



## ORIGINS

◆ As the original setting for Rev. Robert Schuller's "Hour of Power," television show which had 2.2 million views in 156 countries at its peak in the 1970s, the Crystal Cathedral was arguably the most recognizable evangelical Protestant church in the world. The original reflective glass building of the Crystal Cathedral was designed to incorporate Schuller's request that it be open to the "sky and the surrounding world," as well as conducive to television filming.

◆ The Diocese of Orange purchased the 88,000-square-foot glass building on Chapman Avenue in 2011. The initial design concept was unveiled in late 2015 and underwent a \$72-million transformation into Christ Cathedral.

## ARCHITECTS

◆ Christ Cathedral Campus includes several structures designed by three of the most noted architects of the late 20th century: Richard Neutra, Philip Johnson and Richard Meier.

◆ Two signature structures are Christ Cathedral and the adjacent Arvella Schuller Carillon, designed by noted postmodern architect Philip Johnson, well known for his use of glass, and his assistant John Burgee.

◆ Another signature building on Christ Cathedral Campus is the Tower of Hope, designed by Richard Neutra and his son Dion. The 13-story building, topped by a 90-foot cross, was the tallest building in Orange County at its opening in 1968.

◆ The third jewel on the campus is the Richard Meier-designed Cultural Center. Meier, renowned for his design of the Getty Center among many projects, was commissioned to build the space used for exhibits, performances, conferences and special events.

## ARCHITECTURE

◆ The cathedral was completed in 1980 at a cost of \$18 million, with the 236-foot steel spire and its 52-bell carillon completed in 1990.

◆ When construction of Christ Cathedral was completed it was touted as the largest glass structure in the world.

◆ The cathedral is designed to withstand a magnitude 8 earthquake.

## ARCHITECTURE: GLASS PANES

◆ The cathedral is composed of a facade with nearly 11,000 glass panes affixed with structural silicone to a steel framework. It is more than 400-feet long and 100-feet tall.

◆ Restoration experts reconditioned all of the cathedral's glass panes, painstakingly cleaning and sealing each of them. Many of them required resurfacing and resealing to protect the interior.

## ARCHITECTURE: QUATREFOILS

◆ The 11,000 aluminum "quatrefoils" are window shades specially designed by the Johnson Fain architects and installed on the ceilings and walls. The quatrefoils cost \$6 million and are designed to deflect UV rays and heat and reduce outside light which is deemed a distraction from the altar with nearly 11,000 panes of glass.

◆ The quatrefoils are a critical part of the cathedral's unique lighting, and its climate- and sound-enhancing system.

◆ Each quatrefoil is composed of four triangles, permanently situated at varying angles. The triangular pieces hover over each pane and open from zero degrees to 45 degrees to minimize heat and glare.

◆ The quatrefoils include exterior lights to enhance the building's visibility at night, producing an effect described as a "box of stars."

◆ Installation of the quatrefoils required one million pounds of scaffolding.

## ARCHITECTURE: CONSTRUCTION

◆ The first part of the cathedral grounds' transformation began in fall 2012 with seismic retrofitting and installation of air conditioning in the Arboretum and Tower of Hope, as well as fountain repairs and other improvements. New LED lighting and a new fire sprinkler system were installed in Christ Cathedral in summer 2017. About 110 construction crew members worked inside the cathedral daily during the transformation. Crews logged about 100,000 work hours from June 2017 to September 2018.

◆ Irvine-based firm Snyder Langston oversaw the work as general contractor.

◆ 11 million parts of scaffolding, like an erector set, were required to paint the nine-story space frame that supports the cathedral's glass panes, hoist frames, support ladders, trusses, planks and plywood.

◆ Snyder Langston hosted large training classes to instruct construction crews on unique and specific protocols.