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BUILDING DESIGN + CONSTRUCTION

August 2014

Inspiring the Building Team

31ST ANNUAL

RECONSTRUCTION AWARDS

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The Exploratorium at Pier 15
San Francisco, Calif.

 **SGC HORIZON**
a Scranton Gillette
Communications company



2014 JESSE H. NEAL
AWARD WINNER

31ST ANNUAL

RECONSTRUCTION AWARDS

Creativity, collaboration, and skill produce excellence in preservation, adaptive reuse, and renewal.

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BY THE EDITORS:
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The Smithsonian Museum of Natural History converted a staff library into a vibrant Learning Center. Architect/engineer EwingCole led the Building Team for the Bronze Award winner.



Atascadero City Hall was severely damaged by the San Simeon earthquake in 2003. Reconstruction renewed the building's stability, restored its exterior, and improved the functionality of the interior. A ramp system complementary to the original architecture ensures ADA compliance.

california comeback

RESTORATION OF QUAKE-RAVAGED LANDMARK AFFIRMS A CITY'S STRENGTH

Upon its completion in 1918, the building that is now the Atascadero (Calif.) City Hall was the very picture of stability. Intended as the centerpiece of Atascadero Colony—a planned utopian community—the Italian Renaissance structure featured a cruciform plan, with ornate central rotundas on the first and fourth floors. Though the idealized colony never really jelled, the area did thrive, and the building passed through several commercial uses before the County of San Luis Obispo acquired it in 1950. When the city of Atascadero was incorporated 29 years later, the county handed the building over for city offices. The hall, with its grand pillared entrances and red-tiled dome, is featured on the city seal and listed on both the National and California Registers of Historic Places.

In December 2003, the 6.5 magnitude San Simeon earthquake ravaged Atascadero. As city workers dove for cover, the upper rotunda was twisted and wrenched away from its structural moorings. Interior walls and exterior masonry were extensively damaged, and the building was ultimately red-tagged. However, city officials were determined to restore, and improve, the beloved landmark.

Pfeiffer Partners Architects undertook a two-year assessment, including a laser-scan analysis as well as painstaking physical investigations and measurements. The Atascadero Historical Society, an

enthusiastic collaborator, provided invaluable documentation of original conditions. Three packages of work were eventually developed: demolition, FEMA-funded damage repair and hazard mitigation, and city-funded rehabilitation.

The 2008 economic crash posed financial difficulties, and anticipated state funding was eliminated in the subsequent recession. Meanwhile, water infiltration caused additional damage despite the owner's best efforts to keep rain out. Under the management of Bernards, construction finally began in 2010, nearly seven years after the quake occurred.

Stabilizing the structure was obviously the most pressing need. The original building consisted of cast-in-place reinforced concrete floors and unreinforced masonry infill walls between a structural steel, concrete-encased post-and-beam skeleton. Above the fourth floor, the building was essentially an unreinforced masonry structure.

Crews strengthened the existing foundation by drilling 248 micropiles 80 feet deep into bedrock, and pouring pile caps below the foundation. A new structural concrete slab-on-grade was installed at the basement level. Interior perimeter walls up to the fourth floor were stripped to reveal the structure, which was reinforced with more than a million tons of shotcrete and 80,000 pounds of rebar—in essence, creating a building within a building.

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platinum award

31st ANNUAL RECONSTRUCTION AWARDS

PROJECT SUMMARY

ATASCADERO CITY HALL

Atascadero, Calif.

Building Team

Submitting firm: Bernards (construction manager)

Owner: City of Atascadero

Architect: Pfeiffer Partners Architects

Structural engineer: Nabih Youssef Associates

MEP engineer: Davidovich & Associates

General contractor: Dianl Building Corp.

General Information

Size: 58,900 sf

Construction cost: \$21.7 million

Construction time: June 2010 to September 2013

Delivery method: CM agency/multi-prime

The lower rotunda benefited from a new paint scheme inspired by the greens and browns of the California landscape; the painter, a local artisan, donated half of his change-order hours back to the city. Second-floor window overlooks, once blocked, were uncovered and restored, providing views into the space from surrounding office zones. Light boxes behind frosted lunettes give the illusion of natural daylight. In reality, this dome is internal and is topped by a second rotunda housing the City Council chambers.

To fix the upper floors and dome, crews removed most of the exterior cladding, then rebuilt with additional steel and fiber-reinforced polymer instead of shotcrete, which would have been too heavy. Existing steel was horizontally and vertically braced, and roof dome framing members were retrofitted.

When structural improvements were complete, crews used as much of the original masonry as possible to rebuild the walls and roof. In the heavily damaged upper section, about 15% of the roof tiles and 80% of the bricks had to be replaced with color-matched materials. When possible, original tiles, fascia balustrades, and decorative plaster were repaired, cleaned, and returned to their original spots.

IMPROVING INTERIOR DESIGN

Interior reconfiguration was also crucial to improving functionality. Over the years, alterations had resulted in a confusing layout and awkwardly shaped spaces, as well as problematic ventilation. Crews removed most of the interior partitions and built new walls to establish a more sensible floor plan. Efficient HVAC and communications infrastructure was installed.

The lower rotunda was programmed as lobby space and a permit center. Three floors of offices surround this focal point. City Council chambers were constructed in the domed upper rotunda, which once held a library. A small historical museum received a place of honor, reinforcing the building's link with the town.

More than 90% of construction dollars went to firms on the



TIM GRIFFITH

Elegant detailing, a hallmark of the Italian Renaissance style, was re-established in the post-earthquake reconstruction.

Central Coast, including \$5.5 million to local glass, concrete, and masonry contractors. The final construction cost was \$3.3 million less than the original \$25 million estimate. Bernards credits the multi-prime contract process, encompassing 17 separately bid categories, for the savings. City Hall opened on schedule in August 2013, just in time for Atascadero's centennial—an embodiment of civic resilience, determination, and pride.

— Julie S. Higginbotham

Baldwin Auditorium at Duke University, previously a wide space with flat floors, was upgraded by a Building Team headed by designers from Pfeiffer Partners Architects. New sidewalls and balconies, an acoustical canopy over the stage, and a dome restoration were combined with key HVAC and sound-control features to produce an effective performance space.



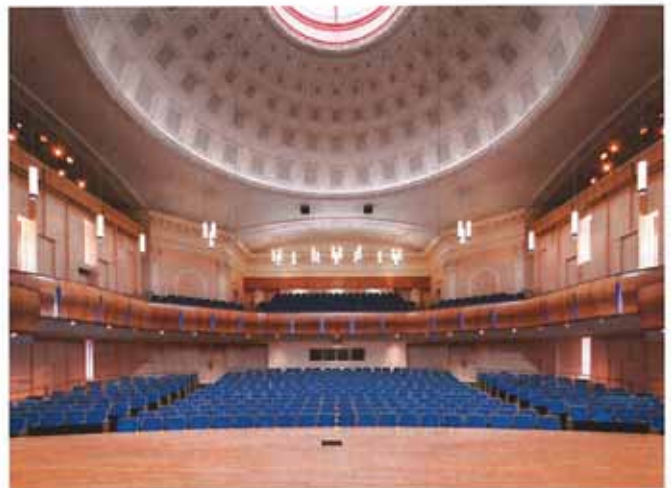
silver winners display creative

ALICE M. BALDWIN AUDITORIUM AT DUKE UNIVERSITY Durham, N.C.

Although the Alice M. Baldwin Auditorium at Duke University has hosted lectures, religious services, rehearsals, and musical performances since its completion in 1927, the sight lines and acoustics in this East Campus focal point were never all that good. Pfeiffer Partners Architects reshaped the interior to improve the sound and views and added wraparound balconies to bring capacity to 700.

New sidewalls make the room narrower, creating a more intimate and sonically balanced space for both amplified and unamplified performances. A lobby wraps around the auditorium, isolating it to improve sound quality. Acoustical adjustment banners line the walls and can be lowered or raised as needed. A new overhead wooden canopy directs sound from the stage into the audience. Gaps in the canopy allow some sound from the stage to escape while providing space for lighting, a film projection screen, and other equipment.

The auditorium stage was expanded and extended forward, making room for larger choral and orchestral groups. The stage, made of perforated wood with more than 75,000 holes, includes a quiet underfloor air distribution system to keep performers cool; UFAD was also provided under auditorium seats on a gently raked floor.



At the rear of the refurbished auditorium, a new control room allows technicians to fine-tune the sound for each type of event hosted in the venue. Adjustable acoustical wall banners can also be raised and lowered to help achieve desired aural effects. The existing dome was repainted and supplemented with new infill panels, and the oculus and arched balcony windows were uncovered and restored.

problem-solving

The HVAC system is connected to a subterranean mechanical vault on the west side of the building; the top of the vault supports a new outdoor terrace.

The historic dome and oculus were uncovered and restored as

PROJECT SUMMARY

BALDWIN AUDITORIUM AT DUKE UNIVERSITY
Durham, N.C.

Building Team

Submitting firm: Pfeiffer Partners Architects

Owner: Duke University

Structural engineer: Gardner & McDaniel

MEP engineer: RMF Engineering

Theater consultant: Theater Consultants Collaborative

Acoustical consultant: Jaffee Holden Acoustics

Construction manager: LeChase Construction Services

General Information

Size: 42,200 sf

Construction cost: \$11 million

Construction time: January 2012 to September 2013

Delivery method: CM/GC

part of the project. Fabric-covered infill panels of varying densities were inserted into coffers of the dome for additional acoustic benefits.

Back-of-house improvements accommodate an elevator, dressing rooms, and instrument and piano storage. The LEED Silver facility has

been upgraded for greater accessibility and now includes a new control room.

This graceful, functional reconstruction has elevated Baldwin Auditorium from its prior status as a substandard performance space to one that is attracting world-class artists.

— Amy McIntosh

680 FOLSOM San Francisco

Located in the heart of San Francisco's South of Market District, 680 Folsom plays the part of the shiny, new office building serving the vibrant, up-and-coming SoMa neighborhood. In reality, it's a gut renovation and recladding of two adjoining buildings.

TMG Partners and Rockwood Capital acquired the vacant former Pacific Bell offices in 2010 on a hunch that its location, large floor plates, and expansive lobby would attract tech companies. The developers commissioned SOM and structural engineer Tipping Mar to reconfigure the drab, 1960s structure into modern, Class A office space—all while meeting stringent seismic requirements and without