North American Pipeline Services installs a cured-in-place pipe into a 52-in. circular brick combined sewer using the water inversion and curing method. The trenchless sewer rehabilitation is for a Philadelphia Water Dept. sewer lining project.

Underground Today I

What Lies Below

Data collection offers insight to streamline critical infrastructure work

By Marge O'Connor

WHAT'S INSIDE

- Technology Makes Repairs Safer and More Efficient
- Slide Rail System for Pipe Casing Installation
- Double Casing Helps Keep BART Safe and Operational
- One of the Largest U.S. HDPE Sliplining Projects
- Sheet Pile Wall Saves Time and Money

Double Casing Helps Keep BART Tunnel Structures Safe and Operational

Each year, approximately 126 million trips are made on the Bay Area Rapid Transit (BART) system, which has served the San Francisco Bay area since 1972. To keep its tunnel structures safe

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IDPE EXPERTISE

and operational, BART has established certain guidelines for new construction within its proximity. One of the guidelines requires that permanent building loads be transferred below



Drilled piles for a new structure in San Francisco needed to transfer the building loads up to 50 ft below grade, extending the deep foundations up to 200 ft.

the BART "zone of influence" (ZOI) or "no-load zone," defined as the area above a line from the bottom of the tunnel at a slope of 1.5H:1V to the foundation element.

At 1028 Market St., a new 13-story residential building in San Francisco's Tenderloin District, this meant that the drilled piles needed to transfer the building loads up to 50 ft below grade, extending the deep foundations up to 200 ft.

Malcolm Drilling utilized doublecased drilled piles, allowing a gap between the soil and the pile extending through the ZOI. The company specializes in solving difficult challenges when not only time is of the essence. Foundation work finished in January 2020, which allowed Build Group to proceed with construction of the structure. •

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Deep Foundations Design Build/Assist Retention Systems Ground Improvement Dewatering



Drilled Shafts installed up to 330ft below grade making them the deepest shafts in the Western US