Minneapolis East Interceptor Tunnel, Phase C
Minneapolis, Minnesota

The Minneapolis East Interceptor, Phase C, is an 8,500 linear foot sanitary sewer constructed under urban areas in the Twin Cities. The cast-in-place tunnel lining has an 8-foot inside diameter. Numerous structures such as access shafts, drop shafts, connection structures, junction structures, diversion structures and overflow structures were constructed in conjunction with the project.

The reinforced concrete tunnel liner was designed to withstand 39-psi internal surge pressures, created during peak periods. 6,000 feet of the tunnel length was in the St. Peter sandstone and approximately 50 feet below the ground surface and 10 feet below the water table. The sandstone tunnel was excavated with a tunnel boring machine. Initial support consisted of ringbeams and wood lagging.

2,500 feet of the tunnel length was under the water table in soft ground consisting of glacial tills and lacustrine deposits that had unconfined compression as low as 425 psf. The soft ground tunnel was excavated with a tunnel boring machine. Initial support consisted of ringbeams, wood lagging and filter fabric. The soft ground tunnel also required the use of compressed air and compaction grouting.

8-foot tunnel with ringbeams and wood lagging

CNA provided the following services to the Project:

- Geotechnical Engineering
- Geotechnical Report
- Structural Engineering for tunnels & structures
- Plan and Specification Preparation
- Construction Submittal Review
- Construction Monitoring

Owner — Metropolitan Council Environmental Services

Completion Date — 1992

Construction Cost – $17 million

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