



UCSF Medical Center Seismic Saw-Cut Mitigation Project

Full Mitigation Best Practice Story

San Francisco County, California



San Francisco, CA - The University of California San Francisco (UCSF) Medical Center Parnassus serves as the main campus for UCSF’s medical program, as well as a Children’s Hospital, several research labs, and the center for the Dental and Nursing programs. Located in San Francisco near Golden Gate Park, this fifteen story structure is in a neighborhood that has a high likelihood of significant damage after a major seismic event.

During the last major seismic event, the Loma Prieta earthquake of October 1989, the Medical Center building and the Medical Sciences Building (MSB) experienced significant damage to the expansion joint between them. An engineering analysis revealed that due to the differences in the relative stiffness of the structures, they would perform better independently than tied together.

Project Seismic Saw-Cut will physically sever the structural connection between the two buildings and install a seismic expansion joint in the gap. This improves the chances of both structures surviving a seismic event with minimal significant structural damage. The same change would be implemented on the link between the MSB and Cole Hall (a 408 seat lecture hall adjacent to the MSB).

Currently, UCSF Medical Center is a large teaching and research facility that provides world renowned inpatient care with a total of 575 licensed beds. UCSF Medical Center is a critical component of the city’s emergency medical response infrastructure and is required by state law to mitigate certain hazards to ensure continuity of operations during local disasters or face decommissioning.

With the completion of this project, the UCSF Medical Center Parnassus will continue to provide quality healthcare and critical emergency medical services up to and throughout a major seismic event. At the time of a future seismic event, there will be few devastating interruptions in healthcare delivery at a time when the community will need to rely on its healthcare system to provide emergency medical services the most.

Activity/Project Location

Geographical Area: **Single County in a State**

FEMA Region: **Region IX**

State: **California**

County: **San Francisco County**

City/Community: **San Francisco**

Key Activity/Project Information

Sector: **Public**
Hazard Type: **Earthquake**
Activity/Project Type: **Retrofitting, Structural**
Activity/Project Start Date: **01/2001**
Activity/Project End Date: **Ongoing**
Funding Source: **Academic**

Activity/Project Economic Analysis

Cost: **Amount Not Available**

Activity/Project Disaster Information

Mitigation Resulted From Federal
Disaster? **Yes**
Federal Disaster #: **845 , 10/18/1989**
Federal Disaster Year: **1989**
Value Tested By Disaster? **Unknown**
Repetitive Loss Property? **Unknown**

Reference URLs

Reference URL 1: <http://www.ucsf.edu/>
Reference URL 2: <http://www.fema.gov>

Main Points

- During the last major seismic event, the Loma Prieta earthquake of October 1989, the Medical Center building and the Medical Sciences Building (MSB) experienced significant damage to the expansion joint between them.
- An engineering analysis revealed that due to the differences in the relative stiffness of the structures, they would perform better independently than tied together.
- Project Seismic Saw-Cut will physically sever the structural connection between the two buildings and install a seismic expansion joint in the gap. This improves the chances of both structures surviving a seismic event with minimal significant structural damage.