



Roseville Tunnel (USA) Rehabilitation

Country	USA, New Jersey (NJ)
Type	Railway
Client	NJ TRANSIT's (NJT)
Main Contractor	Schiavone Construction Company LLC
Execution of the work	Renesco Inc.
Designer	Delve Underground
Construction Period	2024

Project Description

About an hour northwest of Newark, New Jersey, is the historic Roseville Tunnel, situated in Byram Township, Sussex County. The Roseville Tunnel Rehabilitation Project is a design-build project and is part of NJ TRANSIT's (NJT) Lackawanna Cut-off Restoration. The Lackawanna Cut-off - a historic rail line in New Jersey and Pennsylvania - was originally built by the Delaware, Lackawanna & Western Railroad in the early 1900s. It runs from Port Morris Junction in New Jersey to Slateford, Pennsylvania.

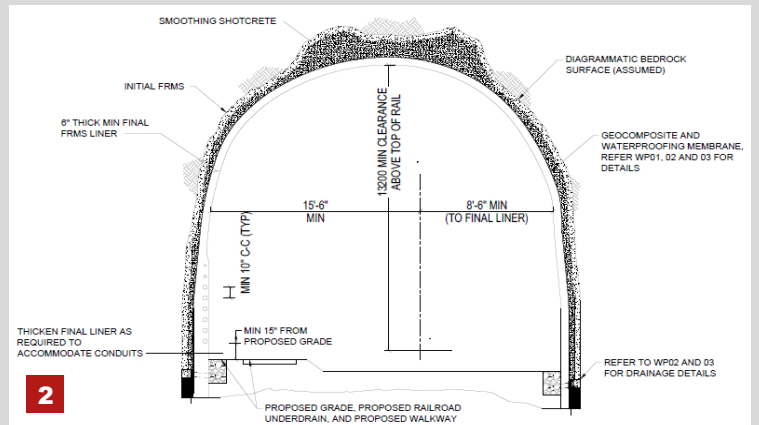
The horseshoe-shaped Roseville Tunnel was completed in 1911. This rock tunnel was originally double-tracked and operated for freight and passenger transport from 1911 to 1979. It is mostly unlined but has approximately 140 feet of concrete liner where a regional fault runs through the tunnel. The rehabilitation includes rock excavation by blasting at the west portal, repair of the existing concrete tunnel liner, which includes grouting the void space behind it and repairing surface defects and concrete spalls, installation of a shotcrete initial lining, installation of a PVC waterproofing membrane to provide a continuous tunnel waterproofing system through the tunnel and installation of a shotcrete final lining throughout the entire tunnel.

Scope of Service

Supply & install of the sheet waterproofing membrane system.

The waterproofing works (umbrella-seal, drained, loose-laid) required a 2.5 mm thick synthetic sheet membrane/geomembrane, PVC-P based, geo-net (drainage), water-barriers/ stops, termination details, penetrations and BA-anchors.

For the inner liner a light reinforcement was installed to allow for shotcrete application.



1. Waterproofing application
2. Tunnel profile, drawing
3. Final lining shotcrete application