TOURS OF PORTSMOUTH AND THE PISCATAQUA

19th and 20th Century Landscapes of Work, Pleasure, and the Industrial Home
Economic and Recreational Uses of the New England Coastal Landscape: shipbuilding, summer estates, industrial and factory housing.

Newcastle and Little Harbor: Summering Places, 1880-1920

1. The Gov. Wentworth estate (c. 1750+) is a unique survival of a colonial governor's rural estate. Its unusual building form (once of 50 rooms), rare surviving interior finishes, and historical associations made it a tourist site from the 1840s and the center of a small Boston summer colony of artists and patrons from 1880. The Hall house is a late 19th c. shingled cottage, typical of many summer homes erected along the New England coast.

2. Great Island, renamed New Castle for its harbor fortifications when separated from mainland Portsmouth in the 1690s, was a fishing village that became a summering spot with the construction of the Wentworth Hotel in the 1870s.

   Wentworth Hotel
   Stedman House (exterior only) photo stop
   Piscataqua Cafe (private)

Industrial and Factory Housing: 20th century Housing

New England Homes is a factory that builds modular houses for commercial building dealers or developers. The Portsmouth company, founded in 1960, has changed from pre-fab house types to a CAD assisted system of finished 'boxes' that can be built in a variety of configurations chosen by the client or developer; they build modular units for the client to "design." New England Homes has supplied over 10,000 houses and commercial buildings to the New England landscape.

Nearby, Panaway Manor is a WW II counterpart (1941) to Atlantic Heights, designed to add worker housing for the Naval Shipyard work force. This bus tour and photo stop also passes a Lustron home that was erected in 1950, as well as bungalows and other early 20th century houses on Portsmouth's edge.

Shipbuilding: U.S. Naval Shipyards & Atlantic Heights


Atlantic Heights, built as a planned garden suburb for workers in an adjacent private shipyard during World War I, was one of a few dozen industrial housing projects executed by the federal government's Emergency Fleet Corporation. Drawing upon colonial doorway details from Portsmouth, the architects and planners used 'reform' housing types from several early 20th century garden suburbs to mask progressive intervention into the private housing market.
VERNACULAR ARCHITECTURE FORUM
Bus Schedule for FRIDAY, May 15, 1992:

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5 - 7 PM reception at the SPNEA Langdon House Garden, Haven & Wendeli Houses

DINNER ON OWN
Vernacular Architecture Forum, Tour II

19th and 20th Century Landscapes of Work, Pleasure, and the Industrial Home

With contributions by:

Shantia Anderheggen
Richard M. Candee
Ellen Fineberg
Elizabeth Hostutler
Nancy C. Muller
Woodard D. Openo
Roger Reed

Production by Teresa J. Kirker Hill, courtesy of Preservation Company.
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Portsmouth and Environs
Map drawn by Barbara Schmidt
TOUR 1: Little Harbor and Newcastle: 19th Century Tourism and the Colonial Revival

INTRODUCTION

by Richard Candece

This pair of tours provides a brief glimpse of a subject which will be more fully explored in the forthcoming book "A Noble and Dignified Stream," The Piscataqua Region in the Colonial Revival, 1860-1930, edited by Sarah L. Giffen and Kevin D. Murphy. I thank them and the various contributors to that multi-disciplinary catalog for allowing their work to be excerpted and paraphrased for these VAF tour notes.

In process of inventing New England, few played a more active role than the popular mid-19th century writer Henry Wadsworth Longfellow. The Wentworth mansion at Little Harbor became an icon of the earliest phases of the colonial revival movement. First was the opening of the house as early as the 1840s to visitors, the Romantic literary retelling of the older governor and his maid (1863), and the commercialization of colonial relics seen in the 1870s stereopticon cards of the building's interior. Next came the artists and architects who promoted New England's buildings as an image at the heart of a new Colonial Revival architectural style. Robert Swain Peabody's plea that the architectural profession should avoid copying English Queen Anne forms and, instead, look for inspiration in native examples of Georgian architecture, was published in the American Architect and Building News October 20, 1877. One of the two images published with his essay was his sketch of the Wentworth mansion. The next year, Arthur Little, a draftsman in the Boston architectural offices of Peabody and Stearns, published his own sketch of the exterior on the title page of Early New England Interiors.

The sorting out of the physical evidence of the structure's construction, decorative finish, and uses has only begun. James Garvin, the New Hampshire architectural historian, continues his investigation of the building's history and the late Arthur Gerrier provided the first scientific paint analysis and identification of several subsequent alterations. But one of the best comments on the 18th century symbolism embodied in the house may be that of John Cornforth, the architectural editor of Country Life. Writing about the chimneypiece in the Council Room he said:

"Rightly it has been recognized as being derived from the one in the Stone Hall at Houghton engraved by Kent in his Designs of Inigo Jones....But surely what is even more interesting is to find the Royal Governor so consciously imitating the famous British Prime Minister: is it not a statement about his political position?"

Not only did Benning Wentworth identify with the Prime Minister's politics, but with his expectations about the rewards of Royal service represented in the construction of Houghton Hall, Norfolk (1722-32). Mark Girouard notes that "At Houghton Sir Robert Walpole built the most sumptuous house of its day out of the proceeds of public service.” Walpole used that country house to entertain colleagues in government and the local...
Council Chamber, Wentworth-Coolidge Mansion (Portsmouth Athenaeum).
gentry who assembled there twice yearly "to drink, hunt, eat and indulge in bawdy, gossip, sight-seeing and politics" in the "informality of the rustic." The source of the Council Room chimneypiece does suggest that Wentworth, the center of a New Hampshire's political oligarchy and major beneficiary of its vast holdings in western lands, may have thought of his estate in a similar, if provincial, way.

The social landscape of the Little Harbor summer colony in the late 19th and early 20th centuries is the subject of Woodard Openo's study of the impact of a close-knit group of Harvard-trained artists and their friends. After a generation looking at the big seaside cottages of the northern Atlantic coast through Scully's eyes, Openo suggests that the aesthetic appropriation of the past played out in the new summer homes of Little Harbor and New Castle in the 1880s and 90s might more appropriately be styled the Shingled Colonial.

The new houses around the remodeled mansion at Little Harbor, and the cottages along the New Castle shore off Wild Rose Lane, were only one aspect of the impact of 19th-century tourism on Portsmouth's periphery. Professor Barrett Wendell, for example, looked on those staying at the Wentworth Hotel as a somewhat suspect class. The big hotel was, throughout the century, in the ownership of a Boston distiller and then a Portsmouth brewery owner and politician. While socially prominent or wealthy families were often said to be among its clientele, the urban middle class took most of its rooms. Its design probably owes more to the several contractors who built its several additions than to trained architects, and its interior was that of decorative painters and "fresco artists." From the start, the hotel was assisted by the island's sole antiquarian, who helped acquire the initial real estate for the hotel and picked the name Wentworth to associate the site with the mansion across the harbor. In the 1880s the hotel management published his local history as a tourist promotion. By the turn of the century the island's year-round residents discovered other ways to profit from the summer visitors. The Piscataqua Cafe is a unique, largely unchanged, commercial/residential structure that illustrates one way the fishing community responded to a harbor full of yachts.

Sources:


J.G. Hale's Plan of Wentworth Farm 1812 (State of New Hampshire)
THE WENTWORTH-COOLIDGE MANSION: Little Harbor, Portsmouth, N.H.

by Nancy C. Muller, Director
New Hampshire Division of Historical Resources and State Historic Preservation Officer

At the end of Little Harbor Road in Portsmouth, overlooking the water and islands beyond, sits the Wentworth-Coolidge Mansion,

Sequestered among the trees, a noble pile,
Baronial and colonial in its style

So Longfellow described the Mansion in his 1886 poem, "Lady Wentworth" from Tales of the Wayside Inn. Other early writers were less romantic in their descriptions. Samuel Drake Adams, in Nooks and Comers of the New England Coast of 1876 wrote, "The exterior of the mansion does not of itself keep touch and time with the preconceived idea of colonial magnificence. Its architectural deformity would have put Ruskin beside himself. The result is an oddity in wood."

By the time these writers were commenting on the mansion, it had already assumed mythical proportions, supposedly composed of fifty-two rooms with a cellar large enough to stable thirty horses. By the mid 1870s, the Mansion's owner was encouraging tourists to visit "Gov. Wentworth's Homestead" to "experience the choice venerableness [sic] which the antiquarian can fully appreciate."

Perhaps more than any other eighteenth-century dwelling in America, the mansion's history has continued to perplex the many scholars, architects, and historians who have studied this rambling, awkward, multi-levelled yellow structure.

The earliest deeds to the property indicate that in 1663 Christofer Souten, a fisherman, sold a site at the conjunction of Sagamore Creek and Little Harbor to Mark Hunking, consisting of eleven acres including a house and other buildings. Mark Hunking, Governor Benning Wentworth's great-grandfather, ultimately left the property to his son, Mark, who in turn left it to his daughter, Sarah Hunking Wentworth, Benning's mother. At the time of Sarah's death in 1741, the property, which then consisted of thirty acres of land plus a three acre island, included a dwelling house, orchards, a warehouse, and wharves. It was left to her children, with sons Benning and Hunking named as executors. Benning Wentworth (1696-1770) was to serve as Royal Governor of New Hampshire from 1741 to 1767. His father, John Wentworth, had been Lieutenant-Governor of the state from 1717 to 1730, and the Wentworths were one of the most politically and socially significant families in Portsmouth.

By 1745, twenty acres of the property had been acquired by Benning's oldest son, John Wentworth, Jr., containing the "homestead or Mansion House of the late Mark Hunking and land adjoining with all buildings thereon." This land, plus an additional twenty acres which John purchased from a neighbor in 1756, passed to Benning when John died, single, in 1759.
Wentworth Mansion: west side, as published in American Architect and Building News 2, no. 95 (October 20, 1877). Drawing signed by Robert Swain Peabody (monogram).

Floor Plan—First Floor

KEY TO FLOOR PLAN
A Modern wing, residence of caretaker of the property.
B Early shop or warehouse, perhaps moved here from elsewhere and converted to a kitchen wing about 1750.
C Early Building, possibly a dwelling, moved and attached to the first unit about 1750.
D Main residential section, containing elaborate woodwork and wallpapers. Part of this unit was originally covered by a flat deck from which to survey a formal garden laid out on the lawn below.
E Council Chamber wing, with a monumental carved mantelpiece derived from an English architectural guidebook of the 1700s and fashioned by local carvers.
F Guest wing, added by J. Templeton Coolidge in the twentieth century.
Most historical accounts describe Benning as building his mansion in 1750, but the first concrete evidence of his permanent move to Little Harbor appears in 1753. Before that time, Benning lived in Portsmouth, renting a wooden house on Daniel Street from his sister, the widow of Archibald MacPheadris, from 1728-1741 and then moving to MacPheadris’ impressive brick house, also on Daniel Street, which he rented from 1741-1759. Unable to persuade the General Assembly to buy or even repair the MacPheadris House, Wentworth sent the House a message on April 26, 1753:

"This being the most advantageous season to make Provisions for a Provincial House, I am hoping you will Embrace it, that neither myself or the Government may be put to any further inconvenience on that account. For this end, I have Provided a house to remove my furniture into, that the workmen may have no interruption from me if the Brick House should be thought most convenient."

Thereafter, Benning apparently stayed at Little Harbor for the remainder of his life, creating an eighteenth century country gentleman's farm with gardens, orchards, fields, and pastures, eventually covering over one hundred acres. What buildings he inherited on the site remain a mystery, but the mansion as found today seems to have survived little altered from his day and is one of the few existing colonial Governor's mansions in America.

The house is an assemblage of at least four, and possibly five, pre-existing buildings, linked with awkward passages and transitions and appended with small, seemingly useless rooms. None of the structures appear to predate the early eighteenth century, one of the earliest perhaps being the two-story kitchen area. The heavy framing and flooring of this unit and the fact that it originally lacked any fireplace indicate that this portion of the house may have once been a warehouse or shop. Brought together along with this warehouse "kitchen" were:

1. a lean-to with cooking fireplace, scullery, and stove rooms
2. a one-story wing, also probably at one time a free-standing unit, which today contains the visitors' bathrooms and a small portion of the caretaker’s apartment
3. a two-story dining room wing, another pre-existing structure
4. the two-and-a-half story parlor wing with the best chamber and original roof deck over it.

Exactly when each of these sections was originally constructed has not been clearly established, but all the various parts seem to have been brought together by June of 1760 when the first known depiction of the "Governour's House" appeared in the Portsmouth Town Records. The same year Benning married his twenty-three year old maidservant, Martha Hilton (his first wife having died five years previously) and had his full-length portrait painted by Joseph Blackburn. A joiner named Neal was employed by him from 1759-1765. The so-called "Council Wing,”
Wentworth Mansion: west side, c.1886, as it appeared when purchased by the Coolidges (Coolidge family photograph).

Wentworth-Coolidge Mansion: c.1886, northeast corner as it appeared when purchased by the Coolidges (Coolidge family photograph).
constructed from another pre-existing building, was probably added at this time, undoubtedly meant to serve as a ballroom with its parlor and dressing rooms. The fireplace in the main chamber is particularly noteworthy and indicates Wentworth's awareness of English fashion of the period. The design copied a fireplace at Houghton Hall in Norfolk, England which appeared in two English architectural books published in 1727 and 1737.

From 1761-1765 Governor Wentworth hired a Boston farmer, Thomas Smith, to work for him. James Grant's "Plan of Piscataqua Harbor, the Town of Portsmouth" of 1774 depicts the property with a number of outbuildings, some of which were warehouses, and a large garden with radiating paths from a central gazebo or garden house. The first lilacs, by legend at least, were planted during Benning's lifetime. In 1770 Benning Wentworth died, and two months later his young wife married a retired English Colonel, Michael Wentworth. An "accomplished gentleman" of "excellent qualities," Michael played the violin and other instruments and was a noted horseman.

Inventories from the estates of Michael (1797) and Martha (1807) indicate that the Mansion was extremely well furnished during their tenure there having some furniture described as "Old-fashioned" and some of the "highest stile," including red and yellow silk damask chairs, sofas, and beds and window curtains. There were an unusual number of carpets, paintings, and prints, costly china and glassware, a large library, and the "grand" Longham and Broderip harpsichord which still graces the house.

Michael and Martha's only child, Martha, inherited the estate upon her mother's death in 1805. Martha had married a grand-nephew of Benning's, Sir John Wentworth, in 1802. Raised in England and trained in the law, Sir John showed relatively little interest in Little Harbor, and the property was leased to a series of people between 1806 and 1816 when it was finally sold to Charles Cushing of Boston. A map of the estate by John G. Hales, dated 1812, indicates that the extensive gardens, orchards, and pastures had been maintained.

Charles Cushing came from a well-established family, and he continued to farm the estate and to raise a large family. Locally he served on the school board and as a petit juror and added valuable properties and stocks to his estate. His wife, Ann Huske Sheafe, was the daughter of the prominent Portsmouth merchant, Jacob Sheafe, and she was allied by marriage to the most influential members of Portsmouth society.

After Charles Cushing's death in 1848, the property passed to the oldest surviving son, Theodore, who lived only a year longer than his father. It then became the property of Theodore's wife, Lucy Sheafe Cushing (a first cousin), and daughter, Anna Sheafe Cushing. Living at the mansion for the next several decades were Charles Cushing's wife, Ann H. Sheafe Cushing; his daughter-in-law Lucy and her daughters Anna S. Cushing and Augustine Sheafe (the latter being Lucy's child by an earlier marriage); his daughter Mary Cushing Israel with several of her children; his youngest daughter Harriet; and a changing assortment of farmers and maids. Nearby on Sagamore Creek lived another daughter, Ann Elizabeth, and her husband Thomas Coffin.
Wentworth-Coolidge Mansion: c.1900. Barn to the left later moved and built into present barn, roof changes. Work probably designed by Alexander Wadsworth Longfellow, Jr. (Coolidge family photograph).

Wentworth-Coolidge Mansion: c.1930s, west side, after addition of new ell to Council Chamber wing (Coolidge family photograph).
In 1875 Lucy and Anna Cushing sold the mansion to nephew and cousin William Pusey Israel and moved to a cottage across Little Harbor Road where Anna lived until her death in 1940. William P. Israel was the first person to capitalize on the mansion's history, encouraging tourists to visit and embellishing the myths which had already been established about the estate. Most of the earliest drawings, photographs, and historical descriptions of the house date from the time of William's ownership, and the property seems to have been largely neglected, with hen coops littering the lawn. In 1886 Israel sold the Mansion and twenty-four acres of the property to become an evangelist for the Adventist Church, traveling throughout the United States.

The last owner, John Templeman Coolidge, Harvard-educated and artistic, was attracted to the old Wentworth Mansion for its antiquarian associations and nearness to the sea. Married to the daughter of the historian Francis Parkman, Katherine Scollay Parkman, Coolidge shared his interests in literature, art, and history with other Boston friends who summered in Portsmouth. Each year he worked on the Mansion, gradually restoring it to its earlier grandeur and respecting its early features including the flocked wallpapers and fine woodwork. The old carriage shed was removed to Leach's Island to become a cabin, and a new guest wing was added in its place. In 1926 another wing for the servants was added to the northwest side of the house, and other outbuildings were constructed, moved, or restored. Included were the "Hennery" made from William Israel's old hen house and the Hall house, both no longer part of the property, and the barn/garage. The gardens were enhanced with a pool, ornamental gates, statues, and new flower beds. The old lilacs were pruned and revived, and the house was painted its present yellow with white trim and green blinds.

John Templeman Coolidge died in 1945, leaving the Wentworth-Coolidge Mansion to his second wife, Mary Abigail Parsons Coolidge. Between 1954 and 1958 she left the property, including the Mansion and Leach's and Clampit Islands, to the State of New Hampshire, which manages this National Historic Landmark property through its Division of Parks and Recreation.


THE SUMMER COLONY AT LITTLE HARBOR

by Woodard D. Openo

Little Harbor is the body of water that wraps around the south and west sides of New Castle (or Great Island), Portsmouth's neighbor to the east. Besides those two municipalities, it is bounded, in part, by the town of Rye. In the 1880s, a summer colony grew up in the vicinity of Little Harbor, populated mainly by socially prominent people from Boston and, to some extent, New York. Almost all of them had some connection with Harvard College; the nucleus had been classmates there in the 1870s.

One of these settlers was John Templeman Coolidge III of Boston, who graduated from Harvard in 1879 and soon thereafter married Katherine Parkman, daughter of the historian Francis Parkman. "Templeman" was probably introduced to Portsmouth by a fellow student from New York, Barrett Wendell (Harvard Class of 1877), whose family originated here. Barrett's parents, Jacob and Mary Wendell, spent summers at the Appledore Hotel, on the nearby Isles of Shoals, and the Jacob Wendell house on Pleasant Street in Portsmouth had been in the family since 1815.

Barrett Wendell, who taught English at Harvard from 1880 to 1917 and wrote numerous books, including a biography of Cotton Mather, persuaded his father to hire another Harvard friend, Edmund March Wheelwright, to design his summer home in New Castle in the summer of 1882. Now demolished, "Frostfields" was located close to the shore on what is now Great Island Common. In the fall of that year, Wheelwright designed a neighboring house on Wild Rose Lane, "Kelp Rock," for the broker and poet Edmund Clarence Stedman of New York. These constituted the young architect's first two domestic commissions. His inspiration for Kelp Rock clearly came from an excursion in Normandy with Alexander Wadsworth Longfellow, Jr., and several other friends in the spring of 1881; the house was described as a "new one-hundred-year-old lighthouse cottage." Subsequent owners added a large ell, and about 1930 the house was redesigned in a fairly standard Colonial Revival style by William L. White, architect, of Exeter, New Hampshire. The tower, located at the east corner of the house to the right of the porch as one faces the facade -- the central feature of the original house -- was removed at that time and replaced by a terrace. The carriage house, converted to a house, preserves something of the original style.

In 1886, Templeman Coolidge (described in the Portsmouth Journal of Literature and Politics as "an artist of Boston," although he came from a Brahmin family) bought the decaying Governor Benning Wentworth Mansion at Little Harbor. John Templeman Coolidge III's parents were divorced and his mother lived in Paris, where he spent much of his childhood and many of his school vacations. As with most of his social group, he felt very comfortable in Europe and he studied with the prominent French artist, Carolus-Duran, through whom he met the artist John Singer Sargent, who became a lifelong friend. When he purchased the farm, Templeman had recently returned, with his wife and two daughters, from a six-year honeymoon in Paris (as the family likes to describe it). His seemingly impractical purchase was supported by his uncle, John Templeman Coolidge II, and very likely encouraged by Barrett Wendell.
"The Hennery," near the Wentworth-Coolidge Mansion with Rogé McKim working in the yard, c. 1890. Architectural work on the building attributed to Alexander Wadsworth Longfellow, Jr. (Coolidge family photograph).

"Creek Farm, circa 1912" (Portsmouth Athenaeum).
Templeman proceeded to restore the mansion and its grounds, converting an existing gable-roofed barn to a guest house for his mother and a sister, Rogé. The "Hennery", as the remodeled structure became known, was almost certainly redesigned by his Harvard classmate, Alexander Wadsworth Longfellow, Jr., who changed the roof to a gambrel and added a long ell on one side. The almost humorously elaborate classical doorway on this very small house is typical of Longfellow and comparable to that of a house he designed on Brattle Street in Cambridge, Massachusetts, very close to his Uncle Henry's house and clearly influenced by it.\(^6\)

"Waddy" Longfellow also designed the neighboring Hall house about 1890 for another Coolidge sister, Elise, and her husband, Dr. Richard Hall. Moved and enlarged early in the twentieth century, probably by the architect, was the mansion's barn, which gives privacy to the Hall house (the Hennery obtains a measure of privacy from its location midway down the bank toward the harbor). The Hall house follows the arrangement of large summer homes of the time, among them Jacob Wendell's Frostfields and Arthur Astor Carey's Creek Farm, in having a clearly-defined servants' wing. The Hennery was simply too small to afford this luxury and was undoubtedly served from the Mansion. Set on rock ledge behind the Mansion, the Hall house is essentially symmetrical on the facade, unlike the functional back, which faces the water. It has been little changed by subsequent owners, except for lightening most of the woodwork (except in the dining room), enlarging the kitchen to take in the pantry, and adding a bay window to that room in place of a double window.

The Hall house (by the Wentworth-Coolidge Mansion), c.1890. Attributed to Alexander Wadsworth Longfellow, Jr., architect (Photograph: Woodard Openo).
Hall house elevations (Drawings: Steven McHenry, Interface Architects)
Wentworth-Coolidge Mansion: John Templeman Coolidge III viewing garden figures carved by Gregory Wiggins, located at the end of the swimming pool, c.1930 (Coolidge family photograph).

Edmund C. Tarbell house, New Castle, N.H.
Center part c.1847, wings c.1905. As enlarged, the first floor on the left was the kitchen and the first floor on the right was the living room (arranged like a living hall with stair in the middle against original house) (Photograph: Woodard Openo).
The Wentworth Mansion presented Templeman Coolidge with a major restoration project in adapting it from a poultry farm to a summer estate. Gradually the rambling house was repaired and some formal elements were added to the grounds, although the Coolidges, like most of the Little Harbor settlers, lived a notably informal life in the summer. Gregory Wiggins, a sculptor from Pomfret, Connecticut, who once taught at St. Paul's School in Concord, New Hampshire, also carved wood sculptures for the Wendells and for the Tavern Club in Boston (of which a number of the settlers were members). In addition to his work, the grounds around the Mansion were decorated with two French eighteenth century garden figures, of cast concrete, brought back by Templeman in the 1880s. The boathouse came to house an artist's studio (with an added shed dormer for light) for Molly Coolidge, as well as numerous boats. Molly was an avid photographer and sculptor who, in her old age, wrote two delightful books about her childhood; when young, she documented much of the family's life at the Mansion in photographs. This boathouse could be considered "proto-Shingle Style" and certainly contributed to the appearance of a Shingled Colonial village on the Coolidge property. (I prefer the term Shingled Colonial to Vincent Scully's "Shingle Style," which has tended to create artificial divisions between Shingle Style, Queen Anne and Colonial Revival that I believe were all part of the same philosophical/aesthetic phenomenon.)

Francis Parkman spent several summers at the Mansion, where he finished his life's work, the great multi-volume history of the French and English in North America, while visiting his daughter and son-in-law there. Even when very old and lame, he enjoyed rowing and fit into the casual life at Little Harbor (unlike his daughter, Katherine, who seems to have been very lonely there). Barrett Wendell had a small one-room studio on the grounds of his parents' summer cottage in New Castle where he wrote in the summers. Thus, most of the settlers at Little Harbor were either practicing writers, artists, photographers or art collectors. Typical of their time, they also enjoyed putting on plays and pageants, usually outdoors. Unlike many of their social group, however, they led comparatively informal lives (except when occasion demanded formality, as when the Careys entertained the delegates to the Russo-Japanese Peace Conference in 1905) and their summer homes reflect this.

The Coolidges and their friends and relatives at Little Harbor were well-educated (by schooling and travel) and knowledgeable about art and history, as well as being, in many cases, accomplished artists. They both practiced and promoted art, and their intense interest in history (at a time when many old houses were being demolished in Portsmouth) led to the preservation of a number of important local houses. Templeman Coolidge had an artist's vision along with a historian's knowledge, a combination which enabled him to see wonderful potential in the Wentworth Mansion, revered by most simply as an architectural oddity and the repository of numerous Colonial legends. The other element here is the settlers' love of the sea and of the sea-girt landscape. This is what attracted the architect R. Clipston Sturgis to purchase the small eighteenth century Martine Cottage on Sagamore Creek, and the artist Edmund C. Tarbell to settle in New Castle in 1905. Tarbell purchased a broad-fronted Greek Revival house and added a gabled ell on either side to produce a unique tri-gabled Colonial Revival house located at the "Portsmouth end" of the island, on the north side of the road. Although some of these houses have been lost and others altered, the extant houses and landscape retain much of the flavor of Little Harbor in the late nineteenth century: a Victorian vision of the Colonial era.
Besides family and professional photography, the best information concerning this functioning and changing uses of the mansion as a country estate comes from Henry P. Coolidge, one of two sons of John Templeman Coolidge III and his second wife, Mary Abigail Parsons, whom he married in 1913, some years after the death of his first wife. Although some of the changes were made when Henry P. Coolidge was very young and others years earlier, he had the advantage of hearing his father's recollections over many years. In the following excerpt from a letter, he described how rooms were used before and during the Coolidge era:

There is no way of knowing how rooms were used before our time save for utility rooms = distillery (our pantry [33]), milk-room (our broom closet [35]), possible counting-room office (our coat room & only telephone room [20]) and formal rooms like the council chamber [23], billiard room [24] with two whist rooms [25 & 26] off it (with slave quarters above [60 & 61]). The old kitchen [38] speaks for itself. We used a remodelled more modern one beyond [42], probably made from knocking down closets & storerooms, but I don't know when.

Main living-room [21], called "The parlor", was to the right of the front door. Here we entertained and had tea, in later days cocktails, and here my father usually read aloud in the evening. [23] Council Chamber -- rather formal, had a piano and was used for concerts when we had musical guests, for evenings of classical records, and on college weekends for dancing to the Victrola.

When my father moved in, two maids lived in the third floor bed-room. Later they sometimes occupied the nursery area [71 & 72]. Eventually my mother added the modern wing beyond the kitchen for them (six bedrooms & bath) but this was not upstairs but on the kitchen level.

My mother added two guest rooms [30 & 31] (in these two rooms, she reused trim from demolished Portsmouth houses, as observed by the late Arthur Gerrier) and six small bedrooms for the maids [48-52] plus a sitting room for them [43] (We were pretty short of sleeping quarters for guests.) None of the other rooms changed use.


Before our time at the end of the house and by the river (where the two new guest rooms were added) there was a group of sheds of some sort, privies and presumably servants quarters. There was no sign of them in my time, but, at some time earlier, enough was removed to the island to make a low bungalow with a screened porch. The first family [referring to Templeman and Katherine Coolidge and their children] used to use it as a camp. Later my sister, Molly Perkins, fixed it up as a simple summer cottage for her family who used it during my childhood. The little oblong pool was among my earliest memories. It must have been there by 1916 or 17 -- maybe before. Its aim was to provide salt water less uncomfortably cold than the ocean and there was a pumping system to keep it filled & changed which was done at high tide. There was a thick hedge of vines around it so that one could bathe in the nude. By drawing a curtain across the entrance, one hoisted a flag to warn off intruders. One of its nicest features was a little fireplace where my parents had coffee brought out after their pre-breakfast
swim. Greg Wiggins was a friend of my father's from the Tavern Club... The pool figures he (Greg) made from a small pair of bronze French 18th century peasant dancers, about six inches tall... My father commissioned them and then designed & made the little arbor they stood in. I presume he designed the whole lay-out for he was an artist & always designing something.

The barn originally stood very near the house, somewhat to the left of entrance porch [36]. I think my father soon (?) moved it up to its present position [the barn, believed to have been built in the Federal period, was joined in its new location by a Greek Revival caretaker's cottage, since removed to North Hampton, New Hampshire. A garage was surmounted by the chauffeur's quarters. The two created the arms of the U-plan barn, introducing a note of formality into the haphazard estate]. Over the years it became the center of a mild sort of gravel courtyard. In the early days it was a proper barn, used for hay, carriages and at least one horse. In my time it housed a beach wagon, a carpenter shop, my fancy loft of pigeons and a small kennel of show dogs.

[Regarding his father]...A special concern of his was ship models and he started, by his own gift, the collection now in the Boston Museum, but before 1927 a good many of the best models were on display in the telephone room [20], and even after the best had gone there were always models around there, also up in the attics. We came of a clipper ship family, and sailing and anything pertaining to the sea were dear to his heart. Appropriately he had a charming little female figure-head standing in the little entrance hall [18] (it is now in the Museum) and a later more florid neoclassic one, painted gold [the one in the Portsmouth Athenaeum], which hung in the carpenter shop/boathouse (once the Governor's black-smith shop, which, I'm sorry to say, the State has torn down). There was also a nautical lady holding a flag as weathervane on the docks and of course for years there was the last of the Pinky Schooners as a landmark in back...[the schooner, incidentally, provided additional guestrooms in a pinch; Molly's book hilariously recounts formally dressed ushers at a family wedding popping out of the derelict ship].
FOOTNOTES


5. J.T. Coolidge III was also a trustee of the Boston Museum of Fine Arts for almost a half-century. In 1920 he and Barrett Wendell unsuccessfully attempted to save the eighteenth century Jaffrey House in Portsmouth from demolition, but managed to save the dining room and parlor for the museum.

6. Edmund March Wheelwright, an accomplished art historian as well as an architect, designed the wonderfully anthropomorphic Harvard Lampoon building at the end of his career. Alexander Wadsworth Longfellow, Jr. ("Waddy" to his friends) was a sociable bachelor who, along with his friends, Templeman Coolidge and Arthur Asto Carey (who commissioned him to design a house at Little Harbor in 1887), was one of the founders of the Society of Arts and Crafts in Boston, in 1897. Waddy's uncle, Henry Wadsworth Longfellow, wrote the poem "Lady Wentworth," about the romantic marriage of Governor Benning Wentworth and his servant, Martha Hilton, in *Tales of a Wayside Inn*.

7. Henry P. Coolidge, letter to the author, April 13, 1989. The paragraphs, written in response to a list of questions, have been rearranged for clarity.


Original Wentworth Hotel, 1873-1878 (Portsmouth Athenaeum).

Enlarged Wentworth Hotel, 1879-80
(Society for the Preservation of New England Antiquities).
THE WENTWORTH HOTEL (later Wentworth-by-the-Sea), Newcastle, N.H.

First hotel 1873, Erastus G. Mansfield, designer
Remodeled and enlarged 1879-80, Jesse B. Edwards, architect
Major additions: 1895, 1897, 1899 (architects unknown)

by Richard Candee

The expanding railroad system and the establishment of hotels were inextricably intertwined, especially in Portsmouth and its island neighbor of Newcastle. The Wentworth, begun at Newcastle in 1873 by Boston distiller Daniel Chase, was constructed during a flurry of hotel-building along the northern New England coast, including the Isles of Shoals, Rye, and Kittery. The simple three-story building, with a front porch facing the ocean and a monitor on top of a hip roof, was designed by Erastus G. Mansfield of Somerville, Massachusetts, one of Chase's distillery investors who is not otherwise known as an architect or builder. For his part in helping acquire the land, local historian John Albee was given the honor of naming the new hotel. "The Wentworth," as it was initially known, memorialized the eighteenth-century governor Benning Wentworth, whose mansion stands across the harbor; the new hotel boasted a massive framed mirror in the parlor "surmounted with a statue of Governor Wentworth."

In 1878 Frank Jones and Frank Hilton acquired The Wentworth; Jones provided the capital and Hilton the hotel management until his untimely death in 1882. Over the next two years they enlarged the hotel, transformed the facade by doubling its length, adding three towers and building a new Mansard roof. The design of the new hotel was apparently supplied by Jesse B. Edwards of Salem, Massachusetts, an industrial contractor who specialized in moving buildings, including those along the Eastern Railroad's right of way. Inside, painted plaster walls and ceilings of "Eastlake frescoing [sic] and aesthetic dados" by "Fresco artist and designer" Philip Butler of Boston (who had earlier painted the Rockingham) decorated the stick style hotel with an Eastlake geometry in dozens of brilliant colors.

After Hilton's death in 1882 Jones considered elaborate plans by Frederick N. Footman, a young Boston-trained architect from nearby Somersworth, N.H. Never executed, presumably because the work could not be accomplished between seasons, the hotel would have quadrupled in length (646 feet across) with five towers and a grand staircase rising from an open hall in the central tower to be heated by "an immense, old-fashioned fireplace of elaborate design." The September 1884 fire at the Rockingham required Jones to focus his building efforts in Portsmouth.

A decade later, between 1895 and 1899, The Wentworth Hotel was enlarged in a neo-classical vernacular that reflected many popular elements of the colonial revival. The exterior, originally green and then yellow, became white. Its lobby was expanded with a circular one-story addition beneath a shallow dome painted with swags and cherubs. A new chimney with a "colonial" enframement was built opposite the main entrance and the walls paneled with mahogany dados. At the same time the elaborate Eastlake painted decoration of the old lobby was replaced by a white...
Wentworth Hotel: dining room wing construction, 1896 (destroyed 1988). (Portsmouth Athenaeum)

Wentworth Hotel with 1899 Colonial Annex (right). (Portsmouth Athenaeum)
decorated plasterwork ceiling of Adamesque detail within the structural organization of large boxed beams.

In 1896 a huge wing replaced the 1880 dining room. The new first floor dining room was articulated by a series of plate glass palladian window openings along its facade and decorated with false-grained plaster columns and pilasters with elaborate composite capitals. Modern improvements in the summer hotel, perhaps designed to attract a more affluent clientele, were advertised when the wing was completed. Upper floors of this wing, unlike the earlier hotel, offered suites of two, three or four rooms with connecting baths.8

In the fall of 1898 the last major addition to The Wentworth was begun. In September, unnamed architects examined the hotel for a 175-foot addition "which will be a separate hotel by itself and connected to the present house by a bridge." Like many new urban hotels, the kitchen and dining room were placed on the upper story, both to expel cooking odors and to provide aerial views of the ocean and harbor. Designed to permit an expanded season, serving a smaller number of off-season visitors with reduced staff, this was later known as the "Colonial Annex."9 The name derived, at least in part, from colonial revival detailing composed of readily available manufactured building parts. These included a fan-lit doorway with entrance settle beneath the semicircular tower, the colonial interior staircase and Ambassador’s parlor (used by the Russian delegation during the 1905 Russo-Japanese Peace Conference), and the white paneling of the dining room with white boxing and cornices picked out in gold to accent trompe l’oeil coffered ceiling decoration.10

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Floor Plan, 1880-1895 (Advertising Brochure, Portsmouth Athenaeum).
Reservation policy:

Each season it is necessary to disappoint many prospective guests whom we cannot accommodate at the Wentworth. The Wentworth policies which have made this hotel so popular might be described as follows:

(a) The best food obtainable, prepared by the world's finest chefs.

(b) Every facility for rest and recreation, including a daily schedule of events designed to please all members of a family.

(c) Careful selection of clientele, restricted to ensure a congenial atmosphere.

In the allotment of accommodations, first preference is given to those who had seasonal reservations the previous year.

Facilities for recreation:

Within easy access of the hotel is our own nine-hole golf course, a 400-yard mashie course; two putting courses, three championship tennis courts; two swimming pools (one heated); boat dock and pier; clam bake and picnic grounds, etc. The Wentworth gardens are among the nicest on the east coast.

June and September after Labor Day are reserved primarily for conventions — July, August and early September are exclusively for individual guests. Children are welcome at the Wentworth; and a specially trained hostess assists with their pleasures. Frequent tours are made to the beautiful gardens and lovely historic houses in the vicinity.
After Jones's death the hotel changed hands several times, was redecorated every generation, and continued to operate as Wentworth-by-the-Sea until 1982. The property became a white elephant; in the Reagan era several new owners attempted to remove the hotel and develop the site with houses or condominiums. The Henley Group acquired the project after some forty housing units had been built along the mill pond and proceeded to develop plans for a modern 350 room hotel designed by The Architects Collaborative (TAC). The architects and property management employed Richard Candee working with Adams & Roy, Consultants to study the old hotel and work with the planning team to integrate only the oldest sections into the new building. Once town planning approvals were accepted in 1988 the owners demolished the later wings to provide space for the new hotel. They then tried to market the resort hotel idea to investors and discovered no one had any money. The Hotel and a local preservation group in New Castle are currently negotiating to preserve the remnant of the hotel and to build an hotel addition that will preserve and reuse the old frame.
Sources:


6. Portsmouth Chronicle, October 12, 1882; May 24, 26, July 14, 1883. Footman’s later design for Frank Jones’ 1886 shingled Queen Anne style summer home, “Ledgemere,” at Sorrento, Maine, may have been Jones’ way of compensating the architect for not using his plans to enlarge the Wentworth. See advertisement, New England [wall plaster] Co., Boston, June 15, 1892, in Frenchman’s Bay and Mt. Desert Land and Water Co. Proprietors of Sorrento, Maine, (n.p., ca. 1894), courtesy of Earle Shettleworth collection.


10. The addition was erected by W.G. Edwards, son of Jesse Edwards and contractor of Boston’s Union Station. The painted dining room ceilings, as well as fragments of the plasterwork and architectural woodwork of the Ambassador’s Parlor, were recorded by Adams and Roy, Consultants in 1988 prior to the demolition of the 1890 wings of the hotel.
Piscataqua Cafe (Photographs: Vince Lombardi).
The Piscataqua Cafe, built on a wharf projecting over the Piscataqua River, served both the New Castle townspeople and the summer yachting crowd from its inception in the 1890s to the late 1920s. Today it continues to function as a private residence for descendants of the Amazeen family who built it.

Two brothers, Luther and Alexander Amazeen, who lived in the eighteenth century farmhouse across the street, built the cafe which was operating by 1897. Constructed on a wharf with a pier that extended into the water and terminated in a small dock, the building was once surrounded by porches. The porches and piers were destroyed in the hurricane of 1954 when docked boats rammed the structure causing its collapse. Unfortunately, the insurance company, which deemed this an "act of God," refused to compensate the Amazeen family for their loss.

Originally, the building consisted of two large rooms on the first floor, extending from front to back (or street to water), which were used as a restaurant. Running along the west/left of the structure were two additional rooms; in the front was an office and in the rear a kitchen area. Adjacent to the end of the kitchen and running along the rear of the restaurant was a porch. The present first-floor room configurations have been altered slightly over the years. The rear porch is gone, the office and kitchen areas divided differently, and the enclosure of a portion of the exterior porch into a work area for the maintenance of fishing gear and the processing of fish (see floor plan). Despite these changes, the original diagonally mounted boards and trim remain largely intact.

Piscataqua Cafe, dining room and staircase (Photographs: Vince Lombardi).
The second floor was primarily home to the family members during the so-called summer months, from April 1 to October 31, as well as occasional guests or boarders. The seven bedrooms were served by one water closet in the hall. The 1 1/2 story attic provided additional sleeping quarters for visiting relatives who would stay for weeks at a time. These rooms remain furnished with the original painted and grained bedroom suites that were purchased for them when the house was built. There were no closets in any of the bedrooms, only hooks and dressers. Several second story porches once extended off the back of the house.

From its inception, the Piscataqua Cafe contained a restaurant and bakery on the ground floor run by the women of the Amazeen family. From a counter they sold homemade pies, cakes and breads to local customers as well as yachters frequenting the restaurant. The men ran the farm across the street and provided the lobsters that were sold in the restaurant. Pleasure boats and yachts cruising up the coast to Bar Harbor would anchor in the harbor and take a dory to the cafe's dock. Here they would dine on lobsters and beer before returning to their vessels to sleep overnight. Many would return for breakfast in the morning.

At one time many small businesses like the Piscataqua Cafe dotted the coastline to serve the burgeoning summer resort crowd building "cottages" along the shores of Massachusetts, New Hampshire and Maine. These wealthy New Englanders, New Yorkers, and Mid-westerners would sail their yachts along the coast stopping at local restaurants and cafes. The Piscataqua Cafe is certainly the sole surviving establishment along the eighteen mile New Hampshire coastline.

Not only did the restaurant serve yachters, but it was also part of the local scene. The Great Island Yacht Club, a local organization, would always hold their annual banquet in the dining room.

With the death of Alexander Amazeen in 1923 and several other family members, and the changes wrought by World War II, it was not possible to continue running the restaurant and bakery. However, the house has not remained idle in the intervening years. The Amazeen family and succeeding generations of Amazeens continue to cherish the building as a family gathering place and a summer vacation spot.

Piscataqua Cafe plans (Measured by Steven McHenry, Richard Candee and Ellen Fineberg. Drawings by Steven McHenry and Lisa DeStephano).
On June 25, 1947 Harry and Clarice Yoken opened Yoken's Restaurant selling 99 cent dinners at a counter with twenty stools in a new streamlined building along U.S. Route 1. At the cash register they also offered English bone china teacups and saucers as tourist items. Two years later, the Thar She Blows Restaurant sign, manufactured by C.I. Brink of Boston at a cost of $20,000, was added to the growing eatery and its Whale Gift Shop.

Mr. Yoken's brother-in-law, Harry MacLeod, Sr., took over in 1958 and the building continued to grow and change. In the 1950s, when Pease Air Force Base brought economic benefits of the Cold War to Portsmouth, the iconography of the facade echoed the commercial image of Mount Vernon. The present exterior, enveloping the older sections of the restaurant and an expanded gift shop, was begun some fourteen years ago and extended to the north three years ago for a new conference center. The restaurant serves one million meals a year, seating up to 750 people at once, and employs 130 workers year round. The gift shop occupies 20,000 square feet, and claims to be one of the largest in New England.
TOUR 2: Industrialized Housing: Pannaway Manor and New England Homes

TWENTIETH CENTURY FACTORY-BUILT HOUSING

by Shantia Anderheggen and Richard M. Candee

Modern "stick-built" construction begins with materials delivered to the site, cut to size, and assembled into a house. The final cost can be adversely affected by the small-scale production of the individual builder, the climate, vandalism or other damage to materials left on the site. Factory-built housing enjoys economies of scale and its partially mechanized construction occurs year-round in indoor facilities. For the prefabricated home customer, there is a fixed purchase price upon placement of the order. New Hampshire currently sells nearly 13,000 one-to four-family houses per year; the majority (68%) employ conventional on-site construction techniques, but some 9% utilize modular construction.

In Portsmouth, three types of prefabricated housing can be seen, each representing a particular era in the 20th century history of American industrialized housing. Sears' Homes (628 Broad Street, The Hazelton, 127 Middle Road, The Westly, or 73 Sagamore, The Dover) represent one type of early twentieth-century prefabricated housing. The mid-century Lustron house (150 Sherburne Road) and the modern products of New England Homes (270 Ocean Road, Greenland) represent successive types of factory-made homes. Together these types of housing may challenge our notions of how various buildings contribute to the contemporary vernacular landscape. Some forms contrast with traditional house forms of the region, others blend into it with revival or geometric anonymity.

The New England Homes factory will pose many questions about how the New England landscape is being changed in the late 20th century. This family-owned business has evolved from the standard designs they manufactured in the 1960s to a new system, tied to a CAD system, that allows the client to shape the design they want. New England Homes, then, manufactures modular "boxes" which may be structured and reconfigured in various ways. Some, as can be seen in their model homes, become standard products to be modified in different ways. As the client is a building dealer, a developer of building sites, their understanding of local market forces and other profit issues control the selection and choices. With more than 10,000 homes throughout the region, this one producer of modular and panelized home represents many other local manufacturers throughout the United States who help define a significant part of their region's contemporary landscape.

Definitions

Industrialized or factory-built housing is often defined as a system of organization for building construction aimed at achieving standardization and mass-production through the use of mechanization. Mid-twentieth century factory-built housing was often modelled after the automobile industry and its success at large-scale factory automation.

Prefabricated housing, housing that is at least partially made away from the building site, currently falls into four categories: modular (or sectional),
panelized, pre-cut and mobile homes (also called manufactured housing after 1974). Modular, panelized and pre-cut differ little in design and construction from conventionally built, on-site houses. These building systems are constructed using conventional stick-built construction with dimensioned lumber and familiar exterior sheathing and finishing. The level of fabrication that occurs at the factory in modular, panelized and pre-cut construction differentiates the systems. The less complete a home is when it is delivered to the building site, the more on-site work there is to be done, increasing the final cost of the structure.

Modular (or sectional) houses are almost totally factory-constructed, three-dimensional structures. Units, or sections, are generally twelve to fourteen feet in width (most states will generally not allow widths of over fourteen feet to travel on their roads) and between forty and sixty-five feet in length. The most common modular design consists of two sections attached along the ridge of the roof.

Panelized construction is essentially two-dimensional, with a greater amount of on-site work necessary than occurs in modular building. The panelized house is constructed from wall, floor and ceiling panels that are usually eight feet high and from four to forty feet long. The panels are normally sheathed on the exterior ("open" panel system), but can also be finished on the interior as well ("closed" panel system). This system offers the customer both factory and on-site flexibility in design and alteration. Panelized systems can be compacted for ease of transportation and tend to be shipped farther away from the manufacturing plant than modular structures.

Pre-cut housing consists of building elements that have been cut, graded, measured and numbered at the factory. The pieces are then shipped to the building site and assembled, usually by a local crew. On-site assembly such as this ultimately costs the homeowner more money than modular or panelized construction. However, pre-cut houses offer the advantage of homeowner participation in the assembly of the house, thereby helping to lower the final cost of the house.

Mobile homes are considered prefabricated housing but are financed as personal property (and subject to HUD construction codes). Other prefabricated construction is financed conventionally. Modular construction is subjected to the same codes as on-site built housing, primarily because modular is seen as essentially similar to site-built housing in both design and construction.

Factory-made building components, building elements that have been at least partially assembled away from the building site, are another expanding area of the home construction industry. These components include pre-hung doors and windows, prefabricated stairs, and roof, floor and ceiling trusses.

History of Prefabrication

There is a long tradition in the Piscataqua of framing buildings to be shipped and erected elsewhere. More than one hundred timber house frames, including "12 frames for Negro huts," shipped from Portsmouth to the West Indies are listed in custom records between 1770 and 1775. Most
were probably venture cargo, but one 1772 pre-fabricated building frame was ordered from a Portsmouth merchant for erection on Grenada in the West Indies. The client specified a "pavillion" roof and a gallery across the front of three rooms en suite. During the California Gold Rush, moreover, the local newspaper reported:

Several houses have been built in this town to be shipped to California and more contracted for. They are about 15 x 25 feet in size, one story with an attic. They have five windows and two doors. The roofs of some are of wood, others sheet iron. They are put together with screws, painted, marked, and then taken apart for shipping. Thomas Norton [of Union and Austin streets] is the builder... The houses made here which cost but little over $100 probably will sell readily there for a thousand.

Elsewhere, a cottage design using a panel system of construction was published as early as 1840 by Baltimore architect John Hall. In the 1860s, Skillings and Flint, Boston and New York lumber dealers, patented a system of small houses constructed from a few standardized panels and other interchangeable parts. These panelized buildings were marketed through a catalogue claiming that the houses could be erected in three hours. In New England, Ernest Hodgson of Boston began the manufacture of panelized wooden buildings in 1892. They were small secondary structures such as chicken houses and later "auto stables." His buildings were conventionally framed wood structures, better known for their high quality and ease of assembly than for their cost savings.

While the earliest prefabricated houses generally used panelized construction, the pre-cut house also saw its beginnings at the end of the nineteenth century. Aladdin Company of Bay City, Michigan and Sears, Roebuck of Newark, New Jersey were early entries into this type of prefabricated housing. Assembly lines for milling, grading and cutting the lumber enabled the company to engage in the large-scale purchasing and processing of lumber. Hence, the pre-cut home's price was more easily fixed.

Until World War II, prefabricated designs, often promoted by well-known architects, accounted for less than 1% of all housing built in the United States. By 1942, however, prefabs supplied 16% in the single-family housing market. The US Federal Housing Authority added 116,000 prefab units during the war, while other Federal and private endeavors built an additional 80,000. During these years substandard materials, dictated by material shortages during the war, gave manufactured housing a reputation for shoddy construction. Thus, local building codes were difficult to pass and consumers had difficulty financing a prefabricated house. Still, at the end of the war, there were over seventy-five manufacturers hoping to market prefabricated houses to provide the nation with desperately needed post-war housing. In 1946, the Veterans Emergency Housing Program proposed the ambitious construction of 2.7 million housing units between by 1947. Of this total, factory-built housing was to contribute 250,000 units in 1946 and 600,000 in 1947. Ultimately, however, only some 37,000 prefabricated units were produced in each of these years.
By the late 1940s there were more than 300 companies manufacturing pre-fabricated homes. Many, including General Panel and Carl Strandland's Lustron, lasted less than a decade after the war. Others were more successful. By the early 1950s, National Homes Corporation, was selling over 15,000 houses per year and became the nation's largest manufacturer of factory-built housing. Founded in 1954, Cardinal Industries, Inc. of Columbus, Ohio, is currently the nation's leader in the production of modular homes and the second largest residential builder in the United States.

Operation Breakthrough, initiated in 1968 and headed by former auto industry executive George Romney, was the next large government involvement in prefabrication in the building industry. This federal program advocated the industrialization of housing production and encouraged corporate interest in the field. Funded by HUD, Operation Breakthrough, set a goal of 26 million housing units by 1978 and subsidized the research and construction of prefabricated housing until 1973. Although never completed, the project was a catalyst for the building industry; it developed new labor agreements, promoted uniform coding for the industry, and introduced advancements in transportation.

Sources:


THE DOVER

SIX ROOMS, BATH AND LAVATORY

There is a certain warmth and "hominess" about a wooden house—a readiness to receive the stamp of its owner's personality and an ability to adapt itself to its environment. It answers the needs of well-to-do or modest builder and holds its own in town or country.

The Dover is an Americanized English type Colonial story and a half cottage, with a convenient floor plan. The massive chimney helps to "tie in" the front gable and the cowled roof lines help to give a compact appearance. The exterior walls are planned for clear bevel siding but will look equally attractive if shingles are used. In either case, we suggest light colors of paint or stain, in contrast to dark shutters, chimney and weathered roof.

The shutters on the front windows are batten type, to match the batten type circle head front door.

Our home building service will furnish every detail to help you have a home as attractive as the Dover. We guarantee quality and quantity, and our ready cut system of construction conserves your building dollars.

THE FLOOR PLANS

From the terrace, the front door opens into a vestibule which has a large coat closet for outer wraps. Handy for your guests. The living room and dining room extend across the entire front of the house and are connected with a plaster arch, also used from living room to vestibule and hall. Plenty of windows assure bright cheerful rooms and a pleasant outlook.

Most every family can use a first floor bedroom—if not for the family, a guest likes a little privacy from the Master bedrooms. Many have converted this room into a combination library and den and still have a "spare" bedroom available by putting a "rollaway" bed in the closet. Note that the semi-open stairs also open into the kitchen—a step-saving convenience. The kitchen will accommodate cabinets quoted in options. The second floor contains two large bedrooms and the bath is above the average size. Linen storage and good closets. Fill out blank for complete delivered price.

Sears, Roebuck and Co.

(Photograph: Courtesy Preservation Press, from Houses by Mail.)
SEARS' HOMES

by Shantia Anderheggen

20th century factory-made housing in Portsmouth begins with Sears, Roebuck's "mail-order" house, a pre-cut dwelling. Sears’ homes were constructed using balloon-frame techniques common to many stick-built houses at that time. However, the components comprising the structure were milled, cut and numbered off-site, at a factory, and then delivered by rail to the building site for assembly. Nearly everything except the plumbing and masonry was provided by the manufacturer, including interior woodwork, paint and nails. Sears' homes were marketed and sold through mail-order catalogues, the first of which was the Modern Homes Catalogue, released in 1908 and featuring twenty-two styles ranging in price from $650 to $2,500, including the plans and materials. The homes were generally sold directly to the homeowner who, upon purchase, could easily change the plans or materials. Three levels of housing were offered: the basic Simplex Sectional cottages, the moderate Standard Built home, and the best-quality Honor Bilt houses. Houses were sometimes depicted in the catalogues with fully furnished interiors, enticing the customer to purchase more than the house from Sears. Initially, the customer provided the local labor to erect the house; later, Sears even provided for construction crews to build the houses it sold.

Sears' housing endeavor was successful for thirty years in part because the house designs represented various current and popular house styles. Staff architects were employed not only in the design of the houses but also most likely in the modification of existing popular styles. In addition, the houses proved to be good quality products that were easy to assemble and available at a reasonable price. Between 1911 and 1935, the manufacturer also provided financing for the homeowner. Although by 1930, nearly 50,000 houses had been sold through Sears and in 1938, sales were over $2 million, by 1940 Sears was no longer manufacturing or selling pre-cut houses. It is estimated that a total of nearly 100,000 houses were sold by Sears in its thirty-two years in the housing business.

Sources:


MODERN HOME No. 264P172 FROM ACTUAL PHOTOGRAPH.

(Photographs: Courtesy Preservation Press, from *Houses by Mail*)
LUSTRON

by Shantia Anderheggen

The Lustron Corporation aimed to produce a low-cost, steel-panel house that would be quick to assemble at the building site. Lustron's prefabricated house, and the efforts of the company president to produce this house, offer a good example of mid-twentieth century efforts in the factory-built housing industry. In 1946 legislation provided for the Federal Reconstruction Finance Corporation (RFC) to loan money to promote prefabrication of houses. The Lustron Corporation borrowed a total of $32.5 million between June 1946 and February 1949. In addition, Lustron president Carl Strandland received a surplus war plant, the 23-acre Curtiss-Wright airplane plant outside Columbus, Ohio. Nearly $1 million in private capital was also invested in Lustron.

The result was a mass-produced, baked-on-steel panel house approximately 1025 square feet in size and assembled with the help of automatic equipment, both in the factory and on the building site. Production for each house would take 280 factory hours and 350 on-site hours. Compared to a traditionally built house of the same dimension which required nearly 1600 hours, the Lustron house represented significant savings in labor costs. The house was sold through dealers who were charged $6,000 before delivery. Lustron promised its customers a $8,000 house. By completion, however, the price was nearly $10,000, depending on transportation costs and other variables (including adaptation to local building codes, a significant problem for prefabricated builders at this time). This greatly reduced the company's ability to compete with the price of a conventionally-built house.

Within two years, Lustron president Strandland had a state-of-the-art mechanized factory and many orders for his steel house. Lustron turned out its first house in late 1948; by October 1949, it had produced 2,100 and sold only 1,700 of these, far below the approximately 35,000 units yearly that Lustron had projected. With over 3,000 employees in mid-1945, Lustron was producing fewer than 26 houses a day at its plant. By March 1950, the government foreclosed on Lustron's RFC loans and Lustron went out of business.

Sources:


Three Deckers in Dorchester, Massachusetts.
TOP: 457 Quincy Street, MIDDLE: 54 Hancock Street, BOTTOM: 43 Barry Street. (Photographs: John Nanian)
NEW ENGLAND HOMES

by Shantia Anderheggen

Sweden utilizes some form of modular technology in over 70% of its construction. In contrast, manufactured housing of some sort makes up about 25% of all the one- to four-family house sales in the nation and in New England modular house sales (26,186 units) are 5% of the US total modular production. While Pennsylvania leads the nation in the production of modular housing, there are 61 plants in New England that produce approximately 12,000 units a year of manufactured housing. New Hampshire is the sixth largest producer of modular/sectional housing in the country, with thirteen plants producing nearly 3800 units yearly.

New England Homes, founded in 1961 as a manufacturer of panelized houses, in 1968 became the first producer of modular homes in New England. The business is carried out on a wholesale basis within the six-state New England region; a subsidiary company at its manufacturing facility provides retail sales to individual home buyers from the seacoast area. Most New England Homes customers are established building dealers who will resell the completed homes to individual buyers for prices which may range from $29,000 to $130,000. Elsewhere, 35 New England Homes authorized dealers, those who purchase a model structure as commitment to the product, have exclusive rights to sell New England Homes within their sales area.

New England Homes has manufactured more than 10,000 domestic and commercial buildings in the last thirty years. A third of these structures have been assembled on sites within a fifty mile radius of Portsmouth. Indeed, 98% of the company's modular housing is shipped to and assembled on sites within 300 miles of the factory, although some New England Homes can now be found as far away as Pennsylvania. Rural areas traditionally offer fertile ground for the sale and distribution of manufactured homes; high urban land values often preclude even moderately priced housing. But New England Homes is not limited to rural New Hampshire, Maine, or suburban Massachusetts; new three-deckers in Dorchester, Massachusetts have been built as urban infill.

Using computer-aided design (CAD), New England Homes provides two essential services to the client. The company offers nine "section" designs which can be combined and altered to suit particular needs. Almost every New England Home produced ultimately includes changes to the basic designs offered by the company. The changes range from altering the location of a window to modifying or customizing other designs for the customer. Linked to the computer design system is another program that enables New England Homes to account for all the building code requirements of each state in the region. State codes are continually updated on the system and in states where third party approvals are necessary, such as Rhode Island and Massachusetts, the system allows for these building code anomalies in the design process.
New England Homes CAD system, factory and on-site construction, finished home (Courtesy New England Homes).
Production

Houses are constructed in sections, year round, in the company's new 2-acre factory. The finished sections are delivered to the building site, placed on the customer's foundation and finished off with products supplied by New England Homes. The production of houses at New England Homes peaks in the spring, when as many as thirteen houses (usually 26 sections) can move through the factory. At this rate, a whole house can be completed in merely eight days. During slower times of the year, one house is produced in approximately twelve days. A peak year for New England Homes would result in the production of nearly five hundred structures while in poor economic times half this number may be produced. During slow times of the year, approximately twenty workers are employed. Each worker remains at one station, while the building section makes its way from station to station on rollers or by overhead cranes. Initially, the deck (floor) is framed and electrical attachments are made. Alongside, walls are framed and run along tracks to conveniently meet up with the deck unit upon each section's completion. Meanwhile, above this work area, the roof has been constructed using trusses purchased from an outside vendor. The deck unit is then rolled to the next work station, where plywood or OSB board is glued and nailed to form the floor. The walls are then attached to the floor unit. The roof is lifted with an overhead crane and attached to the walls with spikes. The interior of the house is almost completely finished with plumbing, doors, windows, floor coverings and painting as well as kitchen cabinets and appliances installed in the factory. The front and rear elevations of the house are finished off and the roof is shingled; gable ends of the house are left unsided until the sections of the house are attached at the building site.

The construction of each section allows for its subsequent journey between the factory and the building site. Comparable on-site construction generally consists of three girders to support the bearing walls. Extended door and window headers also assist in spreading the load. New England Homes builds their structures with four girders. In addition, modular construction uses state-of-the-art adhesives more extensively than conventional construction. The completed sections are delivered to the building site on flat-bed trucks. These modular home sections are then set on the foundation with a crane. Lolly columns are set and house sections are toenailed to the sill. The house is then sided on the gable ends to obscure the area of attachment. The bottom two or three courses of siding on the front and back elevations are generally finished on-site for the same reason. A crew of four (plus the crane operator) make up not only the trucking crew but also the on-site assembly crew. In less than a day, the structure arrives in sections and is set on the foundation; the sections are attached, with all utility and plumbing connections made as well.

Marketing

New England Homes advertises in trade publications and occasionally on television and radio. Surprisingly, one of the most valuable advertisements for the company has proven to be the yellow pages of the phone book. The company emphasizes to the customer the advantage of fixing a price for the house at the start of the building endeavor. There are no surprises; problems with labor, climate and financing are virtually eliminated. New
DOVER

SECOND FLOOR

BEDROOM 4
9'3" x 22'3"

BEDROOM 3
14'6" x 18'3"

BEDROOM 5
9'3" x 22'3"

BATH

UNFINISHED
SECOND FLOOR

FIRST FLOOR

BEDROOM 1
9'3" x 13'2"

BATH

KITCHEN/DINING
14'6" x 13'2"

BEDROOM 2
10'11" x 13'2"

LIVING ROOM
15'11" x 13'2"

28' x 34'

GILFORD II

SECOND FLOOR

BEDROOM 3
8'3" x 13'2"

BEDROOM 4
12'0" x 22'5"

BEDROOM 5
14'5" x 9'9"

BATH

W.C.

UNFINISHED
SECOND FLOOR

FIRST FLOOR

DINING AREA
8'11" x 10'11"

KITCHEN
8'11" x 12'11"

BEDROOM 1
10'10" x 13'2"

DINING ROOM
11'0" x 13'2"

POVER

LIVING ROOM
16'6" x 13'2"

28' x 38

England Homes houses come with a one year warranty on everything, in addition to the standard manufacturers' warranties on components such as flooring and systems.

Sources:

Interviews with Robert P. Killkelly and Mike Donahue, New England Homes.


32-48 Magnolia Street, Dorchester, Massachusetts

(Photograph: John Nanian).
PANNAWAY MANOR

by Elizabeth Hostutler

In the opening years of World War II, the Portsmouth Naval Shipyard expanded its submarine construction operation to employ 11,000 workers, about twice as many as during World War I. Nationwide, more than nine million Americans relocated to work in the defense industry and approximately $6,000,000,000 in federal and private monies was spent to house workers in close to two million new housing units. Political rhetoric described the migration: defense workers had answered the call of their country to help win the battle of production, and their new homes were built to cope with the greatest voluntary migration of free men and women in the history of the world. Pannaway Manor, a neighborhood of 159 single-family homes built by Defense Homes Corp., was one of three large-scale defense housing projects built in the Portsmouth area. The other two were Wentworth Acres, 190 two-, four- and six-family units built around open courts, and Admiralty Court, a neighborhood of duplexes and single family homes built by the Navy in Kittery, Maine.

Defense Homes Corp. was one of sundry federal agencies involved with worker housing during World War II, organized under the Office of Production Management. Pannaway was one of the first permanent construction projects completed, ready for occupancy in December 1941. Although the federal government financed about one-third of all defense projects, most, including Pannaway, were designated to be sold to private owners after the war emergency, relieving the federal government of landlord responsibilities. The country and media responded to the immediate need for two million housing units with patriotism and faith in the sanctity of the single family home. Worker housing was called the second line of defense. Proper housing was critical to the war effort: "The making of engines and munitions of victory is no less vital than the adequate housing of those who make them." American Home magazine proclaimed that the "Strength of its workers stems from the homes they live in and even as we arm for war, we are building for peace."

The design of Pannaway homes relied on small house designs and philosophies codified by the architectural profession and the Federal Housing Administration in the 1930s. The burgeoning popularity of the automobile suburb and economic policies set by the federal Housing Administration to stimulate building during the Depression widely popularized the "small house," less than 1000 square feet in size. In 1931, while addressing the Conference of Home Building, Herbert Hoover said: "Every one of you here is impelled by the high ideal and aspiration that each family may pass their days in the home which they own... There can be no fear for a democracy or for self-government or for liberty and freedom from home owners no matter how humble they may be."

The small houses were most often designed in the Colonial Revival style and called capes or neo-colonials, but were just as easily given an international style exterior. As the cost of construction increased with the addition of modern kitchens, bathrooms, heating and electricity, architects were quick to point out the need for architectural services, even when building a small house. In 1936 and 1937, the editors of Architecture Forum published two volumes of small house designs. Royal Barry Wills
Pannaway Manor (Sanborn Insurance Co. Map, 1944).
published *Houses for Good Living* in 1940 and *Better Houses for Bugeteers* in 1941 two volumes of small colonial house plans. The houses were most often one story, with an expandable second floor, four to six rooms and direct circulation between rooms. In 1939, Alice Waugh, an instructor in Applied Art at Iowa State College, wrote "For its small size and lack of pretentiousness, the Cape Cod cottage has a dignified sedate personality. A more satisfactory model for a small house can scarcely be found." The designers of Pannaway Manor borrowed heavily on this satisfactory model.

Construction proceeded quickly, although the contractors relied on standard practices of the day, including the relatively new use of on-site small power tools. In March 1941, Milton H. Schurrann passed the deed to 37 acres of farmland along Sherburne Road to Defense Homes and ground was broke in April. Plans for 122 homes quickly grew to 159 by May.

By mid-May, 105 defense workers had applied to rent at Pannaway; by October 350 were on the waiting list. Other possibilities for local housing included winter-rentals in the tourist areas of York and Hampton Beach, year-round apartments in Portsmouth that excluded children or pets, or rooms in farm houses out of the city with out-moded or non-existent plumbing and heating. In Pannaway, rents ranged from $40 to $55 a month, and the first residents moved in by Christmas 1941.

The 159 homes in Pannaway line 6,930 feet of winding streets, a design by the Federal Housing Administration, Land Planning Division, New York City (see map). Three floor plans were used; the exterior of the homes differed by the use of clapboard sheathing or cedar shingles, and a gable or hip roof. Exterior Colonial Revival Details included shutters, contrasting trim, pilasters and a small pediment framing the entry and a plain cornice. Inside, plaster walls were painted with textured paint, and 2 1/4" oak boards flooring was laid. Panelled doors and 6/6 window sash throughout the house and dark woodwork and hardwood cabinets in the kitchen completed the picture. Electric refrigerators and stoves and porcelain sinks were installed in the kitchens. The baths were tiled, with a boxed-in tub and shower. The units had full cement basements, and were insulated and heated with oil furnaces. The second floors were left unfinished.

The smallest unit, about 640 square feet, contained a living room, kitchen, bath and two bedrooms. The center entry was flanked by a single window. The 66 four-room homes were concentrated on Colonial Drive, the street that circles the perimeter of Pannaway. The next largest unit, approximately 680 square feet, had an additional dining alcove, separated from the kitchen by swinging, half-length double doors. The block containing the two bedrooms was set back from the facade by about two feet, and a one-car garage was attached to the house by a breezeway. Only thirteen of these homes were built, all but two on corner lots. The remaining 80 units were five and a half room homes, containing a living room, dining alcove, three bedrooms, bath and kitchen. The entry was located to the left or right of a group of three windows and a single window, and square footage measured just more than 700 feet (see drawing).

Pannaway Manor benefited from its early construction date in the war. Later defense projects, including the small Holly Lane neighborhood built just north of Pannaway, were affected by construction material shortages.
5½ room house plan, Pannaway Manor, built 1941
(Drawing: Elizabeth Hostutler).
and time constraints. In the projects that followed, the houses often were built on concrete slabs and made greater use of the rapidly changing prefabrication industry and new synthetic materials such as plywood and wall board.

The frantic pace of World War II defense housing was the merely the spearhead for the construction boom that followed across America in the late 1940s and 1950s. William and Alfred Levitt, geniuses of the Levittowns in New York and Pennsylvania, were christened by fire under government contract to build 1,600 defense homes in Virginia. In June 1942, William Levitt forecasted: "After the war we are going to build houses for the forgotten families of low income and give them more house for the money than they have ever had before.” Defense housing had given the Levitts "some idea of what is possible in the future.” After the war, the Levitts and scores of other contractors built developments of capes and ranch-style homes.

As built, only the 4 1/2 room floor plans in Pannaway divide neatly into the three zones of a ranch: sleeping, living, and garage and or work space. The four and 5 1/2 room floor plans did not incorporate a garage or work space, and a bedroom intruded into the living space in the 5 1/2 room unit. In the fifty years since their construction, many Pannaway houses have "evolved" into ranches. A vast majority of owners have added a garage, attached by a breezeway or additional room, usually an enlarged kitchen or den. In the 5 1/2 room units, the third bedroom, next to the kitchen, is now used as a dining room, and a doorway has been cut between the two rooms. The sense of closure between the kitchen, eating and living spaces often is opened up the removal of doors between these areas. With the addition of garages, driveways and more access from the kitchen to the rest of the house, the importance of the front entry has shifted to the side door into the kitchen.

The houses’ exteriors have likewise changed. Most of the houses are now sided with vinyl or aluminum siding, which covers the original colonial trim. Many 6/6 double-hung windows have been replaced with double-insulated 1/1 sash windows or bowed picture windows. Shed dormers have been added to increase second floor living space. The rhythm of the street layout, however, has not changed. All 159 original units remain, and the streets have not been widened. Twenty-year protective deed covenants, which also excluded "persons of color” from occupying the units, mandated minimum lots sizes of 6,000 square feet and a set back of 25 feet from the street. Since the 1940s, Pannaway has been isolated by the construction of Interstate 95 to its east and Pease Air Force Base to its north and west. No through roads have interrupted the pattern of the original neighborhood.
Sources:


DeCourcey, John, "World War II History of Pannaway Manor," manuscript at Portsmouth Public Library, no date.


*Portsmouth Herald*, selected articles, Feb. 1941 to Feb. 1942.

Portsmouth Planning Board, *First Annual Report*, 1941, Portsmouth City Hall, Portsmouth, N.H.


The White Mountain Paper Company established a pulp mill and headquarters along the Piscataqua in 1902. While the office (top) was finished, the industrial plant was never finished. In 1917, the Atlantic Corporation bought the defunct paper mill, and in 1918, remodelled it as a steel ship-building facility (bottom). This yard won a contract for ten ships from the Emergency Fleet Corporation (E.F.C.), a quasi-public agency created to fund a massive government ship building program, and the Emergency Housing needed to sustain those yards. The Atlantic Corporation took advantage of this government funding to renovate the shipyard and to build Atlantic Heights. The office was moved in 1918 and destroyed by the current owner, National Gypsum Corporation, in 1984.

Elevation, White Mountain Paper Company, office, 1902. (Measured drawing by Philip H. Kendrick, architect)

Proposed plan of Atlantic Corporation shipyard. (Locke Greene Engineers 1917)
TOUR 3: Atlantic Heights and Portsmouth Naval Shipyard

THE DESIGN AND BUILDING OF ATLANTIC HEIGHTS

by Richard M. Candee

The design of Atlantic Heights, a garden suburb built during World War I for workers at the adjoining Atlantic Corporation shipyard, demonstrates the mature relationship between architectural training, progressive ideology, nationalism, and the colonial revival. The key figure in the unified design for 278 family houses in 150 permanent individual structures, eight dormitories, a store, cafeteria, and school was Walter H. Kilham (1868-1948) of Boston. A Boston architect who graduated from M.I.T. in 1889, Walter Kilham became as deeply involved with the study of historic architecture as he was with reforming the design and planning of housing for working people. In partnership with James C. Hopkins after 1901, the firm of Kilham and Hopkins became well-known for the design of schools, town halls, suburban homes, and workers housing. In this work the firm was engaged in what Greer Hardwicke has called the "culture of recall," an ideology that sought to restructure the landscape using architectural symbols of community and civic values drawn from colonial and other sources.¹

When the United States entered the First World War the federal government created the Emergency Fleet Corporation, a quasi-public agency to fund a massive ship building program and emergency housing to sustain those shipyards. Kilham was invited by this government agency in April 1918, on the basis of his prior involvement in reform housing efforts in Massachusetts, to design and plan a million-dollar residential development for the Atlantic shipyard in Portsmouth. In ten days a village plan was developed for the site and several house designs submitted for approval. Construction began that May and, despite the need for design approval from Washington for all stages, and building materials shortages due to the war, the project was substantially completed within a year.

Public buildings in Atlantic Heights: dormitories
(Auction poster, 1925, Collection of the Portsmouth Public Library)
Doorway, Folsom-Kingsbury House, corner Chapel and State Streets (Walter H. Kilham photo album 1917).

(The American Architect 1918)
The design process that led to the selection of the colonial revival style for the mostly brick homes and other buildings at Atlantic Heights illustrates the working methods of well trained colonial revival architects at the turn of the century and suggests the multiple symbolic uses of the style. Kilham had sketched Portsmouth's historic buildings as a student architect and had written about the city's important colonial and federal period brick homes as early as 1902.² His first step in planning this new addition to Portsmouth was to photograph those old buildings whose forms or details might be adapted to the house plans his firm had already built elsewhere. Gambrel roofs, simple Federal-style fanlights set in brick arches, and triangular Georgian pediments over doorways of the city's old homes in particular provided models. A newspaper reporter concluded that the architects had followed as far as possible the colonial lines of the city, "many of the houses having reproduction[s] on a smaller scale of some of the best of the colonial doorways."³ Using these different ornamental doorway details, brick bonding patterns, or occasional clapboard wall on seven different basic house plans not only provided variety but evoked symbolic association with local and regional building tradition.
Proposed and actual plans of Atlantic Heights
(Lockwood Greene 1918; *Types of Housing for Shipbuilders* 1919).
(Types of Housing for Shipbuilders 1919).
Atlantic Heights house plans
(Drawings by Étoile H. Holzaepfel after W. Roger Greeley from Atlantic Heights).
Located along the Piscataqua, a mile beyond the city core, Atlantic Heights was laid out as a self-contained "village" according to reform ideals promoted by the English Garden City movement. Town planner Henry Wright, working for the Emergency Fleet Corporation, assisted the architects in laying out the village plan. Streets conformed to topography, winding around trees and rocks, and were all named for famous Portsmouth-built ships. No curbing was used for the road, nor any garages originally planned, as it was assumed no worker would have an automobile; transportation was to be provided by buses into Portsmouth. Homes were clustered informally to recreate a sense of community and conformed to eight different plans recombined in various ways.

Public buildings, set around what was conceived as a New England town common at the head of the only road into the project, included a proposed village recreational hall with connected shops "of old-fashioned type" to be built in "colonial red brick with white trimming" to look not unlike a miniature Independence Hall. Such architectural symbols were designed, literally, to instill civic pride and community harmony through its colonial style. Kilham and Hopkins had not previously adapted colonial imagery for their earlier reform housing for Massachusetts workers. Its use here, during World War I, reveals several levels of symbolic cultural meaning. This was the first use of federal funds for the construction of houses in an era and a region suspicious of government intervention in the private market. Reformers like Kilham sought to win public acceptance of this radical idea by wrapping many of the two dozen American war housing projects in colonial garb as a patriotic gesture. Moreover, it was expected that well-built permanent homes for workers constructed under the government's war emergency programs would continue as productive industrial communities after the war. The architects and planners wanted to demonstrate that improved housing could be cost competitive with speculative forms of worker housing. They argued that such projects might also improve the nation's social order and that such stylistic associations could help avoid labor strife by inculcating American values among ethnic workers. Congress immediately canceled the program at the war's end, and the government sold all of the housing it had helped build during the war.

However, designs such as those at Atlantic Heights, widely publicized during and after the war, did have a wide impact. Colonial revival architecture had previously been exclusively an elite style for summer cottages of the rich and upper-middle class suburban homes. War-time projects like Atlantic Heights helped democratize this modern "colonial style" as appropriate to small houses built for private industry and speculative suburban development during the 1920s and 1930s. The professional architectural press, popular plan books, and even mail order homes all developed affordable small house designs that offered the colonial style to a growing middle class.

Like all the government war-emergency projects of World War I, the houses at Atlantic Heights were sold to private owners after the Justice Department won its suit against the Atlantic Shipyard. After 1925, when the whole project was auctioned, individual workers and absentee landlords owned all the buildings. The town added a school, designed by Robert Coit of Boston, in the 1920s and one or two new homes have been added to those originally constructed. One of the dormitories was reused for a church in the 1920s; others were raided for building materials during the Depression.
Plans for four house types (Types of Housing for Shipbuilders 1919).
When the I-95 bridge was being erected, remaining dormitories and a few houses were removed from the eastern edge of the village.

Footnotes:


PORTSMOUTH NAVAL SHIPYARD, Kittery, Maine

by Roger Reed
Maine Historic Preservation Commission

Because the shipyard is a military site and its industrial facilities are restricted, the tour of the more than 250 acres will be almost entirely by bus. James Dolph, Historian of the yard and director of the Portsmouth Naval Shipyard Museum, is our host and he will narrate the visit. Navy rules prohibit use of a camera while visiting the yard (unless under the direct supervision of Mr. Dolph), but several modern and historic photographs are in the second set of the slide packets.

In 1800 the newly established U.S. Navy Department created the first federal naval shipyard on an island in Portsmouth Harbor. The landscape of the restricted site, which today has grown to encompass several islands, is an industrial center regularly threatened by peace. At its historic core is a residential district built for the 19th century gentleman naval officers, barracks for U.S. Marines stationed at the shipyard, and both administrative and industrial buildings. The earliest, Quarters A, was built to 1814 plans by the Portsmouth housewright John Locke, who had built the Universalist Church in Portsmouth in 1807-08. The other quarters, as well as the many administrative and industrial buildings, were designed by a series of engineers based here or in Washington. Alexander Parris was among the earliest engineers regularly employed here, although he maintained his local residence across the river at the Franklin House in Portsmouth. His nephew by marriage, to whom he bequeathed all the engineering books from his library, eventually succeeded Parris as engineer for the shipyard. Drawings of the structures they and others designed have recently come to light and, despite their tattered condition, are illustrated to document several of the 19th century buildings we will see.

Although the shipyard underwent a major expansion during the 1850s-1860s, this was followed by a period of decline in activity in the last quarter of the nineteenth century. This decline was due to the lack of adequate dry dock facilities, a poor channel for large ships, and marginal harbor defenses. Following the Spanish-American War there was a concentrated effort to improve the base to meet the needs of America's new role as a world power. A stone and concrete dry dock was constructed, and Henderson's Point was demolished to open up the channel. Several new buildings were erected, and the harbor defenses were improved. It was no doubt intentional that these changes were quite visible to the Russian and Japanese peace delegations when they met here in 1905 to end the Russo-Japanese War. In the years leading up the first world war, large hospital and prison facilities were added to the shipyard. The long-term salvation of the base, however, came in the construction and repair of submarines beginning in 1914. Submarine work is still the specialty of the Portsmouth Naval Shipyard.

Photographs of the shipyard drawings (following) are by Richard Cheek, and appear courtesy of the Maine Historic Preservation Commission.
PLAN OF THE LATE AND PROPOSED IMPROVEMENTS IN THE NAVY YARD AT PORTSMOUTH, N.H.

This plan of the yard, dated 1831, illustrates existing structures and proposals for new building, including a new Commandant's Quarters (not built) to replace the 1814 residence, as well as extensive stone quays on the harbor side of the island and a dry dock basin with a large wharf.
By 1856, when this plan was made by Benjamin Chandler, a great deal of construction activity had taken place. Several timber sheds were built and the great Franklin Ship House (erected 1838; destroyed) had been built on the northwest corner of the island near the bridge. The major engineering accomplishment, which was done under Alexander Parris's direction, was the construction of a floating dry dock and stone dock basin. At one end was a marine railway powered by a steam engine in the Head House (Building 15). This enabled the shipyard to pull vessels out of the basin onto their cradles. Just above the dock basin was a timber dock for the storage of masts in water until they were ready to be transferred into timber sheds, such as Building 43.
Seavys Island was acquired in 1866 to provide room for expansion of the yard. This plan of January 1864, was probably by Benjamin Chandler. It shows an extraordinarily ambitious scheme for enlarging the facilities of the yard into a major naval base. None of this was carried out and very little building took place on Seavys Island until the early 1900s. Such proposed expansion after the Civil War was rejected because of the lack of harbor defenses.
BUILDING 43
Construction Date: 1853
Designer: Alexander Parris
Original Use: Timber Shed

Erected for the storage and air-drying of the wood used in building projects, this structure featured an open floor plan and multiple bays which could be used for ventilation and easy access. The construction consists of granite piers supporting a large gable roof with four Queen Post trusses. The earliest surviving drawing is not signed by Parris, but was prepared in the last year of his life when he was shipyard engineer. The draftsman may have been his assistant, Calvin Brown. Although several of the wooden doors with wrought-iron strap hinges survive, other bays have been altered with brick in-fill.
BUILDING 32
Construction Date: 1848-49
Designer: Alexander Parris
Original Use: Shell Magazine

The exceptionally heavy construction with granite walls, hip roof and King Post trusses was designed to withstand accidental explosions. The drawings are signed by Parris and demonstrate his affinity for neo-classical trim on even this most spartan structure.
QUARTERS G, H, I, J
Construction Date: 1827-28, with additions
Designer: Unknown
Original Use: Quarters for officers

This building was originally only one story with an open floor plan that provided a barracks for warrant officers and ordinaries (those responsible for maintaining ships when laid up). A second floor was added in 1836, and by the 1850s individual dwelling units for officers with families were created. At one point the second floor of the center section was used as a hospital ward. By the end of the nineteenth century the entire building was converted for residential use.
QUARTERS C, D, E, F
Construction Date: 1832-34
Designer: unknown
Original Use: Officer's Quarters

These two sets of double houses were built as quarters for the Naval Constructor, the Chaplin, the Purser, and the Master. The use of Federal style motifs suggests these buildings were standard designs produced by government engineers.
QUARTERS B
Construction Date: 1848-49
Designer: unknown
Original Use: Officer's Quarters

This was the first substantial single family residence built after the Commandant’s Quarters in 1814 and completed the row of housing in the center of the naval base. When completed, Quarters B was assigned to the Captain of the Yards. Although it was built during Parris’s tenure as yard engineer, there is no evidence that he was the architect. Indeed there is a duplicate of this design at the former naval base in Sackett’s Harbor, New York. It can be presumed the house was a government design which originated in Washington. Unlike Quarters C-F, this house has fashionable Greek Revival style details.
QUARTERS A
Construction Date: 1814; remodeled 1874 and 1908
Designer: John Locke, Portsmouth
Original Use: Commandant's Quarters

Designed in an elegant Federal style, this residence was the first substantial building erected at the yard which was not purely utilitarian in character. The first occupant of the house, Commandant Isaac Hull, probably insisted on a residence suitable for his rank and stature. The house has always served as a residence for the commandant of the naval base and stands as a focal point in the most historic area of the shipyard. It is also the earliest local example of a dwelling sited with its major facade (although not its entrance) being the gable end with its two story portico. Like the Langley Boardman house in Portsmouth, it has a partially curving staircase to the rear of the main block.

Although its original Federal style character is still evident, the house underwent a major remodeling around 1874 when Benjamin Chandler altered the portico and first floor plan. The original main entrance was located in the rear (the present back hall), and Chandler created a new central hall with a doorway under the portico. The parlor and living rooms on either side of the central hall were opened up and embellished with an overlay of mid-nineteenth century moldings around the windows and doors. Chandler also added the conservatory at that time. Around 1908 the study was enlarged with a circular bay on the east side.

"Plan and elevation of a dwelling for the commanding officer of the Navy yard at Portsmouth, N.H." (John Locke 1814, redrawn by Amy Amidon).
BUILDING 13
Construction Date: 1857-60
Designer: Benjamin Chandler
Original Use: Administration Building

This building replaced a small wooden building used as a muster office. The new structure reflected the major growth of the yard and the need for more administrative space during the 1850s. Benjamin Chandler, nephew by marriage and successor to Alexander Parris as yard engineer, was more responsible than any other individual in establishing the architectural character of the Portsmouth Naval Shipyard. This building is one of his most important designs and illustrates the persistence of traditional neo-classical design motifs in the architecture of the shipyard. Chandler also designed additions to each wing in 1867.
BUILDING 22
Construction Date: 1857
Designer: Benjamin F. Chandler
Original Use: Repair and construction of gun carriages

The original structure was the two story central block which contained a stair tower and large open rooms on each floor. As the need for more ordinance storage developed during the Civil War, Chandler enlarged the structure. In 1861 a third story and two one story wings were added; additional stories to each wing were constructed in 1865. Small arms were also stored here and across the road was a gun park.

As with many buildings on the yard, its use changed completely in the early 1900s. At that time the first officer's club replaced ordinance storage, and by World War I there was a men's reading room, a bowling alley, and the shipyard's first auditorium for entertainment. The officer's club was remodeled in the 1950s with fairly elaborate Georgian Revival style woodwork. Notwithstanding all these changes, the stairhall still retains its mid-nineteenth century configuration.
BUILDING 7
Construction Date: 1837
Designer: unknown
Original Use: Mast Shed

This was the first substantial masonry building erected at the naval yard. When it was constructed, the water-front was located at one end and there was an opening in the floor to bring the masts into the building (see plan). Although the interior has been remodeled with partitions, the original trusses are intact, as are the two massive hoists at each end of the rigging loft. This building is the only surviving mast shed still surviving on a naval base in this country.
QUARTERS M
Construction Date: early 19th century
Designer: Benjamin F. Chandler c. 1865 remodeling
Original Use: private residence

This house is one of the original farmhouses on Seavys Island, that was acquired by the government for the expansion of the shipyard in 1866. At that time Chandler prepared designs to remodel the house in a picturesque fashion with the hope that the house would be assigned for his own personal use. In the event, it became the quarters of the Naval Constructor and Chandler had to content himself with the use of another old farmhouse on the island that he remodeled more modestly.
BUILDING 98
Construction Date: 1903-08
Designer: Richard Ezdorf
Original Use: U.S. Naval Prison

By 1900 architectural designs originated with the Bureau of Yards and Docks in Washington, rather than the shipyard engineer. For this structure the site work was prepared by the local engineer, Luther Gregory, while the shell of the building was designed in Washington by Richard Ezdorf. Structural steel details for the cell blocks, floors, and trusses were prepared by private firms that also provided the steel components. The prison is constructed of poured concrete but did not take advantage of new technologies such as steel reinforcement bars.

The original design called for two symmetrical wings containing the cell blocks flanking a central tower with administrative offices. Sufficient funds were not appropriated to construct the entire design, with the result that the east wing was built first and followed by the administrative section. The west wing followed several years later, and in 1942-43 an extension was made to the southeast.

The building served as the navy’s only maximum security prison until 1974, when it was closed. Navy, marine and coast guard prisoners were held here.

SHIPYARD MUSEUM
Construction Date: 1942
Designer: Unknown
Original Use: Enlisted Men’s Barracks

This barracks was part of the large building program undertaken during the second world war. In recent times the cafeteria on the ground floor was renovated into a club for enlisted men and in 1991 it became the shipyard museum.
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