

## MNDOT 12-ft Tunnel Repair, MN



- This design is for the fully structural retrofit of a 20' long section of a 12' diam reinforced concrete tunnel. The retrofit designed for 100-psi external hydrostatic pressure. The StifPipe layers will be installed internally by the wet-layup method.
- The StifPipe design is comprised of 4 layers of carbon fiber, 2 layers of glass fiber, and 2 layers of core fabric with a total thickness of 1.25 inches.
- The project challenges include access to 95 ft deep tunnel with the closest access hole 3,900 ft away from the repair location.