

THIS DEBRIS MATTERS:
PRESERVING FIRE-DAMAGED HISTORIC BUILDINGS

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CHAPTER IV PROVO TABERNACLE CASE STUDY

History and Significance

Provo, Utah, is home to one of the tabernacles of The Church of Jesus Christ of Latter-day Saints (LDS Church). Tabernacles were a fairly common building type during the late 19th and early 20th century but have not been constructed since the 1950s. Of the more than one hundred tabernacles constructed less than twenty have survived until 2012, thus making those that survive historically, and often architecturally, significant. The tabernacle in Provo was among the most intact examples of the type, and an architectural gem for the state of Utah. It was listed in the National Register of Historic Places in 1975 for its architectural and religious significance.⁵⁹

The first public meetings were held in the Provo Tabernacle in 1885 although the building was not completed and dedicated until 1898.⁶⁰ It hosted weekly religious meetings as well as many non-religious community events requiring a large hall, such as concerts, lectures, graduation ceremonies, plays, and recitals. Almost everyone who lived in Provo in the last century attended at least one event inside the tabernacle. The building remained in continuous use until it burned in December 2010.

The building had been renovated several times since its completion. Its large exterior center tower (see Figure 1) was removed in phases between 1907 and 1917 because of structural concerns. Art glass windows replaced clear glass windows around

1918. Congregants purchased the first phase of a pipe organ in about 1907. The interior of the building was remodeled several times to improve functionality.⁶¹ Most of these changes were compatible with the original design of the building but were easily distinguishable from each other and original building design. Later projects copied faux-graining and the general late Victorian design of the building but used modern building materials and methods such as wire nails and drywall instead of cut nails and lath and plaster. Interior staircases featured four different newel post designs reflecting the decade in which the staircases were built.



Figure 1: Provo Tabernacle Exterior, circa 1900. The center tower was removed in phases between 1907 and 1918 because of structural concerns. [Image courtesy LDS Church History Department.]

The Provo Tabernacle had significance for its architectural style and connections to broader themes of American history. However, this building's significance was largely tied to the identity and heritage for the local community. This building was the cultural and religious center of the Provo community. Everyone in the city knew this building and had a story about this building. Many even had a favorite architectural feature without knowing how that feature fit within the timeline of the building's construction.



Figure 2: Provo Tabernacle Interior in 2006. Note the pipe organ installed in 1907. Other renovations apparent in the photograph include small meeting rooms to the sides of the rostrum, widening of the rostrum stair case, and a decorative carved panel behind the pulpit. [Image courtesy LDS Church History Department.]

Like many other historic buildings, the Provo Tabernacle was assumed to be one of those buildings that would be around forever. The building was frequently used and in

good condition. Unfortunately, the building was not fully documented: no original architectural plans survived and more recent projects left little documentation. Some rooms had never even been photographed.

Cause of the Fire

The Provo Tabernacle building had a fire detection system installed but no fire sprinklers. The fire detection system had been malfunctioning in the months before the fire; thus the frequent alarms were mostly ignored. On December 17, 2010, a group was preparing the main hall for a Christmas concert. The event called for an elaborate stage and an equally elaborate lighting plan. Similar events had been held in the past and those planning this concert felt very comfortable in the building. As part of the lighting design, a three hundred watt can light was relocated from its position in the attic to make room for a lighting truss. Rather than disconnecting power to the can light the lighting contractor simply placed it on a wood speaker box. A few hours later someone turned on the light switch for the can lights but no one noticed because the lights were not in their usual position.⁶² That 300-watt light fixture started a fire in the attic that eventually destroyed the entire interior of the Provo Tabernacle.

Fighting the Fire

By the time the fire was noticed it had already spread throughout the attic. First responder firefighters entered the building as the ceiling started to collapse. Rather than risk injury by fighting the fire from within the already engulfed interior, fire crews retreated to the exterior of the building. While the building was likely a total loss, the

firefighters followed the protocols of avoiding injury to themselves and others and keeping the fire from spreading to other structures.

Because the fire started in the attic and burned through the king truss, the entire roof collapsed within the exterior walls only a few hours after the first firefighters arrived on scene. Due to the collapsed roof and other debris confined within the masonry exterior walls, the building continued to burn for another 48 hours. This meant that little of the building's interior walls or finishes survived. Every surface in the building was affected by combustion, smoke, or water (See Figure 3).



Figure 3: Provo Tabernacle on Fire, December 17, 2010. [Image courtesy LDS Church History Department.]

Investigating the Fire

The Provo City fire marshal began investigating the cause of the fire before the flames were extinguished. Because the fire marshal was onsite during the fire fighting process he was quickly able to identify the areas of greatest interest for the investigation. The fire marshal collected photos and video from onlookers, took witness statements, and spoke to many of the people involved with setting up the Christmas concert.

Portions of building debris were also removed from the building under the fire marshal's direction to make the building safe to investigate. This debris included heavy roof structural members made of wood and steel. The debris was laid out in a grid next to the building in the exact location it had been found inside the building. Removing dangerous building debris and laying it out in a systematic way after removal are fairly standard practice for investigation of complicated structure fires. This coordinated removal process helped the later salvage process run more smoothly.

Removing building fragments that don't pose a safety hazard to fire investigators before an investigation is complete is not normally done. In an unusual move, the fire marshal allowed the removal of art glass windows that survived the fire because they were not relevant to understanding the fire's cause. The building contractor hired to remove the windows labeled each sash as it came out of the building, making it easier to identify windows later. Removing the art glass windows in the days immediately following the fire allowed this building feature to survive in fairly good condition while a number of other building features deteriorated in the building debris. Most of the surviving windows will be restored because of this early preservation effort.⁶³

In another rare move the fire marshal also allowed employees of the LDS Church to enter the building to look for a significant painting. Art is normally a low priority after a major fire loss but the significance of the piece allowed for the search through dangerous building conditions. Unfortunately, the painting “Restoration of the Melchizedek Priesthood” by influential LDS artist Minerva Teichert was almost completely destroyed in the fire. Searchers were able to identify the painting remnants mainly through the melted Plexiglas cover that had been placed over the painting to protect it from people touching or brushing up against it. Fire crews mentioned after the fire that if they had known the painting’s significance they would have tried to remove it before the roof collapsed.

After a few weeks investigation the fire marshal released the building to the owner with the determination that the fire’s cause was not a criminal act. This allowed the insurance company and salvage crew to enter the building and begin their work.

Salvage and Documentation

The salvage crew consisted of construction workers, architects, and historic preservation professionals. A small team of construction workers under the direction of John Emery from Jacobsen Construction Company managed debris removal and operated machinery. The number of workers varied from four to twenty based on the type of debris removal and the amount of work to be completed. Tim Maxwell, historic architect with FFKR Architects, worked on site almost every day to create record drawings of the building and details. He was occasionally assisted by other staff architects from FFKR Architects. The author managed the salvage of significant character defining features and

documented the salvage process in her capacity as a Historic Sites Curator for the Church History Department of the LDS Church.

Two questions guided the next few months of work on the project: Were the exterior walls stable? Did any character defining elements on the building's interior survive the fire? Portions of the exterior masonry bearing walls collapsed as the roof separated from the walls but overall they were stable and in good condition. Some projecting sandstone courses were broken off by falling building debris and some brick was smoke and soot stained. The exterior walls were structurally braced with steel as a precautionary measure (See Figure 4).

The interior of the building was a far different story. Most of the building had burned and collapsed into an at least six-foot deep pile debris. This debris mixed with the water used to fight the fire then froze in the frigid December weather. Most of the interior plaster separated from the walls. Many wood lintels above doors and windows were completely destroyed. The balcony burned completely, leaving only beam pockets along the exterior walls. Most of the cast iron columns supporting the inside edge of the balcony remained standing. All of the rooms under the front stage area were damaged. Every interior surface, if not charred, was damaged by smoke and water. Because all of the surviving interior finishes were buried under several feet of debris and ice there was little priority in putting a temporary roof on the structure.

The insurance company focused their efforts on the areas where the fire started and initially spread. Because they were primarily looking for electrical information they cared little about room arrangements or interior architecture. The architects and historic

preservation professionals engaged to assess the damage to the building and its possible reconstruction cared little about the electrical details but focused their attention on the floor plan and interior architectural and decorative features. Because of the high total replacement value of the building and potential litigation, the insurance investigators managed the initial salvage operations. The primary goal was to identify locations and details of the source of the fire: the electrical and AV equipment.

Fortunately, these two groups worked side by side. As a shovelful of debris was removed, the insurance company and architects each salvaged building fragments they needed to reconstruct the building's history and the fire's cause. Between December 2010 and May 2011 at least 150 tons of debris were sorted and reviewed in this process. The building was laid out in a grid much like an archaeology project. Each salvaged building fragment was documented according to its position in the grid and labeled as to fragment type and condition.

In the two weeks after the fire the project team created a list of character defining features for the building. This list became almost the wish list of items they hoped to find in the debris or questions they hoped to answer during the salvage process.

The basic building structure was documented only as it helped provide information on changes to the building since the structure and construction methods were fairly typical for the region and time period. This decision to save interior finishes as much as possible but to photograph and then dispose of wood framing was one of the most critical decisions in the project. The entire preservation process and the cost would

have been radically different if interior room framing structures had been a preservation priority.



Figure 4: Provo Tabernacle Interior, March 2011. Note the steel bracing at almost all of the window openings. Most of the plaster was destroyed in the fire and most headers were also destroyed. The floor was partially removed in anticipation of construction of a new full height basement instead of the pre-fire crawlspace. Plastic sheeting was placed over the tops of masonry walls to protect them from further deterioration after the roof collapse. [Image courtesy LDS Church History Department.]

As the salvage process continued it became clear that restoration and reconstruction was possible while the amount of interior damage greatly limited possibilities for preservation and rehabilitation. No single finish completely survived but enough fragments survived that a clear picture could be created of the building originally and immediately before the fire. Because the building had been a large auditorium finishes were fairly uniform. A single style of window trim was used throughout the

building. The building had two baseboard types; one for the main hall and one for ancillary spaces. All original interior doors were made in the same style while doors from later additions to the building were made in styles consistent with the time period of the additions.

In many areas of the building fire burned away the most recent finishes exposing earlier finishes to examination. For example, nine different types of wallpaper and decorative painting were found mostly intact underneath heavily damaged coats of paint. Thus, the fire also presented an opportunity to research a building's construction in a way that can rarely be done. Many of the finishes and construction details would not have been discovered during a typical preservation project. These revealed details aided in a greater understanding of the building's history and change over time. The building's construction and finish history could be clearly seen because the building was so heavily damaged. These details were not readily apparent in historic photographs of the building and were not explicitly stated in archival documentation about the building.

Preservation Decisions

The initial decision for the future of the Provo Tabernacle was to restore the building to its 19th century period of significance. This was possible because of the detailed salvage process, relative intact exterior of the building, and the fact that the building was insured for total replacement value. The preservation project team also determined that the tabernacle filled a critical public need for the community.⁶⁴ Restoring original building finishes did not include exact restoration of the original 1898 floor plan. Improvements in technology and building codes made exact floor plan restoration

impractical. The building did not meet current building code and needed better handicap access. The building would also need a seismic upgrade to meet current code. In February 2011 a meeting of stakeholders and others decided that the acoustics in the building needed to be upgraded and more support space for meetings, event preparation, and restrooms was desired. To accommodate these additional spaces and needs, the design team decided to construct a basement that did not exist in the original building as well as slightly expand the rostrum.

These floor plan changes were possible because while the exterior walls still had a high level of integrity using the seven criteria established by the National Register, interior walls were heavily damaged or did not exist. This allowed the project team the flexibility to accommodate the spaces requested as well as bring the building up to code. Thus, the original plan for the Provo Tabernacle was a rehabilitation and restoration of the exterior with new construction inside the damaged shell of the building.

In summer 2011 the Provo Tabernacle project was cancelled. The president of the LDS Church, Thomas S. Monson, upon review of the project, decided adaptive use was a better option. This option was available because while the exterior had retained most of its integrity, the interior was almost completely destroyed. President Monson decided to turn the Provo Tabernacle into a new LDS temple for the Provo area. While all of the considerations for this decision are not known, he likely considered cost and the fact that the nearest temple was already over capacity and another temple was needed in the area.⁶⁵ He decided that the uses of the Provo Tabernacle could be absorbed by other

structures. This change in use impacted personal significance of the building for many Provo residents but justified the expense in restoring the exterior of the building.

Announcing his decision, President Monson said,

“May I mention that no Church-built facility is more important than a temple...Late last year the Provo Tabernacle in Utah County was seriously damaged by a terrible fire. This wonderful building, much beloved by generations of Latter-day Saints, was left with only the exterior walls standing. After careful study, we have decided to rebuild it with full preservation and restoration of the exterior, to become the second temple of the Church in the city of Provo. The existing Provo Temple is one of the busiest in the Church, and a second temple there will accommodate the increasing numbers of faithful Church members who are attending the temple from Provo and the surrounding communities.”⁶⁶

It is important to note that President Monson stated that the building’s exterior, its only extant feature, would be restored and preserved. This statement provided directed vision guiding all aspects of the project.



Figure 5: Rendering of the Provo City Center Temple. The center tower will be reconstructed. Paint colors and materials for the new roof were being finalized at the time of treatise completion. [Image courtesy LDS Church Special Projects Department.]

At the time of this writing in 2013, construction at the site had just begun. The design team intends for the building to retain its National Register status but the success of that endeavor will not be known until the project is completed in about 2015. At that time an addendum to the original National Register nomination will be submitted. The exterior walls will remain standing with a seismic upgrade located on the inside so as to retain original exterior integrity. The art glass windows will be restored or replicated and the roof reconstructed to its 1898 appearance with a center tower (see Figure 5).

Although the tower and art glass windows were not present at the historic building at the same time, both are character defining features for the building and create much of the building's exterior public identity. Interior finishes salvaged from the fire are being used as design precedents for the temple interior. Even the floor plans have parallels to room locations and dimensions to those in the tabernacle. While the interior of the building will be new construction inside a restored exterior, the interior will feature design consistent with the period of significance.

Lessons Learned

The Provo Tabernacle rehabilitation and restoration project reveals several important decision factors helpful to future preservation projects after fires. The first is to have a strong working relationship between firefighters, fire investigators, insurance companies, contractors, architects and the property owner before and after the fire. More of the building likely could have been saved if the fire department was more familiar with the building's floor plan, significant features, and potential hazards.

The second lesson is that establishing a clear preservation vision is crucial immediately after a fire. The salvage and documentation process occurred relatively quickly because architects, historic preservation professionals, and contractors all knew the significance of individual building elements. The architectural and preservation team trained the contractor to look for character-defining features in the building's rubble. Some of the construction workers tagged and documented items from the debris field even when the architect was not on site to supervise the work. Every member of the project team understood the significance of the building and the meaning it held in the local community. This heightened community awareness also helped the project team during the salvage process because the team knew how closely their work was being observed.

A third critical lesson learned was understanding significance and integrity before and after the fire. A thorough understanding of each building element's pre- and post-fire integrity allowed for quick analysis and clear direction on the appropriate preservation activity. The integrity of surviving building features were analyzed using the seven National Register criteria. Significant building features that needed conservation work after the fire were quickly identified so they could be protected. As use of the building will change after preservation, an expanded understanding of significance is relevant. It was critically important to understand significance and identity beyond definitions in the National Register. Intangible ideas of identity provided as much motivation for preservation of the building as the National Register's statement of significance. The project team took time to understand the meaning of the building to the local community.

They asked community members about their favorite architectural feature and what the building meant in their family. That identity is informing design of new construction, ensuring that the building's authenticity is not completely lost.

Finally, the Provo Tabernacle fire also highlights the need for disaster protection and mitigation plans. Important historic buildings should be fully documented in case disaster happens. At minimum this should include floor plans and elevations, photographs of every room, and written descriptions of significant spaces. Detailed drawings and photographs of individual elements may also be warranted. Historic buildings should have a functioning alarm and fire suppression system. Disaster planning is particularly important in publicly accessible buildings.