

SNEC Tours New London, CT

Prior to its annual meeting, The SNEC conducted a walking tour in New London, CT, on September 24. This account provides a summary of the day and brief descriptions of the architectural highlights.

The tour included stops at four historic structures located along the historic harbor area from Shaw Cove to the middle of downtown: the Hopsin-Chapin Factory Building (1885) at 69 Hamilton Street; the US Custom House (1833) at 150 Bank Street; a former warehouse at 84 Bank Street (predates the Custom House) and Union Station (1888). The annual SNEC meeting was held in former barracks at Fort Trumbull (1850), now a modern conference center. The variety of design and construction among these buildings provides a good sense of the rich architectural heritage that New London possesses.

New London historian, Sally Ryan, accompanied SNEC members during the morning; she provided background on the history of the city and on Bank Street architecture as the tour proceeded. Private owners who graciously permitted access to their property were the following people: Robert Wildes for the Hopsin-Chapin Building; Charlotte Hennigan for 84 Bank Street; and Todd O'Donnell and Barbara Temkin for Union Station.

The New London Maritime Society provided a tour of the Custom House. Arrangements with the Connecticut Department of Environmental Protection, which manages the Fort Trumbull State Park, included use of the conference center for a pot-luck lunch and access to the restored Fort and Visitor Center.

Hopsin-Chapin Building. Richard Gipstein, an architect (AIA) who previously studied the structure, provided an account of the structural system for the remaining building at the Hamilton Street site. He worked with New London Landmarks, Inc., a conservation, preservation and revitalization organization (newlondonlandmarks@hotmail.com), in completing the Historic Resources Inventory that listed the building with



*Hopsin-Chapin Manufacturing Company .
Photo by Sara Wermiel.*

the Connecticut Historical Commission.

The Hopsin-Chapin Manufacturing Company made hot water radiators and boilers at a block long foundry and machine shop erected in 1885 across the street from Shaw Cove. The facility is depicted on a 1911 Aero View of New London (Library of Congress, American Memory, <http://memory.loc.gov/ammem>). What remains now is less than one half the length of the original structure. A conventional post and beam floor



*Arch formed with 15 nailed laminations of one-inch thick (nominal) lumber.
Photo by Sara Wermiel.*

structure has been inserted under the original laminated wooden arch construction. Otherwise, little has been altered.

A large open factory space (approximately 70 ft. wide) with a vaulted roof and clerestory was created by fabrication on-site of wooden arches.

These were formed with 15 nailed laminations of one-inch thick (nominal) lumber. The arches are spaced at approximately eight-foot intervals and positioned on large concrete bases at each end; they are 6.5 ft wide by 13.5 ft. deep. The roof deck is supported by 2x8 purlins spaced at 24 in. on center, perpendicular to the arches. A monitor roof runs the entire length of the vault to provide light and ventilation; it is conventionally framed with wood studs, rafters and diagonal bracing. (The weight of the roof monitor has caused deflection at the top of the arches, where flattening of the curve is noticeable.) The roof profile is completed on both sides of the arches by small shed roofs. Twelve inch thick brick walls enclose the building.

The post and beam structure under the arches creates a second floor level supported by 2x10 floor joists spaced 16 in. on center. The joists are supported by paired 3x8 carrying beams at each arch bay that are in turn supported by a series of 8x8 wood posts with flared wood capitals. The carrying beams are the main support for the second floor and also act as tension members to counteract the horizontal thrust of the arches. For this function, the butt joints where the beam sections meet are connected with thru-bolted metal tie plates. The beams are also thru-bolted there they cross the arches to withstand the tensile forces. The first floor is a concrete slab-on-grade of unknown thickness.

The resulting framing system is a stable, self-supporting structure with a long span upper level, capable of supporting heavy floor loading. The current use of the building is for storage of lumber and other construction supplies in support of a yard in business across the street where water once flowed. Shaw Cove has been reconfigured/filled significantly since the construction of the Hopsin-Chapin building, as has New London harbor in general.

US CUSTOM HOUSE. The building has been in use by customs officials since 1659 and serves today as the oldest operating customhouse in the country. Roberts Mills, the first federal architect, designed this classic Greek Revival granite build-

ing. Among his other works are the Washington Monument and the US Treasury Building, both in Washington, D.C., and other New England customhouses (Newburyport and New Bedford).

Originally adjacent to the Thames River, the



Vaulted ceiling in basement of US Custom House.

Photo by Sara Wermiel.

cruciform design in the basement and sub-basement produced four sizeable storerooms on each level. This allowed storage of incoming goods and contraband. Mills included vaulted ceilings throughout the building, including the basements. The comers in each stone storeroom are not square, but present a diagonal face. One rationale for these features is strength, due to the vulnerability of the structure to flooding.

Exterior doorways on the eastern and southern sides would have allowed access to vessels tied up adjacent to the building. Currently, due to fill and reconfiguration of the harbor, the Thames is a block from the Custom House. A new exhibit at the Custom House includes design drawings for the building and 19th century photographs that allow comparison with the current harbor configuration and appreciation of the changes that have occurred since the time when New London was the second largest whaling harbor in the country.

Among the design highlights at the Custom House are the substantial front doors made with live oak from the USS Constitution. In addition, the flying staircase between the first and second



Cantilever stairs. Photo by Sara Wermiel.

floors appears to project from the wall with no other support. However, each step is notched into the one below it. This distributes load appropriately and the entire SNEC group made the ascent and came back down, no problem.

The Custom House is open Wed-Sun, 1-5 pm and by appointment (860-447-2501)

84 BANK STREET. This early 1800 stone structure has seen many renovations since its original use as a harbor warehouse. The brief stop during the walking tour was to show the latest successful iteration and allow comparison with the Custom House basements. Occupied by a wine and spirits shop now, the walls of the single cavernous stone basement room are exposed and show evidence of a stone extension to the riverside of the original building. The openings in the original riverside wall add to the sense of strength conveyed by the general design. The current combination of simple, but dramatic design and the utilitarian use of space to store and display stock appear to contribute to the success of a young business that is known in the New London area.

UNION STATION. This was H. H. Richardson's last station he died two years before its completion in 1888. The massive brick structure with hip roof and Romanesque details dominates the view for those approaching by land, water or rail. Through



New London Union Station. Photo by Sara Wermiel.

the leadership of New London Landmarks, in 1975 the station was saved from demolition and underwent extensive restoration. Currently involved in a land-use dispute, the building anchors a transportation center that links trains (Amtrak) and buses (Greyhound) adjacent to ferry boat connections to New York, Rhode Island and Massachusetts. Todd O'Donnell conveyed some 20th century history about use of the building by Cold War defense contractors and described the continuing challenges to maintaining the structure as changes occur on neighboring property. He provided a tour of the station interior, including modern offices sandwiched between the original upper floors.

FORT TRUMBULL. This third level defense project was constructed from 1839 to 1850 as part of a national coastal defense system under George Cullum of the US Army Corps of Engineers. Granite obtained from nearby Millstone Point quarries was used to build the Egyptian Revival fortress; an irregular pentagon with projecting ramparts.

The existing fort stands at the end of 230 years of military history. After continuing harbor defense and the start of the US Coast Guard Academy, work concerning anti-submarine research and technology was undertaken at Fort Trumbull during the Cold War. In the mid 1990's the Underwater Sound Laboratory was closed as the Navy focused its efforts in Rhode Island. The State of Connecticut restored the Fort and the asso-

ciated waterfront to create a State Park.

SNEC life member Paul McGinley was involved with the Fort restoration project. During the September 24 meeting, he provided an illustrated presentation on the work with photos of conditions before, during and after the project. He described the delicacy in removing 20th century trappings from a 19th century setting. In the end, however, the tight, secure status of the Underwater Sound Laboratory during the second half of the 20th century preserved Fort Trumbull. As a result, the now restored Fort is in excellent condition. Displays on 19th century artillery and living quarters and Cold War R&D convey the history of the Fort in situ. The adjacent Visitors Center provides multi-media interpretations and presentations on the full story of the Fort.

The Fort and Visitor Center are open Wednesday through Sunday from 9am to 4pm from Memorial Day through Columbus Day. The Park grounds are open from 8 am to sunset. The fishing pier is accessible 24-hours a day. (http://dep.state.ct.us/stateparks/parks/fort_trumbull.htm)

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