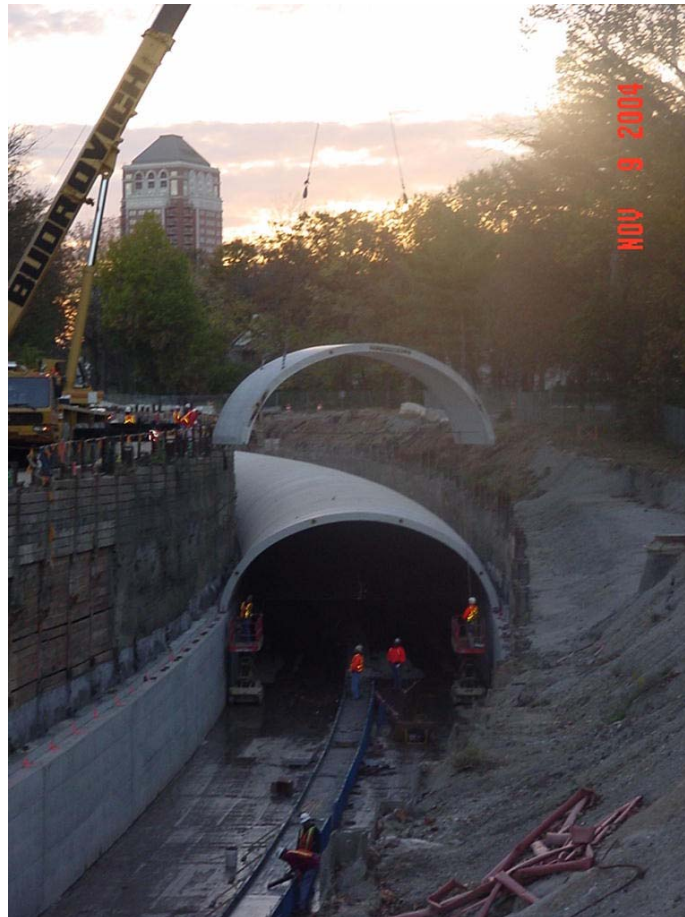


# STRENGTHEN YOUR STRUCTURE

## Cross Country MetroLink Extension Facilities 2



### Project Description

This project involved construction of a 1.32-mile underground light-rail tunnel and 2 stations. This segment of the MetroLink Expansion was built below Forest Park Parkway using the cut-and-cover method. The tunnel and stations are built at depths exceeding 45-feet. Due to the length of this project and the associated depth of the tunnels and stations, this project put into place the largest amount of shoring systems ever completed in St. Louis for construction of a single project.

**Forsyth Station:** The Forsyth station is an open, below-grade station, although portions are partially covered by Forsyth Boulevard and the Forest Park Parkway overpass, which runs overhead. The footprint of the plaza and platform area is circular and accessible from street level by stairs and ramps. The curved walls and recessed plaza are suggestive of classical amphitheaters and add an architecturally unique design to this MetroLink station.

**University City – Big Bend Station:** The University City – Big Bend station is a side platform, underground tunnel station with entrances on all four corners of Big Bend Boulevard and Forest Park Parkway. The entrances are accessible by stairs, ramps, and an elevator. They lead to mezzanines, which in turn, lead to the station platforms. The mezzanines make it unnecessary for patrons to cross the street to access the station.

There were 136 separate tunnel base pours on this project. These were poured at the rate of 1 to 2 per day. Once the base slabs were completed, a minimal amount of wall steel was required due to the majority of the steel being placed within the base slab pour. Constructing Forsyth Station required the finish concrete walls to be true radii in lieu of the typical chord-type construction. This work was accomplished through the selection of a forming system that not only allowed for the radii to be changed in the field quickly by turning a few adjustment turnbuckles, but also by pre-working the forms so the height could be continually adjusted. The contractor also re-engineered the shoring systems and perimeter structural wall at Big Bend which reduced the installation time of both the shoring and concrete work.

Owner	Metro
Architect	URS Corporation
Engineers	various
General Contractor	McCarthy Building Cos.
Ready Mix Supplier	Kienstra Material Co. Riley Ready Mix

### CONCRETE COUNCIL

8000 Maryland Ave., Suite 1320

St. Louis, MO 63105

(314)862-0324

[www.concretecouncil.com](http://www.concretecouncil.com)