



MISSION HOSPITAL STRUCTURAL STRENGTHENING

Laguna Beach, California

OVERVIEW

Over the years, California has been updating their building codes to provide additional strengthening for structures in the event of unexpected natural disasters. Hospitals in particular need to be addressed in a special manner to ensure that operations can stay in place in the event of such catastrophic events. Mission Hospital in Laguna Beach required a seismic retrofit to conform to the most recent building codes and laws enforced by California.

Fyfe Company was contacted by the Engineer of Record (EOR) to provide strengthening for existing columns and collectors on multiple floors of Mission Hospital. The short captive columns were wrapped with the Tyfo® Fibrwrap® system to ensure a flexural controlled performance. In addition to strengthening columns, collector beams were strengthened using our Tyfo® SCH-41 system and Tyfo® composite anchors to provide a better path for transferring tension forces.

After the application of the fiberwrap, columns and beams on the interior of the hospital received a Class 1 flame and smoke system by using the Tyfo® RR system and the exterior columns received Tyfo® U Coat paint, a tough coating with resistance to UV rays, chemicals and stains.

All members were strengthened to the demands specified in a timely manner and with minimal increase in size and thickness. Ultimately, the Tyfo® system was able to provide a cost-efficient and innovative solution compared to conventional construction methods. The building remained in operation during the entire renovation.



External view of columns



Column with Tyfo® SCH-41 system applied



Column with Tyfo® SCH-41 system applied