CASE STUDY

MULTIPLE TRENCHLESS METHODS | INTERCEPTOR INSTALLATION

Project Name:
First Creek Interceptor Project

Prime/Sub Contractors:
BT Construction, Inc. – Henderson, CO

Location:
Aurora, CO

Owner:
Aurora Water

Ground Conditions:
Highly variable soils including clays, calcium sediment, sand, gravel, and groundwater

Akkerman Equipment:
Akkerman Slurry MTB Systems & Guided Boring Systems

Pipe:
42-in to 60-in HOBAS and steel casing

Total Length/Longest:
Six trenchless crossings totaling over 2,500 LF

PROJECT OVERVIEW

BT Construction completed trenchless installations for the First Creek Interceptor Project in Aurora, Colorado. The project required construction of a major wastewater conveyance system designed to improve long-term infrastructure reliability while reducing reliance on lift stations.

To address varying site conditions and multiple crossing requirements, the contractor deployed a combination of trenchless methods including guided auger boring, microtunneling, guided pipe ramming, and hand tunneling. The integrated approach enabled efficient installation across multiple alignments and challenging subsurface conditions.

THE CHALLENGES

- Highly variable ground conditions including clays, sands, gravel, and groundwater
- Coordinating six separate trenchless crossings within a single project corridor
- Maintaining alignment accuracy across multiple installation methods
- Adapting construction approach to differing site and subsurface constraints

THE SOLUTION

- Utilized multiple trenchless methods to suit installation requirements
- Applied multiple trenchless methods, including guided pipe ramming and hand tunneling, to adapt to varying conditions
- Implemented controlled guidance systems to maintain line and grade accuracy across all crossings
- Coordinated sequential installations to optimize efficiency and site logistics

OUTCOME

- Successfully completed six trenchless crossings totaling over 2,500 LF
- Maintained accurate line and grade control across multiple installation methods
- Effectively navigated highly variable ground conditions
- Reduced reliance on lift stations through improved gravity conveyance design
- Delivered a resilient wastewater infrastructure solution supporting long-term regional growth



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