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Freeman Companies, LLC tunneling to success

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Hartford, CT “For a geotechnical engineer, The Tunnel is the project of a lifetime. In a way, I feel that a lot of my career has been leading up to this,” said Chris Tonzi, PE, a senior geotechnical engineer at Freeman Companies, LLC.

“The Tunnel” is the Metropolitan District Commission’s South Hartford Conveyance and Storage Tunnel (SHCST), a key component of the MDC’s Clean Water Project, a CTDEEP and EPA-mandated, over 20-year plan designed to control and reduce the overflow of untreated sewage into natural waterways resulting from Combined Sewer Overflows (CSOs). Occurring during heavy rainfall, CSOs cause existing infrastructure to release unwanted wastewater into the Connecticut River and Long Island Sound.

Once fully constructed, this 18-foot diameter, four-mile long deep rock tunnel will stretch from Hartford to West Hartford. It will handle and store 41.5 million gallons of sewage and wastewater from Hartford, West Hartford, and Newington until it can be treated at the MDC’s Hartford Water Pollution Control Facility. Ultimately, this large capacity of storage will dramatically reduce CSOs from the South Hartford area.

Freeman Companies has been involved in the SHCST since 2012 throughout the phases of design and construction, providing geotechnical engineering technical support and CSO conduit 3D basemapping for Prime Engineer AECOM as well as geotechnical instrumentation for the recently completed preparatory utility relocation work, or “Contract 1,” which enabled the tunnel and shaft construction, “Contract 2,” to proceed.

For Contract 2, Freeman Companies’ Chris Tonzi, PE, leads a comprehensive team of engineers and land surveyors providing geotechnical instrumentation and vibration monitoring, as well as implementation inspections, routine inspections and stormwater monitoring for Stormwater General Permit compliance for the Prime Contractor, Kenny/Obayashi IV, A Joint Venture. At \$279.4 million in construction cost, Contract 2 is the largest contract ever awarded by the MDC and represents one of the region’s largest infrastructure investments.

“The importance of geotechnical instrumentation and vibration monitoring is for risk prevention,” said Tonzi, “and to me, a sign of a good project is preventing issues, not fixing them once they show up.”

Photo courtesy of the MDC.