



TROY TOWNSHIP REGIONAL PUMP STATION & WATER LINE EXTENSION

Wood County, Ohio

Project Relevance

- Fast Track Project
- Regional Lift Station
- Electrical
- Under Budget
- Completed ahead of Schedule

Location

- Troy Township, Ohio

Services Provided

- Civil Engineering, Surveying, Electrical Engineering, Bidding and Construction Management, Project Management

Project Cost

- Estimated Cost: \$2,189,550
- Final Project Cost: \$2,126,759

Project Funding

- OWDA Low Interest Loan

Schedule

- 2019–2020

Project Team

- Neal Materni, Project Manager
- Alan Kohart, Electrical Engineer
- Richard Otley, Design Technician
- Dan Supinski, Design Technician
- Randy Fluke, Jedd Frankforther, John Bair–Survey

PDG was hired by Northwestern Water & Sewer District to provide consulting work to assist the District with a fast track project to provide water and sewer service to a major industrial user in Troy Township, Wood County, Ohio. Locally based NSG Group, a worldwide provider of manufactured glass, is currently building a \$265 million dollar facility to manufacture float glass for the solar industry. The 500,000 s.f. facility will provide 150 new manufacturing jobs to the region.

Public utilities weren't readily available at the site, but close enough in proximity that both water and sewer could be provided. PDG assisted the District and NSG in performing preliminary engineering analysis and cost estimating to determine various options for extension of both water and sanitary sewers to the site. Once final routing and costs were determined in March of 2019, PDG proceeded with the design, bidding and construction management of the improvements.

Regional Lift Station Project Elements

- New 35' deep wet well
- Chemical feed equipment
- Telemetry and 3 phase power extension to the site
- 9,500 LF of 10" force main
- 2,400 LF of gravity sewers
- 7,400 LF of 12" waterline

Working on an accelerated schedule, PDG was able to provide finished water to the site 2 months ahead of the target date. Sanitary sewers and all other elements of this successful project were designed, bid, constructed and commissioned ahead of schedule and under budget.



Reference

Jerry Greiner, NWWSD President
 12560 Middelton Pike
 Bowling Green, Ohio 43402
 419.354.9090
jgreiner@nwwsd.org

UPPER SANDUSKY WARPOLE STREET WATERLINE



The City of Upper Sandusky had the need for an emergency waterline replacement on SR-199 due to excessive breaks in their existing 6" line which was under SR-199. This project included approximately 4200 LF of 8" waterline and new services to over 40 residential and commercial units within the project area. Due to the existing mainline valves being un-operable from the feeder lines into SR-199 (5 lines) PDG worked with The City of Upper Sandusky to create a strategic plan to minimize down time for making the tie-ins of the new lines to the existing infrastructure. With the utilization of several Inserta-Valves the Contractor and City were able to isolate the outlining service area so that the project could be constructed with little to no service interruptions with the users of the line.

Project Relevance

- City Waterline Replacement
- Construction Observation

Location

- Upper Sandusky, Ohio

Services Provided

- Environmental Engineering; Construction Administration/Observation

Project Cost

- Engineers Estimate: \$496,000
- Bid Cost: \$498,490
- Final Project Cost: \$530,857

Size

- 4200 LF of 8" waterline

Schedule

- Professional Services: September 2012
- Construction: May 2013

PDG Project Team

- Neal Materni, Project Manager
- Emil Diener, Construction Observation



Reference

Mr. Scott D. Washburn
Mayor
419.294.3862
mayor@uppersanduskyoh.com

WATER DISTRIBUTION



NORTHWESTERN WATER AND SEWER DISTRICT

PDG has provided professional engineering services to the District since its establishment in 1994. During the last three years, PDG has assisted with the following water distribution projects:

- Rossford City Water Line Replacement
- Sugar Ridge/Mercer Road Water Line
- Custar/Milton Center Water Line
- Hillside Drive Water Line
- Bloomdale Pump Station
- Risingsun US 23 Water Line
- Perrysburg Township Master Plan
- Rossford City Superior Street Water Line
- Wales Road Water Line
- Area 100 Water Line
- Water Distribution Model
- Portage/Bays Road Water Line
- Luckey/Eastwood School Water Line
- Bowling Green Water Line
- Portage Water Line

Contact Jerry Greiner • 419.354.9090

CITY OF PATASKALA WATER SYSTEM EMERGENCY INTERCONNECTION STUDY

PDG worked with the City of Pataskala to investigate potential potable water interconnection opportunities with

the City of Pataskala and the Southwest Licking Community Water and Sewer District (SWLCWSD) water system. This effort included developing a hydraulic model of the City's water distribution system to simulate the impact of various connection points to the City's water distribution system including pressures and available flows.

PDG analyzed five (5) potential interconnection locations for the City to receive water supply from the SWLCWSD during a water emergency. The recommendations provided in this study are based on the developed water distribution model. The model was used to simulate the impact of these alternative connections with the current operation of the City's distribution system including consideration of some system growth based on historic population data.

The City of Pataskala owns, operates and maintains two (2) water treatment plants and a water distribution system that serves approximately 3,000 customers within two (2) significant pressures zones.

Completion: 2013

Contact Nathan W. Coey • Utilities Director • 740.927.4134 • ncoey@ci.pataskala.oh.us

PATASKALA VINE/CEDAR STREET

This project included the replacement of existing waterlines on Cedar and Vine Streets. The scope of work included upgrading the existing lines from 4" and 6" to 8", installation of new service lines and shut-offs to 43 residents and new hydrants and mainline valves. Record drawings of the existing

system were vague so PDG personnel worked with the City of Pataskala's Water Division in the field to locate existing valves and determine the size of the valves and mains which were unknown. Through this work we were also able to identify portions of the system that weren't looped. These deficiencies were also addressed in the project and were upgraded so that the City had more operational flexibility going forward.

Project Cost

Engineers Estimate	\$530,000 (w&s)
Bid Amount (February 7, 2012)	\$574,796.00
Construction Cost	\$591,635.02

The increase in construction costs were due to a 4" waterline extension required after it was discovered that several homes on a side street adjacent to the project were being served by a 1" service line. Additionally, the City requested that we jack and bore services under Main Street (in lieu of open-cut) after bids were received.

Completion: 2013

Contact Nathan W. Coey, Utilities Director • 740.927.4134 • ncoey@ci.pataskala.oh.us

UPPER SANDUSKY-NE QUADRANT WATER LINE PROJECTS A, B & C

PDG provided engineering and project financing for replacement of water lines in the NE quadrant of the City. The project was divided into 3 sections.



Section A– Replacement of water lines on Church, Front, and Bigelow Streets

- Approximately 3,062 LF of 12” water line
- 4,369 LF of 8” water line
- 330 LF of 6” water line with vales and hydrants
- Street resurfacing and curb replacement

Section B– Water line replacement on Third, Fourth, and Fifth Streets; and Guthrie Streets

- 9,065 LF of 8” water line
- Valves, and hydrants
- Street resurfacing, curb and sidewalk replacement.

Section C–Water line replacement on Shafer, Second, Shafer, Finley and Parkview Streets.

- 2,658 LF of water line
- Valves and hydrants
- Some street resurfacing.

Project Costs

Speer Bros., Inc.	\$1,740,736.45
Change Order #1	-\$13,626.19
Final Contract Price	\$1,727,110.26
Project Funding OPWC	\$654,961.29
DEFA	\$1,072,148.07
George Kountoupes Painting	\$748,000.00
Change Order #1	\$24,000.00
Change Order #2	-\$1,300.00
Final Contract Price	\$770,700.00
Project Funding OPWC	\$487.665.31
DEFA	\$283,034.69

Completion: 2013

Contact

Dave Westbrook • Upper Sandusky Water Department Supervisor • 419.294.3862

CITY OF UPPER SANDUSKY WARPOLE STREET WATERLINE REPLACEMENT

The City of Upper Sandusky had the need for an emergency waterline replacement on SR-199 due to excessive breaks in their existing 6” line which was under SR-199. This project included approximately 4,200 LF of 8” waterline and new services to over 40 residential and commercial units within the project area. Due to the existing mainline valves being un-operable from the feeder lines into SR-199 (5 lines), PDG worked with The City of Upper Sandusky to create a strategic plan to minimize down time for making the tie-ins of the new lines to the existing infrastructure. With the utilization of several Inserta-Valves the Contractor and City were able to isolate the outlying service area so that the project could be constructed with little to no service interruptions with the users of the line.

This new waterline was installed down the north bound lane of SR-199 (Warpole Street) in the dead of winter. Due to the location of the new line being under the road, crossing over of the existing service lines to the new line was a challenge. PDG worked with the Contractor on a plan for directional drilling the service lines into the new mains trench while constructing the main line. After a stretch of work was done, the use of an 8” concrete base and a temporary layer of 2” high early strength concrete placed over a layer of visqueen was used as temporary pavement. In

the spring the 2” will be milled off and 2” of Asphalt surface course will be placed. Due to the partnerships formed between the Contractor, Owner and PDG this fast track, high risk project was completed on schedule and was closed out below the contracts base bid.

Project Cost

Engineers Estimate:	\$596,000
Bid Amount (November 5, 2012)	\$596,380
Final Project Cost:	\$530,857
Completion:	2013

Contact

Dave Westbrook • Upper Sandusky Water Department Supervisor • 419.294.3862

VILLAGE OF HAMLER WATERLINE REPLACEMENT, PHASE 1

PDG assisted with grant writing and administration to replace existing mains within the Village of Hamler with new larger mains. The project included just over 2,000 lineal feet of 6-inch and 8-inch waterlines. The new lines replaced a section of waterline from the water treatment plant to the distribution system connection. Work for this project also included installing a new railroad crossing under the CSX tracks in the village. This is part of an ongoing three phase project to upgrade the waterlines in the village. It was completed on time and under budget for our client.

Project Cost

Engineers Estimate	\$275,000
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Bid Amount (June 25, 2014) \$184,473
 Construction Cost \$197,709 (adjusted for quantities)
 Completion: 2014

Contact
 Tim Phillips • 419-274-7651

HENRY COUNTY REGIONAL WATER AND SEWER DISTRICT, MCCLURE WATERLINE CONNECTION

PDG provided design, bidding assistance and engineering for a regional connection through the Village of Malinta to provide service to the Village of McClure, replacing a failing Water Treatment Plant. This project consisted of construction of approximately 16,250 lineal feet of 8-inch waterline that was installed by Horizontal Directional Drilling Method. It was constructed primarily in an easement parallel to a narrow road right-of-way. This project also included construction of a 100,000 gallon elevated water tower, a new master meter and chlorination station, along with the waterline.

Project Cost

Engineers Estimate \$1,900,000
 Bid Amount (August 22, 2012)
 Water Line \$1,009,495
 Elevated Tank \$845,200

Construction Cost

Water Line \$564,628.63 (based on quantities)

Elevated Tank Under Construction -
 Estimate \$845,000
 Completion: 2014-2015

Contact Nick Rettig • Henry County Regional Water & Sewer District • 419.599.7370 • hencopc@bright.net

ELEVATED STORAGE TANKS

BOWLING GREEN 1.5 MG ELEVATED WATER STORAGE TANK

The final phase of the Master Plan Improvements was the replacement of the existing 500,000 gallon elevated tank with a new 1.5 million gallon tank located in the City's north side industrial and commercial corridor. The Master Plan identified this area as the optimal location for a new tank due to its proximity to the 20" and 36" transmission mains that are the main feeds from the City water treatment plant.

As a supplement to the original master plan, PDG performed water age analysis and the effects of the recommended improvements. This was done to optimize the system to enable the City to maintain current and future compliance with the Ohio EPA disinfection by-products rules and regulations. This analysis allowed us to make changes that would help the City long term with maintaining a healthy water supply to their customers.

Project Cost

Engineers Estimate \$3,400,000
 Bid Amount (May 17, 2013) \$3,255,000

Construction Cost \$3,350,918
 Completion: 2014

Contact

Brian O'Connell, P.E. • Director of Utilities • City of Bowling Green • 419.352.6252