

FROM STOCK HOUSE TO VISITOR CENTER

The Stock House is the oldest surviving Bethlehem Steel Corporation structure on the company's former 1,800-acre industrial complex in Bethlehem, Pennsylvania. Between the completion of the Stock House's construction in 1863 and the steel plant's closing in 1997, the building was first enlarged, partially demolished, reconfigured at roof level, and partially demolished a second time as new industrial methods rendered its original function obsolete. The building was rapidly deteriorating when, in 2004, investors purchased a 129-acre parcel within the former steel plant that includes the Stock House.

The investors, Sands BethWorks Retail LLC, donated 9.5 acres at the west end of their parcel – the portion of the site where the Stock House stands -- to the City of Bethlehem for the SteelStacks Arts and Cultural Campus. The City of Bethlehem, the Bethlehem Redevelopment Authority, ArtsQuest, and local public television station PBS 39 formed a partnership to develop the site into a year-round arts and entertainment district. As part of the campus plan, the exterior of the Stock House would be restored and the shed-like interior adapted for three uses: a visitor center that provides information about cultural and recreational destinations in the Lehigh Valley; public restrooms and water fountains for campus visitors including the large crowds that attend outdoor concerts at the Levitt Pavilion SteelStacks; and office space for ArtsQuest, the nonprofit organization that schedules campus programming and manages many of the campus's facilities.

PROJECT PLANNING AND CIVIC ENGAGEMENT

Project planning for the Bethlehem Visitor Center was funded through a Preserve America Grant totaling \$125,768. Preserve America is a federal program administered by the White House that aims to help communities use their heritage to strengthen the local economy. The City of Bethlehem successfully applied to become a Preserve America Community prior to the start of Stock House restoration planning phase, which qualified Bethlehem to apply for Preserve America funds.

At the project onset, all stakeholders agreed that restoring the 1863 appearance of the Stock House exterior was paramount and that the 19th century and early 20th century building fabric should be conserved, where possible. Stakeholders also agreed that the building should house an exhibition space, public restrooms for the campus, and administrative offices for ArtsQuest. After selecting a project architect, preservation consultant, engineering consultants, an economic consultant, and an exhibition designer the architects, historic preservation consultants, and

engineers surveyed and documented existing conditions at the abandoned Stock House. The project team then developed the outlines of a preservation strategy and plan for adaptive reuse.

The team convened a series of public meetings during which they presented preliminary proposals and solicited input from interested members of the community. Community response impacted a number of design decisions including the placement of a new addition to the building (the addition was placed on the back side of the Stock House) and the content of the exhibition space (a combination of electronic kiosks and vitrines to showcase local and regional history and attractions).

After the project team completed a detailed restoration plan they submitted it for approval by the Pennsylvania Historical and Museum Commission, which is part of the Pennsylvania Bureau of Historic Preservation, and the U.S. Department of the Interior, National Parks Service. The state and federal entities deemed the plan in conformance with the Secretary of the Interior's Standards for Restoration and Rehabilitation, a requirement of the Preserve America Grant and an objective of the project stakeholders.

BUILDING RESTORATION

The building was in very poor condition prior to restoration. Water had infiltrated the interior through missing windows and doors, holes in the roof, and deteriorated gutters. Sections of the 2-ft.-thick load-bearing walls had been infilled or repaired with brick. The top of the northeast corner of the building was open to the weather. The stone wall's joints had been patched with a variety of mortars that were eroding. Existing wood window frames, sills, and sashes were in poor condition and numerous glass panes were broken. Door widths had been modified as had window openings. Some window and door openings had been fully infilled with rubble, brick, or concrete block. Vegetation was growing in and on the building.

Exterior demolition

The first phase of building restoration entailed selected demolition. Rubble stone walls were stripped of paint, tar, stucco, and other non-original materials. 20th century mortars not original to the building were removed from stone surfaces and mortar joints. Door and window openings infilled with materials other than stone were cleared.

Removal of non-original materials included: bricks used to stabilize arches and reconstruct wall corners; iron and steel attachments visible at the stone surface; steel projections at roof eaves; and, the circa 1970 corrugated steel roof decking.

Interior demolition

Before remodeling the interior for new uses, many 20th century features were removed to return the building to its original, 19th century open-shed configuration. In the demolition, electrical conduits, electrical boxes, and electrical wires were removed. Steel doors were removed. A 1950s era crane was removed (with state and federal approval). Twentieth century partition walls, storage bins, and a small mezzanine and stairs to the mezzanine were removed. Finally, a metal ceiling of 20th century origin hanging from the roof trusses was removed.

Restoration of rubble stone walls

In place of the 20th century mortars used to patch and repoint the rubble walls, joints in the rubble stone were repaired and repointed with natural hydraulic lime mortar and aggregates that match the building's original mortar. Stress cracks in the walls were repaired. The rubble stone faces (interior and exterior) were pressure washed using silica for a light sanding to clean the surface.

Where appropriate, the brick and concrete block infill removed during the demolition phase was replaced with stone from two sources that match the original rubble stone. A small amount of rubble stone used to infill original window and door openings was salvaged, cleaned, and reused in the wall restoration. Approximately five tons of new stone quarried at Rolling Rock Stone in Berks County, which is 25 miles from the restoration site, supplied the balance. The stone from Berks County is a mixture of Chesterfield Blend and Mount Holly Blue, both of which are quartzite sandstone similar to the original rubble stone quarried in the South Mountain district of the City of Bethlehem.

Restoration of windows and doors

Existing wood window frames and sashes and original wood double-doors were removed, repaired, reconditioned, and reinstalled. Existing glass was salvaged, cleaned, and reinstalled in the refurbished window frames. Existing wood window sills were reconditioned. Wood was painted following reinstallation.

Replication of windows and doors

For wall openings with no existing or salvageable windows and doors, shop drawings used to guide the fabrication of the surviving 1909 windows and doors were followed in the fabrication of replacement wood windows, sills, and double doors. Replicated windows were glazed with a specialty float glass that closely follows the appearance of the original window glass. This glass was also used, as needed, in the restored windows.

Restoration of iron and steel columns, beams, and trusses

Wide-flange steel columns and beams retained from the 1950s crane assembly and support for the 1916 Hoover-Mason Trestle extension were sandblasted and repainted. Roof trusses were also sandblasted and painted. The south half of the trusses are the original Fritz-type half-moon-section wrought iron trusses. The north half are early 20th century angle trusses. In the restoration, truss members were reinforced, where needed, for structural stability.

Installation of a new roof system

A standing seam steel roof was installed over the roof trusses along with metal storm-water gutters and downspouts.

NEW SPACES AND BUILDING SERVICES

The restored building shell, a new mezzanine level, and an addition provide approximately 15,000 square feet of space in the completed project. The ground level of the historic structure accommodates an exhibition area, a vestibule with drinking-water fountains, public restrooms with 68 bathroom fixtures (16 sinks and 52 toilets), and a stairway to the mezzanine. The new mezzanine is inserted into the former industrial shed but set back from the original south wall. The addition with its entrance lobby, elevator, and stairway to the mezzanine is attached to the historic building's north side. New electrical, HVAC (heating, ventilation, and air conditioning), and plumbing services and new ceilings and electric lighting were installed throughout.

Ground level adaptive reuse

The ground level of the Bethlehem Visitor Center hosts public functions defined by walls and doors constructed within the restored industrial shed. Visitors enter the ground level either through a north entrance provided by the new addition with its easy access to a large parking lot to the west of the Bethlehem Visitor Center; or through two sets of double doors at the south side of the restored building that face the center of the SteelStacks Arts and Cultural Campus and lead to the building's new vestibule.

The lobby at the north entrance opens directly to the exhibition area. The south entrances bring visitors to drinking fountains, doors to the exhibition area, a newly constructed stairway to the mezzanine at the east end of the building, and public restrooms. The public restrooms occupy a significant amount of space in the adapted building and serve the entire SteelStacks Arts and

Cultural Campus, including large crowds that attend the numerous outdoor cultural, commercial, and entertainment activities staged on the campus throughout the year.

The tall ceiling in the vestibule reaches above the graceful arches of the rubble stone wall and continues through a glass partition wall and glass doors that separate the vestibule from the exhibition area. Steel columns and beams from the 1950s crane assembly and new steel beams attached to the columns to support the mezzanine march through this tall and narrow slice of space further unifying the public areas of the building.

A radiant heating system is integrated within the ground level concrete floor. The floor in the adapted building is poured on top of a gravel layer that rests on the building's original concrete floor.

The mezzanine level

The ArtsQuest office space includes an open office area, 10 private offices, two conference rooms, a reception area, a kitchen, a bathroom, and a storage area.

Natural southern light enters the mezzanine through windows that connect with the vestibule and double-story space of the exhibition area that in turn gathers light through the building's original stately windows. Northern light falls directly into the mezzanine through restored windows and replicated windows. At selected locations, members of the 1916 truss reconfiguration are exposed at the mezzanine ceiling level.

A contemporary addition

As part of the adaptive reuse, the project contractors built an addition off the former Stock House's north wall at a location that is slightly setback from the northwest corner. The addition accommodates an elevator and stair to the new mezzanine and a ground-level lobby to the elevator, stairs, and exhibition area in the restored building.

The form and material of the addition harmonize with the adjacent steel stacks, are sympathetically scaled to the former Stock House, and appropriately strike a clear distinction between the 21st century addition and 19th century industrial building to which it is attached.

The broad curve of the addition corner's zinc metal panels echoes the form and surface of the blast furnaces. The insulated glass panels that attach the addition to the historic masonry structure provide an unambiguous distinction between old and new. Metal detailing within the stairway harmonizes with the exposed steel columns and beams in the interior of the restored structure.

EXHIBITION DESIGN

The building's flexible exhibition space was conceived as a portal to key sites and activities opportunities in the Lehigh Valley, not a destination in and of itself. The Bethlehem Visitor Center's exhibition area is managed jointly by ArtsQuest and Discover Lehigh Valley, a regional visitor's bureau.

The exhibition area has three table-height interactive video monitors that provide rotating information pertaining to Lehigh Valley history including an historic profile of the Bethlehem Steel Corporation plant and its steel workers; culture and entertainment offerings on the SteelStacks Arts and Cultural Campus and other locations throughout the region; and recreation venues. Walls are used for two-dimensional display. Vitrines in the exhibition area display artifacts from collections of the organizations associated with Discover Lehigh Valley. In a small theatre with lounge seating visitors can relax and watch short documentary films.

A greeter at the exhibition reception desk provides information and support services to visitors.