

Barnes-Jewish Hospital South Campus Integration Project

BJC Healthcare / Washington University

Location

St. Louis, Missouri

Construction Completion

2000

Construction Cost

\$90 million

Area

500,000 s.f.

DMA Services Provided

Structural Engineering



North Segment



Pedestrian Bridge & Receiver Lobby



South Segment

The project incorporated multiple-use, future expansion considerations, seismically enhanced design and unusual field condition requirements. Although the main use of the structure was to provide a full-service parking facility to include valet parking as well as lobby and bridge links to the Children's Hospital, the building also includes an emergency unit and provisions for a future eight-story steel office tower constructed on top of this site. Field conditions required the spanning of the MetroLink Light Rail which runs underneath the structure, without infringing upon the continuous use of the rail line.

The role of David Mason & Associates as the structural engineer was to design a structure which is seismically enhanced to withstand a 1-in-2,500 year earthquake and maintain the ability to be occupied. This building was one of the first in the St. Louis region to utilize the National Earthquake Hazards Reduction Program (NEHRP) seismic design code which was the basis for the 2000 national building code.

This structure also incorporated a wide variety of systems including high strength microsilica enhanced concrete, post tensioning, steel subframing for emergency department equipment isolation and construction phasing procedures to allow the continued use of existing buildings until the parking structure was in use.

