



WMATA Steel Tunnel Liner Structural Investigation Washington Metropolitan Area Transit Authority (WMATA)

Location: Washington, D.C.

Date: 2018 – Present

Structure: Twin-running tunnels

Length: ~950 feet

Cross-Section: Single Bore Steel Lined Tunnels

Geology: Saturated Sand and Clay

Cost: n/a

Client: Gannett Fleming – Parsons
Transportation Group JV (GFP)

Owner: Washington Metropolitan Area Transit
Authority (WMATA)



Figure 1. GZ inspector evaluating condition of steel tunnel liner.

GEC On-Site Inspection Support Services:

A section of the WMATA tunnels on the Yellow Line in Washington DC near L'Enfant Plaza Station was constructed utilizing steel lining segments. During our Leak Remediation Inspection work, it was noted that severe corrosion and section loss were present on many of the segments, particularly below spring line. The project team recommended, and WMATA agreed to conducting detailed inspections and measurements of the steel thickness, and developing a recommendation for an engineered solution. Each steel segment ring element was inspected panel by panel, and material thickness was tested at randomized locations where severe corrosion was noted. A report summarizing these findings, the structure history, rehabilitation alternatives, and recommended approach was prepared and submitted to WMATA.

Gall Zeidler Consultants (GZ), as part of the GEC team, coordinated inspection tasks with WMATA personnel and provided inspection staff for the evaluation and documentation of the conditions of the steel panels and associated features (e.g. bolts, ribs, etc.). GZ also participated in developing the report summarizing the inspection findings, suggesting remediation methods, and providing remediation recommendations.



Figure 2. Measuring thickness of steel liner at locations of heavy corrosion.