



UTILITIES

OUR SERVICES

- ▶ Existing & Future System Analysis
- ▶ GIS Sewer System Mapping
- ▶ Alternative Alignment Analysis
- ▶ System Modeling
- ▶ System Hydraulics Design Calculations
- ▶ Engineering Reports
- ▶ Fast-Track Sewer System Extension Application
- ▶ Alternative Permit Applications
- ▶ Trenchless Design
- ▶ Easement Acquisition & Mapping
- ▶ Construction Plans & Specifications
- ▶ Construction Administration & Observation

REACH OUT

www.withersravenel.com

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utilizing **FORCE MAINS**

In addition to conveying wastewater from a pump station to an interceptor or treatment plant at a higher elevation, force mains may also be necessary to cross a drainage divide or when installation for a gravity sewer becomes cost-prohibitive.

WithersRavenel has designed force mains for all of these conditions, and can help clients identify when and where force mains are a suitable choice for their wastewater system. We can navigate the challenges posed by rocky and hilly terrain, wetland and riparian buffers, limited right-of-way, and existing utility conflicts. Where appropriate, we provide clients with support for fast-track sewer system extension application, permitting, funding options, and value engineered solutions.

