

## MNDOT 12-ft Tunnel Repair, Minneapolis, MN



- StifPipe® was used to repair a section of 100-ft deep, 12-ft diameter stormwater tunnel.
- The design was stand alone (fully structural) to withstand 100-ft of soil and groundwater pressure.
- The StifPipe® layers were installed internally by the wet-layup method.
- No modifications to the access hole were needed to convey the materials and tools to the repair location.
- The overall design was comprised of 4 layers of carbon fiber, 2 layers of glass fiber, and 2 layers of core fabric with a total thickness of 1.5 inches with the top coat.
- The project challenges included access to 100 ft deep tunnel with the closest access hole 2,500 ft away from the repair location.