

CASE STUDY



San Diego based contractor Ortiz Corporation, chooses trenchless sewer installation using Akkerman Guided Boring Equipment and No-Dig Pipe to help overcome difficult soils and high traffic install

PROJECT NAME: Sewer Group 786

PRIME CONTRACTOR: Ortiz Corporation

LOCATION: Pacific Beach & Mission Bay Area, CA

OWNERS: City of San Diego, CA

COMPLETION DATE: June 2020

GROUND CONDITIONS: Soft sand and clay

AKKERMAN EQUIPMENT: GBM 240A Jacking Frame, Guidance System, Casing and Auger Assemblies

PIPE: 8 & 12-in. ID NO-DIG® Vitrified Clay Pipe, 1m

TOTAL LENGTH/LONGEST RUN:
3,700-lf./370-lf. of 8-in. ID VCP

PROJECT OVERVIEW

The City of San Diego needed to replace sewer infrastructure in the Pacific Beach and Mission Bay areas, and 3,700-lf. was identified for pilot tube guided boring trenchless installation to minimize tourist traffic disruption. This area is home to many beaches, aquatic sports and the Sea World theme park, so continuous highway traffic was a challenge.

The project included the replacement of existing sewer mains applying the following construction methods:

- Rehabilitate approximately 3,700-lf. using pilot tube guided boring trenchless technology at 4-21-ft. depths through the median of the main arterial four-lane roadway, and a neighborhood street
- Replace-in-place and realign approximately 11,645-lf. within existing trench alignments via open trenching

The work also included replacement of 50 existing manholes, pedestrian curb ramps, new sewer laterals, and re-plumbing of existing sewer laterals.

The project was initially bid as open cut construction. In the first seven hundred feet, the soils were so unstable that trench widths reached 15-ft. The soil was also contaminated which required a significant amount of disposal. After costs and social impacts mounted, the owner re-bid the project with the pilot tube guided boring trenchless solution encouraged where ever possible.

THE CHALLENGES

- Tourist area with high levels of traffic at all times
- Contaminated soil
- High level of groundwater, dewatering at 5-50 gpm pumping volumes
- Flat grades ranging from .25-.75%+

THE SOLUTION

Contractor used a 240A Guided Boring System to install 3,700 lf. of 8 and 12-in. ID VCP in 19 runs utilizing the three-pass method. The solution allowed them to accurately install the pipe in the median while live traffic was continuous alongside the construction zone.



OUTCOME

- Successful installation of 3,700-lf. of new sewer lines
- Minimized construction impacts
- All line and grade tolerances met
- Reduced construction schedule over original design and finished under budget