CHITTENDEN COUNTY
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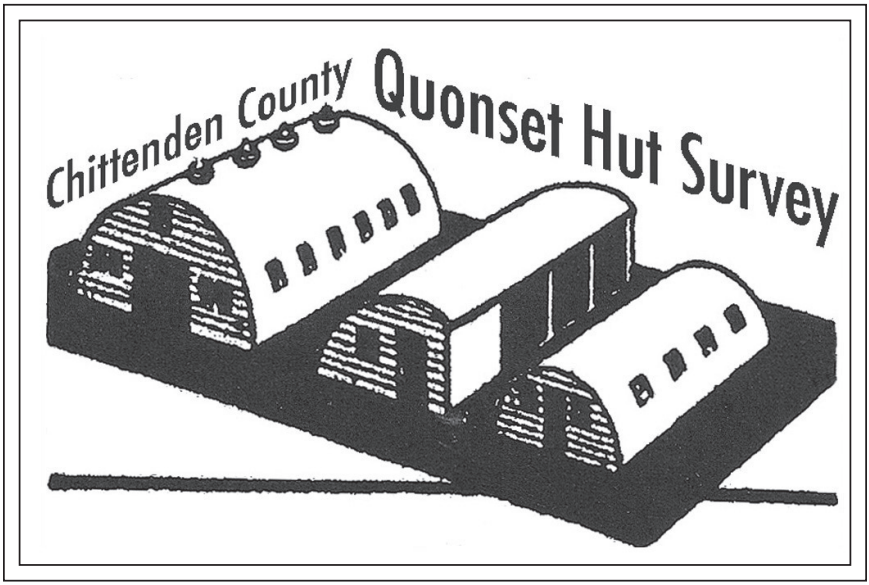

The Chittenden County Quonset Hut Survey

by Devin Colman

Is there a Quonset hut in your town? During the years following World War II, these arch-roofed metal buildings with a funny name could be found throughout Vermont and served a variety of purposes, from retail stores, storage sheds and movie theaters to repair shops, laundry centers and even houses. But how many remain in existence in today? The goal of the Chittenden County Quonset Hut Survey is to identify any Quonset huts that have survived the past sixty years intact and document those that have already been lost.

Origins of the Quonset Hut

Designed in 1941 for the United States Navy and named for the Naval Air Station on Quonset Point, RI, where they were first manufactured, the Quonset hut is an icon of World War II building technology. Needing a lightweight, portable structure that could be assembled and disassembled quickly by untrained workers, the Navy commissioned the George A. Fuller Company to design and manufacture such a building. The Navy specified that it had to be arch shaped, in order to deflect shell fragments in combat zones. Given only sixty days to finalize their plans, a team of Fuller Co. engineers, led by architect Otto Brandenberger, found inspiration in the Nissen hut. Developed and manufactured by the British for use during World War I, the Nissen hut was a semi-circular prefabricated metal building to which the Quonset hut bears a striking resemblance. Functionally, however, the Nissen hut left much to be desired: it was difficult to erect, required numerous parts and tools for assembly and lacked insulation.

By using standardized components that could be put together with common tools and adding a layer of insulation between the interior and exterior wall panels, the Quonset hut became a fully functional building that could be shipped anywhere in the world and erected by a team of ten men in just one day. The Navy's need for such a building was so great that the Quonset hut was put into production before the final plans had even been approved.

Quonset Hut Design

The basic structure of the Quonset hut is straightforward: rounded steel-frame structural members support an exterior skin of corrugated sheet metal, a layer of insulation, and an interior skin of pressed wood. The two open ends are enclosed with plywood panels, into which doors and windows are easily installed. Adding to the Quonset hut's versatility, it could be erected on a poured foundation, pilings, or directly on the ground. Floors were often finished with large sheets of plywood. Some huts included dormer windows along their sides, especially if they were to be used for housing.

The first huts measured 16 feet wide and 20 or 36 feet long. A later version of the huts included low sidewalls to increase the usable interior floor space, rooftop ventilators and various window and door configurations. The Navy manufactured an estimated 150,000 Quonset huts during World War II. After the war, many of the huts were disassembled, shipped back to the United States, and sold to the public for $1,000.00 each. How many of these surplus huts made their way to Vermont?

UVM Quonset Hut

One surviving example is the Quonset hut located at the University of Vermont, behind Dewey Hall (the former Medical Building) at the corner of Colchester Avenue and North Prospect Street. Now used by the UVM Geology Department as long-term storage space, this Quonset hut was erected c. 1947 to house research animals used in medical experiments.[i] In 1948, R. M. Peardon "Pete" Donaghy, MD, chair of neurosurgery at UVM, conducted his first research into peripheral nerve repair in the UVM Quonset hut.[ii] The hut is an example of a Stran-Steel Quonset hut, representing the third and final evolution of the original Quonset hut design. In 1943, production at Quonset Point ceased and was transferred to the Stran-Steel Division of the Great Lakes Steel Corporation. On a Stran-Steel Quonset hut, the exterior corrugated metal siding is installed horizontally, while factory-curved panels form the ridgeline to shed water. These huts were also larger, measuring 20 feet wide by 48 or 56 long.

About the Survey

The Chittenden County Quonset Hut Survey is an informal inventory of the remaining Quonset huts in Chittenden County. Locating and identifying Quonset huts today can be difficult, primarily because they were frequently utilized as outbuildings and erected behind other structures, in rural areas, and out of view from the general public. Several known examples in Burlington that were highly visible have been demolished and replaced with newer buildings. These "lost Quonset huts" will be described in future issues of the CCHS Bulletin.

In the meantime, if you know of a Quonset hut in your town, know where one used to be, or remember living or working in one, please contact Devin Colman at devincolman@mac.com or 802-655-0502. The results of the survey will be compiled and reported in January 2012. For more information about twentieth-century architecture throughout Vermont, please visit www.vermontmodern.com.

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[1] For detailed information on Quonset huts, please refer to the book Quonset Hut: Metal Living for a Modern Age, by Chris Chiei and Julie Decker, published by the Princeton Architectural Press, 2005.

[2] The UVM Quonset hut is shown on the 1942 Sanborn Fire Insurance Map as part of an update in June 1950.

[3] James C. Hebert, MD, FACS, The History of Surgery in Vermont, http://www.med.uvm.edu/surgery/TB1+BL.asp?SiteAreaID=520.

The Quaker Smith Point Water Silo: An Example of Adaptive Reuse

by
Michael Richards

The conservation of historic resources has become an intricate science that employs a variety of professions, including architecture, history, engineering, and fine carpentry. Appropriate treatments must be determined based on a resource's physical condition, historical significance, proposed use, and any requirements necessary to bring the resource up to current codes. In many cases, historic resources can be adapted for entirely different functions than originally intended without damaging their historic character.

Although many adaptive reuse projects make headlines in newspapers and architecture periodicals, transformations that occur in our communities often go unnoticed. This article describes an innovative adaptive reuse project, the rebuilding of a water silo at Quaker Smith Point in Shelburne, Vermont.

Quaker Smith Point

Quaker Smith Point is a teardrop-shaped peninsula that extends westward into Lake Champlain from the southwest shoreline of Shelburne Farms. The point was first settled by blacksmith William "Quaker" Smith and his wife Elizabeth in 1783. The Smiths lived and farmed off the land at Quaker Smith Point, as it came to be known, and constructed a house and farm barns for animals and agricultural storage. The property was handed down to William and Elizabeth's grandson Isaac around 1792. When Isaac died in 1870, his wife initially leased the farm. It became part of the Shelburne Farms estate when Seward and Lila Webb purchased the property in 1886.

According to Shelburne Farms historian Erica Huyler Donnis, "Seward and Lila's eldest son, Watson Webb, was officially deeded Quaker Smith Point in 1913 when he chose Southern Acres as his portion of the outlying properties that Seward and Lila were dividing among their four children. Watson expanded the property by constructing a new silo for water storage, a new sheep fold, extensions to the existing barns, and a new house for employees

and guests. In 1935, Watson and Electra Webb gave their eldest son Sam use of the farmhouse. Sam also made several additions to the property, including a trophy house to showcase catches from his hunting voyages. Sam was then officially deeded the property in 1949" *(The History of Shelburne Farms: A Changing Landscape, An Evolving Vision, p. 198).*

After Sam passed away in 1988, the property was split between his two children, Holly Webb Darling Froud and Sam Webb Jr. They eventually made the difficult decision to divide and sell the property to private owners. Jon Fishman, the drummer of the band Phish, purchased the 18-acre northern parcel of the point in the spring of 2004 and lived in what was once the employee/guest house constructed by Watson Webb. Michael and Karen Stone purchased the southernmost parcel comprising 15.7 acres in 2004, and eventually purchased Fishman's parcel in 2005.

The Stones have made some remarkable changes and additions to the property's buildings and landscaping that have upgraded the site while still preserving the original colonial aesthetic imprinted by the Smiths and Webbs. In 2004, the Stones hired Vermont builder Peter Close to disassemble and reconstruct the water silo.

The Silo

Cylindrical tower silos used for bulk storage have been constructed from wood, steel, rolled steel shells, concrete/stone/brick block, or concrete staves. In the late nineteenth and early twentieth centuries, concrete stave silos were the most common due to ease of construction and concrete's strong compressive strength suitable for storing tightly packed material. The staves are small concrete blocks pieced together by tongue and groove joints and tightly wound by a steel hoop system to further compress the silo to prevent structural failure. Silos with wooden staves, like the one at Quaker Smith Point, were also often wound by steel hoops. The circular design of silos makes for an interesting space that can be adapted to a variety of functions. The simple construction also allows relatively rapid disassembly and reassembly that enables silos to be moved to and from different sites, an attribute that benefits both agricultural needs and adaptive reuse projects.

Photographs on the following pages illustrate the deconstruction-reconstruction process of the Quaker Point water silo. The renovated silo is about 22 feet in diameter, 30 feet in height, and contains about 760 square feet of interior space. The reconstruction features a stronger, light wood frame, red hand-split cedar shake siding, double-hung windows, and a conical metal roof. The water cistern now sits below the silo and still functions to distribute water via the well across the property. A yoga studio and a meditation room occupy the ground and upper levels, respectively. Windows strategically placed around the circumference of the silo maximize natural light and provide breathtaking 360-degree vistas that showcase the rolling countryside and Green Mountains to the east and the glistening water of Lake Champlain and the Adirondack Mountains to the west. Much of the original exterior cedar wood was reused for finishes on the interior walls and other lumber was recycled for the spiral staircase. The silo is naturally cooled by the gentle breezes of Lake Champlain in the summer and can be heated in the winter by propane.

Original silo showing water cistern inside. Courtesy of Peter Close.

Cistern being disassembled and moved. Courtesy of Peter Close.

New structural framing. Courtesy of Peter Close.

View of entrance on south facade.

Second level meditation space finished with the old exterior boards.

The Quaker Point silo project demonstrates how well components from older structures can be recycled. More importantly, it preserves a remnant of our cultural and historical heritage and demonstrates the potential splendor of adaptive reuse. Yesterday's historical vestiges can become tomorrow's active spaces, spaces that can both preserve the stories of the past while providing new life for the present and the future.

Acknowledgements. The author would like to extend *very* special thanks to Michael and Karen Stone for providing access to their beautiful property and giving him information on the silo at Quaker Smith Point. Builder Peter Close provided an array of images documenting the construction process of the silo.

Vermont Barn Census: Chittenden County Barns

In 2009 and 2010, local volunteers and graduate students enrolled in the Researching Historic Structures and Sites course in the University of Vermont Historic Preservation Program conducted a barn census and undertook historical research about farming in Chittenden County. The information they collected about the agricultural heritage of Chittenden County towns is available at:

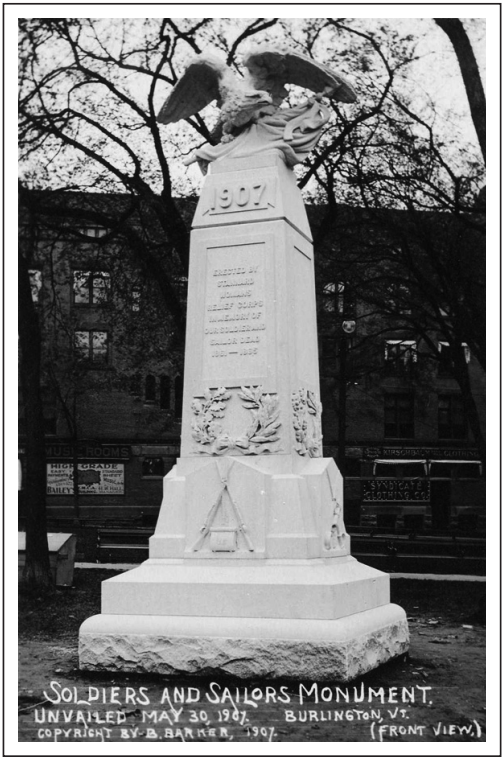
http://www.uvm.edu/~hp206/2010

Civil War Places in Chittenden County

The Vermont Humanities has initiated a project to identify Civil War sites where Vermonters "mobilized, worked, argued, worried, and mourned," including "the churches where abolitionists lectured, the factories that made guns and uniforms, the farms run by women and children in the absence of men, and the monuments, GAR halls, and cemeteries throughout the state."

The Council invites all Vermonters to locate sites, conduct research, and share stories. The Council has created a research kit and templates for walking tours and brochures. The research kit includes helpful information on people, places and themes to look for; sources in towns, around the state, and on the web; a step-by-step guide to finding a Civil War place; a bibliography; and a list of Civil War Places to visit. For more information, consult the Civil War Places Research Kit online at http://www.vermonthumanities.org/Civil War Research kit.pdf.

Two Civil War Places projects for Chittenden County have already been completed. Julia Lewandowski, the Civil War program assistant at the Vermont Humanities Council, designed a "Civil War Places Walking Tour" for Burlington based on research by Howard Coffin. The self-guided walking tour extends from the Old North End through downtown and into the South End. It includes sixteen Civil War places and takes about two hours. Lewandowski is also the author of "Finding Richmond's Civil War Sites." She shares the results of her efforts to find out about the men from Richmond who went to war, events in Richmond during the war, and stories and places that make the town's Civil War history come to life. Download the Burlington tour at http://www.vermonthumanities.org/index_files/Civil War Walking Tour.pdf. Read about Richmond's Civil War sites at http://www.vermonthumanities.org/index_files/Civil War Research in Richmond.pdf.



The Soldiers' Monument erected in Burlington's City Hall Park in 1907. The plaque reads, "In honor of the brave men who victoriously defended the Union on land and sea during the War of the Great Rebellion."

2010 Research Grants

The CCHS awarded five research grants in 2010 to support projects on a variety of topics and places.

Schuyler Jackson of Hinesburg received a grant to support his research on the advent of electric power in Chittenden County and its impact on the culture, society, economy, and land use within the county. He plans to interview residents who remember the transition to electricity and review historical documents.

Judy Rosenstreich will develop a guidebook to the historic Jewish community in Burlington's Old North End. The guidebook will incorporate photographs, interviews with descendants of the original immigrants, and commentary on the religious, economic and cultural contributions of this community to the city, county and state.

Michael R. Gadue will write a history of the Vermont Army National Guard Mountain Warfare School in Jericho that will illustrate the tradition of living and working in mountain and natural environments.

Sylvia Allen received an award to support her comprehensive history of the Vermont Transit Company and a biography of its founder, William S. Appleyard. Vermont Transit services changed the face of transportation in Chittenden County and opened up opportunities for many of the county's residents.

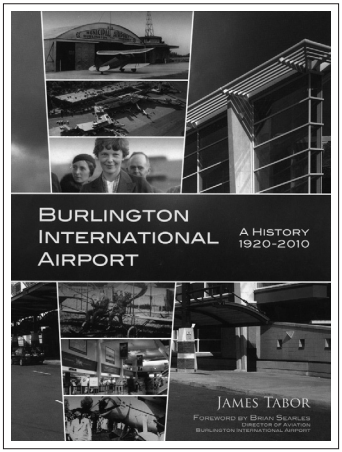
Emily Morgan will conduct a survey of historic structures in the Chamberlain District and Mayfair Park neighborhoods of South Burlington. Her research, including oral histories from long-time residents, will document Chittenden County's evolution from rural to urban and present a history of architectural styles in the two neighborhoods.

Each year, CCHS awards research grants to individuals who propose original research projects about Chittenden County's past. Visit the CCHS web site to find an application.

New Titles on the Book Shelf

Shelburne Museum's Circus Collection. Kory Rogers. Shelburne, VT: Shelburne Museum, 2010.

Shelburne Museum curator Rogers packs the 62-page paperback with colored illustrations of the museum's circus collection. It includes reproductions of nineteenth and twentieth-century posters advertising circus spectacles, aerialists, thrill acts, sideshow freaks, and more. Bulletin readers will be especially interested in the section on posters carefully recovered from the exterior of a Colchester, VT house. The 525-foot long miniature circus parade and the 3,500 handcarved pieces of the Kirk Bros. Circus, favorites of generations of museum visitors, are also featured.



Burlington International Airport: A History 1920-2010. James Tabor, foreword by Brian Searles. Burlington International Airport, 2010.

As Brian Searles, Burlington Airport's former Director of Aviation says in the foreword, this is a "wonderful volume about the personalities, politics and adventure that took this airport from 100 acres with a grass strip in 1920 to the busy facility used by nearly 1.5 million commercial passengers, thousands of general aviation pilots and countless military operations each year." In eleven chapters, author James Tabor takes the reader from the early days of "Wings and Prayers" to the 2010 document designed to guide the airport's development through 2030. The hardcover, 190-page book contains 117 black and white historical photos and 25 spectacular color images.

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cchsvt@gmail.com

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