



WATER & WASTEWATER CASE STUDY

PUMP STATION UPGRADE

BACKGROUND

GTH was called in to assist a general contractor to complete a pump station project when the original control system integrator was unable to. The pump station included five pumps with VFD's, power monitoring, generator, ATS and process instrumentation. The PLC was a Modicon system utilizing Unity software.

CHALLENGE

The main challenge for the contractor was that the PLC was never programmed for the station. As the PLC panel was built by others, GTH was tasked with reverse engineering the system. The GTH engineering team evaluated the panel and through loop testing, made drawing modifications to match as built conditions for all I/O points and networked devices. There were also additional challenges relating to the instrumentation. None of the VFD's were configured by the original system integrator and the field devices had been installed but never tested or calibrated.

SOLUTION

Once the construction company hired GTH to finish the job, our engineering team went to work. PLC programming meetings were immediately held with the client personnel to determine the goals and objectives. In the end, development was completed and ready for testing in less than four weeks. Loop drawings and panel drawings were updated to match correct as built conditions and unwitnessed testing began within eight weeks of receiving approval to proceed. GTH also integrated the HMI and radio connectivity to the SCADA system which was an add on to the original scope. The end result exceeded the customer's specifications and expectations.



BENEFITS

The contractor and client were able to complete the project as needed to get the pump station online. GTH provided not only PLC application development but also addressed numerous other process related services such as:

- ATS and generator systems communication networking
- VFD communication networking
- Instrument configuration
- Loop testing and documentation
- Operational readiness testing

