United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form.* If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. **Place additional certification comments, entries, and narrative items on continuation sheets if needed (NPS Form 10-900a).**

1. Name of Property

historic name Pulpit Rock Base-End Station (No. 142), Harbor Defenses of Portsmouth (NH)

other names/site number Pulpit Rock Fire Control Tower (FCT); Pulpit Rock Tower; Pulpit Rock Camp

2. Location

street & number 9 Davis Road ☐ not for publication

city or town Rye ☐ vicinity

state New Hampshire code NH county Rockingham code 015 zip code 03870

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended,

I hereby certify that this X nomination ___ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60.

In my opinion, the property X meets ___ does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance:

__national X statewide __local

Elizabeth H. Murphy, SHPO
Signature of certifying official/Title

4/15/10
Date

NH
State or Federal agency/bureau or Tribal Government

In my opinion, the property ___ meets ___ does not meet the National Register criteria.

Signature of commenting official

Date

Title

State or Federal agency/bureau or Tribal Government

4. National Park Service Certification

I hereby certify that this property is:

✓ entered in the National Register

___ determined eligible for the National Register

___ determined not eligible for the National Register

___ removed from the National Register

___ other (explain:)

Signature of the Keeper

4/16/10
Date of Action

5. Classification

Ownership of Property
(Check as many boxes as apply.)

- [ ] private
- [ ] public - Local
- [X] public - State
- [ ] public - Federal

Category of Property
(Check only **one** box.)

- [ ] building(s)
- [ ] district
- [ ] site
- [X] structure
- [ ] object

Number of Resources within Property
(Do not include previously listed resources in the count.)

Contributing	Noncontributing	
		buildings
		district
		site
1		structure
		object
1		**Total**

Name of related multiple property listing
(Enter "N/A" if property is not part of a multiple property listing)

"N/A."

Number of contributing resources previously listed in the National Register

"N/A."

6. Function or Use

Historic Functions
(Enter categories from instructions.)

DEFENSE/fortification = Battery (Base-End Station)

Current Functions
(Enter categories from instructions.)

VACANT/NOT IN USE

7. Description

Architectural Classification
(Enter categories from instructions.)

Other: Coast artillery fire control

Modern Movement: Moderne

Materials
(Enter categories from instructions.)

foundation: CONCRETE

walls: CONCRETE

roof: CONCRETE

other:

Narrative Description

(Describe the historic and current physical appearance of the property. Explain contributing and noncontributing resources if necessary. Begin with **a summary paragraph** that briefly describes the general characteristics of the property, such as its location, setting, size, and significant features.)

Summary Paragraph

The Pulpit Rock Base-End Station (No. 142, Site 2-A), located along the Atlantic Coast of Rye, New Hampshire, exists as an intact and well-preserved example of a purpose-built World War II-era structure among a class of larger, fixed, early to mid-20th century military fortifications intended for coastline – and primarily harbor - defense of the United States mainland and its insular possessions. These ubiquitous structures, several hundred of which were erected on both the Pacific, Atlantic and foreign coasts, were designed as part of an integrated direct-line, optical detection and plotting system to afford accurate, long-range artillery strikes from coastal batteries against off-shore enemy naval forces. Base-End Stations functioned primarily as range-finding observation posts linked by secure telephone cables with shoreline batteries manned by the Coast Artillery Corps, a specialized artillerist branch of the United States Army first authorized in 1907. Base-End Station No. 142, Site 2-A (See USGS Map; and Continuation Sheet 7.1 - Exhibit I), built in mid-1943, is situated a short distance (approximately two miles) south of the main entrance to Portsmouth (New Hampshire) Harbor, along the rocky, jagged shoreline of the North Atlantic Coast and was built to serve in a chain as one of 14 similar but non-identical structures – serving three separate fortifications - associated with both naval and aerial defense of this place, particularly the Portsmouth Naval Shipyard. Once the site of a short-lived (1943-1945) but now-vanished military presence called, informally, Pulpit Rock Camp, the several-acre, seasonal enclave of summer cottages which lay east of, and separate from the tower property, hosted the four-gun, 90 mm Anti-Motor Torpedo Boat Batteries 951 & 351 (See Continuation Sheets 7.2 & 7.3 – Exhibit II); searchlight tower; sub-surface magazine and electrical generator shacks – in addition to a secondary, albeit-formidable, 70'+/- open steel-frame observation tower (Site 1-A; and See Continuation Sheets 7. 4 & 7.5 - Exhibit III) – all clustered near the ocean's edge. Pulpit Rock Tower was/is the dominant and sole vestigial element of this once, small garrison, which served as part of the in-shore defense of Portsmouth Harbor. The area setting - Pulpit Rock - is a nearby projecting, vertical ledge formation at the sea's edge which constitutes part of New Hampshire's 18-mile portion of low, softly undulating coastline – and not the slight promontory upon which the Base-End Station is actually situated. Set back approximately over 500' west of this aforementioned landmark and the right-of-way of Ocean Boulevard (NH Route 1-A), the stark, foreboding, eight-story, gray silo-like form of the Moderne style tower itself rises prominently above its now densely-wooded half-acre+/- site to a height in excess of 100' above mean low-tide level, making it the tallest structure in the area. The site is bounded by one-lane roadways on three sides, which serve a small, seasonal summer colony of cottages now gradually undergoing conversion for year-round occupancy. Conspicuous at 1000 yards, the Base End Station's looming, futuristic yet sentinel-like presence and narrow, seaward-facing observation windows bespeak of the solemn duty of wartime vigilance even to the uninformed observer, while dominating the bucolic landscape of this small enclave of homes. Significant features of No. 142 include its unusual circular plan, which is approximately 17'+/- in diameter at the base; and construction of reinforced concrete. Design of the tapered, stepped shaft is organized in the classical order of base, shaft and capital – with a raised foundation. All exterior surfaces remain unpainted. Access includes a single, hooded entry door on the elevated first story, accessed by a simple, one-flight, concrete stair. Fenestration is limited on the first six floors to opposing pairs of small rectangular windows (almost suggesting medieval loopholes), whose openings alternate on the north-south and east-west axes, between the second and sixth stories (two per floor); whereas on the observation decks (seventh and eighth stories) there exist identical, short, broad horizontal 160° slit windows affording panoramic vistas seaward. Both of the aforementioned upper stories have cast-in-place anti-glare hoods above the slit windows, which entirely circumscribe these levels. The roof level is articulated in the most utilitarian manner: There is a small, low, wood-framed deck house added later covering the hatch and ladder to the interior below; and a low wooden safety railing surrounding the roof perimeter. Pulpit Rock Tower possesses historic integrity with respect to its continued presence at its original (1943) location; and retains all of its original design characteristics in form, mass, height, scale and details. The structure's original setting, that of a slowly evolving early 20th century summer colony briefly interrupted by the necessary military presence of World War II, continues largely unaltered within the coastal landscape context of rocky terrain and low vegetation. The use of the tower's original reinforced concrete materials continue to be expressed by the superior quality of workmanship in both finish and detail. The solemn, yet *moderne* appearance and imposing architectural character of No. 142, conveyed through its deceptive form, restrained fenestration and neutral color scheme, still evoke the stern feeling of a restricted, isolated military outpost, while conveying a dual association of meaning with both the structure's original role in coastal defense fire control operations, and as a symbol of farewell to the era of fixed seacoast fortifications (1623 – 1945).

Narrative Description

The Base End Station No.142 at Pulpit Rock, Rye, New Hampshire is a World War II era (1939-1945) Atlantic seacoast fortification-related structure, associated directly with the Harbor Defenses of Portsmouth, New Hampshire and particularly, the war-industries facility at the Portsmouth Naval Shipyard. The structure, erected in 1943, is one of the few unaltered survivors of an integrated system of 14 similar towers constructed along approximately 50 miles of coastline between Point Halibut at Rockport, MA to the south, and Gelaspus Point at Kennebunk Beach, Maine to the north. Pulpit Rock Tower was designed primarily for shore-based observation and data gathering of enemy naval and aerial forces positions; more specifically, to assist Coast Artillery Corps batteries at nearby Fort Dearborn in both early target spotting and range-finding of enemy ships; and for anti-aircraft defense. Similar systems were created or upgraded from existing fortifications, for defense of all major port cities in the continental United States and its foreign possessions. In the Northeast, along the Atlantic Coast, these included the Delaware Bay; the Port of New York and Long Island Sound; Narraganset Bay; Boston, Massachusetts; and Portland, Maine.

Located just north of Wallis Sands State Park, a popular seacoast bathing beach along NH Route 1-A, the slightly elevated, uneven site of the Pulpit Rock Tower consists of two adjacent parcels (Lots # 384 and #385 – See Sketch Plan Continuation Sheet) whose irregular, rectangular form together comprise the entirety of the 0.438 acre property. Pulpit Rock Tower is situated upon Lot #384, along the extreme northwestern edge of this parcel. The site, (See Photographs #1 and #2) set back approximately 570'+/- from the ocean's edge, is surrounded by a small, compact summer colony of traditional, early-mid 20th century, one and two-story, shingled cottages, several of which are reported to have been used for temporary barracks for Coast Artillery personnel during the period 1943-1944. Increasingly, these dwellings are being converted to year-round homes, although new home sites are quite limited. Soils are extremely thin with extensive areas of rock ledge exposed. Vegetative cover has been left unmanaged for decades, and tree cover consists of mixed hardwood and coniferous species, with a dense under story of shrubs and brush – all of which serve to isolate No. 142 from the surrounding enclave of cottages, except on the northeast side, where the tower overlooks a garage and home not 60'+/- distant. The current access to the property is from the southwest, via an unimproved pedestrian path from nearby Neptune Drive, one of two narrow roads which partially surround the property. Structural evidence – two corroded steel anchor bolts set in ledge, located 75'+/- southwest of the tower entrance along the entry path - bear witness to one other structure which may have stood previously upon Lot #385.

Of the 14 Base End Stations constructed for the Harbor Defenses of Portsmouth, the tower at Pulpit Rock was the only one designed to be cylindrical in form. Design of Base End Stations around the country defied formal stylistic classification, as they varied widely in location (relative to batteries), and in size, form, design, and whether they were subterranean. The other Base End Stations in the immediate group were often naturally elevated (and thus shorter in height), and were designed to be rectangular or square in plan, and frequently integrated – for purposes of camouflage - with other forms of utilitarian or domestic architecture, such as lighthouses, water towers or summer cottages. While it appears that Pulpit Rock Tower was intended to be painted in camouflage colors (on account of it relative prominence) while resembling a standpipe in form, there is no evidence that such a paint scheme was ever undertaken. (See Continuation Sheet 7. 6 – Exhibit IV: Historic View) As a result, the tower remains in the natural, medium gray tone of its weathered concrete exterior structure.

The design height of each tower depended, in large degree, on the natural elevation of the shoreline; Pulpit Rock Tower (See Photograph #3) is the tallest of the Base End Stations in its parent group (eight stories) owing to its relatively low elevation in relation to mean low tide at sea level. Consequently, of this group, No. 142 was the tallest station constructed among the 14 structures. Elevation was of critical importance in construction of the two upper-level observer platforms, as it was essential for the range of the optical equipment to allow clear observation seaward at least the same distance as the range of the batteries the towers were intended to serve. The effective range of the two 16" naval guns mounted at Battery Seamen and the 6" rifles of Battery 204, both located at nearby Fort Dearborn on Odiorne Point, were approximately 44,000 yards (25 miles), and 15 miles, respectively. The design height of the Pulpit Rock Tower is 72.92' and the structure is situated at 34.0' above sea level at mean low water, which provided instrument height axes on the two levels (Site No. 2-A / seventh floor; and Site No. 1-A / eighth floor) of 104' and 96' respectively. Above, a bronze US Geological Survey hub (but without legible elevation data) is found embedded in the exterior concrete roof surface, which reads "Pulpit Rock FCT 1943."

Base End Station No.142 is a free-standing, eight-story reinforced concrete structure, circular in plan, approximately 17'0" in o.d. at the first floor level, and capped with a flat, concrete roof (See Photograph # 4 and Continuation Sheets 7.7 & 7.8 Exhibit VI: Floor Plans and Elevations). The raised foundation portion of the base, founded entirely on a substrate of granite ledge, is approximately one-half story above grade and, like the superstructure, is slightly tapered. Each level is

delineated with a typical, horizontal "V" joint in the concrete exterior, which also offers a clue to the construction method (continuous flow reinforced concrete) attributed to the expedited erection of this structure in the Spring of 1943. Exterior surfaces are smooth, and either reflect the use of steel slip-forms, or skilled parging of the exterior skin. The only other design feature is a heavy belt course of chamfered concrete circumscribing the structure at the top of the first story and delineating the formal transition between "base" and "shaft" in the classical method of architectural organization. Wall thickness is approximately 20" at the first level. The empty, un-appointed basement interior – where headroom ranges between 7'0"+/- and 8'0"+/-, reveals a scoured, uneven, solid rock ledge surface for the floor, and the impressions of rough-sawn lumber left upon the interior wall surface from the vertical, "stave" planks employed in the on-site forming of the poured concrete foundation. There are no footings evident. To counter wind loading, it may be assumed that steel anchor rods were driven deeply into the ledge and are continuously tied into the basement wall, and subsequent stories above. Neither floor drains nor natural or artificial lighting were apparent within this damp, but dry chamber.

There is no principal façade in the Pulpit Rock Tower because of its uniform circular plan but the main entrance (and sole means of access) is located on the western elevation, at the first floor level (See Photograph #5). A projecting (34"), semi-circular cast concrete hood with ears (27" radius) covers the entrance to the first story, a flat steel, security door which is approached by a short flight of concrete stairs, which project approximately 7'0" from the face of the structure. Comprised of six steps (each 8 ½" x 8 ½") and a concrete landing at the top, this 5'6" wide structure was originally enclosed with a two-tube, 1 3/4" o.d. (typical) steel railing on both sides, and was designed in the then-popular utilitarian, "pipe and knuckle" style. The pipe railing on the south side has now been vandalized and only a fragment remains at the landing beneath the entry hood. All cast iron "knuckle" fittings bear the raised manufacturer's name, "Walworth." Pipe rails were all painted red – red lead primer perhaps - at one time; but are now covered in Navy gray. A steel-framed and welded mesh, "screen" door for additional security, covers the principal entry door.

The only other features which appoint the first story exterior are three small wood-framed (typical throughout tower) vertical casement windows, each 10" in width, by 20 ½" in height, which penetrate the exterior wall on the north, east and south sides – all at eye level. Typically, the three-light sash are painted black and hung on steel hinges and fastened with single, cast iron "D-pull" hardware and appear to have been intended for limited ventilation and minimal natural lighting of the interior. The electrical and telephone cable utility service entrance (now disconnected) is also mounted on the northwest exterior side of the structure, about 6'0"+/- from the entry door, and consists of heavy vertical conduit and several gray-painted steel circuit boxes. The original electrical system consisted of direct burial, commercial 110 volt, AC, single-phase power, requiring 2.0 kilowatts, which was provided by the NH Gas & Electric Company.

The second – sixth stories of Pulpit Rock Tower constitute the "shaft" of the structure and are uniform in design, continue the slight upward taper and are constrained at the structural joint between the fifth and sixth story by a shouldered reduction in overall diameter, reflecting the decrease in wall thickness (to 16") with the increase in elevation. Similarly, this detail is repeated again between the seventh and eight story, where the wall section is again reduced to 12" – its minimum (and terminal) dimension. Fenestration alternates with two opposing windows per story, beginning with the second story, where the two openings are located on the north and south walls, and followed on the third, where the windows are aligned on the east – west axis, and so on, until the sixth floor, where there are four windows, which align with all four points of the compass. Other than use for stair access to the upper levels and probably sleeping bunks and storage of gear and light weapons, these levels were not used for observation purposes, due to limited visibility.

The seventh and eighth stories – the "capital" - differ markedly from the stories below as they are shorter and contain the observation quarters for the six-member Coast Artillery details assigned to round-the-clock watches. The seventh story contains only one typical small window on the west side, and a slit observation window facing eastward, also spanning portions of the north and south walls, with a view arc of 188°. Decorative recessed panels in the concrete – of the same dimension as the slit observation windows – are carried around the structure to the west, and are stopped before each of the small ventilation windows, forming a field around the latter openings. This fenestration is repeated on the eighth, or top floor with an identical view arc, except that the small ventilation window is located on the northwest side of the tower. Both floors have a cast-in-place, projecting anti-glare hoods of concrete which circumscribe the entire tower just above the slit windows, which provided shade for the observers and optical instrument crews during peak sunlight hours.

The roof horizon (See Photograph #2) is distinguished only by a low, contemporary, three-rail polygonal wooden safety railing circumscribing the perimeter of the flat, reinforced concrete (13 ½" thick) roof deck. The roof surface is covered with strips of asphalt roll roofing sealed with tar, and is now in poor condition. The original rectangular (17" x 25") interior stove chimney rises through the roof on the southwest side and is 29" in height. This is parged on the exterior, and the clay flue tile, having seen little use, has been left exposed above a sloped cement wash. A diminutive, shed-roofed deck house (48" x 46") (See Photograph # 11) constructed of plywood on a 2" by 4" frame with a similar entry door - and covering the former sliding scuttle hatch (now missing) to the eighth floor below – is situated on the western side of the roof (See Photograph # 11). Two, parallel, 2" x 3" sleepers – the base of the rails for the sliding hatch – lie parallel at 44" apart and are fastened to the roof surface, extending eastward 52" in length from the face of the roof house (the only direction a

sliding hatch could open). Lying unsecured against the deck house and over miscellaneous electrical equipment described below are two, unidentified, 4" x 4', 10' 4" long wooden hardwood poles, each rabbeted along the length of one edge and bearing steel gussets held in place by ½" anchor bolts; and a crossbar member of similar cross-sectional dimension but much shorter in length. An unidentified piece of electronic equipment, beacon or transponder, is fastened to the latter member, and carries the markings:

AS – 822/BPY ANTENNA
Serial # 81
NAVY DEPARTMENT BUREAU OF SHIPS
WATSON ELEVATOR (MFG?) INC. NEW YORK, NY
CONTRACT NO - (?) ◦ – B3222?

It is presumed that these members were the vertical supports – once fastened to the front corners of the deck house – which appear in the historic view (See Continuation Sheet 7. 6 – Exhibit IV) and were part of the small radar array installed by the US Navy. The deck house structure and the safety railing appear to be a recent replacements and date from the post-1959 period when the property was surplussed by the US Navy.

Just east of center of the roof plane is the aforementioned USGS bronze hub. The surface area of the roof – unseen from the ground – is littered with, presumably, the base components of antennae and radar tracking equipment, some of which may date from the closing days of World War II, when Mount Agamenticus and Sisters Point Base-End Station on Gerrish Island, Kittery Point, Maine, and Pulpit Rock Tower were reportedly supplemented with radar for range-finding, in place of the traditional optical fire control systems which were then placed on standby. Remnants of this early electronic equipment includes three layers of 5" wide sheet copper over 12' in length, laid upon twelve, short 2" x 3" wooden sleepers – aligned in parallel and secured directly to the roof with eight, 2" copper straps. The northern end of the larger 5" straps pass through a penetration in the roof and into the electrical sub-panel of the eighth floor observation room. Above this an 11'4" long steel channel, trapezoidal-shaped mounting bracket, designed as an equipment base – 26 ½" in height – which is bolted into the concrete roof directly above the copper strapping. At each end, and in the center, there are drill holes in boxed patterns of four per group, evidently for fastening vertical antenna or a larger array. Finally, there are three additional but smaller trapezoidal-shaped steel brackets (24" long x 13 ½" high), each with an 8" x 10" flat mounting surface and drilled for a center-sockets. These are mounted on concrete bases, and closely surround the north, east and south sides of the deck house. During commissioning of this structure in 1943, one source indicates that a single, .50 caliber machine gun was located on this roof for use by the Anti-Aircraft Intelligence Service (AAIS-OP-7), the unit assigned to the roof level for enemy aircraft spotting, but no sign of any fixed mount is visible now. No other antennae equipment was observed at roof level. Since all of this equipment would have interfered with both the sightlines of the Anti-Aircraft Intelligence Service – OP – 7 detail assigned to the roof level – and their aforementioned heavy automatic weapon, it is likely that this equipment was installed in late 1944, or after the war, when the US Navy assumed responsibility for the structure.

Overall the integrity of the structure and its exterior are in excellent condition, considering the enriched briny environment and lack of routine maintenance, and bears no evidence of wind or seismic deflection, expansion, settlement or shear cracks, either at foundation level or the superstructure above. Neither a Historic Structures Report nor a formal building conservation and maintenance plan have yet been prepared for the property. Of primary concern are the several areas of exposed reinforcing bar – now visible as a grid - which are rusting and now evident on the upper levels of the south and east elevations. Here, quality control during construction deviated from the engineered design to ensure that this portion of the internal steel reinforcement cage was properly aligned vertically, which would have allowed at least 2" of concrete to cover these steel members. Priorities for maintaining the integrity of the tower structure will include conservation measures to correct this concern, and re-covering of the bituminous weather-surface of the concrete roof. At the roof level, the deck house and safety railing – not original features - are in only fair condition. The asphalt-surfaced deck house roof, flashings and paint are weathered and deteriorated, while the partially rotted wooden safety railing – fastened with nails – can no longer be relied upon to serve as more than a visual safety barrier. Further investigation and interpretation might also be applied to the remains of the radar equipment on the roof, particularly if any of the remaining equipment dates from 1944-45, the dawn of this technology and an aspect which might lend additional historical significance to the tower. Virtually all of the windows and hardware remain intact, operable, and have several broken lights, requiring re-glazing and paint. The primary concern with broken windows – with respect to maintaining building integrity - is the admission of seagulls and pigeons, whose droppings, when damp, attack the concrete structure. The steel door and security screen - which may not be original - are in very good condition and are in need of routine re-painting. Hardware is not original (1943) equipment but requires adjustment and lubrication. Similarly, the original pipe railings at the entrance – intact along the north side but largely missing on the south – while, in still-serviceable condition, require proper cleaning and re-painting but probably do not meet current building codes for public places. Where the railing is missing, original matching cast "knuckles" and iron pipe might be procured to restore this feature. The concrete entry steps, while in sound overall condition, require cleaning

and might be considered for treatment with an appropriate, NPS-approved concrete sealer. The electrical and telephone cable service entrance – in fair condition – is equipment subject to conservation, and may be adaptable for re-installation of electrical power within the structure.

The interior spaces, appointments and finishes of Pulpit Rock Tower also remain in excellent condition, but require attention to resolve both residual minor guano deposits, and securing openings to prevent the re-occurrence of this condition. Floor plans of the interior are virtually identical on floors one through six. Ceiling headroom is uniformly 8'0" (sixth floor is 7"6".) On these levels, there are typically, a single flight of winding cast-in-place concrete stairs attached to the north wall, protected by the typical, two rail, "pipe and knuckle" style railing described earlier. These multiple flights of stairs are 33" wide, with 9" risers and winding treads ranging from 11" in width at the outside, to 7" at the interior. The arris of all steps have a bullnosed detail and a section of 2" x 3" angle iron forms the threshold at the floor level, at the top of each flight. Stairway penetrations in each floor are also chamfered. All floors are 6" deep in section. All interior lighting fixtures (incandescent vapor tight units) and most of the interior electrical system were removed for salvage value upon de-commissioning of the structure.

Other features common to the first six floors include a continuous, single-flue, interior concrete stove chimney (8" x 25"), cast against the southwest wall, and rising through each floor to just above the roof level. Five-inch diameter thimbles cast into the flues are provided near the ceiling on each floor, to which stovepipes from US Army cannon heaters (cylindrical cast iron coal stoves) were attached – which provided the necessary heat for each level. A cast iron clean-out door for ashes (installed upside down and marked in relief "10-12") is provided only on the first floor, near the base of this common chimney shaft. The chimney structure has chamfered corners and, like the remaining interior surfaces of the entire structure excepting the ceilings, has been artfully parged with cement, to produce a smooth, paintable interior surface – thus removing any additional clues to the construction method used in pouring the superstructure's walls. No cannon heaters remain inside the structure. Conversely, all ceilings remain unparged and retain both the impression of wood grain left by the formwork used to pour each floor, as well as the segmented pattern of the formwork itself, which resembles the felloes of a solid wooden wheel from antiquity. Floors are plain, unfinished concrete surfaces on these levels.

On the first floor, to the left (north) of the entry door and mounted on the wall, is a substantial panel of three electrical circuit boxes served by a 3 ½" steel conduit passing through the wall from the service entrance outside; and a single fuse box, further to the left. While it is no longer readily apparent, the secure telephone lines connecting the Plotting Room at Fort Dearborn to the observation platforms above, also passed through this junction of electrical equipment. A second, 3 ½" conduit rises from the interstice between the circuit boxes and fuse box passing through a penetration in the second floor, serving as the main feed, typically, for all of the floors above. The only other distinctive feature at this level is a simple, wood frame and plank (1"), utilitarian closet with batten door, situated against the east wall beneath the stairway. The east window, covered with galvanized hardware cloth, is also located within this diminutive space, which appears to have served as a bucket-type latrine for the station crew.

Interior window openings reveal deeply battered (26" wide by 23" high) openings, typically, and many have been secured against breakage and entry of seabirds with exterior mesh or hardware cloth. The vertical, three-light wooden casement sash, hinged right, typically contain lights 8" wide by 6" in height.

The second, third and fourth floors are identical, unfurnished in any way, and otherwise unremarkable. The fifth follows, except for a curved wooden partition and contemporary hollow core door which conceal – and control – the access to the stairs to the sixth floor. This is not an original feature and may have been used for security purposes (checkpoint) when the tower served as a US Navy facility during the 1950s.

Proceeding upward, the pipe railing ends at the sixth floor level where there are also two rails missing from the curvilinear section protecting the stairway opening. This space (See Photograph # 6) provides the transition between the access levels and the observation levels. Here, the floor is covered with (9" x 9") asbestos tile, the walls are painted a shade of cream, and the ceiling white. A two-bay, wooden-framed, built-in stand-up chart or utility desk (39" in height x 75" wide x 33" deep), without shelves and of about 60° in arc, is contoured against the south wall, and finished with a 3/16" masonite surface. Most notably, a stout wooden ship's ladder (2" x 8 " stringers; 2" x 10" treads with a 10 ½" rise) climbs steeply at a 60° pitch near the west wall and through a rectangular gangway in the ceiling to the seventh floor (See Photograph # 8). The railing consists of a single pipe mounted on two, two by four inch posts which are fastened perpendicularly to the outside of the stringers, about one-third of the vertical height of the ladder. There are four typical windows at this level and three electrical boxes are fastened to the north wall, adjacent to the main electrical conduit. A second, smaller-diameter conduit located on the northwest portion of the wall rises vertically, passing through both the sixth and seventh floor planes. The existing paint scheme of this space was applied after the installation of the aforementioned electrical boxes, based on observation of the bare, parged cement surfaces behind the now-missing electrical equipment.

The seventh and eighth floors – the observation and range data transmission levels for Battery Seamen (Site No. 2-A) and Battery 204 (Site No. 1-A) respectively - were designed to be identical in function and plan, although serving different batteries. The interior character of these spaces differs markedly from the floors below. Headroom on the seventh floor is reduced to 7'6"; on the eighth floor it is only 6'9". The floor surface on the seventh level is covered with typical asbestos, terra cotta-colored tile; on the eighth floor the surface is 1" x 7" hemlock or yellow pine laid on 2" x 4" sleepers – but only covering the eastern half of the space. The remainder of this floor is exposed, unpainted concrete. Walls and ceilings are, not unexpectedly, painted light colors to provide additional reflected interior light – but differ in shade; on the seventh floor, walls are a cream color with a white ceiling whereas on the top story the walls are lime-green, with a cream ceiling. Given that the structure was utilized by three different branches of the armed services over a 15-year period, this may reflect either changing functions or regulations. On both levels, the wooden ship's ladder is repeated and a gravity-operated, swinging safety rail (iron pipe) of clever design is actuated whenever personnel use the gangway between floors. Both floor hatches (32 ½" x 37") have been removed, and the pipe railings pass through the floor planes of the gangway openings. A single small window pierces the west wall at the seventh floor; and again on the northwest wall of the eighth level.

The distinguishing characteristics of the two upper levels (See Photographs # 7 and # 8) are the narrow, eastward-facing, horizontal slit observation windows, of which there are six contiguous units on each level. Typically, these are 14" high rough openings, with 24" x 36" one-light, awning-style sash with cast iron "D-pull" hardware as seen elsewhere. On the seventh floor, and directly beneath these windows, (See Photograph # 7) is a five-bay chart table which follows the contours of the exterior wall and may be a feature introduced later. The table frame is constructed with 2" x 4s" and the work surface edges and single row of shelves below, are fabricated with steel angle iron. East of the center of the floor in these spaces, on both levels, are massive octagonal poured concrete instrument bases (39" across x 7" in height) with three, ¾" threaded anchor bolts protruding vertically from the top surface (See Photograph # 9). At these positions, the now-removed Lewis DPF (Depression Position Finder) position and range-finding instruments were mounted. These were served by a crew of two, an observer, and a reader, who managed the telephone communications with the subterranean plotting room at Fort Dearborn. With these sophisticated instruments on both levels, each station had the capability to ascertain range in either the horizontal (preferred) or vertical baseline mode. The latter allowed the tower to act independently and, although not as accurate, permitted the observer to locate a target if sighting was obscured (by fog) from one or more other towers. Above this position and to the north is a ceiling impression of another, now-missing piece of equipment – the mirror image of which may also be found on the floor – and which is identified only by a rectangular (21 ½" x 28") "ghost" left on the unpainted spots in these concrete surfaces. The purpose of this piece of equipment has not been identified. Other "ghosts" of missing electrical equipment on the walls suggest the location of the time-interval bells, and the telephone system. On the eighth floor, there is no chart table – if one originally existed – which seems unlikely as its construction may have interfered with the swing of the Lewis DPF instrument, whose base had an integral operator's chair. Finally, there exist two, tall, wood-framed observation chairs – one on each floor - which are likely to be later equipment from 1976-1977 when the NH Department of Fish & Game leased the tower for in shore fisheries surveillance - as their quality of construction does not seem to meet military specifications for design or durability of that period. Nevertheless, these identical chairs are 45" in height overall, 29" at seat height and 20 ½" in width, with a footrest at 10". Each seat back is stiffened with a diagonal wooden brace at the rear.

Electrical systems have been nearly entirely removed from the structure leaving only a few circuit boxes and sub-panels. These vestigial survivors have been noted only where they remain extant, as electricity was essential to operation of the tower and its communications. Both of the upper floors would have been equipped with a time-interval bell, which rung simultaneously at all 14 base-end stations for marking positions, when a target was being identified, tracked and plotted. On the seventh floor, there is a surviving sub-panel high on the wall at the northwest side; the 3 ½" conduit serving this box and an identical unit formerly below it, have both been removed. On the eighth floor, 3 ½" conduits may still be found near the chimney on the southwest side, and above the small window at the northwest wall. The conduit (main feed) from below on the north side has also now been removed. Three, 10" x 12" electrical boxes remain mounted on the south wall, and three more, 12" x 12" in size, are affixed to the north wall. For the sake of brevity, the former presence of other, numerous, typical electrical outlet boxes throughout the lower levels of the structure have not been noted here in detail.

The eighth floor chamber is unique in one other respect: This level also hosted the lookout station for the Anti-Aircraft Observation Service–OP-7 detachment which was linked with the aerial portion of the Harbor Defense of Portsmouth. In Pulpit Rock Tower, the AAIS was assigned limited quarters indeed; the roof and a rectangular concrete "tub" suspended from the scuttle at the eighth floor ceiling (See Photograph # 10). Three-man details were assigned to duty in these cramped and exposed conditions, which included a .50 caliber Browning machine gun mounted on the roof surface. The "tub" so-called, is a 39" deep x 43" wide x 36 ½" high, three-sided concrete box connected to the underside of the southwest portion of the roof, which mounted a steel access door (now missing) on the south side. This inverted, half-story elevated structure was reached originally by military personnel via a three-rung, vertical steel ladder from the main floor, which remains extant; but has now been superceded by a more convenient, elevated wooden landing. Once inside the unheated chamber, one could stand erect and open the sliding scuttle hatch to begin observation duties "on position;"

for the duration of the watch or, as necessary, climb the original, wooden, six-rung ladder (which remains) to the roof surface. The east side of the "tub" retains the original duty board, a vertical work surface used for posting charts of ship and aircraft silhouettes for observations teams' convenience in quickly identifying enemy forces. Exhibit VI (See Continuation Sheet 7.10) depicts conditions inside of a period base-end station and illustrates an example of the primary spotting equipment, a Lewis DPF, originally specified for Pulpit Rock Tower. The roof hatch, now removed, has been replaced with the aforementioned plywood deck house and swinging door (See Photograph # 11). Standing near the AAIS position, and leaning against the south wall of the tower, is a former hatch door (37" x 32 ½") constructed of 1 ¼" x 5 ¼" planks on two, 2" x 4" battens, which has likely been removed from one of the gangways on the seventh or eighth floor. This surviving example, fastened with slotted iron screws is painted Navy gray and remains in excellent condition.

Base End Station No. 142 was authorized by the US War Department (2nd parcel) on December 12, 1942 (Letter CE 601.1) and approved in a second endorsement by the Secretary of War on the same date. Site 2-A was acquired on June 19, 1943 from Emma L. and Otto Johnson; the tower was designed by the US Army Corps of Engineers, Boston District Office, North Atlantic District, and was constructed under contract with a civilian contractor during the summer of 1943. The structure was accepted for active service by the Coast Artillery Corps on September 16, 1943.

United States Department of the Interior
National Park Service

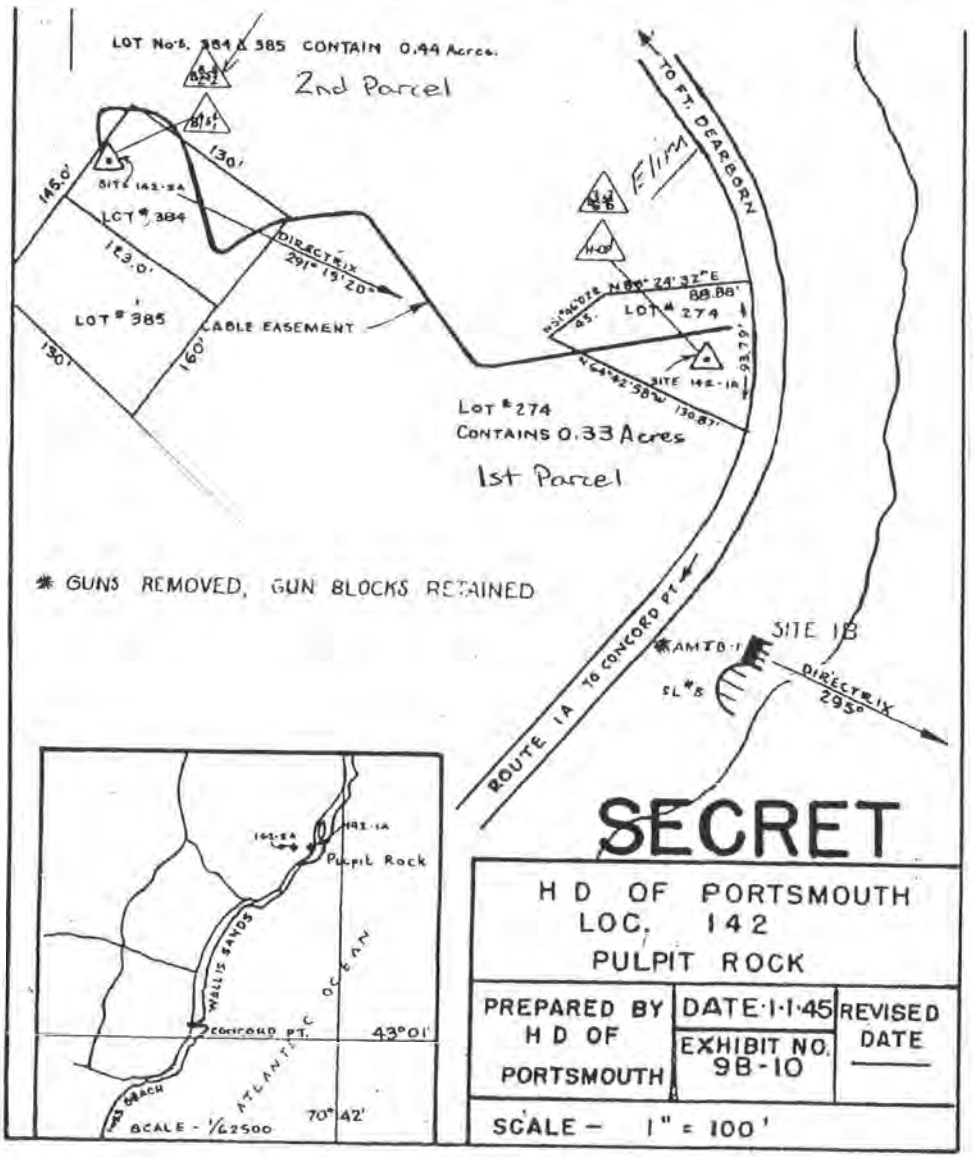
National Register of Historic Places Continuation Sheet

Name of Property PULPIT ROCK TOWER

County and State ROCKINGHAM, NH

Name of Multiple Property Listing (If applicable)

Section number: 7.0 page: 7. 1 **Exhibit I: Site Map of Parcels 1-A and 2-A**



Source: Plan entitled: "H D of Portsmouth Loc. 142 Pulpit Rock. Prepared by HD of Portsmouth. Date 1-1-45 Exhibit No. 9B-10 Scale – 1" = 100' " from 1945 Supplement to Harbor Defense Project, Harbor Defenses of Portsmouth HPPH-AN-45.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Name of Property PULPIT ROCK TOWER

County and State ROCKINGHAM, NH

Name of Multiple Property Listing (If applicable)

Section number: **7.0** page: **7. 2** **Exhibit II: Site Plan for Anti-Motor Torpedo Boat Battery 951**

(See Plan Attached on Continuation Sheet 7.3)

Source: Report of Completed Works – Seacoast Fortifications (Batteries). Job No Loc. 142, FS2, EDC 976. US Eng. Office New England Div. Boston, Mass. 1 December 1945 Part VII (Battery Plan) (Sheet 2 of 2 Sheets) Pulpit Rock Location: No. 142 Site: 951 Battery: Anti-Motor Torpedo Boat Defense No. 951 No. of Guns: 4 Caliber: 90mm Carriage: 2 Ped. – 2 Mobile

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Name of Property PULPIT ROCK TOWER

County and State ROCKINGHAM, NH

Name of Multiple Property Listing (If applicable)

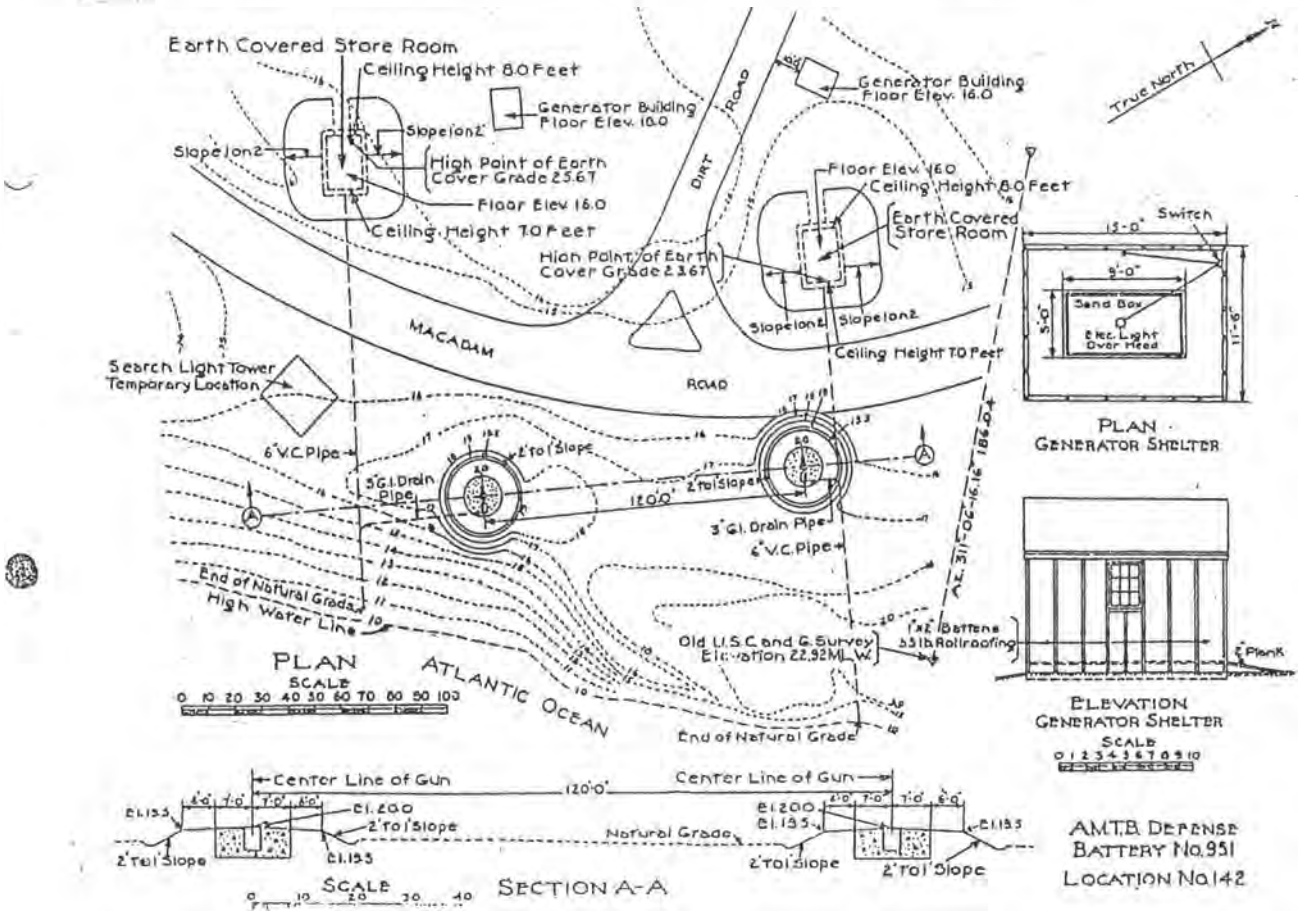
Section number: 7.0 page: 7. 3 **Exhibit II: Site Plan for Anti-Motor Torpedo Boat Battery 951**

(Sheet 2 of 2 Sheets) SPEKM-1

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
(Battery Plan)

PART VII Corrected to _____

HARBOR DEFENSES OF Portsmouth, New Hampshire
Pulpit Rock Location No. 142 Site 951
BATTERY Anti-Motor Torpedo Boat Defense No. 951
NO. OF GUNS 4 Caliber 90 mm Carriage 2 Ped.-2 Mobile



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National Register of Historic Places Continuation Sheet

Name of Property PULPIT ROCK TOWER

County and State ROCKINGHAM, NH

Name of Multiple Property Listing (If applicable)

Section number: **7.0** page: **7. 4** **Exhibit III: Site 1-A - Plan and Elevations for Steel Tower**

660 (Boston) CM 35026 ~~CONFIDENTIAL~~

REPORT OF COMPLETED WORKS – SEACOAST FORTIFICATIONS
(Fire control or Torpedo Structures)

Form 2. Corrected to November 1, 1942 35026

STRUCTURE:	
Location	Site 1A Pulpit Rock
	Rye, N. H.
Date of transfer	July 8, 1942
Cost to that date **	$15,074.51
Type of construction	Open Tower- 2 Story Sta.
(a) Roof	Steel
(b) Remainder of bldg.	Steel and Concrete Floor
How concealed	Painted with O.D. Stain
How protected	1" Steel Plate
Height above concealment	60'
Height above protection	Protection to Top
Conspicuous at 3000 yards	Yes
ELECTRIC CURRENT:	
Source of	Commercial
Kilowatts required	.5
Type of lighting fixtures	Commercial
HEAT:	
How heated	Small Portable Oil Heat
WATER & SEWER:	
Connected to water mains	No
Connected to sewer	No
Type of latrine	None
Permanent or temporary inst'lln	Permanent
Present condition	Excellent - New
REFERENCE:	
Reference of site *	18' approx.
Reference of instrument axis *	B3 89.08, H-OP1 81.08
Type and capacity of crane	None
Max. dim. of reel handled	None

* Above M.L.W.
** Includes cost of land procurement of $953.96 .03 Acres Ft Foster

Source: Report of Completed Works – Seacoast Fortifications (Fire Control or Torpedo Structures) 660 (Boston) CM 35026 (handwritten) Form 2. Corrected to: November 1, 1942. 35026 ~~CONFIDENTIAL~~ Sheet 1 of 2 Sheets. (second sheet missing). Harbor Defenses of Portsmouth, N.H. Pulpit Rock, Rye, N.H. (142) 1-A. Structure: Combined Fire Control Tower B3/6 S3/6, H-OP1 (#205 at Fort Foster).

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Name of Property PULPIT ROCK TOWER

County and State ROCKINGHAM, NH

Name of Multiple Property Listing (If applicable)

Section number: **7.0** page: **7. 5** **Exhibit III: Site 1-A - Plan and Elevations for Steel Tower**

Sheet 1 of 2 Sheets.

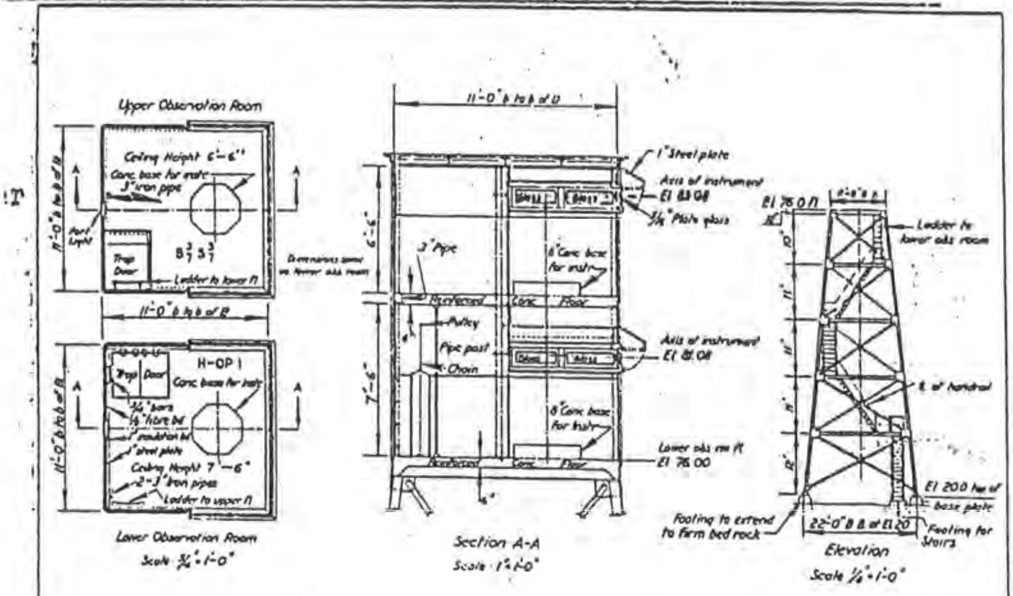
HARBOR DEFENSES OF - Portsmouth, N. H.

~~FORT~~ Pulpit Rock, Rye, N. H. (142) 1-A

STRUCTURE Combined Fire Control Tower

B³/₁₆ S³/₁₆, H-OP1 B³₆ S³₆ #205 at Odiorne's Point

INSTRUMENTS AND EQUIPMENT:	
Type of observing inst.	D.P.F. and A.I.
Type of plotting board	None
DATA TRANSMISSION:	
Type of	Telephone
Date of transfer	--
Cost of data transmission equip.	--
For tide stations give description of tide gauge	--
For datum points give Forts from which visible	--
For dormitories give sta. served	--
For cable hut give S. C. type	--



United States Department of the Interior
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National Register of Historic Places Continuation Sheet

Name of Property PULPIT ROCK TOWER

County and State ROCKINGHAM, NH

Name of Multiple Property Listing (If applicable)

Section number: **7.0** page: **7. 6 Exhibit IV: Historic View - Pulpit Rock Tower c. 1968**

Source: Pulpit Rock Tower, Property Files, New Hampshire Fish & Game Department, Facilities and Lands Division, 11 Hazen Drive, Concord, NH 03301

(See Plans and Elevations on Continuation Sheets 7.8 and 7.9)

Source: Report of Completed Works – Seacoast Fortifications (Fire Control or Submarine Mine Structures) 600.914 (Portsmouth) CM 68456 (handwritten) Part 2. Corrected to; November 1, 1943. 68456 Sheet 1 of 2 Sheets. Harbor Defenses of Portsmouth, N.H. Fort: Pulpit Rock Location No. 142 Site 2A Structure: Observation Tower – 8 Stories AAIS-OP-7 Upper: B4/1 S4/1 #204 Fort Dearborn; Lower: B8/2, S8/2 Seamen.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Name of Property PULPIT ROCK TOWER

County and State ROCKINGHAM, NH

Name of Multiple Property Listing (If applicable)

Section number: **7.0** page: **7. 8 Exhibit V: Floor Plans and Elevations – Pulpit Rock Tower**

Kan.919(Portsmouth) CM 68456

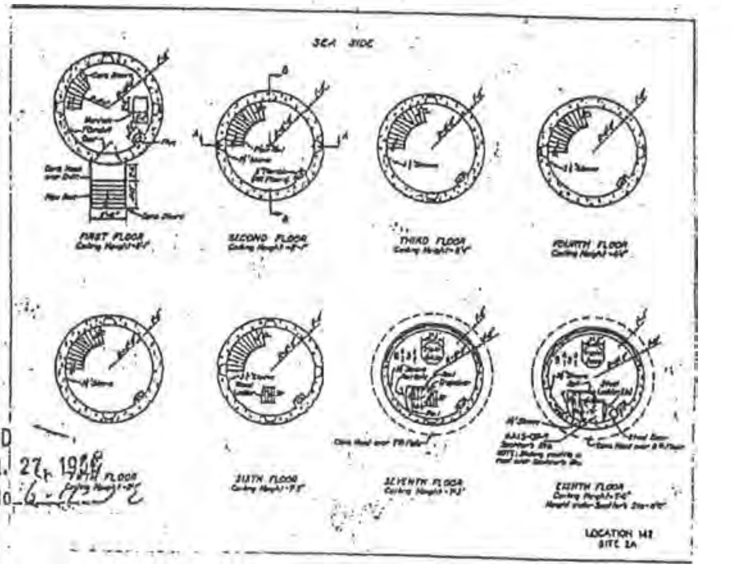
Sheet 1 of 2 Sheets SPEKM-1

EPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
(Fire Control or Submarine Mine Structures)
art II 68456 Corrected to 1 November 1943

HARBOR DEFENSES OF Portsmouth, New Hampshire
FORT Pulpit Rock Location No. 142 Site 2A
STRUCTURE Observation Tower - 8 Stories
AAIS-OP-7 Upper B 4/1 S 4/1 Lower B 8/2 S 8/2 Seamoh
#204 ...

TRUCTURE:
Location (Coordinates) x
y
Location (Site Description) Rye, Rockingham Co. N.H.
Date of Transfer 6 June 1943
Cost to Transfer Date $18,325.-
Type (For Obs. Sta., Tower, Round Concrete Tower
Cottage, etc.) 8 Stories and Lookout
Type of Construction Reinforced Concrete Tower
(a) Roof Flat w/ scuttle, Re.Conc. 13.5" Thick
(b) Remainder of Bldg. Reinforced Concrete Walls 12"
How Concealed None
How Protected 12" Reinforced Concrete Walls
Height Above Concealment 72.92'
Height Above Protection None
Conspicuous at 1000 yards

INSTRUMENTS AND EQUIPMENT: Upper ~~Middle~~ Lower
Type of Observing Inst. 1 DPF x 1 DPF
Type of Plotting Board None
DATA TRANSMISSION:
Type Telephone
Date of Transfer
TIDE STATION:
Description of Tide Gauge
DATUM POINTS:
Forts From Which Visible
QUARTERS:
Stations Served
CABLE HUT:
S.C. Type



TILITIES:
Electric Power Commercial
Source of New Hampshire Gas & Electric Company
Voltage 110 AC or DC AC Phase Single
Kilowatts Required 2.0
Type of Lighting Fixtures Vapor Tight Units
How Heated Cannon Stoves
Connected to Water Mains? No
Connected to Sewer? No
Type Latrine None

EFERENCE: (Mean Low Water)
Of Site 34.0' Above
Of Instrument Axis: Upper ~~Middle~~ Lower
Above B 4/1 104.0' x B 8/2 96.0'

RANE:
Type & Cap.
Max. Dia. Reel Cap.

DECLASSIFIED
DOD Dir. 5200.9, Sept. 27, 1958
NCWN by ... date 6-17-...

#1811 to Real Estate Dealer for 51 Acres
Otto + Emma ...

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Name of Property PULPIT ROCK TOWER

County and State ROCKINGHAM, NH

Name of Multiple Property Listing (If applicable)

Section number: **7.0** page: **7. 9 Exhibit V: Floor Plans and Elevations – Pulpit Rock Tower**

68456

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS (Fire Control or Torpedo Structures)

Part II Corrected to 1 Nov. 1943

Sheet 2 of 2 sheets

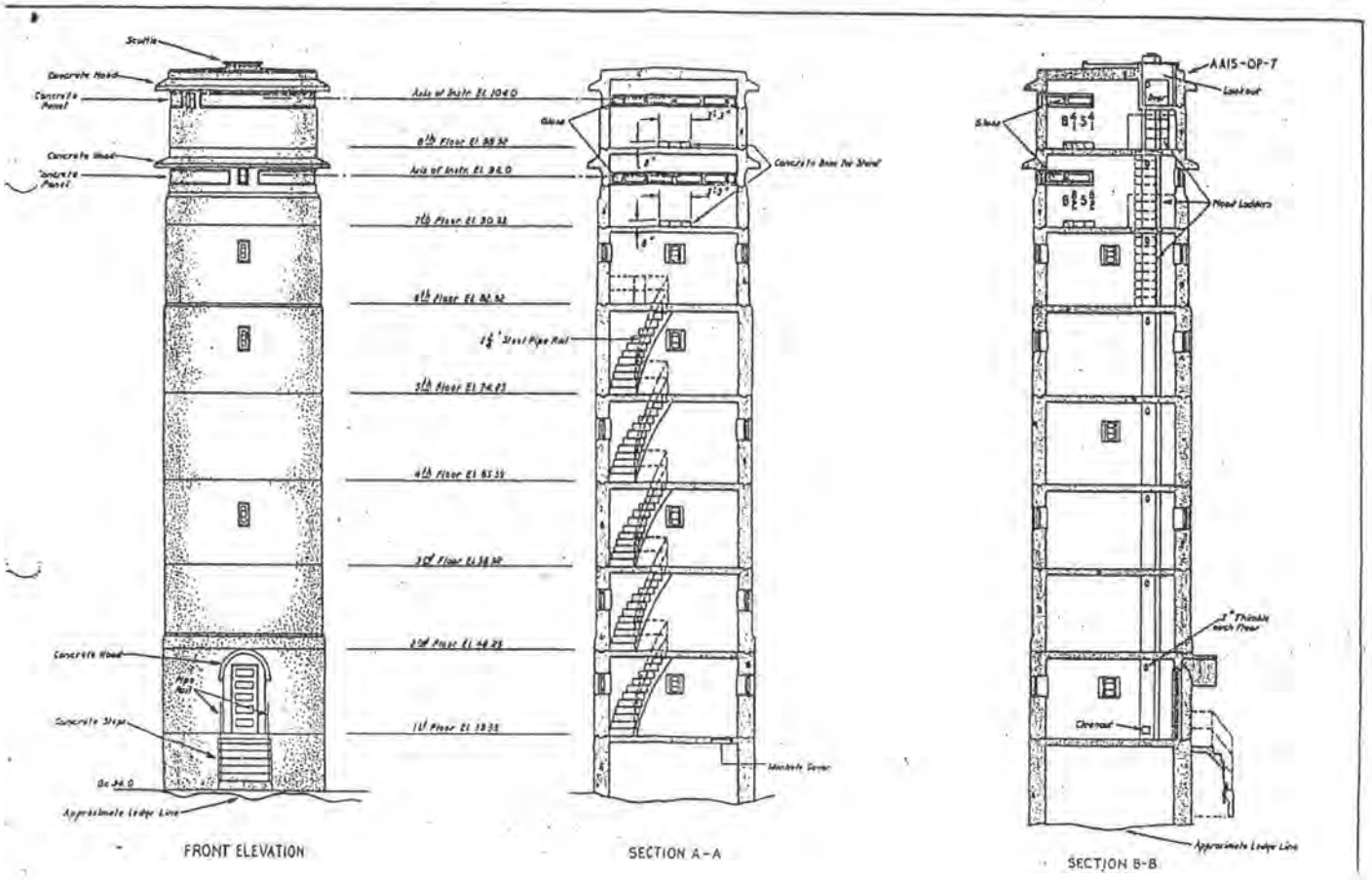
HARBOR DEFENSES OF Portsmouth, New Hampshire

Fort Pulpit Rock - Rye, New Hampshire

Structure Observation Tower - 8 Stories

Elevation & Sections

LOCATION 142 SITE 2A



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National Park Service

National Register of Historic Places Continuation Sheet

Name of Property PULPIT ROCK TOWER

County and State ROCKINGHAM, NH

Name of Multiple Property Listing (If applicable)

Section number: **7.0** page: **7. 10** **Exhibit VI: Lewis Depression Position Finder (DPF) Instrument**

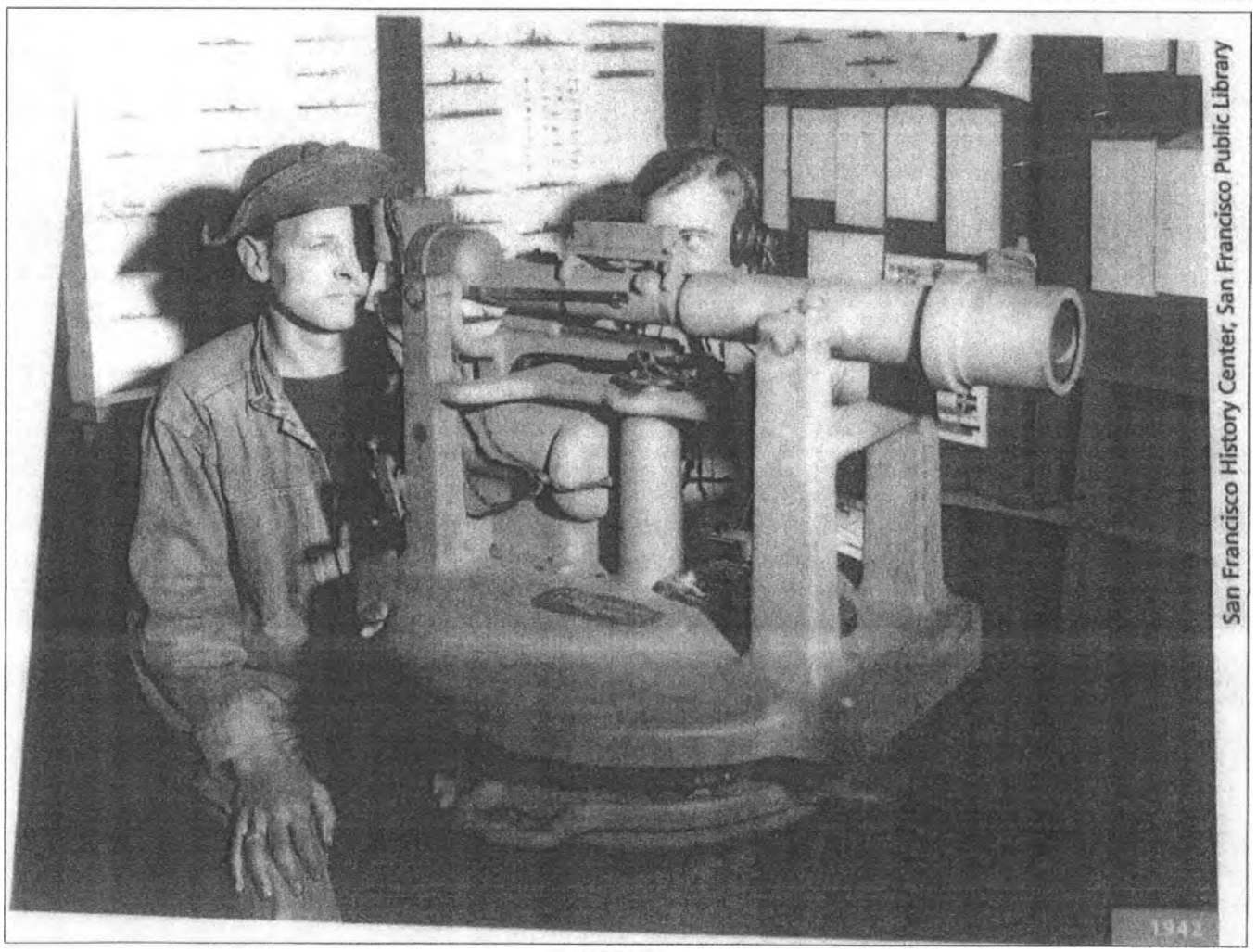
Source: "Fort Funston Groupment Command Post C2 and Base End Station B3S3 / B5S5, by Vladimir Yakubov." San Francisco History Center, San Francisco Public Library, San Francisco, CA
http://svsm.org.gallery.FunstonBaseEndStation/P1100800s

Fort Funston Groupment Command post C2 and Base End Station B3S3/B5S5, by Vladimir Yakubov

[login]

Gallery: SVSM Gallery ✧ **Album:** Walkarounds ✧ **Album:** Fortifications & Military Installations ✧ **Album:** Coast Defenses of San Francisco Bay Area ✧ **Album:** Fort Funston Coast Defense Batteries, San Francisco ✧ **Album:** Fort Funston Groupment Command post C2 and Base End Station B3S3/B5S5, by Vladimir Yakubov ✧

20 of 36



P1100800s.jpg

United States Department of the Interior
National Park Service

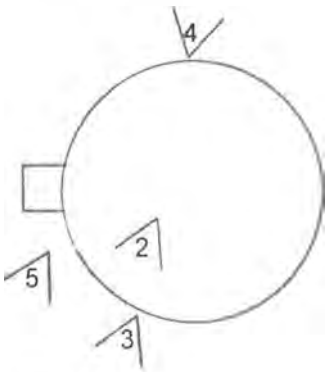
National Register of Historic Places Continuation Sheet

Name of Property PULPIT ROCK TOWER

County and State ROCKINGHAM, NH

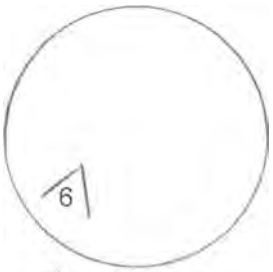
Name of Multiple Property Listing (If applicable)

Section number: 7. 0 page: 7. 11 Key to Exterior and Interior Photographs

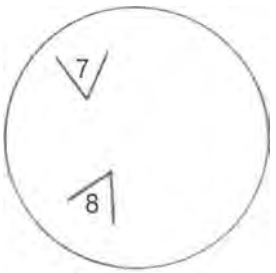


Exterior

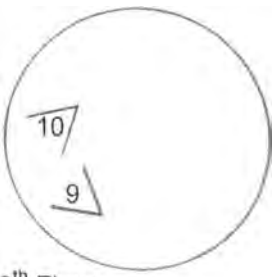
Context View



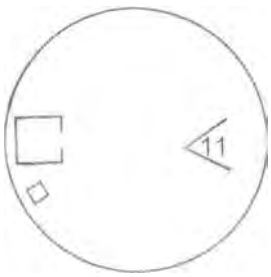
6th Floor



7th Floor



8th Floor



Roof

8. Statement of Significance

Applicable National Register Criteria
(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

[X] A Property is associated with events that have made a significant contribution to the broad patterns of our history.

[ ] B Property is associated with the lives of persons significant in our past.

[X] C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.

[ ] D Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations
(Mark "x" in all the boxes that apply.)

Property is:

[ ] A Owned by a religious institution or used for religious purposes.

[ ] B removed from its original location.

[ ] C a birthplace or grave.

[ ] D a cemetery.

[ ] E a reconstructed building, object, or structure.

[ ] F a commemorative property.

[ ] G less than 50 years old or achieving significance within the past 50 years.

Areas of Significance
(Enter categories from instructions.)

Military

Architecture

Period of Significance

1943 - 1945

Significant Dates

1944 - 1946

1950

1950 - 1959

Significant Person
(Complete only if Criterion B is marked above.)

"N/A."

Cultural Affiliation

Architect/Builder

U.S. Army Corps of Engineers

Period of Significance (justification)

Pulpit Rock Tower is significant for the period 1943 – 1945 – the closing years of World War II - when the structure was built and commissioned for active service as Base-End Station No. 142, serving, initially, Battery Hunter at Fort Stark, Portsmouth, New Hampshire; and Battery Bohlen at Fort Foster, Gerrish Island, Kittery, Maine. The 22nd Regiment of Coast Artillery began to be de-activated on November 9, 1944. No. 142 also served on reserve duty during the period 1944 – 1945, when the older batteries were retired and the station was re-assigned to the newly-constructed replacement Batteries 103 and 204 at nearby Fort Dearborn. During 1944, Pulpit Rock Tower appears to have also been designated as one of the three initial sites to receive the installation of an emerging technology – radar – which was maintained for surveillance only after November, 1944 for the Harbor Defense of Portsmouth until dismantling of the system in 1946.

After 1950, when the Coast Artillery Corps was disbanded the tower was transferred to the US Navy where it continued in use as a security and storage station through 1968, until being declared surplus government property and its conveyance to the State of New Hampshire in 1978.

Criteria Considerations (explanation, if necessary)

Statement of Significance Summary Paragraph (Provide a summary paragraph that includes level of significance and applicable criteria.)

Base-End Station No. 142 at Pulpit Rock, built in 1943, is an atypical and unusually well-preserved example of a special class of just fourteen, military fortification-related structures within a larger, nationwide system, erected along the New Hampshire (and portions of the Massachusetts and Maine) coastline during World War II. It was designed to support the hastily modernized coastal and air defenses of Portsmouth Harbor and the Piscataqua River beginning in 1941, the vital port which provided access to the submarine manufacturing facilities at the Portsmouth Naval Shipyard, a prime axis target. No other harbor in the continental United States witnessed the construction of this large a number of artillery fire control stations protecting a single harbor, so vital was the shipyard considered to the allied war effort. From its inception, Pulpit Rock Tower's intrusive placement in the quiet, nearby ocean side residential summer colony of Rye, and its direct relationship providing fire control for Forts Stark and Foster, and later nearby Fort Dearborn, is associated with the broad contextual influence of "World War II in New Hampshire." The development of long-range coastal artillery and indirect fire, designed to strike enemy ships beyond the horizon, coupled with the refinement of increasingly sophisticated optical range-finding equipment, necessitated the need for a system of elevated, dispersed and concealed or camouflaged, shoreline observation towers from which data on naval positions and movement could be transmitted to centralized, fire control plotting rooms near main batteries. Pulpit Rock Tower – now one of only two range-finding stations for coastal artillery left in New Hampshire - is a symbolic reminder of both the critical role, and the *denouement,* of a distinguished former branch of military service, the United States Coast Artillery Corps (1901 – 1945), and the nationwide system of fixed coastal fortifications which it built and garrisoned through two World Wars. For this reason, and because Portsmouth is the oldest continuously fortified harbor (1623) in the nation, it is associated with a second statewide context, "New Hampshire's Coastal Defenses, 1775 – present." In this regard, Pulpit Rock Tower meets National Register Criterion A for association with events that have made a significant contribution to the broad patterns of the State's history. Pulpit Rock Tower is a contributing element of a distinct, purpose-built group of military structures which "represent the most sophisticated visual sighting system developed for American coast artillery." (Source: Openo, Woodard. The Thoreson Group. State Coastal Properties Project: Part 2 - Fort Dearborn. Concord, NH. NH Office of State Planning. 1983 p. 42) Additionally, the structure's uncommon circular tower form, undisguised, exceptional height, and quality of reinforced concrete construction, qualify it as an outstanding example of mid-20th century, US Army Corps of Engineers functional design, and inclusion within a third state context, "Architecture in New Hampshire, 1623 – present." In the realm of architecture, the Pulpit Rock Tower exists as the only example of a base-end station ever built in New Hampshire to be constructed with the Moderne influence, in cylindrical form. Base-End Station No. 142 meets most of the requirements for Criterion C through embodying the distinctive characteristics of a type (military utilitarian), period (World War II example), or method of construction (continuous concrete pour) or...that possess high artistic values (sculptural quality of the vertical, cylindrical design), or that represent a significant and distinguishable entity whose components may lack individual distinction (landmark quality of presence attributable to composition, height, color and texture).

Narrative Statement of Significance (Provide at least **one** paragraph for each area of significance.)

Base End Station No. 142, located at Pulpit Rock, Rye, New Hampshire is significant for its association with important themes in the history and architecture of the nation, the state and local community during a narrow period of primary significance – the last two years of World War II (1943-1945), which is manifested in the Areas of Significance: "Military," and "Architecture." The applicable NH Statewide Contexts are: "World War II in New Hampshire," "New Hampshire's Coastal Defenses, 1775 – present," and "Architecture in New Hampshire, 1623 – present."

Criterion A
Area of Significance: Military (1943-1945)
Applicable Statewide Contexts: "World War II in New Hampshire," and "New Hampshire's Coastal Defenses, 1775 – present"

The United States was slow to mobilize prior to the onset of World War II, having retreated into isolationism after the failure of the League of Nations (1922 - 1941), while also enduring, with the rest of the world, the most severe economic depression (1929 – 1941) the country had yet known. Budgets for military preparedness and increases in standing forces during the 1930s were, consequently, not increased commensurate with the threats looming in Western Europe and the Far East. America's shoreline defenses and ports had not been substantially improved since the First World War – and now faced the new threat of aerial bombardment from aircraft as well as vastly improved propellants, naval gunnery and submarine warfare. Open-fort, uncovered coastal fortifications and batteries across the country constructed during the Endicott and Taft Periods were now vulnerable to aircraft bombardment and plunging fire from naval forces as far as 25 miles distant. Integrated fire control for shore batteries advanced slowly during this period and, before the introduction of the first radar units in 1938, range finding was still conducted by direct, line-of-sight observation using high-powered optics, and gunnery solutions employing a horizontal baseline system of "triangulation," along with laborious manual computation. After 1937, with the adoption of the Model M1 16" naval rifle for shore-based fortifications – the most powerful artillery weapon in the world at the time with an effective range of 44,000 yards – and the introduction of a new battery design, the Central Traverse Casemate, a prototype pioneered at Forts Funston and Cronkhite in San Francisco, the Army Corps of Engineers slowly embarked upon an ambitious plan of modernization, funding being limited. The new prototype solved the problem of protecting open batteries from overhead fire: The casemate principle allowed creation of independent but connected, steel-reinforced concrete gun emplacements with all of their support functions underground, while covering their roofs with massive quantities of earth for both concealment and to absorb the impact of high-explosive, armor-piercing shells.

In New England, the Devine Board of Coast Artillery and Corps of Engineers officers in the First Coast Artillery District developed, in 1939, a plan for modernization of Portsmouth's harbor defenses. This would include maximum protection for the Piscataqua River basin and the Portsmouth Naval Shipyard, a submarine shipbuilding and maintenance facility employing a highly-skilled workforce of 22,000 and vital to the war effort. This formidable defense was comprised of, by 1944, new long-range batteries with casemated 16" guns and 6" shore protection batteries; a modern, inter-connected system of base-end fire control stations; mine casemates and electrically-controlled harbor mine fields, covered by 3" rapid fire cannon; submerged anti-submarine netting across the harbor mouth; coastal 90 mm Anti-Motor Torpedo Boat batteries; Anti-Aircraft Intelligence Service spotting tower system; Searchlight battalions, and Anti-Aircraft batteries. Construction of Fort Dearborn at Odiorne Point in Rye followed the new principle of the casemated design for both Battery Seamen / 103 and Battery 204. In all, over a dozen batteries nationwide were fortified for the Coast Artillery Corps with the 16" casemated guns; eight such weapons were allocated to protect New England's shores, along with the newly-adopted, medium range (15 mile) weapon, the 6" gun. Commensurate with this, the fire control systems critical to serving these guns were revamped as well, by extending horizontal baselines greater distances with installation of modern, concealed or disguised structures having contemporary optical instrumentation, such as the Lewis Depression Position Finder (DPF), as specified for the Pulpit Rock Tower. Even while lacking such instruments now, No. 142 possesses significance, as a largely intact, dual-level observation platform, whose interior environment may be interpreted to comprehend past methods and improvements in range-finding science. Pulpit Rock was equipped with the ability to calculate range in both the horizontal, and if necessary, vertical baseline modes. In this regard, Pulpit Rock Tower also stands as a monument to fire control technology in New Hampshire, which reached its zenith over more than half a century of development, in both the quality of optics, as well as refinement in the speed and accuracy of use of the baseline system for target triangulation. The tower's value in the Area of Significance "Military" is revealed in the systematic role it played in defending the shores of New Hampshire, the nation and its people during the greatest conflict of the 20th century. This continues to be revealed

in its dominant presence and close proximity to both the nearby shoreline, and the three fortifications (Forts Stark, Foster and Dearborn) with which it was most closely associated.

On June 21, 1944 in the late afternoon, the (two) new Model M1 16" naval guns installed at Battery Seamen / 103 were test-fired, continuously and without incident, for about four hours, for the first – and only – time. Subsequent to the firing, the guns were cleaned and mothballed – and never fired again. With the prospects of sea-borne or air attack diminishing steadily in 1944, the first battalions of the 22nd Coast Artillery Regiment were de-activated in November and transferred out as replacements for the war in Europe, or to other duties, primarily in preparation for the anticipated invasion of Japan. At the conclusion of the war in August, 1945 virtually all of the heavy guns of the Coast Artillery were scheduled to be cut up for scrap by 1948 or earlier, their purpose and function having been made obsolete by advances in airpower, rocketry and atomic weapons almost as soon as they were first installed. Optical range-finding and hand-calculated gunnery solutions too, were quickly replaced with radar and increasingly sophisticated vacuum-tube, electro-mechanical computers, ushering in a new era in electronic surveillance and target-plotting. The Coast Artillery Corps itself was disbanded as a distinct service unit in 1950, the era for the necessity of fixed seacoast fortifications having been superceded with the advancing technology of mobile and aerial warfare.

Criterion C

Area of Significance: Architecture (1943-1945)
Applicable Statewide Context: "Architecture in New Hampshire, 1623 – present."

Pulpit Rock Tower, completed in June, 1943, was one of fourteen, new base-end stations constructed in 1942-43 by private contractors for the Harbor Defense of Portsmouth (NH), which was supervised by the US Army Corps of Engineers, Boston District. This vital, updated system of fire control towers was designed to serve new 6" batteries planned for Fort Foster at Gerrish Island, ME; and 16" and 6" batteries to be placed at an entirely new facility - Fort Dearborn – at nearby Odiorne Point in Rye. The 22nd Regiment of Coast Artillery had been mobilized shortly after December 7, 1941 and was quickly assigned to Fort Dearborn, eventually reaching a complement of about 2,200 personnel. A temporary battery of four, tractor-drawn mobile, WW-I vintage, 155mm GPF guns were hurried into position at Odiorne Point and founded on new, Panama mounts – circular concrete pads with a curved rail which would allow these weapons to traverse and follow a moving target at sea. To furnish fire control data to this battery, several older, vintage WW-I fire control base-end stations were re-equipped, and pressed into service along with several temporary towers, constructed with both wooden and steel frames, one of the former being erected, initially, at Pulpit Rock.

The new base-end towers extended from Halibut Point, Rockport, MA on the south, to Gelaspus Point, at Kennebunk Beach, ME to the northeast, a distance spanning approximately 25 miles in each direction – also the effective range of the new 16" guns. To be effective, the baseline plotting system required at least a 30° angle between each station and the target. Towers at the extreme ends of the system were shared by the Harbor Defenses of Boston (Fort Ruckman at Nahant), and Portland, ME (Fort Williams at Cape Elizabeth) respectively, creating a seamless overlap of telephone and wireless communication between these mutually-supportive surveillance systems, which constantly monitored off-shore naval activity. With the exception of Pulpit Rock, all of the fire control towers in the 50-mile long base-end station system for the Harbor Defenses of Portsmouth were designed square in plan, and of reinforced concrete construction. For reasons undoubtedly associated with the low elevation of the site, the Pulpit Rock Tower was also the tallest in stature (eight stories) of all of the examples in this group, making it a probable candidate for installation of radar, later in 1943. The towers in this system included, from south to north:

Harbor Defenses of Portsmouth:

Base-End Station Locations	Current Status
• Halibut Point, Rockport, MA (shared HD of Boston)	State park unit
• Castle Hill, (Crane Beach) Ipswich, MA (shared HD Boston)	Demolished
• Plum Island, MA	Demolished
• Salisbury Beach, MA	Demolished
• Great Boar's Head, (Hampton Beach) Hampton, NH	Private Residence Annex
• Rye Ledge, Rye, NH	Demolished

• Appledore Island, ME	Extant - Poor Condition
• *Pulpit Rock, Rye, NH *(circular plan)	Extant - Exc. Condition
• *Sisters Point (Gerrish Island) ME	Demolished
• Seal Head Point (Godfrey's Point) ME	Demolished
• Cape Neddick, ME	Demolished
• Bald Head Cliff, ME	Demolished
• Moody Point, (Wells Beach) ME	Extant – Realty Office
• Gelaspus Point, (Kennebunk Beach) ME	Demolished

Locally, the Base-End Station at Pulpit Rock (Site 2-A), sometimes also referred to generically as the larger, temporary entity called Pulpit Rock Camp (1943-45) (See Continuation Sheet 7. 1 - Exhibit I), was unique in that this was the only compound for the 14 aforementioned stations which included two observation towers – the second being a steel, open-framed tower with two observation platforms – Harbor Defense Observation Post No. 1, and Base 3/6, Spot 3/6 for the new 6" Battery No. 205, intended to be constructed at Fort Foster, Kittery Point, ME. (See Continuation Sheet 7. 3 - Exhibit III) This 70'+/- tower, located southeast of its taller, concrete counterpart near NH Route 1-A, replaced an earlier, temporary wooden tower, hastily erected after the Pearl Harbor attack. This steel tower was taken down and scrapped shortly after the end of the war in late 1945. In addition, Pulpit Rock Camp included Anti-Motor Torpedo Boat Defense Battery 951 (Site 1-A), consisting of four, 90mm guns on barbette mounts; a 60" searchlight tower; electrical generator houses; and a subterranean ammunition magazine. (See Continuation Sheet 7. 2 - Exhibit II) The ordnance is reported to have been dismounted and put in storage before the end of the war since Battery 205 at Fort Foster was never armed. Officers, gun crews, searchlight operators and tower observers – estimated at 35-40 in number including officers - were billeted in leased summer cottages nearby, some of which are reported to remain extant. Site 2-A upon which Pulpit Rock Tower is located, was acquired in late 1942 and is a separate and non-contiguous parcel from Site 1-A, which was acquired by the War Department on March 24, 1941. Few traces of Pulpit Rock Camp remain today; all government buildings, equipment and the magazine have been long removed/filled in and only the circular concrete gun mount of the south battery (partially removed), remains exposed to view on the ledges east of the highway; the north battery having been destroyed during widening of US Route 1-A some years ago. The summer cottages – perhaps four in number – have all reverted to private ownership and have been modified or improved to varying degrees. Pulpit Rock Camp – the former compound of gun batteries, searchlight equipment and utility buildings - is no longer extant and therefore has diminished integrity of feeling or association with this aspect of the ancillary 1943-45 military occupation of this place, – and is noted here solely for the purpose of illuminating the association with the two, larger historical, community contexts.

With construction of the new base-end stations for direct-line optical observation, several other, steel-frame towers were also erected for radar arrays. Among these, in New Hampshire, were included, Ragged Neck and Concord Point (both now demolished); and in Maine, Mount Agamenticus and Sisters Point, at Gerrish Island (also demolished). At least two other sources indicate that Pulpit Rock Tower was also retro-fitted with radar for range-finding purposes as early as 1944, which is corroborated by electronic equipment remnants found on the roof deck. Further research may be warranted to irrefutably establish that Pulpit Rock Tower was also one of the first radar sites in New Hampshire to be used for fire control purposes during the Primary Period of Significance (1943 – 1945).

Within the system of base-end stations constructed for the Harbor Defenses of Portsmouth (1942-1943), only five survive today – two of these remain extant in New Hampshire and neither is open to the public. Pulpit Rock Tower, while its interior equipment has been removed, retains a high degree of historical, architectural and structural integrity for the Primary Period of Significance (1943-1945), expressed in its site context, its Moderne-influenced design, stability, form, plan, features and detail. The structure offers a unique, one of a kind, contribution to New Hampshire's limited collection of historically-significant, military-related buildings and structures and, of the two surviving examples, is the best one to represent the themes of "Military" and "Architecture" for fire control structures associated with coastal defense in New Hampshire during World War II. The significance of the structure's design hangs largely on its utilitarian circular form, Moderne influence, and the distinct character of its narrow observation windows and restrained secondary fenestration. In these respects. the structure meets the requirements for Criterion C by evoking the distinctive characteristics of a type (military fire control tower), period (World War II era example), or method of construction (continuous concrete pour) or...that possess high artistic values (sculptural quality of the vertical, cylindrical design), or that represent a significant and distinguishable entity whose components may lack individual distinction (landmark quality of presence attributable to height, color and texture).

Developmental history/additional historic context information (if appropriate)

The history and development of base-end stations and triangulation methods for gunnery emerged co-incident with improvements in weaponry metallurgy, smokeless propellants, carriage design, range-finding optics and, eventually, electro-mechanical computation. Between 1900 and 1910, coastal artillery actually held the lead, for a brief period, in accuracy, range and destructive effectiveness, over naval artillery. Continuation Sheets 8.1 and 8.2 present an overview of the harbor entrance locations of the fortifications to which Pulpit Rock Tower was designed to serve in 1943; Forts Stark and Foster originally; then Fort Dearborn in 1944 – 1945, when Batteries 103 and 204 were completed. The following excerpt from Coast Defense Study Group author, Pete Payette, provides insight into the system – and arrangement – of the base-end station complex which developed at Portsmouth Harbor during the first quarter of the 20th Century:

> "During and after World War I, there was an earlier system of emergency wartime base-end stations and fire-control observation posts. The main cupola of the Wentworth Hotel in New Castle was approved as an observation station for the Gun Group Commander at Fort Stark, although it is not known for certain whether it was actually used as such. A temporary wartime secondary field station (**B"** Battery Hunter, Fort Stark) was established on Odiorne Point in 1917. A permanent concrete secondary station (**B"** Battery Hunter) was built in 1921, located about 300 yards east of the Wentworth Hotel in New Castle. It was destroyed in 1998. A concrete secondary station (1921) still exists on Gerrish Island at Seward's Point (**B"** Battery Bohlen, Fort Foster). The primary stations (**B'**) for Batteries Hunter, Bohlen, and Farnsworth (Fort Constitution) were located on post. The crow's nest positions on Battery Hunter (E1 Hunter - E2 Bohlen) and on Battery Bohlen (E1 Bohlen - E2 Hunter) were established as an improvised emergency baseline of approximately 2080 yards long until the advent of World War II rendered these stations obsolete."
>
> Source: http://www.northamericanforts.com/East/New_Hampshire/Towers/towers.html

Payette provides further insight into how the tower system was integrated, through electrical signaling, and telephone communications, with the plotting room, which may have accompanied one or more batteries:

> "Sightings of enemy surface ships were made through the optical instruments at Base-End Stations, and were coordinated by time-interval bells that rang synchronously (every 15 or 30 seconds) throughout the entire system. A Depression Position Finder (DPF) scope was used to find and track the target, and a smaller azimuth scope was used to report shell hits and/or misses. Using this method, the location of a target could be determined from several towers at the same instant. Data from these observers, along with weather and tidal information, was telephoned on secure lines to bomb-proof plotting rooms. A primitive computer, which had replaced the earlier manual plotting boards, processed all of the incoming information and then provided artillery crews with aiming coordinates based on the predicted location of the moving enemy ship at the time of firing. Because the shells might be fired as far as 25 miles (for 16-inch guns), the rotation of the Earth also had to be taken into consideration when calculations were being made."
>
> "Each observation level in a station was used exclusively for one specific gun battery or command post, usually manned by six observers per level, and three observers for each AAIS post. Each station had a barracks, either attached or unattached to the tower itself, and was usually made to camouflage the structure (if attached) as a beach house or church or other such structure. The searchlight stations were manned by eight men per light, and usually shared the same barracks with the observation crews. Most of the base-end stations were not manned during the later years of the war, as the threat of enemy invasion ceased to exist, and also because the new invention of radar had made the towers obsolete as tracking stations. Some were kept in service, however, to serve as a backup to the radar. Fort Dearborn's two 16-inch guns were "mothballed" immediately after test-firing in 1944, therefore the stations assigned to these guns were actively manned only once in order to test the equipment. The stations assigned to Battery 205 at Fort Foster were never manned, as that battery was never armed and made operational."
>
> Source: http://www.northamericanforts.com/East/New_Hampshire/Towers/towers.html

The Plotting Room at Fort Dearborn remains extant – underground as it was designed - near Frost Point just northwest of Battery Seamen / 103 (See Continuation Sheets 8.3 and 8.4 – Exhibit VII: Military Layout of Fort Dearborn 1941-1959) but is not open to the public for interpretation at this time.

The system of position finding for spotters in base-end stations depended upon not only high-power optics but an understanding of complex mathematical and geometric principles in order to determine both position, direction, and speed of a moving target from a battery or directing point. Coastal batteries were not aimed directly at enemy ships, but toward a predicted point called the Set Forward Point. This abstract concept was defined as the point on the surface – and precise moment in time – that both the target and flight of the projectile would be predicted to arrive simultaneously, after traveling over a predicted interval of time and distance. The US Coast Artillery Corps used three methods of calculating the data needed for an accurate gunnery solution:

1. **"The Horizontal Base System**
   In the horizontal base system base-end observing stations were placed at each end of a known base line laid out along the coast line. This line constituted the known leg of a triangle. The base line did not necessarily run back in a direct line to the gun position. The displacement of the guns and other factors were calculated by the plotting room. The stations were designated as B' (Prime) and B" (Secondary). The station closest to the directing point was designated as B'. There were several groupments of base end stations to allow for combat casualties and target tracking from different points of view."

2. **"The Vertical Base System**
   In the vertical base system, the target was located by the offset method used in surveying, in which the direction and distance of the target from a known point are determined. The direction was determined by reading the azimuth as in the horizontal base system. The distance was determined by the depression angle method which involves the solution of a vertical right triangle of which one leg is the desired range, the other leg is the effective height of the observation instrument above the target, and the hypotenuse is the line of sight from the observer to the target. "

   "An instrument called a Depression Position Finder (DPF) was used to determine vertical angles. The vertical base system requires only one observing station as the depression angle is solved mechanically by the observation instrument."

3. **"The Self Contained System**
   Self-contained range finders were designed to determine both range and azimuth at the same time. The stereoscopic height finder M1 originally designed for antiaircraft artillery was adopted as the standard self-contained range finder for seacoast artillery."

   "Base-end stations were manned by an Observing Detail consisting of an observer and a reader. The reader's telephone in a horizontal base system was connected to the earphone set of the appropriate arm setter (B' or B") in the battery plotting room at the gun emplacement."

   "In a vertical base system, the telephone system is connected to the arm setter in the plotting room who repeats the range information to the plotter who marks the range by means of range graduations along the edge of the arm. In Battery Commander's stations, more personnel were assigned to maintain the Commander's chart."

   Source: http://www.ftmac.org/BESWork.htm

In conclusion, Continuation Sheet 8.5 Exhibit VIII – Fire-Control Towers of the Harbor Defenses Command of Portsmouth, together with the preceding exhibits, demonstrate the depth and geographical reach of association with the statewide contexts "World War II in New Hampshire," and "New Hampshire's Coastal Defenses, 1775 – present" possessed by the Pulpit Rock Tower. Despite America's resistance to engaging in a second world conflict in 1941, and the hurried preparations which were required soon after, no shots were required to be fired in anger from New Hampshire's shore, or

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National Register of Historic Places Continuation Sheet

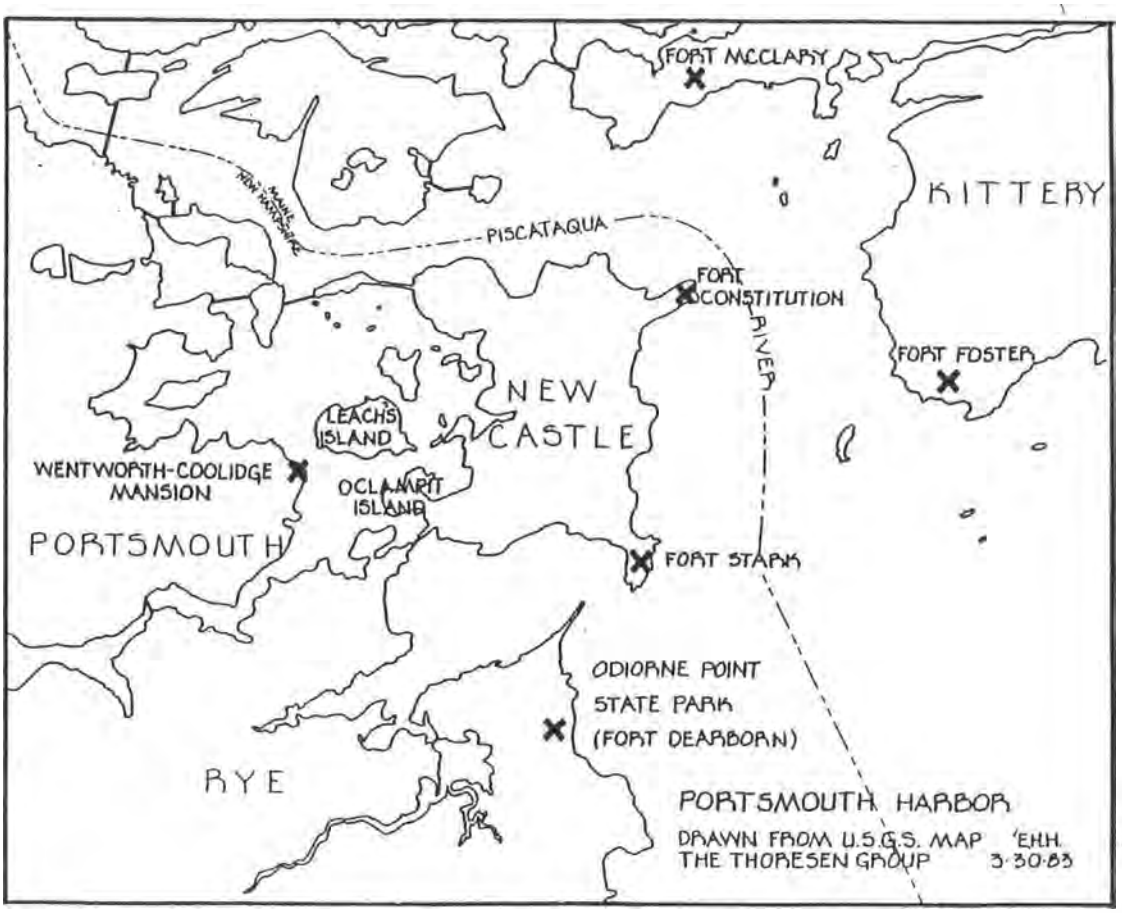
Name of Property PULPIT ROCK TOWER

County and State ROCKINGHAM, NH

Name of Multiple Property Listing (If applicable)

Section number: **8.0** page: **8. 1 Exhibit VII: Location of Portsmouth Harbor Forts 1941**

Source: The Thoreson Group. State Coastal Properties Project: Part 1 Fort Stark. Map C. Page 20. Concord, NH. NH Office of State Planning. 1983



United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Name of Property PULPIT ROCK TOWER

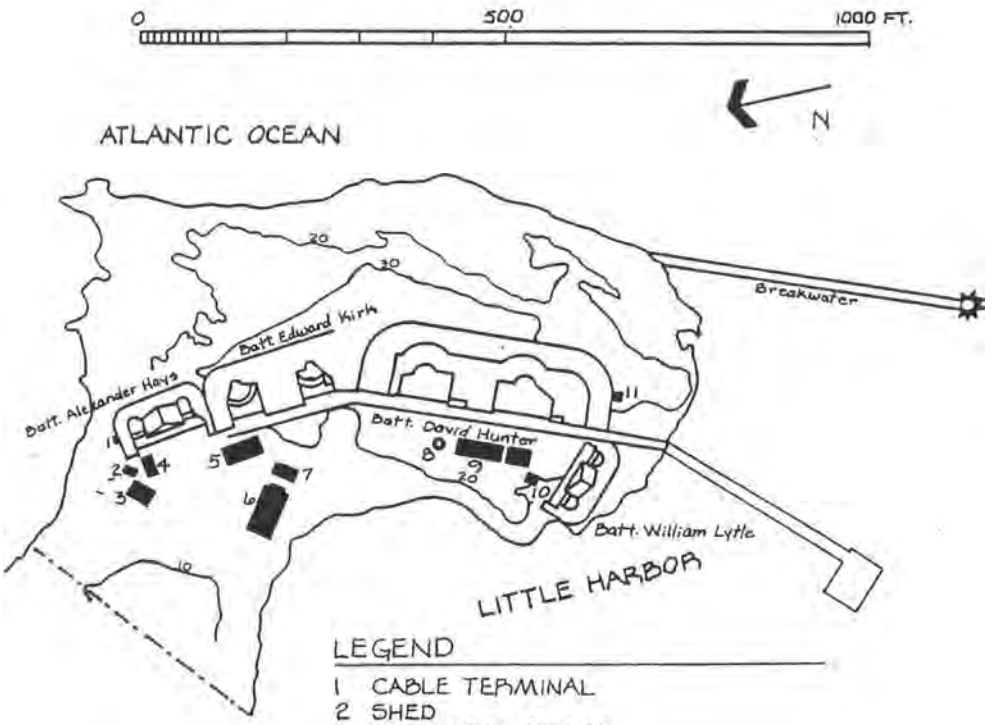
County and State ROCKINGHAM, NH

Name of Multiple Property Listing (If applicable)

Section number: **8.0** page: **8. 2 Exhibit VII: Plan of Fort Stark & 12" Battery Hunter 1910**

Source: The Thoreson Group. State Coastal Properties Project: Part 1 Fort Stark. Concord, NH. NH Office of State Planning. 1983

FORT STARK
NEW CASTLE, NEW HAMPSHIRE



LEGEND

1 CABLE TERMINAL
2 SHED
3 ENGR. DEPT. OFFICE
4 FIRST MINE COMMAND
5 MINING CASEMATE
6 BARRACK
7 COAL SHED & LAVATORY
8 WATER TANK
9 CARPENTER SHOP, BLACKSMITH SHOP & STORE ROOM
10 SHED
11 BRICK OIL HOUSE (U.S.L.H. DEPT.)

THE THORESEN GROUP
BASED ON 1908 ARMY CORPS OF ENGINEERS MAP
BUILDINGS DRAWN FROM 1910 REVISED MAP

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

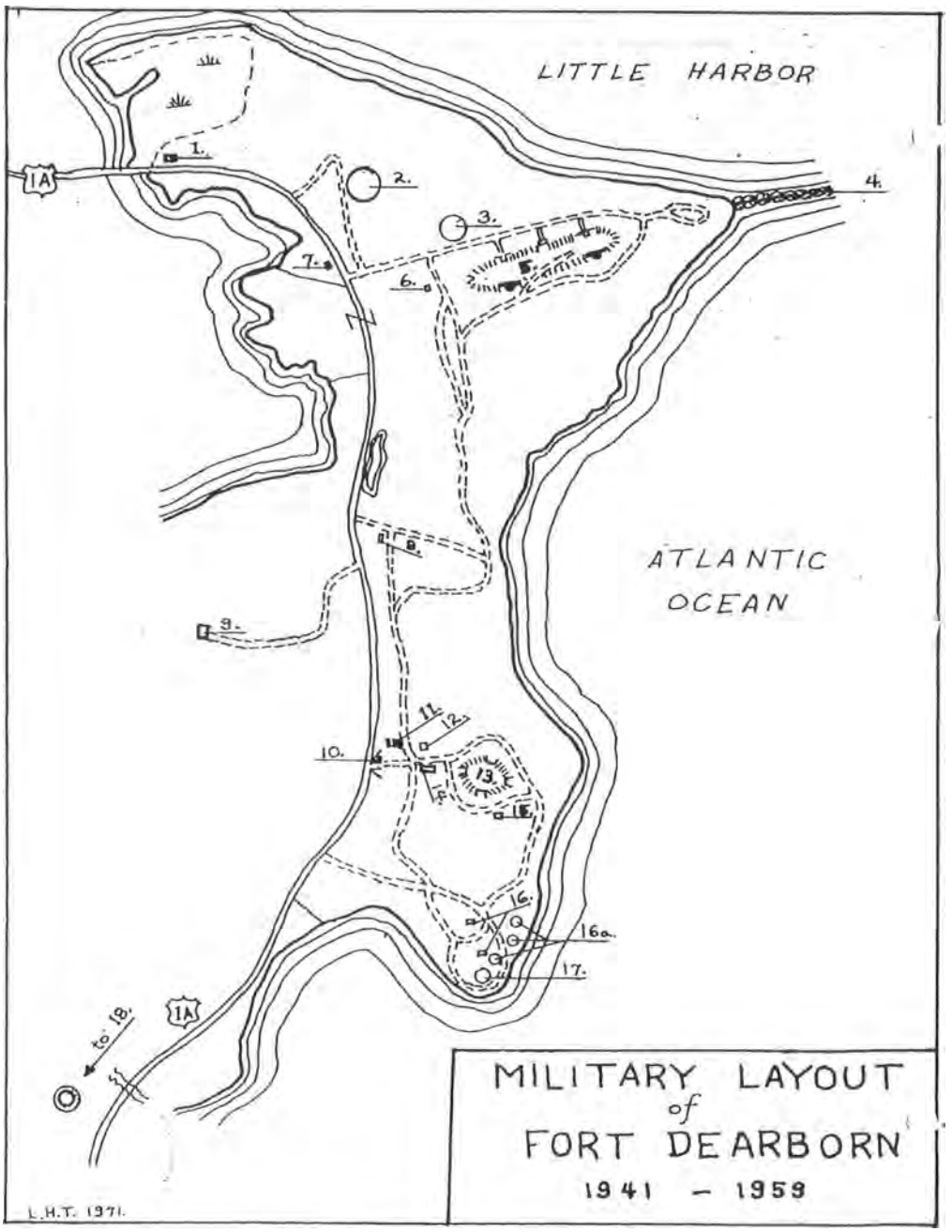
Name of Property PULPIT ROCK TOWER

County and State ROCKINGHAM, NH

Name of Multiple Property Listing (If applicable)

Section number: **8.0** page: **8. 3 Exhibit VIII: Military Layout of Fort Dearborn 1941 - 1959**

Source: Tallman, Louise P. Odiorne Point: Highlights of History. Concord, NH. Published by NH Division of Resources and Economic Development. Concord, NH. Unpaged. 1972



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National Park Service

National Register of Historic Places Continuation Sheet

Name of Property PULPIT ROCK TOWER

County and State ROCKINGHAM, NH

Name of Multiple Property Listing (If applicable)

Section number: **8.0** page: **8. 4** **Exhibit VIII: Military Layout of Fort Dearborn 1941 – 1959 Legend**

MILITARY LAYOUT of FORT DEARBORN

Coast Artillery (1941-1949)
New Hampshire National Guard (1949-1950)
Air Defense Command (1949-1959)

1. Search light battery storage building. Cinder-block construction. Coast Artillery.
2. Plotting room for Battery Seaman. Earth-covered concrete. Coast Artillery.
3. Reservoir and pumping station. Earth-covered concrete. Coast Artillery.
4. Breakwater, constructed in 1902 by Army Engineers.
5. Battery Seaman, casemate for the two sixteen-inch guns. Earth-covered concrete. Coast Artillery.
6. Small-arms ammunition building. Coast Artillery.
7. Building erected by Coast Artillery for a commissary, but never used. Now Brown property.
8. Fire house and repair shop. Air Defense Command.
9. Large ammunition magazine. Cinder-block construction. Coast Artillery. Now Brown property.
10. Main gate and traffic control house. Air Defense Command.
11. Foundations of the temporary barracks. Air Defense Command.
12. "Gap Filler" building, for emergency power generating equipment. Air Defense Command.
13. Casemate for the six-inch, rapid-fire guns, with mounts on top. Observation post on top for fire control. Earth-covered concrete structure, erected by Coast Artillery. Steel observation towers added by Air Defense Command. Recent adaptation of lower rooms as Civil Defense shelter.
14. Mess hall. Air Defense Command.
15. Operations building. Air Defense Command.
16. Ammunition magazines for the 155mm guns. Earth-covered concrete. Coast Artillery.

16a. Positions of the temporary 155mm guns. Now removed.

17. Panama mount with steel track for one of the 155mm guns. Coast Artillery.
18. Fire control observation tower, located between 1-A and Parsons Road. Coast Artillery.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Name of Property PULPIT ROCK TOWER

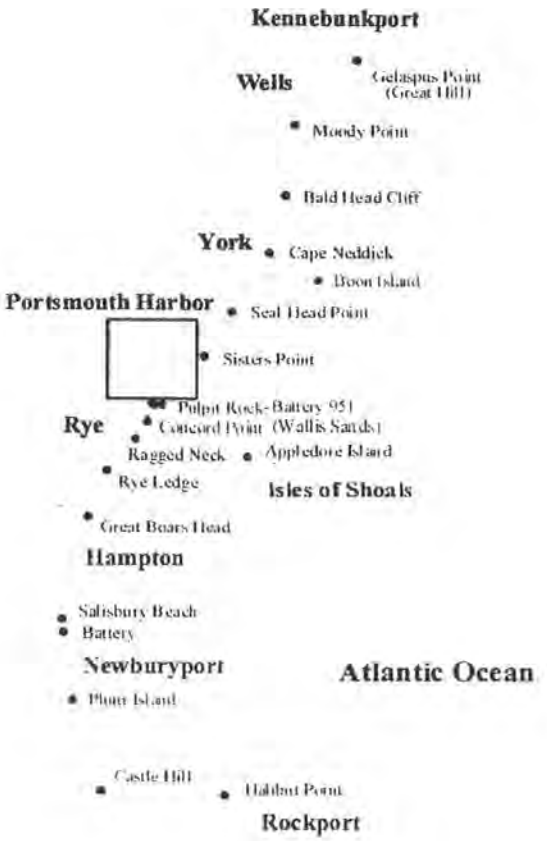
County and State ROCKINGHAM, NH

Name of Multiple Property Listing (If applicable)

Section number: **8.0** page: **8. 5** **Exhibit VIII: Fire-Control Towers of the Harbor Defenses of Portsmouth**
Source: http://www.northamericanforts.com/East/New Hampshire/Towers/towers.html

Gun Battery Fire-Control Towers (Base-End Stations) of the Portsmouth Harbor Defense Command

1942-1946



Portsmouth's harbor. Base-End Station No. 142 stands today in silent tribute to those citizens who served resolutely on the homefront in both industry and military service, in a time of great peril for the state and the nation.

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Hoxie, USAR, Lt. Col., Wilbar M. "Pulpit Rock Observation Station: Proposal for Nomination to the National Register of Historic Places." (Type-written manuscript). 1977

Hoxie, USAR, Lt. Col., Wilbar M. "Fort Dearborn – Keystone in the Harbor Defenses of Portsmouth." (Type-written manuscript). 1971

Payette, Pete. http://www.northamericanforts.com/East/New_Hampshire/Towers/towers.html

Maps and Plans

Kittery Quadrangle – Maine-New Hampshire. 7.5 Minute Series (Topographic). Scale: 1:24,000. United States Geological Survey. 1995; 1956; 1920; 1893.

Durgin, CE, John W. Portsmouth, N.H. "Plan of Lots Fair Hill Estates'" Rye Beach, N.H." File No. 135 Plan No. 753-2. Scale: 1"-100.' Sheet No. 2 of 2 Sheets. Rockingham County (NH) Registry of Deeds, Exeter, NH. 10-18-66 original. (Lots #384 & # 385 contain the site of Pulpit Rock Tower)

Seacoast Engineering Assoc., Inc. Town of Rye, NH 2009 Tax Maps. (Map 20.2 Lot 050).

Reports

Gun Battery Fire-Control Towers (Base-End Stations) of the Portsmouth Harbor Defense Command 1942 – 1946. "WWII Tower Locations" (chart). http://www.geocities.com/nhfortress/Towers/towers.html?200928

Gun Battery Fire-Control Towers (Base-End Stations) of the Portsmouth Harbor Defense Command 1942 – 1946. "About Base End Stations." http://www.geocities.com/nhfortress/Towers/towers.html?200928

Gun Battery Fire-Control Towers (Base-End Stations) of the Portsmouth Harbor Defense Command 1942 – 1946. "Pulpit Rock Base-End Station – Location 142 (Site 2-A)"
http://www.geocities.com/nhfortress/Towers/towers.html?200928

The Thoreson Group. State Coastal Properties Project: Part 1 Fort Stark. Concord, NH. NH Office of State Planning. 1983

The Thoreson Group. State Coastal Properties Project: Part 2 Fort Dearborn. Concord, NH. NH Office of State Planning. 1983

Reports of Completed Works. Supplement to Harbor Defense Project, Harbor Defenses of Portsmouth HPPH-AN-45. 1945

_____Plan entitled: "H D of Portsmouth Loc. 142 Pulpit Rock. Prepared by HD of Portsmouth. Date 1-1-45 Exhibit No. 9B-10 Scale – 1" = 100.'

_____Seacoast Fortifications (Batteries). Job No Loc. 142, FS2, EDC 976. US Eng. Office New England Div. Boston, Mass. 1 December 1945 Part VII (Battery Plan) (Sheet 2 of 2 Sheets) Pulpit Rock Location: No. 142 Site: 951 Battery: Anti-Motor Torpedo Boat Defense No. 951 No. of Guns: 4 Caliber: 90mm Carriage: 2 Ped. – 2 Mobile.

_____ Seacoast Fortifications (Fire Control or Torpedo Structures) 660 (Boston) CM 35026 (handwritten) Form 2. Corrected to: November 1, 1942. 35026 ~~CONFIDENTIAL~~ Sheet 1 of 2 Sheets. (second sheet missing). Harbor Defenses of Portsmouth, N.H. Pulpit Rock, Rye, N.H. (142) 1-A. Structure: Combined Fire Control Tower B3/6 S3/6, H-OP1 (#205 at Fort Foster).

_____ Seacoast Fortifications (Fire Control or Submarine Mine Structures) 600.914 (Portsmouth) CM 68456 (handwritten) Part 2. Corrected to: November 1, 1943. 68456 Sheet 1 of 2 Sheets. Harbor Defenses of Portsmouth, N.H. Fort: Pulpit Rock Location No. 142 Site 2A Structure: Observation Tower – 8 Stories AAIS-OP-7 Upper: B4/1 S4/1 #204 Fort Dearborn; Lower: B8/2, S8/2 Seamen.

Previous documentation on file (NPS):

___preliminary determination of individual listing (36 CFR 67 has been requested)
___previously listed in the National Register
_X_previously determined eligible by the National Register
___designated a National Historic Landmark
___recorded by Historic American Buildings Survey #_____
___recorded by Historic American Engineering Record # _____
___recorded by Historic American Landscape Survey # _____

Primary location of additional data:

_X_State Historic Preservation Office
___Other State agency
_X_Federal agency
___Local government
___University
___Other
Name of repository: _____

Historic Resources Survey Number (if assigned): _____

10. Geographical Data

Acreage of Property .438 acres+/-
(Do not include previously listed resource acreage.)

UTM References
(Place additional UTM references on a continuation sheet.)

	Zone	Easting	Northing		Zone	Easting	Northing
1	19	359785	4765745	3			
2				4			

Verbal Boundary Description (Describe the boundaries of the property.)

The Boundary Description of Base-End Station No. 142, or Pulpit Rock Tower, located in the Town of Rye, NH as it commonly referred to presently, may be found in Book 2307, Page 1523 at the Rockingham County Registry of Deeds, Exeter, NH; and is presented herein as follows:

"Beginning at a point which is the intersection of the northeasterly side of an unnamed street and the northwesterly side of an unnamed street, said point being 335 feet more or less from the northerly side of Ocean Boulevard measured along the line of the said northeasterly side of the unnamed street;

thence along said northeasterly side of the unnamed street in a northwesterly direction a distance of 130 feet;

thence in a northeasterly direction a distance of 145 feet;

thence in a southeasterly direction a distance of 123 feet to the northwesterly side of an unnamed street;

thence in a southwesterly direction along said northwesterly side of the unnamed street a distance of 160 feet to the point of beginning.

Containing 0.438 acre, more or less.

Meaning and intending to convey all the interest of the United States acquired by General Warranty Deed form Emma L. Johnson and Otto Johnson, husband and wife, dated June 19, 1943 and recorded in the Land Records of Rockingham County, New Hampshire, in Book 1009, Page 282.

Boundary Justification (Explain why the boundaries were selected.)

The boundary described in the foregoing includes the entirety of the structure known as Base-End Station No. 142 or Pulpit Rock Tower, and all land, minerals, surface features and vegetation which has historically been associated with this property since creation of the lot on June 19, 1943 and which maintains the historical integrity of the property.

11. Form Prepared By

name/title Christopher W. Closs, Community Planning and Preservation Consultant
organization Christopher W. Closs and Company date November 2, 2009
street & number P.O. Box 530 telephone 603 513-1763
city or town Hopkinton state NH zip code 03229
e-mail clossplan@comcast.net

Additional Documentation

Submit the following items with the completed form:

- **Maps:** A **USGS map** (7.5 or 15 minute series) indicating the property's location.

  A **Sketch map** for historic districts and properties having large acreage or numerous resources. Key all photographs to this map.

- **Continuation Sheets**

Photographs:

Submit clear and descriptive photographs. The size of each image must be 1600x1200 pixels at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map.

Permanent location of negatives: Christopher W. Closs, PO Box 530, Hopkinton,NH 03229

Name of Property: Base End Station No. 142 / Pulpit Rock Tower
City or Vicinity: Rye
County: Rockingham **State: New Hampshire**
Photographer: Christopher W. Closs
Date Photographed: July 23, 2009
Number of Photographs: 11

1 of 11: Site Context – E ELV of tower; View W from Ocean Boulevard

2 of 11: Site Context and Roof – Ocean Boulevard & Odiorne Point with former Fort Dearborn at left, background. View: NE

3 of 11: Exterior - W & S ELVS; View NE

4 of 11: Exterior - E & N ELVS; View SW

5 of 11: Exterior – Principal entry, stair, pipe railing, hooded door. View NE

6 of 11: Interior – 6th Floor. Ship's ladder to 7th. View: NW

7 of 11: Interior – 7th Floor. Chart table; slit observation windows. This level provided target spotting and fire control data for 16" guns, Battery Seamen / 103 at Fort Dearborn. View: SSE

8 of 11: Interior – 7th Floor. Ship's ladder and gangway to 8th Floor; and gangway to 6th Floor below. View: NNW

9 of 11: Interior – 8th Floor. Observation chair atop concrete pedestal formerly used for mounting of Lewis Depression Position Finder (DPF) range-finding instrument. View: E

10 of 11: Interior – 8th Floor. Anti - Aircraft Intelligence Service (AAIS) – OP – 7 position and step-up entry hatch into "tub." Hatch to roof is above / out of view. View: NW

11 of 11: Exterior / Roof – Deck house. Covering AAIS – OP – 7 position and former sliding hatch to roof. Chimney flue, deck house, radar bases and pole. View: WSW

Property Owner:

(Complete this item at the request of the SHPO or FPO.)

name State of New Hampshire, Department of Fish & Game
street & number 11 Hazen Drive telephone 603 271-3511
city or town Concord state NH zip code 03301

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

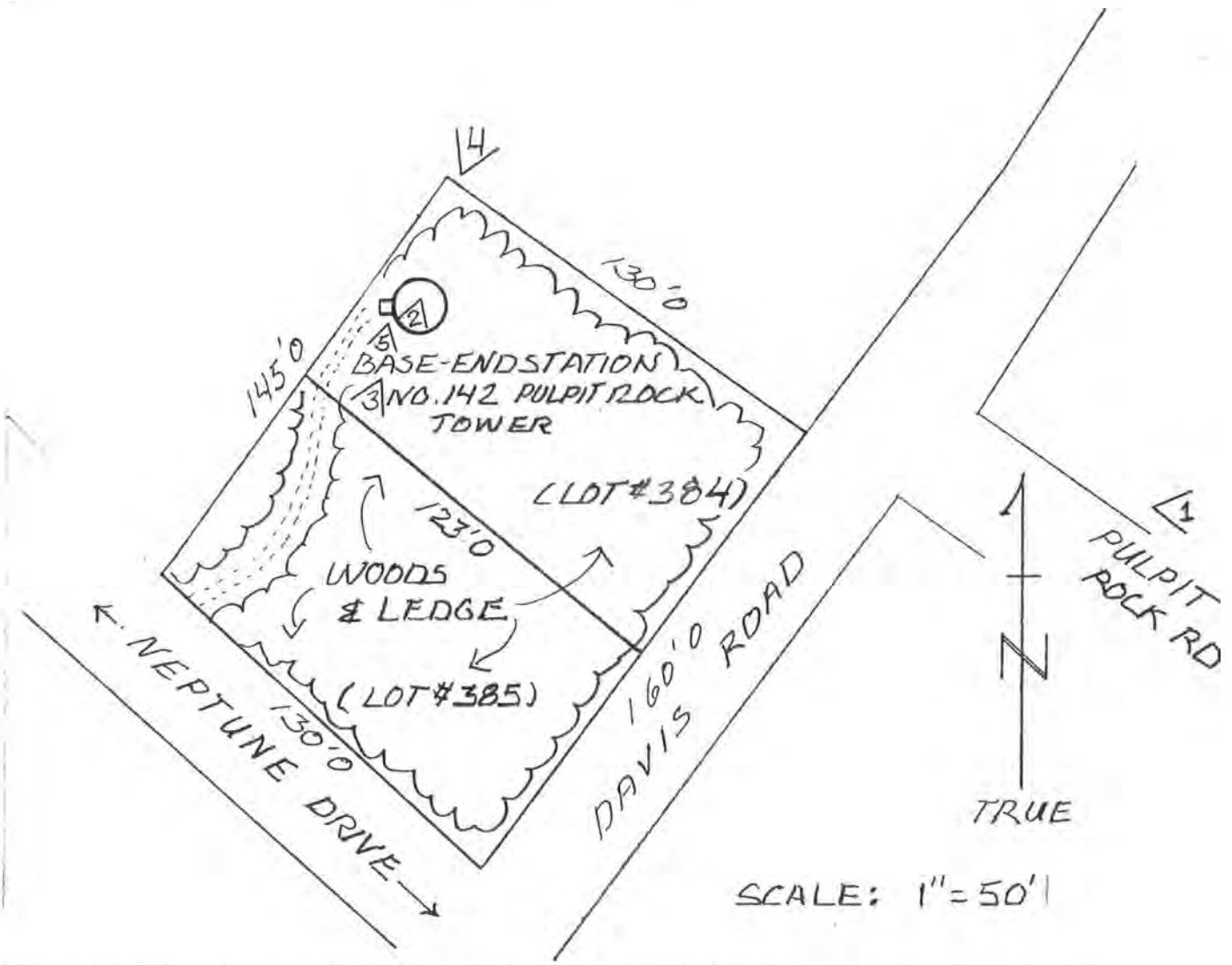
Name of Property PULPIT ROCK TOWER

County and State ROCKINGHAM, NH

Name of Multiple Property Listing (If applicable)

Section number: **Sketch Map** page: **Additional Documentation - 1**

CONTRIBUTING STRUCTURES: 1



Source: Tax Map of the Town of Rye, NH (Map 202, Lot 050); and Plan entitled: "H D of Portsmouth Loc. 142 Pulpit Rock, Prepared by HD of Portsmouth. Date 1-1-45 Exhibit No. 9B-10 Scale – 1" = 100' " from 1945 Supplement to Harbor Defense Project, Harbor Defenses of Portsmouth HPPH-AN-45.

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
EVALUATION/RETURN SHEET

REQUESTED ACTION: Nomination

PROPERTY NAME: Pulpit Rock Base-End Station (No. 142)

MULTIPLE NAME:

STATE & COUNTY: New Hampshire, Rockingham

DATE RECEIVED: 03/05/10 DATE OF PENDING LIST: 03/24/10
DATE OF 16TH DAY: 04/08/10 DATE OF 45TH DAY: 04/19/10
DATE OF WEEKLY LIST:

REFERENCE NUMBER: 10000188

DETAILED EVALUATION:

✓ ACCEPT ___ RETURN ___ REJECT 4/16/10 DATE

ABSTRACT/SUMMARY COMMENTS:

WWII defense tower

RECOM./CRITERIA A-C

REVIEWER [signature] DISCIPLINE Historian

TELEPHONE ____ DATE 4/16/10

DOCUMENTATION see attached comments Y/N see attached SLR Y/N

If a nomination is returned to the nominating authority, the nomination is no longer under consideration by the National Park Service.

085 1NA2NNNI --- 10/17/2009 Concord Came
ra Store

PROPERTY NAME:
BASE-END STATION NO 1412
PULPIT ROCK TOWER
CO.: ROCKINGHAM, NH
PHOTOGRAPH #: 1

084 1NA4NNNI --- 10/17/2009 Concord Came
ra Store

PROPERTY NAME:

BASE-END STATION NO. 142
PULPIT ROCK TOWER
CO. ROCKINGHAM, NH

PHOTOGRAPH #: 2

085 1NA2NNNI --- 10/17/2009 Concord Came
ra Store

PROPERTY NAME:

BASE-END STATION NO. 142
PULPIT ROCK TOWER
CO. ROCKINGHAM. NH

PHOTOGRAPH#: 3

085 1NA4NNNI --- 10/17/2009 Concord Came
ra Store

PROPERTY NAME:

BASE-END STATION No. 142
PULPIT ROCK TOWER
CO. ROCKINGHAM, NH

PHOTOGRAPH #: 4

085 1NA6NNNI --- 10/17/2009 Concord Came
ra Store

PROPERTY NAME:

BASE-ENA STATION NO. 142
PULPIT ROCK TOWER
CO. ROCKINGHAM, NH

PHOTOGRAPH #: 5

084 1NA1NNHI --- 10/17/2009 Concord Came
ra Store

PROPERTY NAME:

BASE-END STATION No. 142
PULPIT ROCK TOWER

CO. ROCKINGHAM, NH

PHOTOGRAPH #: 6


ALLIGA

085 1NA1NNNI --- 10/17/2009 Concord Came
ra Store

PROPERTY NAME:

BASE-END STATION No. 142
PULPIT ROCK TOWER
CO. ROCKINGHAM, NH

PHOTOGRAPH #: 7

084 1NA2NNNI --- 10/17/2009 Concord Came
ra Store

PROPERTY NAME:

BASE-END STATION No. 142
PULPIT ROCK TOWER
CO. ROCKINGHAM, NH

PHOTOGRAPH #: 8


POKEY 10/25/

085 1NA3NNN1 --- 10/17/2009 Concord Came
ra Store

PROPERTY NAME:

BASE-END STATION No. 142
PULPIT ROCK TOWER
CO. ROCKINGHAM. NH

PHOTOGRAPH #: 9

084 1NA2NNNI --- 10/17/2009 Concord Came
ra Store

PROPERTY NAME:

BASE-END STATION No. 142
PULPIT ROCK TOLLER
CO. ROCKINGHAM. NH

PHOTOGRAPH #: 10

084 1NA3NNNI --- 10/17/2009 Concord Came
ra Store

PROPERTY NAME:

BASE-END STATION No. 142
PULPIT ROCK TOWER
CO. ROCKINGHAM. NH

PHOTOGRAPH #: 11

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

UNITED STATES
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS

KITTERY QUADRANGLE
MAINE-NEW HAMPSHIRE
7.5-MINUTE SERIES (TOPOGRAPHIC)

Produced by the United States Geological Survey

Topography compiled 1944. Planimetry derived from imagery taken 1982 and other sources. Photoinspected using imagery dated 1995; no major culture or drainage changes observed. Survey control current as of 1944. Boundaries revised 1999

North American Datum of 1927 (NAD 27)
Projection: Maine coordinate system, west zone (Lambert conformal conic)
10 000-foot ticks: Maine coordinate system, west zone and New Hampshire coordinate system
1000-meter Universal Transverse Mercator grid, zone 19

North American Datum of 1983 (NAD 83) is shown by dashed corner ticks. The values of the shift between NAD 27 and NAD 83 for 7.5-minute intersections are obtainable from National Geodetic Survey NADCON software

Hydrography compiled from USC&GS charts 1205 (1954), 329 (1955), and 1206 (1955). This information is not intended for navigationsl purposes

There may be private inholdings within the boundaries of the National or State reservations shown on this map

Information shown in purple may not meet USGS content standards and may conflict with previously mapped contours

MN GN
16½° 293 MILS
1° 09′ 20 MILS
UTM GRID AND 1999 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

20% TOTAL RECOVERED FIBER

SCALE 1:24 000

1 0.5 0 KILOMETERS 1 2
1000 0 METERS 1000 2000
1 0.5 0 1
MILES
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000
FEET

CONTOUR INTERVAL 20 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929
TO CONVERT FROM FEET TO METERS, MULTIPLY BY 0.3048
DEPTH CURVES AND SOUNDINGS IN FEET-DATUM IS MEAN LOWER LOW WATER
THE RELATIONSHIP BETWEEN THE TWO DATUMS IS VARIABLE
THE MEAN RANGE OF TIDE IS APPROXIMATELY 8.7 FEET

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, P.O. BOX 25286, DENVER, COLORADO 80225
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

MAINE
QUADRANGLE LOCATION

1	2	3
4		5
6	7	8

1 Dover East
2 York Harbor
3 York Beach
4 Portsmouth
5 Isles Of Shoals Oe N
6 Hampton
7 Isles Of Shoals Oe W
8 Isles Of Shoals
ADJOINING 7.5′ QUADRANGLE NAMES

INTERIOR–GEOLOGICAL SURVEY, RESTON, VIRGINIA–1999

ROAD CLASSIFICATION

Primary highway hard surface
Secondary highway hard surface
Light-duty road, hard or improved surface
Unimproved road
Interstate Route
U.S. Route
State Route

KITTERY, ME-NH
1995

NIMA 6870 II SW-SERIES V811

ISBN 0-607-91073-9
9 780607 910735

KITTERY QUADRANGLE
ME-NH 1995

BASE-END STATION
NO. 142
PULPIT ROCK TOWER
9 DAVIS ROAD
RYE, NH 03870

UTM:
ZONE: 19
E: 359785
N: 4765745

NEW HAMPSHIRE DIVISION OF HISTORICAL RESOURCES
State of New Hampshire, Department of Cultural Resources
19 Pillsbury Street, Concord, NH 03301-3570
TDD Access: Relay NH 1-800-735-2964
www.nh.gov/nhdhr

603-271-3483
603-271-3558
FAX 603-271-3433
preservation@dcr.nh.gov

February 1, 2010

Ms. Lisa Deline
National Park Service
1201 Eye Street NW 6th Floor
Washington DC 20005

Dear Lisa,

I am pleased to present the enclosed nominations for the Bloody Point Railroad Depot in Newington, NH and the Pulpit Rock Tower in Rye, NH to be considered for listing on the National Register of Historic Places.

Sincerely,

Peter Michaud
National Register
Preservation Tax Incentives
& Easements Coordinator
(603) 271 3583
Peter.michaud@dcr.nh.gov

I hope you had a nice holiday season and an enjoyable start to the new year!
Pete