HWC ENGINEERING

HWC WATER PROJECTS

WATER SUPPLY, TREATMENT AND DISTRIBUTION IMPROVEMENTS, MARTINSVILLE, IN

HWC completed a Preliminary Engineering Report (PER) for improvements for the Martinsville water system. The evaluation looked at supply, treatment and distribution system improvements and made recommendations to address the most pressing needs. After working with City and their project team to obtain funding and Indiana Utility Regulatory approval, HWC moved into the design phase. The final project design was broken into two divisions of work. The first division included the design of three new 1,400 GPM wells within the existing well field, modifications to the Fluoride Room, a new office/lab building, interior improvements to the water treatment building and miscellaneous site improvements. It also included the replacement of a remoter booster station, which provides water to the Morgan-Monroe State Forest. The second division consisted of a City-wide water main distribution system improvement project. It included the replacement of over 13,000' of 6-12" water mains, 80 fire hydrants and nearly 140 service lines. Special sequencing of work is required to accommodate I-69 detour traffic to be routed through the City.

The $6.2 million project is being funded with an OCRA grant and an SRF loan. Construction is scheduled to begin in the fall of 2020 and be complete in 2021.

RIVER RIDGE ELEVATED TANKS, JEFFERSONVILLE, IN

HWC has provided the design and current inspection services for the water system improvements for the River Ridge Development Authority, which includes two new elevated water storage tanks and water main project at the River Ridge Commerce Center, near Jeffersonville, Indiana.

The water system previously lacked enough storage for the water system's current and projected demands. A single 0.75 MG ground storage tank located adjacent to a booster pump station (located just east of SR-62 along Paul Garrett Avenue) and three older elevated tanks with a combined capacity of 0.50 MG provide a total of 1.25 MG of storage. Two pressure zones (north and south) exist in the system with most of the development and water demand in the system being in the southern zone. Currently, the pressure zones are separate, and the booster pumping station pumps water to both zones using a pressure reducing valve (PRV) to supply different pressures to each zone.

Given the proposed increase in capacity of the water treatment plant and well field as part of a separate project, it was desired to provide additional storage to equate to a total volume, which is equivalent to the projected short term average demand, or approximately 4.0 MG. Accordingly, two elevated tanks with a capacity of 2.0 MG each are being installed. A hydraulic model was completed to determine the tank locations. Ultimately, a location along 8th Street in the northern pressure zone, paired with a site at International Drive in the southern pressure zone was recommended as the best alternative. The scope of work for the project generally includes the following:

- Two (2) composite style elevated water tanks, each with a capacity of two million gallons, a low water level approximately 100' above grade, a 42' operating range and approximately 98' in diameter.
- Site improvements, including access drives, parking and site piping to accommodate each tank and connect it to the distribution system
- Approximately 2,800 lineal feet of 16" water main along 8th Street to connect the new tank to the existing north transmission main
- Electrical and instrumentation/controls for each tank. Each tank will have a level sensor which will control the booster pump station pumps which will supply each of the tanks as required. One of the tanks will contain an altitude valve
- Control valve modifications to control flow and pressure in the system with the new tanks on-line
- Demolition of three existing tanks in the system (given their current, fully depreciated condition) following completion of the two new tanks.