

CASE STUDY

PILOT TUBE METHOD | GUIDED PIPE REAMING



Project Name:
Renewal of New Sewer



Prime Contractor:
Derech Afar Technologies Ltd.



Location:
Rosh HaAyin, Israel



Owner:
Rosh HaAyin Municipality &
The Sewage and Water Corporation



Ground Conditions:
Clay



Akkerman Equipment:
GBM 339A Jacking Frame &
Guidance System, Custom Pullback
Reamers



Pipe:
Polyethylene, 225 & 315 mm (9 & 12.4-in.)



Longest Length:
120 m (393-ft.)

PROJECT OVERVIEW

The Rosh HaAyin Municipality required the construction of new sewer and waterlines mainly by pipebursting and open cut methods. However, three new sewer lines were required for underground infrastructure upgrades near a busy intersection.

THE CHALLENGES

- Exact line and grade required three gravity flow sewers:
 - 90 m, 315mm, -1.0% (1, 90m drive)
 - 120 m, 315mm, +1.4% (1, 120m drive)
 - 300 m, 225mm, +1.0% (3, 100m drives)
- Open-cut excavation was not a viable or safe option
- Existing water, sewer, drainage, communication and electricity underground infrastructure at different depths up to 6.5 m (21-ft.)
- Owner required continued 24/7 traffic during construction
- New road constructed near the excavation route
- Collaboration with all municipalities

THE SOLUTION

- Use of small diameter Pilot Tube Guided Boring System and two diameters of custom pullback reamers

OUTCOME

- Accurately executed sewer installations
- Minimal construction disturbance to traffic and businesses
- Safer construction zone
- Camera slope check verified accuracy on all three bores

