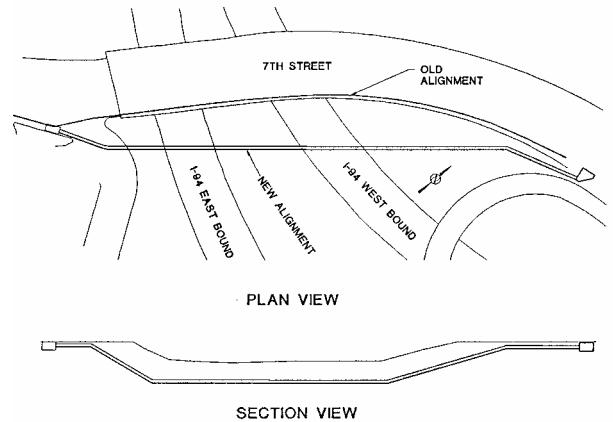


QWEST Telephone Duct Relocation

Reconstruction of the East 7th St. Bridge over 1-94 required relocation of telephone ducts in the bridge to an underground location. The new alignment is shown in the figure.



The 240-ft portion of the alignment under 1-94 was installed in jacked 48-inch steel casing. On the south side of the freeway, 54-ft of the alignment was installed in 48-inch RCP jacked downhill at an angle of 25°. The remaining 260-ft of the alignment was installed in open cut. The soils in the area were primarily fill, glacial till and coarse alluvium.

CNA, the engineering firm for the project, provided the following services:

- Complete plan and specification preparation
- Plan prepared on Autocad CADD system
- Geotechnical report including computer generated geologic sections (soil stratigraphy, graphical depiction of blow count data)
- Cost estimating
- Project management
- Construction inspection

Owner — Qwest (formerly Northwestern Bell)

Location — St. Paul, Minnesota

Project Construction Cost— \$713,000

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