

Metro Project

Tender Predesigns for Athens Metro Line 4 /Alsos Veikou – Goudi for 8 NATM Metro Stations, 1 Forestation, 20 Shafts and 1 TBM tunnel

Athens, Greece

Project

Tender Predesigns for Athens Metro Line 4 /Alsos Veikou – Goudi for eight (8) NATM Metro Stations, one (1) Forestation, twenty (20) Shafts and one (1) TBM tunnel

Construction Cost

Total cost: approx. € 1,9 bil.

Project Schedule

Design: 2018– on going
Construction: 2019 – 2029 (expected)

Project Description

One (1) double track TBM tunnel

Total length: ~ 11km
Cross section: 71m², Effect. cross section: 56.5m²
One (1) tunnel for TBM start up: Length: ~50m
Cross section: 92m² Effective cross section: 56.5m²

Eight (8) NATM Stations (Akadimia, Kolonaki, Evangelismos, Kessariani, Panepistimioupoli, Ilissia, Zografou, Goudi)

NATM Section; dimensions: Length: 20m - 96m, Width: 17m - 20m, Cross section: 194m² - 235m², Effective cross section: 135m² - 173m²
C&C Section; Length: 20m-60m, Width: 25m-55m, Depth: 25m-43m

Forestation

NATM Section; dimensions: Length: 300m, Width: 15m, Cross section: 173m², Effective cross section: 100m²
C&C Section; Length: 210m, Width: 16m-31m, Depth: 31m

Twenty (20) Shafts

dimensions: Length: 10m-25m, Width: 25m - 40m, Depth: 12m - 25m

Construction Method

TBM tunnels: Mechanical excavation with EPB - TBM (Earth Pressure Balance – Tunnel Boring Machine)

One (1) tunnel excavated with conventional means for TBM start up

Stations:

NATM Section: Top heading – Bench tunnel, pre-supported with umbrella arch system.
C&C Section; Construction with Cut & Cover method, Soldier reinforced piles with Prestressed Anchors and / or Struts

Shafts: Excavation & Reinstatement (Cut & Cover)

Forestation:

NATM Section: Top heading – Bench tunnel, pre-supported with umbrella arch system.
C&C Section; Construction with Cut & Cover method, Soldier reinforced piles with Prestressed Anchors and / or Struts

Final Lining

- Concrete C40/50 for TBM tunnels' segments, Reinforcement B500c
- Concrete C30/37 for station's & forestation's permanent structures, Reinforcement B500c

Geology

Artificial Deposits, Alluvial Fan Deposits, Sandstone - Marl Series, Athens Schist, Upper & Lower Formation, Overburden: 2 -30m

Our Services

- Geotechnical – structural tender designs
- BIM/Revit modelling for calculation of BoQs

Client

AKTOR S.A.

