# PRV Vault Engineering – From Rough Sketch To BIM

Parker, CO









# **PROJECT OVERVIEW**

LOCATION: Parker, CO

**SOLUTION USED:** Ferguson Virtual Design & Construction (VDC) services

# CHALLENGE:

An undesigned Pressure Relief Valve Vault identified after project kickoff.

### SOLUTION:

A Building Information Model created on a condensed timeline based off minimal information.

# THE FERGUSON ADVANTAGE:

- Seamless flow of information from product/supply team to VDC and back
- Cutting-edge Building Information Modeling (BIM) technology
- Automatically generated Bill of Materials (BOM) for simplified procurement



### BACKGROUND AND SCOPE

Our customer was supporting new construction in a residential development area on the edge of the Denver metro when they identified a Pressure Relief Valve (PRV) Vault in the plans without a design. The engineer and the city staff attached to the project had never worked with a PRV Vault of the specified size before, leaving them unclear on how to proceed.

Our sales associate, understanding the capital and time costs at stake, engaged our Virtual Design & Construction team to provide a solution.

#### METHOD

The engineer and contractor provided a rough, hand-drawn line-sketch of the requested vault with no specifications. We leveraged our team's experience on similar projects and deep understanding of product and technology to create a Building Information Model.

The model was approved, and the products were ordered based on the BOM automatically generated by the BIM software. The contractor used the information provided by our VDC team to install the vault with little to no rework involved.

#### THE SOLUTION: FERGUSON WATERWORKS

The vast experience and industry knowledge of our VDC associates enabled us to create a fully constructible model with virtually no information, and keeping the design with Ferguson established a free flow of information across all involved parties. Given the level of detail provided, onboarding a third party to design the PRV vault would have delayed development and increased cost as site visits, redesigns and rework mounted.

The cutting-edge BIM technology employed by the VDC team also allowed us to condense the design-toinstallation timeline via shop drawings, a hyper-accurate model and a comprehensive, automatically generated BOM.

