

## Saint Joseph's Church

Structural Investigation of Fire Damage  
Yakima, Washington



### CLIENT

INRECON

### STRUCTURE

Built in 1905, this historic church is constructed of various materials: the church walls are stone and brick masonry; the bell towers are concrete and masonry; and prior to a fire, the roof was framed with large timber trusses and rafters.

### CHALLENGE

WJE was retained to investigate fire damage to the walls and roof of the church and design repairs. Due to the historic significance of the church, maintaining the original appearance of the structure was a primary requirement of the repairs.

### SCOPE OF SERVICE

- Surveyed the structure, including visual and binocular observation of the walls and roof
- Conducted limited sounding of the masonry, mortar, and concrete to identify fire damage to the walls
- Designed new roof trusses and connections from the trusses to the existing walls

### SOLUTION

- Concluded that most of the fire had been confined to the timber roof structure and that structural damage to the masonry walls was minimal
- Developed conceptual repairs to restore the fire-damaged masonry and concrete, replace the roof with new framing, and tie the new roof to the existing masonry walls to improve the seismic performance of the structure
- Designed repairs to restore the structure to its original appearance and function