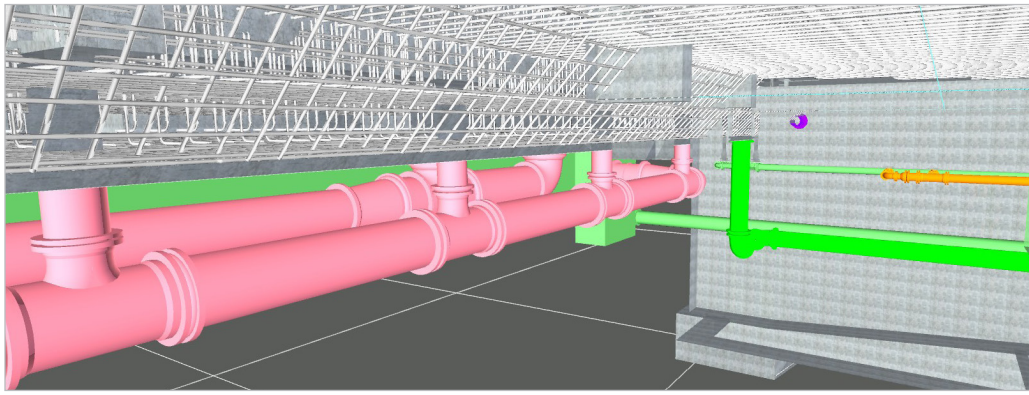
CUSTOMER CASE STUDY

VDC PROJECT SUPPORT AT INDIAN BROOK TREATMENT PLANT

FERGUSON WATERWORKS



PROJECT OVERVIEW

PROJECT / CUSTOMER:

Indian Brook Water Treatment Plant

LOCATION:

Ossining, NY

PRODUCT / SOLUTIONS:

Virtual Design & Construction (VDC) Services

CHALLENGE:

Coordinating below-grade systems with tight tolerances and sequences, complicated by unknown subsurface data requiring numerous revisions and relocations

SOLUTION:

Continuous VDC support enabled flexible planning and revisions; bridged design, construction, and supply chain aspects; and maximized field-ready accuracy

OUR ADVANTAGES:

- Dedicated VDC experts and leading-edge design technology
- Streamlined material procurement and delivery
- Enhanced project management

BACKGROUND:

The Indian Brook Water Treatment Plant, located in Ossining, New York, underwent historically extensive infrastructure upgrades to enhance the region's water treatment capacity and reliability. With an estimated total investment of $100 million, this clean drinking water project was designed to provide clean, safe water for over 35,000 residents, promoting sustainability, efficiency, and resilience in line with 21st-century environmental and resiliency standards.

PROJECT SCOPE:

This facility employs an intricate network of below-grade ductile iron piping with zero margin for error. The Ferguson Waterworks VDC team was brought in to deliver state-of-the-art VDC services to mitigate risks, enhance constructability, and optimize installation timelines for subgrade piping systems.

A project like the Indian Brook Water Treatment Plant—especially involving below-grade ductile iron piping and advanced VDC coordination—comes with several notable challenges.

First, coordinating below-grade systems often involves dealing with unknown subsurface data. This can be in the shape of unknown utilities, unexpected rock formations, and high local water tables.

Second, this piping needs to be coordinated across all involved disciplines or trades. The team had to contend with structural footings, electrical systems, and other drainage systems, which led to the need for tight tolerances and sequencing.

Finally, the team faced numerous revisions and relocations requiring frequent updates to the model on tight timelines. Our team was able to support procurement and construction schedules by fielding ongoing feedback and adjustments in a timely manner.

METHOD:

Our team collaborated closely with our client and various trades within a centralized model, conducting clash detection and actively participating in weekly coordination calls. This approach ensured robust support for both the internal Ferguson team and the external client project team.

We addressed the project's toughest challenges—subsurface complexity, tight coordination, evolving designs, and aggressive timelines—by integrating real-time Building Information Modeling tools, deep product expertise, and supply chain alignment.

Our associates have a comprehensive understanding of ductile iron fittings, joint types, flanges, lay lengths, and systems. Our team was able to leverage this knowledge to create a model meant to reflect real-world conditions, not just digital geometry. Additionally, our models are coordinated with Ferguson Project Management and Sales teams to optimize lead times and create a seamless flow from design to procurement to construction.

Through advanced modeling, clash detection, and constructability-focused shop drawings, we resolved numerous design conflicts, accelerated procurement, and ensured field-ready accuracy. Our cross-functional approach turned risk into reliability, delivering not just models, but certainty.

THE SOLUTION: FERGUSON:

We're more than a supplier—we're a value-add solutions partner. On critical infrastructure projects like this one, project owners and contractors look to us for our unmatched ability to combine product knowledge, cutting-edge VDC services, and real-time access to national inventory. We deliver fully coordinated models, accurate shop drawings, and materials that are both specification-compliant and field-ready. By aligning design, construction, and logistics from the outset, we can reduce risk, accelerate timelines, and give the entire project team confidence.

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