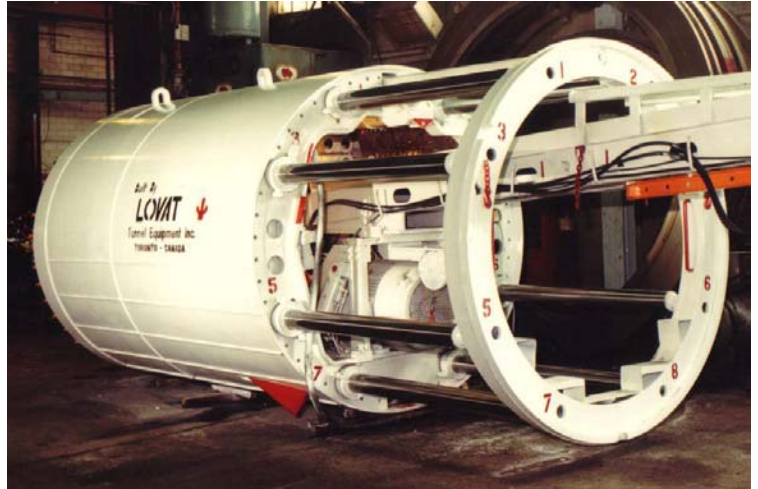
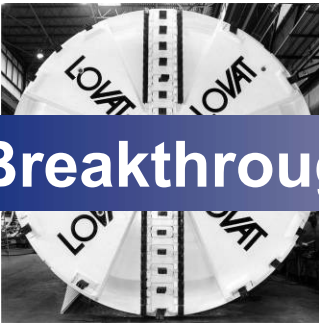


Supply of TBM to City of Edmonton, Alberta, Canada



LOVAT and the City of Edmonton, Department of Public Works and Asset Management, Alberta, have recently finalized a contract for the supply of a refurbished LOVAT M102SE Series 8000 Tunnel Boring Machine [TBM]. The TBM, currently undergoing a refurbishment program at LOVAT's Toronto facilities, will be delivered in July of 2007. This will be the 8th LOVAT TBM supplied to the City Public Works Department.

The Soft Ground TBM has a bore diameter of 2,604 mm and is configured for Open and Semi-Closed excavation modes. During the refurbishment, the TBM will be equipped with a new Arm type Segment Erector, Segment Expander Assembly and Transport Beam to allow installation of concrete segments, replacing the original rib and lagging equipment previously used.

The TBM will be used to bore the North Edmonton Sanitary Trunk Sewer, NL2-NL3-N1 Tunnel at a length of 3,700 meters with a maximum slope of 0.125%. The depth of cover above the tunnel crown will vary from 11 to 33 meters. The tunnel will be driven from eastward from 76 Street to Manning Drive, along the northern side of 153 Avenue. The entire tunnel alignment is below groundwater level. Groundwater heights above the tunnel invert will vary from 14 to 31 meters.

The subsurface profile along the tunnel alignment consists of fill clay and clay till, overlying the sedimentary bedrock at depths from 2.7 to 10 meters. The bedrock, extending to the maximum drilling depth of 37.3 meters, consists of clay shale, sandstone and siltstone with occasional coal and bentonite layers. The LOVAT TBM will be challenged during a portion of the drive in mixed conditions due to highly plastic clay-shales which become "sticky" when wetted.