

KRESGE CENTENNIAL HALL

Northwestern University, Illinois

OVERVIEW

Kresge Centennial Hall at Northwestern University was built in 1955. Within the Judd A. and Marjorie Weinberg College of Arts & Sciences, the facility offers a significant portion of arts and humanities classes, programs and departments. The renovations include replacement of new mechanical, electrical, plumbing, fire protection and communication systems and will achieve a minimum LEED Silver rating. Fyfe Company was contacted to design a system to supplement the structural deficiencies of the renovated building.

Fyfe Company designed the Tyfo® SCH-41 system to provide strengthening to slab, columns and beams. The columns required additional axial and shear strengthening, which was achieved using a combination of the Tyfo® SCH-41 system and the Tyfo® SCH composite anchors. Slabs were reinforced with the Tyfo® SCH 41 system to provide steel equivalency reinforcement equivalent to #3, #4 and #5 grade 60 bars around new openings. The beams required a combination of flexure, shear and torsion reinforcement. This was achieved by using the Tyfo® SCH-41 system and the Tyfo® SCH composite anchors to achieve full confinement and the required strengthening for each beam.

All structural members were strengthened to the demands specified in a timely manner and with minimal increase in size. Ultimately, the Tyfo® systems were able to provide a cost-efficient and minimal impact alternative solution to conventional construction methods.



Columns with Tyfo® SCH-41 strengthening system



Tyfo® SCH-41 system and the Tyfo® SCH composite anchors