Gall Zeidler Consultants
Geotechnics | Tunnel Design | Engineering

3 Rivers Protection and Overflow Reduction Tunnel Project
Fort Wayne Utilities (FWU)

Location:	Fort Wayne, IN
Date:	2017 – Present
Structure:	Combined Sewer Overflow (CSO) 16' ID tunnel with Pump Shaft, Working Shaft, & Retrieval Shaft with 7 Inflow Adits
Length:	4.64 miles (24,500 feet)
Cross-Section:	Silurian Wabash Formation – Tunnel Traverse, Detroit River, and the Wabash formations – shafts
Geology:	The Wabash Formation consists of a fine-grained, slightly dolomitic limestone and dense to fine-grained somewhat argillaceous limestone. Salamonie Dolomite is a coarse-grained, vuggy dolomite.
Cost:	US$ 188 million
Client:	The Lane Construction Corporation
Owner:	Fort Wayne Utilities (FWU)

Excavation and Support Design Services:

The Three Rivers Protection & Overflow Reduction Tunnel (3RPORT) is a deep rock tunnel that includes drop shafts and consolidation sewers that will reduce the combined sewage overflows into the rivers by 90% during large rain events. The tunnel itself is a combined sewer overflow (CSO) tunnel project with seven water collection locations along the St. Mary and Maumee Rivers. The tunnel will receive flows from existing combined sewer outfalls to reduce combined sewer overflows to the St. Marys and Maumee Rivers to four overflow events within a typical year. The tunnel will then convey the flow to the Wet Weather Pump Station No. 1 (WWPS#1) for transfer to and storage in the Wet Weather Ponds (WWP) or directly to the Water Pollution Control Plant (WPCP) for treatment. The waste water that remains in the tunnel after a storm event will require pumping for treatment.

Gall Zeidler Consultants (GZ) are the on-site shift engineers providing technical support and assistance to the Site Superintendent while also acting as a link between the field and technical office. Their main role is providing supervision and reporting of tunnel construction activities while ensuring the operations are performed in compliance with the approved working procedures.

Figure 1. Grouting operations at Adit 9.

Figure 2. Hobas pipe connections to vent and drop shafts.