Eliminating Sanitary Sewer Overflows During Wet-Weather Events
Village of Georgetown, Ohio

Known as the boyhood home of former president Ulysses S. Grant, the Village of Georgetown, Ohio (Village) addressed the need to eliminate sanitary sewer overflows (SSO) during wet-weather events in the collection system as well as at the Village of Georgetown Wastewater Treatment Plant (WWTP). Both the Possum Run Pump Station and Town Run Pump Station SSO Elimination Projects were aimed at reducing the amount of excess flow to be treated at the WWTP. It was also necessary for the Village to add collection system storage in order to comply with recent, stricter Ohio Environmental Protection Agency standards and achieve compliance with the new dissolved oxygen, ammonia-nitrogen, and phosphate limits for aquatic life protection, recreational use and water supply use as defined in the Ohio Water Quality Standards.

Jones and Henry Engineers, Ltd. along with the Village officials needed to address issues associated with the overflows the Possum Run Pump Station had experienced during ten-year storm events or greater. The project consisted of a wet-weather high-flow pump station and construction of two separate prestressed concrete tanks: the Possum Run equalization basin and the Town Run storage tank. DN Tanks was contracted to design, build, and prestress both tanks.

The new Possum Run 750,000 gallon prestressed concrete tank was built in a neighboring location. It was chosen to provide wet-weather overflow storage since it offered flexibility in being differentially backfilled and addressing the possible uplift outcomes that the overflowing Possum Creek could present during extreme wet-weather events. The tank, with an outside diameter of 70’ and side water depth of 28’, was designed as an equalization tank with a dome roof. Additionally, the new Town Run 2.0 MG equalization flow storage tank was constructed near the WWTP. It was designed to conform to AWWA D110 Type III Standard and had a 146’ outside diameter with a 14.7’ side water depth and a dome roof. Both of these equalization basins were designed to address the flow of rainwater and wastewater into the wastewater treatment plant during storms and to prevent any discharge of untreated wastewater into the environment during times when its capacity was exceeded.

With the renovations, and newly installed equalization tanks, the plant will be able to treat larger amounts of water and conform to the new Ohio EPA restrictions.