National Park Service
Cultural Landscapes Inventory
2022



Ocracoke Light Station

Cape Hatteras National Seashore

[Internal Review/Park Review/SHPO Review]

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Chapter 1: General

Region

Southeast

Park Alpha Code

CAHA

Park Org Code

5190

Resource Type

Cultural Landscape

Resource Classification

Cultural Landscape

Inventory Status

Complete

Resource ID

550073

Resource Name

Ocracoke Light Station

Parent Landscape

N/A

Parent Resource ID

N/A

State

NC

Park Name

Cape Hatteras National Seashore

Cultural Landscapes in the Cultural Resources Inventory System:

CRIS is the National Park Service's database of cultural resources on its lands, consisting of archaeological sites, historic structures, ethnographic resources and cultural landscapes. The set of CRIS records for cultural landscapes is referred to as CRIS-CL. CRIS-CL records conform to a standardized data structure known as the Cultural Landscapes Inventory (CLI).

The legislative, regulatory and policy directions for conducting and maintaining the CRIS are: Section 110 of the National Historic Preservation Act, NPS Management Policies (2006), Director's Order 28 (Cultural Resources) and Director's Order 28a (Archeology).

The Cultural Landscapes Inventory (CLI)
The CLI is the data structure within CRIS used to document and evaluate all potentially significant landscapes in which NPS has, or plans to acquire any enforceable legal interest. Each CRIS-CL record is certified complete when the landscape is determined to meet one of the following:

Landscape individually meets the National Register of Historic Places criteria for evaluation; or, Landscape is a contributing element of a property that is eligible for the National Register; or, Landscape does not meet the National Register criteria, but is managed as cultural resources because law, policy or decisions reached through the park planning process.

Cultural landscapes vary from historic sites, historic designed landscapes, historic vernacular landscapes to historic ethnographic landscapes, but may also fit within more than one type. Those eligible for the National Register have significance in the nation's history on a national, state or local level, as well as integrity or authenticity.

The legislative, regulatory and policy directions for conducting and maintaining the CLI within CRIS are: *National Historic Preservation Act of 1966 (16 USC 470h-2(a)(1)). Each Federal agency shall establish…a preservation program for the identification, evaluation, and nomination to the National Register of Historic Places…of properties…*

Executive Order 13287: Preserve America, 2003. Sec. 3(a)…Each agency with real property management responsibilities shall prepare an assessment of the current status of its inventory of historic properties required by section 110(a)(2) of the NHPA…No later than September 30, 2004, each covered agency shall complete a report of the assessment and make it available to the Chairman of the Advisory Council on Historic Preservation and the Secretary of the Interior…

Executive Order 13287: Preserve America, 2003. Sec. 3(c) each agency with real property management responsibilities shall, by September 30, 2005, and every third year thereafter, prepare a report on its progress in identifying…historic properties in its ownership and make the report available to the Councill and the Secretary…

The Secretary of the Interior's Standards and Guidelines for Federal Agency Historic Preservation Programs Pursuant to the National Historic Preservation Act, 1998. Standard 2: An agency provides for the timely identification and evaluation of historic properties under agency jurisdiction or control and/or subject to effect by agency actions (Sec. 110 (a)(2)(A) Management Policies 2006. 5.1.3.1 Inventories: The Park Service will (1) maintain and expand the following inventories…about cultural resources in units of the national park system…Cultural Landscape Inventory of historic designed landscapes, historic vernacular landscapes,…and historic sites…

Cultural Resource Management Guideline, 1997, Release No. 5, page 22 issued pursuant to Director's Order #28. As cultural resources are identified and evaluated, they should also be listed in the appropriate Service-wide inventories of cultural resources.

Landscape Description

The Ocracoke Light Station is a historic vernacular landscape and historic site located on Ocracoke Island of the Cape Hatteras National Seashore (CAHA) in Hyde County, North Carolina, significant under National Register Criteria A and C. The approximate two-acre site is located on the southwest end of the seventeen-mile-long Ocracoke Island, which extends southwest from Hatteras Inlet to Ocracoke Inlet between Hatteras and Portsmouth Islands. The Ocracoke Light Station, located on National Park Service (NPS) land, is surrounded by the village of Ocracoke, the southernmost community associated with the Cape Hatteras National Seashore. The station is set back from the marshy Pamlico Sound to the west. North Carolina State Highway 12 (NC 12) connects the village of Ocracoke with Hatteras Island to the north via a ferry across Hatteras Inlet.

The Ocracoke Light Station was listed in the National Register of Historic Places (National Register) in 1977. It is significant in the areas of commerce, transportation, and architecture. The centerpiece of the original two-acre site is the 1823 brick tower and cast-iron lantern, the oldest North Carolina lighthouse still in continuous service and the second oldest lighthouse in the United States in continuous service. The tower and the fourth-order Fresnel lens reflect a standardized design used for many early lighthouses built by the Department of the Treasury. The early masonry towers were built separately from the keeper's quarters and were usually conical or octagonal in shape. The Ocracoke Lighthouse retains its Fresnel lens, and several contributing features remain in the historic station cultural landscape (Clifford and Clifford 2000, 17–18).

The layout of the site was consistent with other light stations of the day, where support buildings were clustered for easy access along a northeast axis to the keeper's quarters. The lighthouse and oil house occupied a northwest cross axis. A wooden fence enclosed the station and walkways connected the various buildings on site.

The site retains three original support buildings (double keepers' quarters, storehouse, and privy) and two historic outbuildings (concrete oil house and carpenter shop). Most of the historic circulation system survives, which linked major features of the station. Historically significant plantings include mature live oaks and cedar trees around the dwelling, open ground around the lighthouse, areas of grass throughout most of the site, and marsh/wetland along the western edge of the site. Enclosed garden spaces do not survive, but the picket fence that surrounded the station has been maintained over the years, although not in its original location on all sides.

Congress authorized Cape Hatteras as America's first National Seashore in 1937, but it was another sixteen years before the park was officially established in January 1953. The U.S. Coast Guard (USCG) continued to own and manage the Ocracoke Light Station until 1955, when they issued a revocable permit to the NPS for the use and occupancy of the quarters building of the station. An amendment that included the garage, chicken house, carpenter shop, and pump house was signed in 1957, granting the use of these buildings with the stipulation that the NPS keep them in good repair and condition. A revised use agreement signed in 1986 included the grounds and fence. On June 7, 1999, the USCG transferred title of the lighthouse and approximately two acres to the NPS. The USCG continues to own and operate the Fresnel lens (Ocracoke Light Station, HS-1A/HS-1B Buildings #501/501B/503, Accession 191, Catalog 5037, Box 1 Folder 1, Cape Hatteras National Seashore (CAHA) Collection. In 1822, French physicist Augustin Fresnel developed a complex lens that concentrated light into a powerful beam).

SIGNIFICANCE SUMMARY

The Ocracoke Light Station is nationally significant under CRITERION A in the areas of transportation and commerce as the oldest lighthouse in continuous operation in the state of North Carolina and second oldest in the United States that aided exploration, settlement, and shipping enterprises in the Outer Banks, known as the "Graveyard of the Atlantic." The light station is also significant under CRITERION C at the local level in the area of architecture as it is representative of the spatial organization of light stations constructed in the early nineteenth century. The period of significance begins in 1823 with the construction of the lighthouse and

keeper's quarters and ends in 1954, with the automation of the lighthouse and the time when support buildings including the Double Keepers' Quarters ceased to serve an important function.

ANALYSIS AND EVALUATION SUMMARY AND CONDITION

The centerpiece of the Ocracoke Light Station is the lighthouse with its fourth-order Fresnel lens built by the Department of the Treasury in 1823. The early masonry towers were built separately from the keeper's quarters and were usually conical or octagonal in shape. The Ocracoke Lighthouse embodies a distinctive design and method of construction that typified secondary coastal lighthouses on the East Coast of the United States during the first half of the nineteenth century. Secondary lights were located on less prominent points and in broad sounds and bays. They were generally shorter and used less powerful optics than first-order lighthouses, such as Cape Hatteras and Bodie Island.

These early nineteenth-century light stations had a simplistic layout consisting of light tower, dwelling, garden site, a place to store oil, a system to provide water, privy, and perhaps a chicken house or shelter for a milk cow. The layout of the Ocracoke Light Station was consistent with other light stations of the day, where a clustering of support buildings facilitated easy access. A picket fence enclosed the station and walkways connected the various buildings on site.

Plantings at the site historically were live oaks and cedars clustered around the dwelling and light tower. There were no foundation plantings. Little is known about the garden plots located at the north end of the station, although the keepers' families had a garden like most residents of the village. The garden was damaged in 1933, when overwash from a storm damaged trees, figs, and grapes that grew on the property. A garden on Ocracoke would have fared better in its protected location than the one at the windswept station on Bodie Island that was never a success.

Although its design integrity remained intact, the preservation of the Ocracoke Lighthouse was threatened in 1989 when a contractor removed the historic windows and replaced them with vinyl-clad thermal sash windows and replaced the historic door with a non-historic metal door.

Although the USCG agreed to replace the vinyl-clad windows with repaired/reconstructed windows and to have a new board and batten door constructed, questions remain as to the condition of these windows and the quality of the wood chosen for the repaired/reconstructed window sash. A crew from the Williamsport Preservation Training Center completed the work in 1990.

Integrity of location and setting remains high. Integrity of materials and workmanship have been diminished by inappropriate material and application techniques. Modern intrusions have affected integrity of feeling and association. Nonetheless, the station retains many of the elements of a nineteenth- and early twentieth-century light station with few modifications.

Landscape Hierarchy Description

Ocracoke Light Station is classified as a cultural landscape in the CRIS database.

Recent Condition

N/A

Subsite/Child components

N/A

Landscape Type

Historic Vernacular Landscape, Historic Site

Cover Page Graphic

See Cover Page.

Site Plan(s)

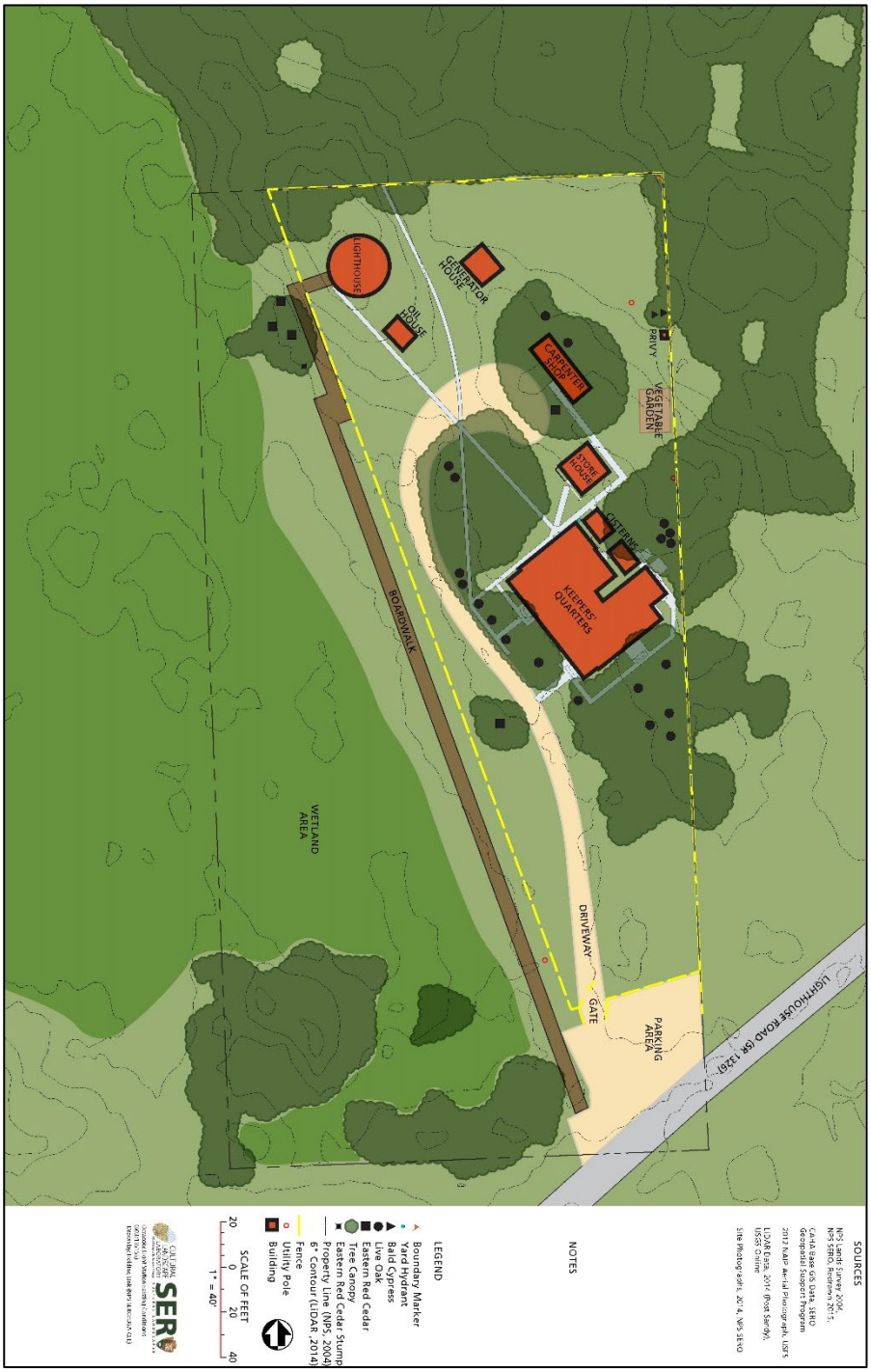
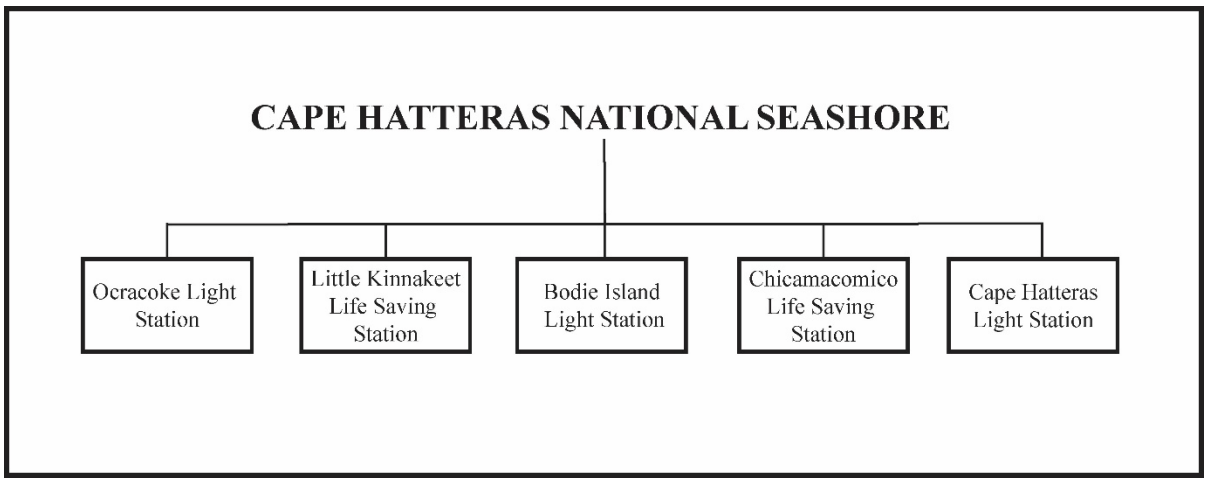


Fig 1. Existing Conditions Site Plan

Hierarchy Description Graphic



Cape Hatteras National Seashore Hierarchy Graphic

Other Names

Seq. No.	Name	Type
1	Ocracoke Light Station	Both Current and Historic

Chapter 2: Concurrence Status

Park Superintendent Concurrence Date

09/14/2022

Park Superintendent Concurrence

Yes

Completion Status Explanatory Narrative

The park contact is Jami Lanier.

Concurrence Graphics

United States Department of the Interior

NATIONAL PARK SERVICE
Atlanta Federal Center
1924 Building
100 Alabama Street, SW
Atlanta, GA 30303

IN REPLY REFER TO:

1.A.2. (SERO-CR)

Memorandum

To: Superintendent, Cape Hatteras National Seashore

From: Acting Chief, Cultural Resources Division, Interior Region 2 KIRSTIE HAERTEL Digitally signed by KIRSTIE HAERTEL Date: 2022.07.14 08:18:46 -04'00'

Subject: Cultural Landscape Inventories for Bodie Island Light Station and Ocracoke Light Station

We are pleased to submit the Bodie Island Light Station and Ocracoke Light Station Cultural Landscapes Inventories (CLI) for final review and signature. The CLI is an evaluated list of landscape properties in the National Park System eligible for listing in the National Register of Historic Places (NR) or that contribute to a previously-listed NR historic property. Once an independent online database, the CLI is now part of the multidisciplinary NPS Cultural Resources Inventory System (CRIS). The Bodie Island Light Station CLI was prepared through an IDIQ contract with BDS Architects and subcontractor, Historical Landscape Architect Kelsey Mork. Ms. Mork used data from the Bodie Island Light Station Cultural Landscape Report (NPS Susan Hitchcock, 2014) to create the inventory. The Ocracoke Light Station CLI was prepared by Cultural Landscapes Research Associate, Olivia Head, through a CESU Agreement with the University of Georgia. Ms. Head used data from the Ocracoke Light Station Cultural Landscape Report (NPS Susan Hitchcock, 2016). Final drafts of both inventories are located on IRMA: Ocracoke - https://irma.nps.gov/DataStore/Reference/Profile/2293942 and Bodie Island - https://irma.nps.gov/DataStore/Reference/Profile/2293941. The final, signed versions will be available on IRMA at the same locations, as well as in CRIS: https://apps.cr.nps.gov/CRIS.

In order for the CLIs to be certified in CRIS, the North Carolina State Historic Preservation Office (SHPO) needs to concur on the findings of the CLI, including the list of contributing and noncontributing landscape features. David Hasty, CLI Coordinator for the Region, will send a request to the North Carolina SHPO for concurrence on both CLIs.

In addition to SHPO concurrence, park superintendent signature is also needed to certify a CLI record. We request that you approve the CLIs using the attached form. Based on the findings of the CLIs, Ocracoke Light Station cultural landscape is in fair condition and Bodie Island Light Station cultural landscape is in good condition. If you have any questions, please contact David Hasty, IR2 CLI Coordinator. If the findings of the CLIs are agreed upon, please sign the attached approval form and return it to our office via e-mail to David Hasty at david_hasty@nps.gov.

Attachment

Interior Region 2 • South Atlantic–Gulf
Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi
North Carolina, Puerto Rico, South Carolina, Tennessee, U.S. Virgin Islands

Memo to Superintendent

CULTURAL LANDSCAPE INVENTORY
CONDITION ASSESMENT CONCURRENCE SHEET – July 2022

Park Information

Park: Cape Hatteras National Seashore
State: North Carolina **County:** Dare (Bodie); Hyde (Ocracoke)

Cultural Landscape Information

Inventory Name	CRIS CLI ID #	Condition
Bodie Island Light Station	550104	Good
Ocracoke Light Station	550073	Fair

Management Category: Should Be Preserved and Maintained

Park Superintendent Concurrence

Cape Hatteras National Seashore concurs with the findings of the CLIs for Bodie Island Light Station and Ocracoke Light Station, including the components of Condition and Management Category.

Concur _____ **Not Concur** _____

_____
Superintendent **Date**

Good: Indicates the inventory unit shows no clear evidence of major negative disturbance and deterioration by natural and/or human forces. The inventory unit's cultural and natural values are as well preserved as can be expected under the given environmental conditions. No immediate corrective action is re-quired to maintain its current condition.

Fair: Indicates the inventory unit shows clear evidence of minor disturbances and deterioration by natural and/or human forces, and some degree of corrective action is needed within 3-5 years to prevent further harm to its cultural and/or natural values. If left to continue without the appropriate corrective action, the cumulative effect of the deterioration of many of the landscape characteristics will cause the inventory unit to degrade to a poor condition.

Poor: Indicates the inventory unit shows clear evidence of major disturbance and rapid deterioration by natural and/or human forces. Immediate corrective action is required to protect and preserve the remaining historical and natural values.

Signature from Superintendent

United States Department of the Interior

NATIONAL PARK SERVICE
Atlanta Federal Center
1924 Building
100 Alabama Street, SW
Atlanta, GA 30303

IN REPLY REFER TO:
1.A.2. (SERO-CR)

Renee Gledhill-Earley
Environmental Review Coordinator
North Carolina State Historic Preservation Office (NCHPO)
109 E. Jones Street MSC 4617
Raleigh, North Carolina 27699

Subject: NCHPO review and concurrence with the findings of Ocracoke Light Station Cultural Landscape Inventory at Cape Hatteras National Seashore

Dear Ms. Gledhill-Earley:

The National Park Service respectfully requests your review and concurrence on the findings of the Ocracoke Light Station Cultural Landscape Inventory (CLI), in accordance with the regulations set forth in Section 110(a)(2) of the National Historic Preservation Act (16 U.S.C. 470f), as amended (NHPA). Ocracoke Light Station is located in Cape Hatteras National Seashore in Hyde County, North Carolina.

A copy of this CLI is provided via email, together with this cover letter and signature form, to Environmental.Review@ncdcr.gov. The Ocracoke Light Station CLI was prepared by Cultural Landscapes Research Associate, Olivia Head, through a CESU Agreement with the University of Georgia. Ms. Head used data from the Ocracoke Light Station Cultural Landscape Report (NPS Susan Hitchcock, 2016) to create this inventory.

The CLI is an evaluated list of landscape properties in the National Park System considered eligible for the National Register of Historic Places or that contribute to an existing historic property. In order for CLI data to become certified, National Park Service guidance requires review and concurrence on CLI findings from the relevant State Historic Preservation Office (see attached memo). The sections most germane to SHPO review are the National Register and the Analysis and Evaluation of Integrity chapters. The National Register chapters provide information on how the existing nomination (#77000110) could be updated to more fully document the property. The Analysis and Evaluation chapters identify relevant landscape characteristics with associated landscape features, describes their evolution over time, and assesses integrity of present-day conditions. Some landscape features, such as buildings and structures, small scale features, and circulation, could be considered as countable resources. Other features, such as views and vistas, would enhance the description of the district, particularly in terms of setting, feeling, and association.

Interior Region 2 • South Atlantic–Gulf
Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi
North Carolina, Puerto Rico, South Carolina, Tennessee, U.S. Virgin Islands

Letter to NCHPO

At the time the current National Register nomination for Ocracoke Light Station was prepared, the information collected differed in several ways from that which is recorded today. For example, indicating how the property meets specific evaluation criteria and criteria considerations was not required. Additionally, the period of significance was selected from a list of century-long time frames, rather than indicated by a year, or years, that relate specifically to the history of the property. As such, the period of significance for the Ocracoke Light Station was indicated as 1800-1899 and 1900-present. Under "Specific Dates," the period of "1823 to Present" was identified. The Light Station was also listed under the category of Buildings, rather than as a Site.

Areas of significance were simply selected from a checklist, and elaboration of those specific areas was not required as it is today. The areas of architecture, commerce, and transportation were checked in the Ocracoke Light Station National Register nomination, but the Statement of Significance served as more of a history of the property and lighthouses on the Outer Banks in general rather than an exploration of Ocracoke Light Station's significance in the three areas identified.

In 1990, the Ocracoke Light Station was included in the boundary of the National Register-listed Ocracoke Historic District. The Summary Statement of Significance mentions the Ocracoke Lighthouse. The Ocracoke Historic District nomination classifies the Ocracoke Lighthouse and its outbuildings as contributing resources to the significance of the district. Because the nomination covers the district as a whole, it does not necessarily add further documentation of the light station that would make its documentation classification "Entered – Adequately Documented." Instead, the 1977 Ocracoke Light Station should be updated to include an expanded period of significance, further elaboration of areas of significance, documentation of historically significant cultural landscape features, and expanded documentation in general to bring the nomination up to contemporary National Register standards.

With concurrence from your office, the findings become certified in the National Park Service Cultural Resources Inventory System (CRIS) database. If you have any questions about these documents, please contact David Hasty, Regional CLI Coordinator, at (404) 507-5780 or by e-mail at david_hasty@nps.gov. The attached concurrence signature form can be returned by e-mail to David Hasty.

We greatly appreciate your office's assistance with the project.

Sincerely,

KIRSTIE HAERTEL Digitally signed by KIRSTIE HAERTEL
Date: 2022.07.14 08:03:42 -04'00'

Kirstie Haertel
Acting Chief, Cultural Resources Division, Interior Region 2

Attachment

Letter to NCHPO

North Carolina Department of Natural and Cultural Resources
State Historic Preservation Office
Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary D. Reid Wilson

Office of Archives and History
Deputy Secretary, Darin J. Waters, Ph.D.

August 16, 2022

David Hasty
National Park Service
Southeast Regional Office
1924 Building, 100 Alabama Street SW
Atlanta, GA 30303

David_hasty@nps.gov

Re: Cultural Landscape Inventory, Ocracoke Light Station, Cape Hatteras National Seashore, Hyde County, ER 22-1795

Dear Mr. Hasty:

Thank you for your email of July 18, 2022, regarding the above-referenced Cultural Landscape Inventory (CLI) for the National Register-listed Ocracoke Light Station (HY0004). We have reviewed the submission and offer the following comments.

We note that the CLI is thorough and well-written. We concur that the historic vernacular landscape associated with the Ocracoke Light Station is a contributing element of this National Register-listed property. Additionally, we concur with the recommendation that the 1977 National Register of Historic Places nomination should be updated to include a revised period of significance, further elaboration of areas of significance, documentation of historically significance cultural landscape features, and expanded documentation to bring the nomination up to current National Register standards. We provide notes on specific topics below:

- In several locations in the CLI (Pages 12 and 27, etc.) it stats that "The Ocracoke Light Station is nationally significant under Criterion A…". As no historic context has been provided to justify that the property rises to the level of national significance and no official determination of such as been made, the statement should be revised to read: "The Ocracoke Light Station appears to be nationally significant under Criterion A…".

- As indicated in *National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation*, "A property with national significance helps us understand the history of the nation by illustrating the nationwide impact of events or persons associated with the property, its architectural type or style, or information potential. It must be of exceptional value in representing or illustrating an important theme in the history of the nation".

Location: 109 East Jones Street, Raleigh NC 27601 **Mailing Address:** 4617 Mail Service Center, Raleigh NC 27699-4617 **Telephone/Fax**: (919) 814-6570/814-6898

Signature from NCHPO

It appears that the best argument and strongest case for national significance will be under Criterion A for its significance in the area of maritime history. Making an argument for national significance in the areas of commerce and transportation will a bit more challenging as the lighthouse was only indirectly related to the business of trading goods, services, and commodities, and the process and technology of conveying passengers and materials. Much of the justification will likely center on illustrating how the complex fits into the Federal government's efforts in creating the network of navigational aids on the east coast.

- As for updating the property's period of significance, it does not appear that ending the period of significance in the present day can be justified. The property does not appear to meet National Register Criteria Consideration G, as the activities/events that occurred in the last fifty plus years are not of exceptional importance. Unless additional background research and justification can demonstrate otherwise, it seems that the logical end to the period of significance would be 1955 or 1957 when the U. S Coast Guard issued permits to the National Park Service (NPS) for occupancy and use of the site. Based on a final determination for the period of significance, the contributing status of some of the features described in the report may need to be revised.

- If it is believed that the NPS's occupation of the site is significant and should be included with an extended period of significance that incorporates the occupancy/ownership of the site by the NPS, the following must be included:

1. A historic context for and the justification of the significance of the NPS/National Seashore history of the Cape Hatteras Seashore through the 1970s and how it relates specifically to the site.

2. A historic context for and the justification of the significance of the "Park Development Era" discussed in the report (both park-wide and site-specific).

3. A thorough discussion and demonstration of how the NPS-constructed features and/or changes would meet the National Register criteria.

4. A discussion of what additional areas of significance would be added.

5. A discussion of the impact(s) of the NPS-constructed features and/or changes on the site's/landscape's pre-1955 integrity of design, setting, feeling, workmanship, and materials.

- Many of our recent nominations require a statement regarding archaeological potential. One should be included in the updated nomination document. The statement should address the extent of filling episodes that are mentioned in the report.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Location: 109 East Jones Street, Raleigh NC 27601 **Mailing Address**: 4617 Mail Service Center, Raleigh NC 27699-4617 **Telephone/Fax**: (919) 814-6570/814-6898

Signature from NCHPO

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-814-6579 or environmental.review@ncdcr.gov. In all future communication concerning this project, please cite the above referenced tracking number.

Sincerely,

Renee Gledhill-Earley

for Ramona Bartos, Deputy
State Historic Preservation Officer

cc: David Hallac, NPS david_hallac@nps.gov
Jami Lanier, NPS jami_p_lanier@nps.gov
John Wood, NCHPO john.p.wood@ncdcr.gov

Location: 109 East Jones Street, Raleigh NC 27601 **Mailing Address:** 4617 Mail Service Center, Raleigh NC 27699-4617 **Telephone/Fax**: (919) 814-6570/814-6898

Signature from NCHPO

CULTURAL LANDSCAPE INVENTORY
CONDITION ASSESMENT CONCURRENCE SHEET – August 2022

Park Information

Park:	Cape Hatteras National Seashore		
State:	North Carolina	**County:**	Dare (Bodie); Hyde (Ocracoke)

Cultural Landscape Information

Inventory Name	**CRIS CLI ID #**	**Condition**
Bodie Island Light Station	550104	Good
Ocracoke Light Station	550073	Fair

Management Category: Should Be Preserved and Maintained

Park Superintendent Concurrence

Cape Hatteras National Seashore concurs with the findings of the CLIs for Bodie Island Light Station and Ocracoke Light Station, including the components of Condition and Management Category.

Concur ☑ **Not Concur** ☐

Superintendent Signature and Date 9/14/2022

Good: Indicates the inventory unit shows no clear evidence of major negative disturbance and deterioration by natural and/or human forces. The inventory unit's cultural and natural values are as well preserved as can be expected under the given environmental conditions. No immediate corrective action is re-quired to maintain its current condition.

Fair: Indicates the inventory unit shows clear evidence of minor disturbances and deterioration by natural and/or human forces, and some degree of corrective action is needed within 3-5 years to prevent further harm to its cultural and/or natural values. If left to continue without the appropriate corrective action, the cumulative effect of the deterioration of many of the landscape characteristics will cause the inventory unit to degrade to a poor condition.

Poor: Indicates the inventory unit shows clear evidence of major disturbance and rapid deterioration by natural and/or human forces. Immediate corrective action is required to protect and preserve the remaining historical and natural values.

CLI Superintendent Signature Sheet

Revision

N/A

Chapter 3: Geographic Information

Area (Acres)

2

Land Tract Number(s)

15-103

Boundary Description

The two-acre station is located on Ocracoke Island in the Cape Hatteras National Seashore of the North Carolina Outer Banks in Hyde County, North Carolina. The Ocracoke Light Station National Register Historic District boundary corresponds to the original two-acre site acquired from Jacob Gaskill on December 5, 1822. The cultural landscape report is limited to a study of the Ocracoke Light Station National Register Historic District cultural landscape.

The larger setting is the barrier islands of the North Carolina Outer Banks, a thin slice of land separated from the mainland by a large expanse of shallow water, comprising the Albemarle, Croatan, and Pamlico Sounds. The formation of these barrier islands began fifteen thousand years ago when the ocean level was 300 feet lower than today and North Carolina's coastline extended fifty to seventy-five miles east of its present location. Winds from the west piled up sediment to create a large dune at the easternmost edge of the continental landmass. Then, as glaciers melted and the sea level rose, the dunes became barrier islands paralleling the coastline (Oppermann 2009, 7–8).

Latitude/Longitude

Seq. No.	Geo-metry	Latitude	Longitude	Geo-Datum	Elev a-tion (Meters)	Position Source	Position Arruracy	Date	Narra-tive
1	Area	35.1090792	-75.9855711	1984 WGS		GIS			
2	Area	35.1079378	-75.9855499	1984 WGS		GIS			
3	Area	35.1079308	-75.9862475	1984 WGS		GIS			
4	Area	35.1090687	-75.9862602	1984 WGS		GIS			

Regional Landscape Context

Physiographic

The Outer Banks of North Carolina refer to a thin slice of land separated from the mainland by a large expanse of shallow water, comprising the Albemarle, Croatan, and Pamlico Sounds. The term "banks" is a topographic term that refers to a series of undersea sand bars or "sand banks," as they were called in the earliest references such as John Lawson's *A New Voyage to Carolina*.

Scientists generally agree that sea level during the past one-half million years has alternated between periods of interglacial conditions when continental ice melted causing shorelines to advance inland across the Continental Shelf and periods of glaciation when water was withdrawn from the seas and stored as glacial ice causing shorelines to move seaward. When the last period of glaciation ended between 14,000 and 18,000 years ago, the ocean level was 300 feet lower than today, and North Carolina's coastline extended 50 to 75 miles east of its present location.

When this change from glacial to interglacial conditions occurred, glaciers melted and sea level began rising. Winds from the west piled up sand to create a large dune at the easternmost edge of

the continental landmass. Wave action reworked sediment that was moved along the shore, and seas broke through the dune ridge, flooding low areas in back of the dunes to form lagoons or sounds. Waves, currents, and winds transformed the dunes into long chains of barrier islands that run parallel to the coastline from New England to Texas (Dolan and Lins 1986, 11–13; Oppermann 2009, 1).

Vegetation stabilized the Outer Banks when sufficient rainfall removed the salinity from the sand and pushed the underlying saltwater table downward and to the sides so that a large pocket of fresh water was formed beneath the Outer Banks. Seeds carried in the air or transported by shore birds took hold. Grasses anchored the sand, which allowed shrubs to survive. Finally, cedar, pine, and live oak, mixed with dense grape vine, covered areas that had once been bare sand beach (Stick 1958, 2–3; Lawson 1709, 68).

Cultural

Ocracoke Light Station is located on the Cape Hatteras National Seashore in the village of Ocracoke, Hyde County on Ocracoke Island in the Outer Banks of North Carolina. Swan Quarter is the county seat of Hyde County. As of the 2020 Federal Census, the population of Hyde County was 4,589, and the population of Ocracoke was 797, both slight declines from their respective 2010 populations. As of 2019, the largest industry sectors in Ocracoke are accommodation and food services, public administration, and agriculture, hunting, fishing and forestry.

Political

The Ocracoke Light Station property has been owned and administrated by the National Park Service since its acquisition by the NPS in 1999. The U.S. Coast Guard continues to own and operate the Fresnel lens in the Ocracoke Lighthouse.

Location Map Graphic Information



Fig 2. Location map

Counties and States

Hyde County, North Carolina

Chapter 4 : Management Information

Management Category

Should be Preserved and Maintained (Category B)

Management Category Date

09/14/2022

Management Category Explanatory Narrative

The Ocracoke Light Station meets the criteria for Management Category B, "Should be Preserved and Maintained." The Ocracoke Light Station was listed in the National Register as significant on a statewide level on November 25, 1977. Because the light station is not currently listed as a nationally significant resource, it does not meet Management Category A. However, it does currently meet National Register Criteria A and C at a statewide level and is compatible with the park's legislated significance, leading to its categorization of "Should be Preserved and Maintained (Category B)."

Management Agreements

Management Agreement	Other Management Agreement	Management Agreement Expiration Date	Management Agreement Explanatory Narrative
Special Use Permit			National Park Service/US Coast Guard to maintain the modern navigational aid on the Ocracoke Lighthouse

Legal Interests

Legal Interest Type	Fee Simple Reservation Expiration Date	Other Organization /Agency	Legal Interest Narrative
Fee Simple			All property within the boundary of Ocracoke Light Station, with the exception of the Fresnel lens, is owned by the United States and is under the administration of the National Park Service.
Less than Fee Simple			The United States Coast Guard continues to own and operate the Fresnel lens.

Located in a managed wilderness?

No

Adjacent Lands Information

Do Adjacent Lands Contribute?

Yes

Narrative

The Ocracoke light station cultural landscape is surrounded by the Cape Hatteras National Seashore, the National Register-listed Ocracoke Village Historic District, and the Atlantic Ocean. The adjacent land is privately owned and developed with hotels, private homes, and small businesses. Although the historic views from the lighthouse were compromised with the construction of the boardwalk and parking area, the light station complex is intact. The site was chosen because a light station at Ocracoke Inlet was critical to navigating the dangerous shoals of the "Graveyard of the Atlantic." Its location helped mariners determine their position both by day and night.

Adjacent Lands Graphic



Fig 3. Adjacent Lands – View from Silver Lake

Chapter 5: National Register Information

National Register of Historic Places

Documentation Status

Entered – Inadequately Documented

Documentation Narrative Description

The Ocracoke Light Station was listed in the National Register on November 25, 1977. The National Register documentation for the Ocracoke Light Station describes the statewide significance of the property as follows:

> Ocracoke light station was one of the first lighthouses authorized for the state of North Carolina. Ocracoke lighthouse is the oldest functioning lighthouse structure on the North Carolina coast. It continues to warn mariners of hazardous Ocracoke Inlet.
>
> During the latter part of the 18th Century and the first half of the 19th Century Ocracoke Inlet served as the primary point of entry for sea vessels bound for the populous northern part of North Carolina. Efforts were made to establish a lighthouse to guide mariners toward the inlet. A light was needed not as a channel marker but for the mariners bound into the inlet to warn them not to cross the bar at night.
>
> The first lighthouse at Ocracoke was authorized by an act of the North Carolina General Assembly in 1789 and on September 13, 1790, a one-acre site on Ocracoke Island was deeded to the State of North Carolina. The lighthouse construction did not occur because lighthouse became the responsibility of the Federal Government. Nothing happened until May 13, 1974, when Congress authorized construction of a lighthouse on Shell Castle Island just inside Ocracoke Inlet. The Shell Castle Lighthouse was lighted in 1803, but was rendered useless because the channel had shifted about a mile so that the light did not serve its purpose of guiding mariners to the channel.

On May 15, 1802, an appropriation of $14,000 was made for a light vessel to replace the Shell Castle Lighthouse. The light vessel was placed in service at the inlet but did not prove satisfactory either. On May 7, 1822, Congress authorized $20,000 for construction of a lighthouse on Ocracoke Island to replace the light vessel. The lighthouse was built on two acres of property sold to the United States in December of 1822 by Jacob Gaskill for a sum of $50.00.

Over the years, the lighthouse became a community center. During bad storms, towns people would congregate in the lighthouse quarters on high ground until the waters receded. During WWII Coast Guardsmen stayed in the quarters and maintained a round-the-clock watch from the top of the lighthouse. The lighthouse remains in operation (automatically) today under the jurisdiction of the U.S. Coast Guard. The quarters and other property were transferred to the National Park Service (under a special use permit) in 1957 for use as ranger quarters. According to the keeper of the light, 1929-1946, Joe Burrus, "the great event of each day used to be climbing the spiral stairs at sundown to trim the wick, fill the reservoir, polish the reflectors and light the lamp. Today, my days are more like the trip back down the spiral stairway.'"

At the time the current National Register nomination for Ocracoke Light Station was prepared, the information collected differed in several ways from that which is recorded today. For example, indicating how the property meets specific evaluation criteria and criteria considerations was not required. Additionally, the period of significance was selected from a list of century-long time frames, rather than indicated by a year, or years, that relate specifically to the history of the property. As such, the period of significance for the Ocracoke Light Station was indicated as 1800-1899 and 1900-present. Under "Specific Dates," the period of "1823 to Present" was identified. The Light Station was also listed under the category of Buildings, rather than as a Site.

Areas of significance were simply selected from a checklist, and elaboration of those specific areas was not required as it is today. The areas of architecture, commerce, and transportation

were checked in the Ocracoke Light Station National Register nomination, but the Statement of Significance served as more of a history of the property and lighthouses on the Outer Banks in general rather than an exploration of Ocracoke Light Station's significance in the three areas identified.

In 1990, the Ocracoke Light Station was included in the boundary of the National Register-listed Ocracoke Historic District. The Summary Statement of Significance mentions the Ocracoke Lighthouse:

> "The Ocracoke Historic District has statewide significance under Criterion A, in the areas of Exploration/Settlement and Social History, and under Criterion C in the area of architecture. The Ocracoke Historic District is North Carolina's only surviving, inhabited, Outer Banks island settlement to retain much of its historic character. The approximately 200 acre district, fanning out in an arc around Silver Lake Harbor consists of the densest concentration of historic resources surviving in Ocracoke village, including the 1823 Ocracoke Lighthouse (the oldest surviving lighthouse still in use on the North Carolina coast), the 1942 Coast Guard Station, several historic commercial buildings, and over 100 houses built primarily between the 1880s and 1930s. The period of significance extends from the earliest extant resources, built in the 1820s, to 1959, the year that Ocracoke entered the modern era. Some forty-six primary buildings built between 1940 and 1959, and an equal number of contemporary outbuildings are of exceptional significance because of their continuation of traditional Ocracoke building practices."

The Ocracoke Historic District nomination classifies the Ocracoke Lighthouse and its outbuildings as contributing resources to the significance of the district. Because the nomination covers the district as a whole, it does not necessarily add further documentation of the light station that would make its documentation classification "Entered – Adequately Documented." Instead, the 1977 Ocracoke Light Station should be updated to include an expanded period of significance, further elaboration of areas of significance, documentation of historically significant cultural landscape features, and expanded documentation in general to bring the nomination up to contemporary National Register standards.

Eligibility

Eligible – SHPO Consensus Determination

Concurrence Eligibility Date

08/16/2022

Concurrence Eligibility Narrative

[enter text here]

Significance Level

Statewide, Local

Contributing/Individual

Individual

National Register Classification

Site

Statement of Significance

[enter text here, use bold caps for titles: e.g. **CRITERION A.** Use bold lower case text and a colon for sub-titles: e.g. **Military:**]

The Ocracoke Light Station is significant at a statewide level under CRITERION A in the areas of transportation and commerce as the oldest lighthouse in continuous operation in the state of North Carolina and second oldest in the United States that aided exploration, settlement, and shipping enterprises in the Outer Banks, known as the "Graveyard of the Atlantic." The light station is also significant under CRITERION C at the local level in the area of architecture as it is representative of the spatial organization of light stations constructed in the early nineteenth century. The period of significance begins in 1823 with the construction of the lighthouse and keeper's quarters and ends in 1954, with the automation of the lighthouse and the time when support buildings including the Double Keepers' Quarters ceased to serve an important function.

The construction of the Ocracoke Light Station is directly associated with federal government efforts to provide an integrated system of navigational aids for national and international

shipping on the Atlantic coast. It is the oldest lighthouse in North Carolina still in continuous service. It is the second oldest lighthouse in the United States in continuous service. Boston Light on Little Brewster Island was the first lighthouse built in the United States in 1716 and is still in operation today. The Ocracoke Light Station provided safe passage for maritime trade along the hazardous waters of the Outer Banks, often referred to as the "Graveyard of the Atlantic." The lighthouses on the Outer Banks, located at Currituck Beach, Bodie Island, Hatteras Island, and Ocracoke, guided both national and international shipping along the coast. This national significance meets Criterion A.

The tower and the fourth-order lens reflect a standardized design used for many early lighthouses built by the Treasury Department. The early masonry towers were built separately from the keeper's quarters and were usually conical or octagonal in shape. Brick was used for the outer and inner walls after the turn of the nineteenth century, especially in southern states where stone was not readily available. The small size of brick, standardized production, and general availability made it the preeminent masonry material. The early nineteenth-century stations included the light tower, dwelling, garden site, place to store oil, a system to provide water, and perhaps a chicken house and shelter for a milk cow. The spatial organization at the Ocracoke Light Station reflected a similar landscape pattern. The distinctive architectural features of the tower, its oil house, double keepers' quarters, and outbuildings are locally significant and meet Criterion C for architecture (Clifford and Clifford 2000, 17-18).

National Register Significance Criteria

A, C

National Register Criteria Considerations

N/A

National Register Periods of Significance (with Historic Context Themes)

Seq. No.	Start Year/Era and End Year/Era	Historic Context Theme	Subtheme	Facet

	1823-1954	Developing the American Economy	Shipping and Transportation by Water	Ships, Boats, Lighthouses, and Other Structures

National Register Areas of Significance

Seq. No.	Category	Subcategory (only for Archeology and Ethnic Heritage)	Narrative
1	Transportation		
2	Commerce		
3	Architecture		

NRIS Information

Seq. No. (R)	NRIS Name (R)	NRIS ID (R)	NRIS URL (R)	Other Name	Primary Certification Date (R)
1	Ocracoke Light Station	77000110	https://catalog.archives.gov/id/47720910	H5-0-1A;H5-0-1B	11/25/1977
2	Ocracoke Historic District	90001465	https://catalog.archives.gov/id/47720912		9/28/1990

State Register Documentation

Seq. No. (R)	Identification Number	Name	Listed Date	Narrative
N/A	N/A	N/A	N/A	N/A

National Historic Landmarks

Status	Theme	Contributing	NHL ID	NHL URL	Date
N/A	N/A	N/A	N/A	N/A	N/A

Statement of Significance for National Historic Landmark

N/A

World Heritage Site

Status	Category	WHS ID	WHS ID URL	Date
N/A	N/A	N/A	N/A	N/A

Is Resource within a designated National Natural Landscape?

No

Chapter 6: Chronology & Physical History

Chronology

Seq. No.	Major Event	Major Event Narrative	Start Year of Event	Start Era	End Year of Event	End Era
01	Established	Congress passes Lighthouse Act of 1789. Oversight given to Treasury Department.	1789	CE	1789	CE
02	Established	North Carolina General Assembly passes act to build lighthouse on Ocracoke Island.	1789	CE	1789	CE
03	Built	Congress authorizes construction of lighthouse on Shell Castle Island at Ocracoke Inlet; completed 1798.	1794	CE	1798	CE
04	Destroyed	Lightning destroys Shell Castle Island Lighthouse.	1818	CE	1818	CE
05	Established	Federal lighthouse program placed under Stephen J. Pleasonton, Fifth Auditor of the Treasury.	1820	CE	1820	CE
06	Built	Augustin Fresnel invents complex prism lens far superior to Argand and Lewis lamps. Becomes the standard in Europe and elsewhere.	1822	CE	1822	CE
07	Established	Congress authorizes $20,000 or lighthouse and keeper's quarters on Ocracoke Island.	1822	CE	1822	CE
08	Built	Winslow Lewis' standard specifications for lighthouse, keeper's dwelling, well and privy used at Ocracoke. Noah Porter of Massachusetts is awarded construction contract. Lewis has contract to equip tower with his light system of lamps and reflectors.	1823	CE	1823	CE
09	Established	Anson Harker is first lightkeeper of record (1829-46).	1829	CE	1846	CE
10	Damaged	Report of "partial destruction of the light house at Ocracock by fire."	1834	CE	1834	CE
11	Established	John Harker becomes keeper (1847-53).	1847	CE	1853	CE

12	Established	Congress creates Light-House Board to oversee lighthouse program and implements campaign to install Fresnel lenses nationwide.	1851	CE	1852	CE
13	Established	Thomas Styron becomes keeper.	1853	CE	1860	CE
14	Built	Fourth-order Fresnel lens with fix beam is installed at Ocracoke.	1854	CE	1854	CE
15	Established	William J. Gaskill becomes keeper.	1860	CE	1862	CE
16	Established	Enoch Ellis Howard becomes keeper (longest tenure).	1862	CE	1897	CE
17	Altered	Large portion of lighthouse recemented and whitewashed, woodwork of lighthouse and keeper's quarters painted, along with general repairs to both buildings.	1868	CE	1868	CE
18	Built	Rear frame shed addition built on keeper's quarters.	1889	CE	1889	CE
19	Built	Three-room second story and front porch added to the keeper's quarters.	1897	CE	1897	CE
20	Established	J. Wilson Gillikin becomes keeper.	1897	CE	1897	CE
21	Established	Tillman F. Smith becomes keeper.	1897	CE	1910	CE
22	Built	Coal and wood shed built.	1903	CE	1904	CE
23	Established	U.S. Bureau of Lighthouses (Lighthouse Service) replaces Light-House Board.	1910	CE	1910	CE
24	Established	A.B. Hooper becomes keeper.	1910	CE	1912	CE
25	Established	Captain Leon Wesley Austin becomes keeper.	1912	CE	1929	CE
26	Built	Concrete oil house built.	1913	CE	1913	CE
27	Built	New privy built.	1916	CE	1916	CE
28	Altered	Lighthouse converted to electricity, powered by Delco generator.	1929	CE	1929	CE
29	Built	Second dwelling for assistant keeper and family built at south side of original keeper's quarters.	1929	CE	1929	CE
30	Built	Carpenter shop likely constructed.	1929	CE	1929	CE
31	Established	Captain Joe Burrus becomes keeper.	1929	CE	1946	CE
32	Established	U.S. Coast Guard takes over management of America's lighthouses.	1939	CE	1939	CE
33	Altered	Lighthouse automated; lightkeepers no longer needed.	1954	CE	1954	CE

34	Land Transfer	USCG issues revocable permit granting NPS permission to use and occupy keepers' quarters.	1955	CE	1955	CE
35	Land Transfer	USCG permit amended to include use of garage, chicken house, carpenter shop, and pump house; NPS must maintain.	1957	CE	1957	CE
36	Preserved	Keepers' Quarters Preservation Project – Phase I	1987	CE	1987	CE
37	Preserved	Keeper's Quarters Preservation Project – Phase II	1988	CE	1988	CE
38	Altered	Lighthouse door replaced with metal door and windows mistakenly replaced with vinyl-clad sash.	1989	CE	1989	CE
39	Restored	Vinyl windows replaced with six repaired sash and six new sash; metal entrance door replaced with wooden door based on 1823 design.	1989	CE	1990	CE
40	Built	Current generator house constructed.	1994	CE	1994	CE
41	Land Transfer	Lighthouse transferred to NPS, Coast Guard retains light.	2000	CE	2000	CE
42	Damaged	Hurricane Dorian causes flooding and damage.	2019	CE	2019	CE

Physical History

Sequence Number and Physical History Time Period

1 - Late Woodland Occupation, c. 800-c.1788 CE

Physical History Narrative

The Late Woodland cultures in coastal North Carolina emerged about 1,200 years ago. At the time of white settlement, these indigenous cultures were linguistically associated with either the Algonquian or Iroquoian traditions. Shell and grit-tempered pottery, horticulture supplemented by hunting and gathering, burial ossuaries, bow-and-arrow technology, and palisaded villages typify these cultures.

Sequence Number and Physical History Time Period

2 - European Contact, c.1520-1788 CE

Physical History Narrative

Contact with Europeans occurred around 1520. The Algonquin tribes included the Pasquotank, Yeopim, Poteskeet, Chowanoc, Machapunga, Bay or Bear River, Pamlico, Hatteras, Neusioc, and possibly the Coree. They lived in an area extending from the Virginia border southward to Bogue Inlet and from the Outer Banks as far inland as present Plymouth, Washington, and New Bern.

Tribes associated with the Iroquoian tradition were the Tuscorora and the Meherrin. The more powerful and warlike Tuscorora lived just to the west of the Algonquin tribes. The Meherrin were confined to the east bank of the Chowan River.

European settlement led to the eventual disintegration of the aboriginal populations, mainly by disease and warfare. An epidemic in 1695 devastated the Pamlico, and the Chowanoc were wiped out by war in 1677. By the eighteenth century, the only indigenous people living permanently on the Outer Banks were the Hatteras Indians, whose villages were in the wooded area west of Cape Hatteras. After the Tuscarora War of 1711–1715, American Indians eventually disappeared from eastern North Carolina. The last known reference to the Hatteras Indians was in a deed of 1788 from "Mary Elks, Inden [sic] of Hatteras Banks" to Nathan Midgett transferring a tract of land that included the site of the old Indian town ("Southeastern Prehistory, Woodland Period," http://www.nps.gov/seac/hnc/outline/04-woodland/index.htm; U.S. Army Corps of Engineers 1986, 2-2; Torres 1985, 64).

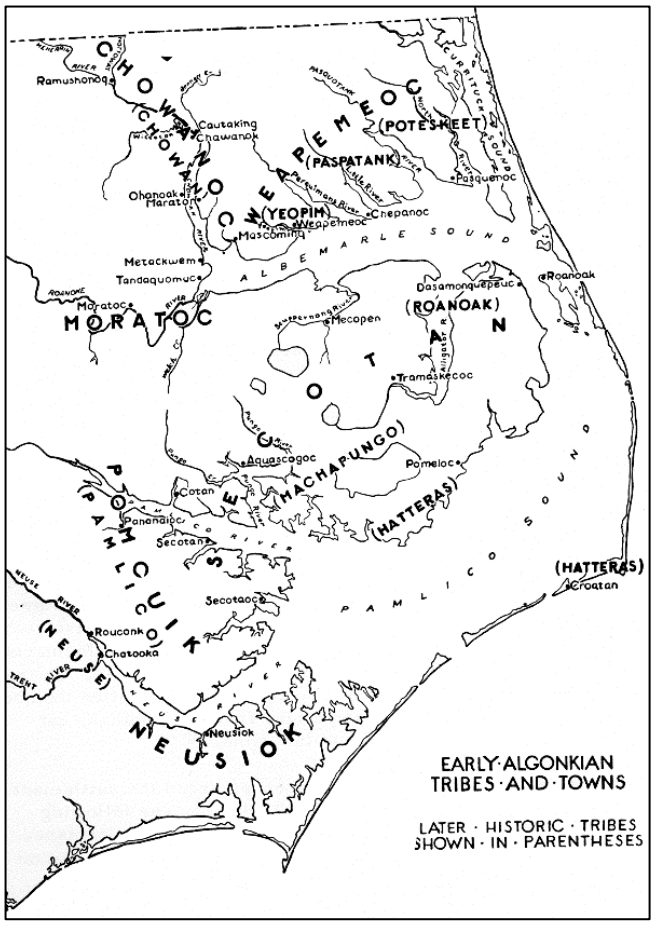


Fig 4. Early Algonquin tribes and towns. (Reprinted from Gary Dunbar, Historical Geography of the North Carolina Outer Banks)

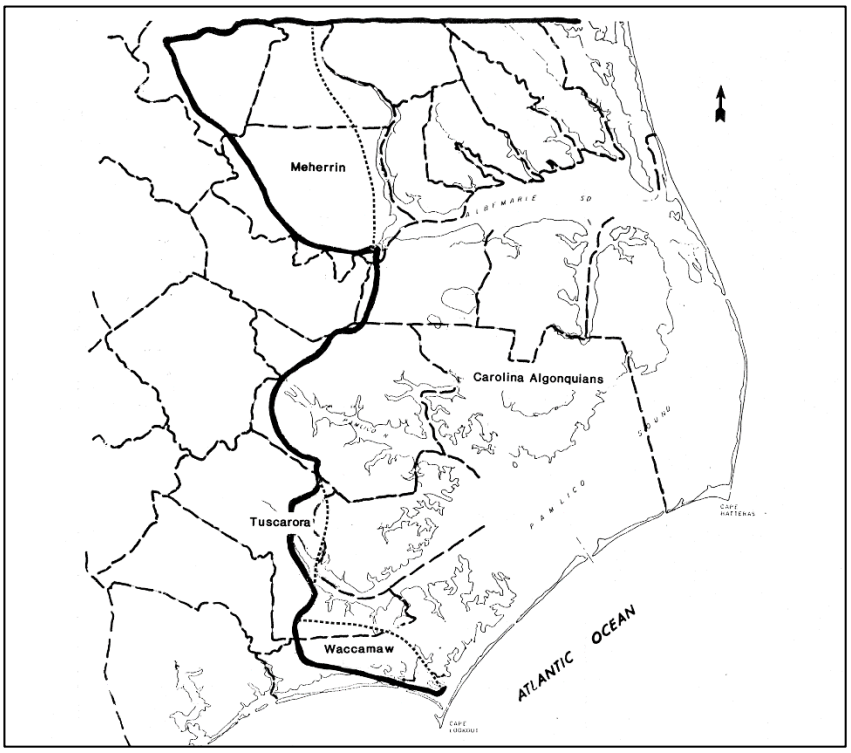


Fig 5. Historically known aboriginal groups of Eastern North Carolina. (Reprinted from Richard Lewis, Cultural Resource Studies Eastern North Carolina Above Cape Lookout).

Sequence Number and Physical History Time Period

3 - European Exploration and Settlement of the Outer Banks, 1524-1850 CE

Physical History Narrative

The Outer Banks were first explored by Giovanni da Verrazzano's 1524 expedition for the French, who mistook the North Carolina sounds on the other side of the land mass for the Pacific Ocean. In 1584, a reconnaissance voyage for Sir Walter Raleigh's English venture landed above Cape Hatteras, commanded by Captains Arthur Barlowe and Philip Amadas. Captain Barlowe described the natural systems of the Outer Banks in 1584:

> Wee viewed the lande about us, being . . . very sandie, and lowe towards the water side, but so full of grapes, as the very beating, and surge of the Sea overflowed them, of which

> we founde such plenty . . . that I thinke in all the world the like aboundance is not to be founde.
>
> Wee passed from the Sea side towards the toppes of those hils . . . being but of meane height, and from thence wee beheld the Sea on both sides to the North, and to the South, finding on ende any of both waies. This lande laye stretching it selfe to the West, which after wee founde to be but an Island of twentie leagues long, and not above sixe miles broade. Under the banke or hill, whereon we strode, we beheld the vallies replenished with goodly Cedar trees, and having discharged our harquebushot, such a flocke of Cranes (the most part white) arose under us, with such a crye redoubled by many Ecchoes, as if an armie of men had showted all together.
>
> This island had many goodly woods, full or Deere, Conies, Hares, and Fowle, even in the middest of Summer, in incredible aboundance . . . [and] the highest, reddest Cedars of the world (Stick 1958, 14–15).

Sir Richard Grenville's 1585 expedition landed at Ocracoke before eventually settling on the north end of Roanoke Island where they built a fort. Grenville left for England a few months later, leaving Ralph Lane in charge. In 1586, Sir Francis Drake offered to resupply the colony, but Ralph Lane and his colonists abandoned the settlement and returned to England with Drake. Sir Richard Grenville arrived at the settlement shortly thereafter and left fifteen men at the fort on Roanoke Island (Stick 1958, 17–18; Dunbar 1958, 8–9).

In 1587, yet another expedition led by artist John White arrived on Roanoke Island. They found the fort demolished and the fifteen men gone, apparently killed in retaliation for an earlier attack on the main village of the Roanoke tribe. White returned to England to get needed supplies, leaving 112 colonists. Upon his return with a supply ship in 1590, he discovered the colonists missing. The mystery of the disappearance of the "Lost Colony," except for the words "Croatoan" carved on a post at the entrance to the palisade and "Cro" on a tree, has never been solved. White assumed the clues referred to Croatoan Island, but he was unable to persuade his party, who feared the treacherous nature of the coast, to sail to Croatoan Island, located south of Cape Hatteras. White was forced to return to England without knowing the fate of the settlers.

Permanent settlement did not begin until the mid-seventeenth century, when fur trappers, Indian traders, and planters from Virginia's southern frontier moved into the area. American Indian habitation of the Outer Banks at the time of white settlement was sparse, and some used the area only for seasonal hunting. The Hatteras Indians lived in a town on the sound side of Cape Hatteras. Francis Yeardley of Virginia sponsored a group that visited Roanoke Island in 1654 and bought land in eastern North Carolina. A fur trading post operated by Nathaniel Batts, the first known permanent settler on the Albemarle Sound, is recorded near Fletts Creek on Nicholas Comberford's 1657 The south part of Virginia, now the north part of Carolina (Stick 1958, 19–21; Dunbar 1958, 10–11, 16–19; U.S. Army Corps of Engineers 1986, 2–4; and Nicholas Comberford, "The South Part of Virginia Now the North Part of Carolina" [map], 1657, http://www.learnnc.org/lp/multimedia/7780).

The first land grant was issued by the Lords Proprietors in 1663, following receipt of their royal charter, to Sir John Colleton who set up a plantation on Colington Island. Other large land grants held by absentee landowners followed, but many people who sought smaller parcels were of more modest means. Most chose the wooded hammocks on the sound side of the islands, where their building sites were clustered near sloughs and creeks and where they found protection from strong winds and high tides (Stick1985, 22–25; Dolan and Lins 1986, 18; and Dunbar 1958, 105).

A lack of deep-water ports and navigable tributaries, such as those found in Virginia and South Carolina, stunted the commerce and prosperity of North Carolina. Accessing the ports that the colony did possess to reach small river settlements and plantations required sailing through treacherous inlets along the Outer Banks and across shallow sounds. Some felt that these limitations were actually helpful in times of war. Early explorer and naturalist John Lawson commented, "the Difficulty of that Sound to Strangers, hinders them from attempting any Hostilities against us; and at the same time, if we consider the Advantages thereof, nothing can appear to be a better situation, than to be fronted with such a Bulwark, which secures us from our Enemies" (Stick 1958, 2; Lawson 1709, 175; and Mike McNamara, "A New and Correct Map of the

Province of North Carolina: The Discovery of a 1737 North Carolina Manuscript Map," http://www.mesdajournal.org/2012/correct-map-province-north-carolina/).

Before 1700, most settlers located between Roanoke and Currituck Inlets. They lived in small, scattered settlements with fenced gardens and free-ranging livestock. They were sustained by fishing, grazing stock, farming, and whaling. Most had migrated from Virginia and were joined by a few shipwreck survivors. The Outer Banks had a reputation as a refuge for Virginia outlaws, but most settlers were small landholders trying to get a foothold in the new colony. The death of the infamous pirate, Blackbeard, at Ocracoke Inlet in 1718 signaled the end of large-scale piracy and paved the way for the settlement of the lower Outer Banks. The shallow inlets and channels made resident pilots, hired to steer ships safely through the shifting channels to mainland ports, a necessity. Smuggling goods through the Outer Banks and avoiding ports where custom duties were paid was common practice in the eighteenth century. Because of its remoteness and lack of a customs house, smuggling flourished around Ocracoke Inlet (Torres 1985, 39, 43).

The shoaling and eventual closing of both Roanoke and Currituck Inlets led to a shift in maritime traffic seventy-five miles south to Ocracoke Inlet, the only reasonably navigable waterway for ships trying to reach inland ports, such as Elizabeth City, New Bern, and Edenton. Ocracoke Village, then known as Pilot Town, developed as a result of the inlet's use. In 1731, Governor George Barrington reported that "Curratuck Inlett is shut up and Roanock is so dangerous that few people care to use it but go around to Ocacock." He argued for the establishment of a central customs house at Ocracoke: "There is a good harbour and water sufficient for a ship that carrys 300 tunns. From this place the goods brought in may by small vessels be carried within Land to all places in this Country that does not depend on Cape Fear River for their trade, and be a port for the three districts of Roanoke, Currituck, and Bath Town" (Stick 1958, 34–35).

Although authorities ignored his suggestion, the majority of ships going to or from North Carolina were using Ocracoke Inlet, and there was a need for pilots to shepherd the vessels through the dangerous shores. Captain Miles Gale made one of the first requests for appointment

as a pilot on November 9, 1734. Other early Ocracoke Inlet pilots were James Bun, David Wallace, John Dixon, Francis Jackson, George Howard, and Lorable Gaskins.

An industry developed around "lightering," the practice of transferring all or parts of cargoes from large trade ships arriving from Europe to shallow-draft boats that could travel the inlets to the mainland. Pilots navigated the inlets and dockworkers loaded and unloaded the cargoes. By 1750, hundreds of ships were using Ocracoke Inlet as a trade route. By the 1770s, the two largest communities on the Outer Banks were located there—the town of Portsmouth on the south side of the inlet and Pilot Town or Ocracoke Village on the north (Stick 1958, 12–26, 42; Dunbar 1958, 21, 26–28, 105; Dolan and Lins 1986, 18; and Pompe 2010, 27).

By the time North Carolina became a state in 1789, about 1,000 permanent residents lived on the Outer Banks. The economy of the Federal period was not that different from colonial times. Garden patches largely accounted for "farming" in the region. In 1810, it was noted of the Portsmouth area that "the soil is not used for agricultural purposes, more than in Gardens & the raising of a few sweet potatoes." In the 1850 census, there were two farmers at Portsmouth, none on Ocracoke and Hatteras Islands, eleven on the North Banks, and eighteen on Roanoke Island. The 1860 census showed no farmers on Portsmouth, Ocracoke, and Hatteras, but twenty-six on the North Banks and thirty-nine on Roanoke Island. Prominent agriculturist Edmund Ruffin observed in 1856: "Roanoke Island, (which, however I did not see, because of accidental delays in the water trip,) . . . is very productive, and especially in potatoes and garden vegetables" (Dunbar 1958, 30–31).

In 1800, Ocracoke village had 137 people, but by 1850, the population grew to 536. Of that number, 432 residents were white and 104 were enslaved people of African descent. Ownership of enslaved African Americans was not widespread except for large landowners. The 1850 census showed 503 enslaved African Americans for the entire Outer Banks, with 168 enslaved blacks on Roanoke Island that the children of free black William Meekins owned 140 acres at Cape Hatteras and 50 acres at "Kinnakeet Banks" in the late 1700s (Stick 1958, 73, 89; Torres 1985, 53; and Impact Assessment, Inc. 2005, 14).

The prominence of Ocracoke Inlet gradually decreased as its depth diminished at the same time as vessels were getting larger, resulting in the ascendency of Hatteras Inlet in the years leading up to the Civil War. Although the Army Corps of Engineers began dredging the inlet in 1830, they had abandoned the work by 1837. By this time, the inlet's use was in decline. In the 1850 census, there were fifty-seven pilots living at Ocracoke and Portsmouth and only eleven at or near Hatteras Inlet. By 1860, Hatteras Inlet, with about thirty-five pilots, had about eight more pilots than Ocracoke Inlet. By 1880, there were twenty-six pilots at Hatteras and none at Ocracoke (Dunbar 1958, 28).

Before the Civil War, fishing had become the most prominent occupation according to the 1850 and 1860 census, with the job title "fisherman" and "mariner" far exceeding any other category. The isolated setting and its dangers required a self-sufficient and independent minded people, who grew their own food, caught their own fish, put up their own houses, and built and sailed their own boats. These same people would be called upon to operate the lighthouses and life-saving stations of the Outer Banks (Dunbar 1958, 28–35; Stick 1958, 72–77; and Torres 1985, 73).



Fig 6. John White watercolor drawing from 1585 exploratory trip. (© Trustees of the British Museum)

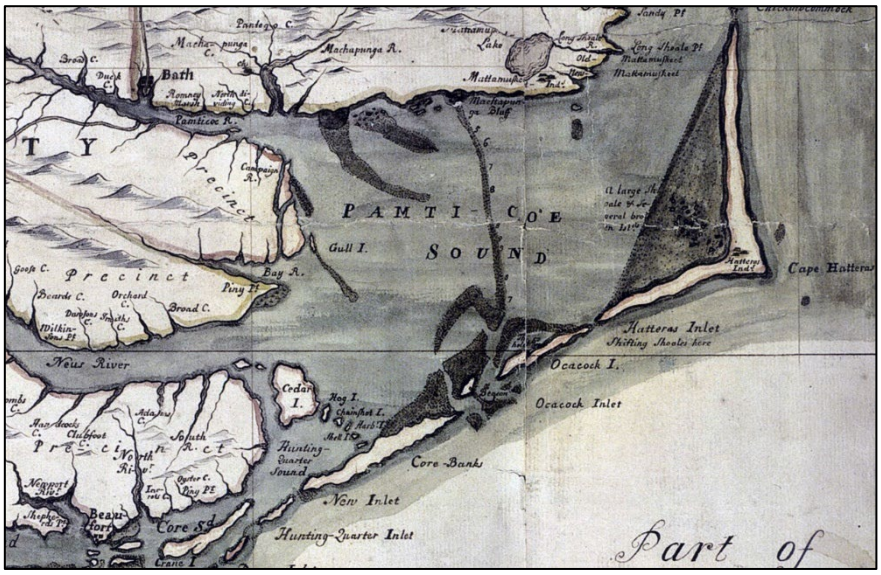


Fig 7. Edward Mosely, Map of the Province of North Carolina, 1737. (East Carolina University Libraries).



Fig 8. John Bachman, Panorama of the Seat of War, 1861. (© Cartography Associates)

Sequence Number and Physical History Time Period

4 - Exploration and Settlement of Ocracoke Island, 1585-c.1778 CE

Physical History Narrative

Sir Richard Grenville's expedition to the Outer Banks landed at Ocracoke in 1585, where the flagship grounded on a shoal. Grenville and Ralph Lane explored the sound and mainland while repairs were made before moving north to Roanoke Island. The origin of the name "Ocracoke," which was spelled "Wokokon" or "Wokoken" in the sixteenth century, is probably the Woccon Indians. John White's map of 1585 marks the earliest occurrence of "Wococon" on a map. The 1657 Nicholas Comberford map showed the island as "Wococock," and in 1665 surveyor T. Woodward referred to an "Inlett at Wococock or Wococon." The "W" was eventually dropped, but it was spelled many different ways before the adoption of the present-day spelling. The name "Ocacock" appears on Herman Moll's map of ca. 1736 (Stick 1958, 18, 298).

From the 1580s to the middle of the eighteenth century, Ocracoke Island was approximately eight miles long, bounded by Ocracoke and Hatteras Inlets. Lawson describes several inlets through

the barrier islands, and his journal gives a glimpse of the Outer Banks as they were in the early 1700s.

> Ocacock is the best Inlet and Harbour yet in this Country; and has thirteen Foot at Low-water upon the Bar. There are two Channels, one is but narrow and lies close aboard the South-Cape; the other in the Middle, viz: between the Middle Ground and the South Shoar, and is above a Mile wide. The Bar itself is but half a Cable's length over, and then you are in seven or eight Fathom Water; a good Harbour. The Course into the Sound is N.N.W. At High-water, and Neap-tides here is eighteen Foot Water; it lies S.W. from Hatteras Inlet, Lat. 35°20′ (Lawson 1709, 63).

In the 1730s, Hatteras Inlet began to close, joining Ocracoke to Hatteras Island. An 1846 hurricane opened a new inlet closer to Hatteras village, which was also called Hatteras Inlet. Ocracoke was once again an island but a different configuration than during its colonial history (Stick 1958, 298).

Sometime around 1719, John Lovick received a 2,110-acre land grant for Ocracoke Island. The land was acquired by Richard Sanderson of Perquimans County, who, at his death in 1733, still owned the entire island. He bequeathed to his son Richard "Ye Island of Ocreecock, with all the stock of horses, sheep, cattle and hogs" (Stick 1958, 299; Dunbar 1958, 18).

French and Spanish privateers frequently raided livestock on Ocracoke, culminating in a Spanish tent camp on the western end of the island in 1741. Although the Spanish eventually abandoned their base of operations, the January 9, 1742, Charleston Gazette reported that "a Spanish Privateer has again lately been on that coast, and taken two Vessels off Okerecock." Such attacks prompted Outer Banks residents to demand protection. In 1747, Governor Gabriel Johnson felt that Ocracoke would be an excellent location for a fort. He stated:

> Inside the south end of the Island lyes the Harbor which has convenient places to careen ships. Wood and fresh water in abundance. A small fort mounted with some cannon

> would prove in time of war sufficient security to the shipping in the harbor and to the houses on land. Ocracoke is an airy and healthy place, abounding in excellent fish and wild fowl. If a Port is settled on Ocracoke Island a town will soon be built which will become in a little time a place of great commerce.

According to historian David Stick, the colonial government eventually built a fort on the south side of Ocracoke Inlet. Fort Granville was garrisoned from about 1757 until 1764, but it does not show up on any maps of the 1770s, by which time it apparently had disappeared.

During the American Revolution, a committee of the Provincial Congress of North Carolina noted that the Outer Banks was defenseless in the face of the powerful British Navy. North Carolina and Virginia agreed to construct two large row galleys, one of which, Caswell, guarded Ocracoke Inlet from 1778 until she sank from rot a little over a year later. Her demise allowed British warships to conduct further raids on the Outer Banks until the end of the war. By this time, the importance of Ocracoke Inlet as a trade route had diminished (Stick 1958, 41; Torres 1985, 41–48).



Fig 9. Herman Moll, Carolina, ca. 1736. (© Cartography Associates)

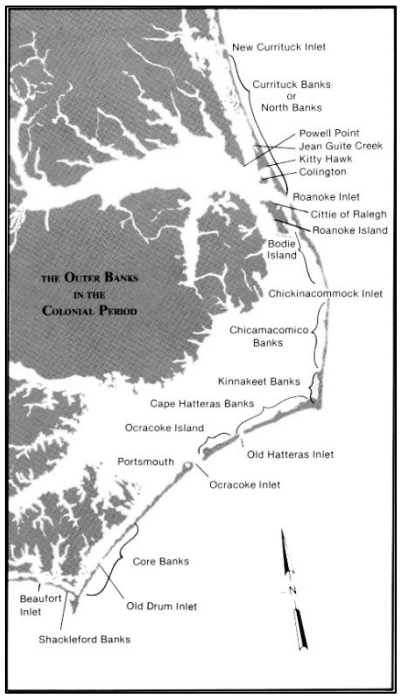


Fig 10. The Outer Banks in the Colonial Period. (Reprinted from Gary Dunbar, Historical Geography of the North Carolina Outer Banks)

Sequence Number and Physical History Time Period

5 – The Graveyard of the Atlantic, c.1760-1789 CE

Physical History Narrative

Secretary of the Treasury, Alexander Hamilton, has been credited with declaring the ocean off the Outer Banks as "the Graveyard of the Atlantic" for the extraordinary number of ships buried there. The Labrador Current that increased the speed of sailing ships also brought them perilously close to the shifting sand bars of the Outer Banks. If they did not veer east out to sea at Bodie Island, notorious Diamond Shoals awaited them. Once grounded, ships were soon torn apart by the turbulent waters, their crews doomed without assistance. Mariners who made it through then had to avoid the opposite-flowing Gulf Stream, a maneuver called "threading the needle" (Stick, The Outer Banks of North Carolina, 1; Oppermann, Bodie Island Light Station Double Keepers Quarters HSR 8; and Cheryl Shelton-Roberts and Bruce Roberts, Bodie Island Lighthouse: Its History & Restoration (Morehead City, NC: Lighthouse Publications, 2010), 2–3).

Local pilots were an early aid to navigation, and piloting became an important occupation for residents of Ocracoke. When the captain of a vessel approached an inlet, a pilot boarded the ship and guided it through, avoiding the dangerous shoals. Because of their importance, pilots were appointed and licensed by the colonial government. To attract pilots to the area, the legislature passed a bill in 1760 setting aside fifty acres on Ocracoke for the use of pilots. Another twenty acres was leased to the pilots in 1766. A community known as Pilot Town formed at Cockle Creek, now known as Silver Lake. Jonathan Price noted in 1795 that the inhabitants of "Ocracock," as it was then called, were all pilots, "and their number of head of families is about thirty." The present day village of Ocracoke grew up around the Pilot Town community. In addition to the fact that the inlet was wide enough and deep enough to allow vessels of sizable draft to pass through with the aid of pilots, lightering at Ocracoke made it possible for large ocean-going ships to transfer cargoes to smaller boats capable of navigating the shallow sounds.

Mechanical aids such as beacons and channel markers were proposed as early as 1715. Buoying and beaconing of Ocracoke Inlet occurred around 1733, when Moseley's map notes that Beacon Island had "two large Beacons in it," but the problem of ocean currents and shoals were far greater. Edmund Ruffin described the problem:

> Taking the whole space within the outlines of Pamlico, Albemarle and Currituck sounds, and their connecting waters, and of all the deep, still and unobstructed waters of the many rivers discharging therein, there is not one of the Atlantic States, which has a greater extent of good and smooth navigable water—and safe from storms also, by its topographical features, and entirely secured from any invasion, or effective blockade, by a hostile naval force. . . . But these remarkable and otherwise valuable characteristics are rendered almost nugatory by another remarkable feature of this region. There is now no access to the ocean, through the sand-reef, so good and deep as the narrow Ocracoke Inlet, which now only permits vessels of six feet draft to pass over the bar across the inlet, after tedious delays and much danger, and which passage opens upon an unsheltered and most dangerous sea coast. The whole ocean shore of North Carolina is a terror to

navigators, and is noted for the number of shipwrecks, and especially near Cape Hatteras (Torres 1985, 49, 52–60, 67).

Sequence Number and Physical History Time Period

6 – Shell Castle Island Lighthouse, 1789-1818 CE

Physical History Narrative

In 1789, the North Carolina General Assembly passed an act authorizing the first lighthouse at Ocracoke. Through an act of Congress that same year, the U.S. Light-House Establishment (Light-House Establishment) was created and operated under the Department of the Treasury. All U.S. lighthouse ownership was transferred to the federal government, which became the general lighthouse authority (Clifford and Clifford 2000, 3–5). The following September, a group of men deeded a one-acre site on the southern tip of the island to the state, which transferred the land to the federal government for the purpose of building a lighthouse.

The Department of the Treasury seemed satisfied with the proposed location on Ocracoke Island until 1794, when an influential group of men, including pilots, merchants, ship owners, and captains, petitioned Congress to change the location to Shell Castle Island, a twenty-five-acre, shell-covered island located between Ocracoke and Portsmouth Island to the south. This site was adjacent to the deepest inlet channel between shallow Pamlico Sound and the ocean and would be more advantageous to ships approaching and leaving the inlet. In the early 1790s, John Wallace and John Blount began building wharves, warehouses, a gristmill, and a few residences on the island, where vessels would dock and transfer their cargo to lighters that could navigate the shallow sounds.

An invitation for bids published in the North Carolina Gazette on May 23, 1795, described the details of the lighthouse. It was to be a pyramidal-shaped wooden tower measuring 54½ feet, covered with shingles, and set on a ten-foot-deep submerged stone foundation. The tower was to be capped with a six-foot enclosure for a lantern and a three-foot dome. In November 1797, John Gray Blount and John Wallace deeded land to the federal government. Henry Dearborn was the low bidder and completed the Shell Castle Lighthouse in 1798. The site included a frame keeper's quarters with a cellar and an oil vault.

The beacon's usefulness declined as the importance of Shell Castle Island as a commercial point diminished with the shoaling of Wallace Channel. By 1818, the channel had shifted nearly a mile away. The lighthouse remained in service until August 16, 1818, when lightning destroyed both its tower and keeper's dwelling. A light vessel replaced the Shell Castle Lighthouse in 1820, but its effectiveness proved inadequate (Torres 1985, 73–75; Stick 1958, 302–303; "Ocracoke Light Station," http://www.nps.gov/caha/planyourvisit/ols.htm; Ocracoke Lighthouse HSR, 9).

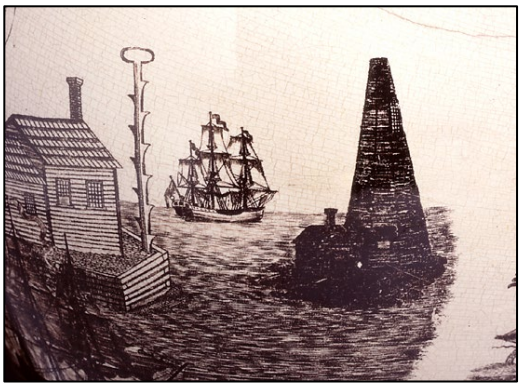


Fig 11. Shell Castle Island light tower. (© North Carolina Museum of History)

Sequence Number and Physical History Time Period

7 – Ocracoke Island Lighthouse, 1820-1852 CE

Physical History Narrative

Beginning in 1820, Stephen Pleasonton, Fifth Auditor of the Department of the Treasury, was assigned the "care and superintendence of the lighthouse establishment." Pleasonton relied on the local collector of customs to select sites, purchase land, and supervise the contractors who built the towers and related structures. Henry Dearborn was the Collector of Customs for the Districts of Boston and Charleston, and he executed the contracts for the construction of the Ocracoke Lighthouse (Clifford 2000, 21; Opperman 2016, 10).

On May 7, 1822, Congress authorized $20,000 to construct a lighthouse on Ocracoke Island. For a charge of fifty dollars, the federal government purchased two acres at the south end of the island from Jacob Gaskill on December 5, 1822, as the site for a new lighthouse. Massachusetts builder Noah Porter completed the lighthouse and the one-and-one-half-story keeper's dwelling, well,

and privy in 1823 for $11,359. The contract called for an octagonal iron lantern at the top of the tower. At the top of the lantern was to be a dome topped by a ventilator and a weathervane. Around the lantern was an iron railing. The tower had a door and six windows. The tower's solid white coloration served as its identifying mark to mariners by day and constructed a new lantern to accommodate the more compact Fresnel lens (Cloud 1993, 3–4; Ocracoke Lighthouse HSR, 10; Stick 1958, 303; and "Ocracoke Light Station, "http://www.nps.gov/caha/planyourvisit/ols.htm. The daymark system using unique patterns of contrasting colors was developed later by the Light-House Board; Oppermann 2016, 36-37).

On July 28, 1823, Henry Dearborn executed a contract for the lamps and reflectors with Winslow Lewis, who oversaw the construction of many early lighthouses. The beacon would be a revolving light with fifteen lamps fitted with oil heaters and an equal number of sixteen-inch Argand parabolic reflectors. In 1849, the lighthouse was equipped with a new lantern room and lighting apparatus, which consisted of ten brass lamps and twenty-one reflectors, replacing the fifteen that had been used before. The apparatus revolved every two minutes to produce a flashing light. Although the French physicist Augustin Fresnel had devised a lens in 1822 that was considered far superior to the reflector lamps, Pleasonton was slow to adopt the new technology (Opperman 2016, 10; Clifford and Clifford 2000, 24; and "Ocracoke, NC," http://www.lighthousefriends.com/light.asp?ID=355).

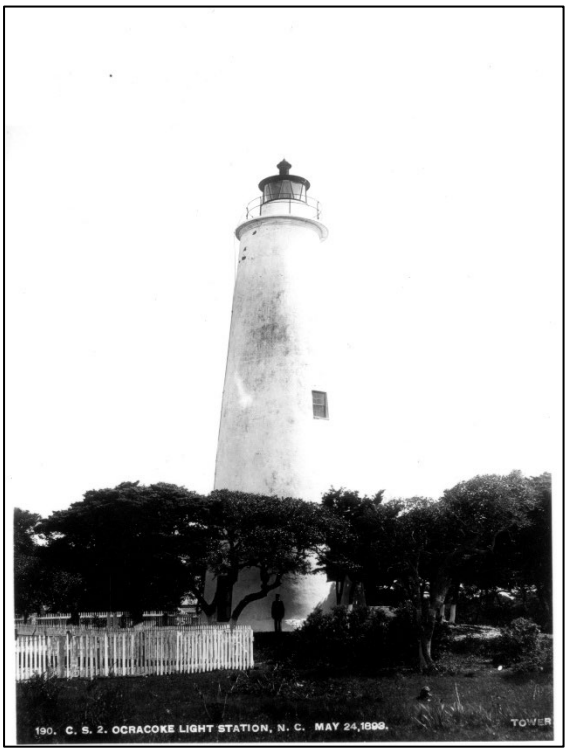


Fig 12. Ocracoke Lighthouse, 1893. (NPS/CAHA Collection)

Sequence Number and Physical History Time Period

8 – U.S. Light-House Board, 1852-1910 CE

Physical History Narrative

In 1852, Congress replaced Pleasonton with a nine-member Light-House Board that totally revamped the administration of lighthouses. The board devised a classification system based on position and use. Primary coast lights were those with the most prominent locations along the coast; secondary lights occupied less prominent points along the coast or in broad sounds and bays. The Fresnel lens became the standard adopted by the Light-House Board, replacing the less powerful reflector lamps. These lenses used prisms to refract light to the center of the lens, where it was concentrated into a powerful beam. First-order lenses provided the largest range; sixth-order lenses provided the smallest. In 1854, as part of its modernization program, the board replaced the Argand reflectors in the Ocracoke lantern with a fourth-order Fresnel lens with a

fixed white light and constructed a new lantern to accommodate the more compact Fresnel lens (Clifford and Clifford 2000, 78; Cloud 1993, 5; Oppermann 2016, 38).

Another development was the substitution of lard oil in place of sperm or whale oil, the single preferred fuel up until the middle of the nineteenth century. An increase in the price of whale oil spurred a search for an alternative fuel. In the 1850s, colza oil from rapeseed replaced expensive whale oil. In the late 1850s, the Light-House Board directed a committee headed by Joseph Henry of the Smithsonian to begin testing lard oil. Henry found that when heated to 250 degrees, the oil was the equivalent if not superior to whale oil. The introduction of lard oil began around 1865, and by 1867, it was being used in the larger lamps. It soon became the fuel for all lighthouse lamps (Ocracoke Lighthouse HSR 1990, 21; Oppermann 2016, 28-29).

During the Civil War, the strategic value of the North Carolina Outer Banks was coveted by both sides. After North Carolina seceded from the Union in May 1861, the Confederacy built a series of forts along the Outer Banks to protect the inlets and sounds. By 1862, Union forces had captured the entire North Carolina coast, and in the process, retreating Confederate troops dismantled the lens of the Ocracoke Lighthouse to darken the coast. Although it was reported in June 1863 that the Ocracoke Lighthouse had been "refitted and the lights re-exhibited," it was apparently not permanently lighted until 1864 (Stick 1958, 118–52; Oppermann 2016, 25-26, 39; Cloud 1993, 6; and Ocracoke Lighthouse HSR 1990, 11).

In 1868, the station underwent numerous repairs that included relaying the brick walks around the house, and in 1869 it was declared to be "in fine order." Repairs also occurred in 1883 that included removing the existing fence and replacing it with a new picket fence. The first major change to the keeper's quarters came in 1889, when a frame shed room was added to the back of the house (Cloud 1993, 7; Oppermann 2016, 25).

In May 1892, plans of the lighthouse were drawn based on dimensions taken on site. One notable difference between the 1823 specifications and the lighthouse as documented in 1892 is the

appearance of the lantern. The contract called for it to be an octagon in form, but by 1892, the lantern was round in shape (Oppermann 2016, 19-20).

In May 1893, Herbert H. Bamber, Lighthouse District Superintendent of Construction, surveyed the light station and produced a detailed site plan and a series of photographs. The site plan shows the light tower at the northern end of the property and the double keeper's quarters, a storehouse, and privy sited southeast of the light tower. The dwelling, with the frame shed room addition, occupies the central portion of the site. The storehouse is located northeast of the dwelling; the privy is on the eastern boundary. The only other structure demarcated on the site plan is a well located southeast of the light tower. Areas for a garden are documented in the northwest and northeast corners of the site. A fence encloses the northwest garden. Live oaks are clustered around the dwelling and light tower and near the northeast garden area. A few cedars are scattered about the site. Shrubs or "bushes" (as noted by Bamber) of unknown identity are located in the southwest and northeast corners and along the eastern boundary. The entire station is enclosed by a picket fence with grass planted within the fence.

Images taken at the same time reflect what is seen on the site plan. In addition, images capture the family in residence standing on a brick deck or walkway that wrapped around the house. A work yard with chickens, wooden enclosures (probably for livestock and chickens), and sandy circulation paths surrounds the house. The trunks of live oak trees are painted white, as was the custom to keep insects out of trees. There were no foundation plantings around the dwelling or storehouse ([H. H. Bamber], Photographs 189 (C. S. 1) and 191 (C. S. 2), Ocracoke Light Station, N. C. May 24, 1893, NPS/CAHA Collection).

To provide more space for the keeper and his family, a second story was added onto the original quarters in 1897. An image from 1897 shows the station very much as Bamber documented it in 1893 but with a second story on the dwelling. In 1898, Keeper Tilmon F. Smith mentioned whitewashing a cow stable and chicken house in his logbook. In 1899, in addition to repairs, a new fourth-order lamp was installed.

Keepers performed a wide range of duties. Maintaining the buildings and grounds, hauling oil, trimming wicks, and polishing the lens were part of a well-trained lightkeeper's regulated life. Ocracoke lighthouse keepers fished, hunted waterfowl, raised livestock, and planted gardens. Because of the station's proximity to the village of Ocracoke, the keeper and his family did not face the isolation that other Outer Banks keepers experienced.

As the twentieth century dawned, the Department of the Treasury made several improvements to the station. In 1902, Keeper Smith began building a plank walk from the quarters to the light tower. In 1904, a small woodshed was built, fencing erected, and various repairs made (Cloud 1993, 7, 16–17; "Ocracoke, NC," http://www.lighthousefriends.com/light.asp?ID=355; Mr. John W. Lewis, Ocracoke Light Station, N.C. [map], 1897, 5th L.H. District, Baltimore, MD, NPS/CAHA Collection). A site plan from 1908 shows a clustering of outbuildings and a cistern linked to the dwelling by brick and wooden walkways.

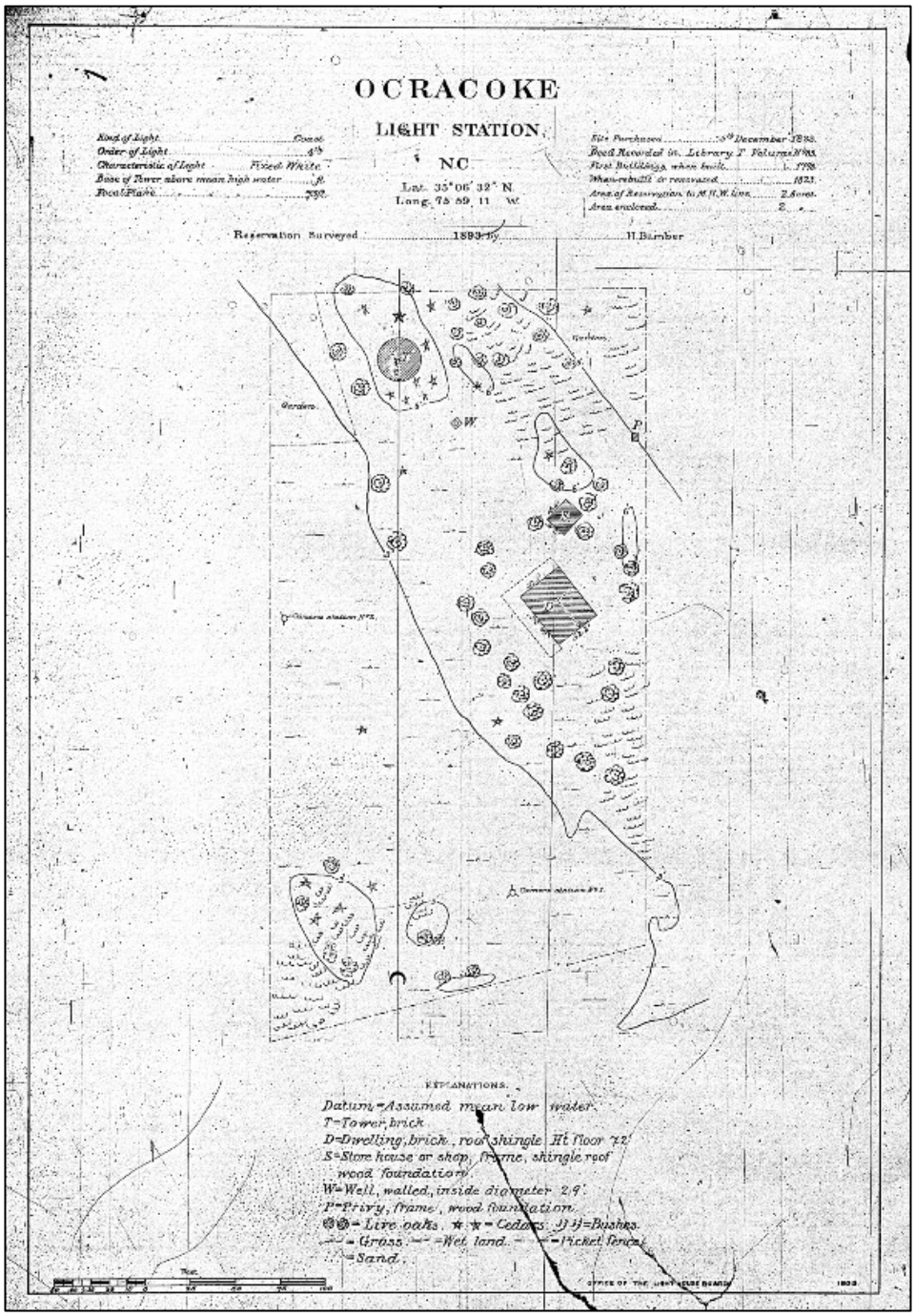


Fig 13. Ocracoke Light Station site plan, 1893. (NPS/CAHA Collection)



Fig 14. Ocracoke Lighthouse, 1893. (NPS/CAHA Collection).



Fig 15. Ocracoke Light Station, after 1897. (NPS/CAHA Collection)

Sequence Number and Physical History Time Period

9 – U.S. Bureau of Lighthouses, 1910-1939 CE

Physical History Narrative

In 1910, Congress dissolved the Light-House Board and created in its place the civilian U.S. Bureau of Lighthouses under the Department of Commerce. The legislation referred to the bureau as the Lighthouse Service, its more commonly known name (Lighthouse Digest Magazine, "Important Dates in United States Lighthouse History," http://www.foghornpublishing.com/history.cfm).

In 1913, Wesley Austin had just taken charge of the light, after having served as first assistant at Currituck Beach Lighthouse since 1893. In February, Chief Construction Engineer H. B. Bowerman visited the light station. In May, Keeper Austin recorded that a repair party arrived to put a cement coating on top of the tower and to repair fence planks, walks, and outbuildings.

During hurricanes, the light station was a place of refuge for some local residents. Situated on higher ground, the complex often remained above flood waters. Villagers, sometimes arriving by boats that navigated inundated roadways, waited out the storm in the keepers' dwelling. One example of this occurred in September 1913, when a hurricane struck the Outer Banks. The Lighthouse Service commended Keeper Austin for saving government property and giving shelter to island residents during the storm. His daughter, Ruby, described the storm of 1913: "The waves were terrible. The boats washed up on the island over the fences around the lighthouse." Keeper Austin reported that high winds blew down part of the fence, washed over plank walks, and severely damaged trees inside the station. For the next week, he reported clearing litter out of the station. The following week he began making repairs to the privy, plank walks, and fencing. The station was inspected on October 4 and found to be in good condition (Ocracoke Lighthouse HSR 1990, 24; Cloud 1993, 23–25; "Ocracoke, NC," http://www.lighthousefriends.com/light.asp?ID=355).

The substitution of mineral oil (kerosene) for lard oil as fuel for the light brought about the construction of an oil house in 1914, constructed of reinforced concrete and equipped with iron

doors and ventilators. Keeper Austin reported in his logbook that a repair crew arrived on February 23, 1914, to build the oil house. Keeper Austin received an efficiency star on August 18, 1914. A repair crew arrived on March 22, 1915, to make minor repairs to the station.

Several improvements occurred at the station in 1916. A repair crew arrived on April 3 and began taking out the plank walks and replacing them with concrete walks. They also rebuilt the privy and repaired the top of the cistern. After the repair party left on April 13, Keeper Austin painted the outbuildings, tower, quarters, hot house, and fence and fixed the chicken lot. Although chickens had been documented previously in photographs, this is the first mention of the cistern and hot house in the keeper's logbook (Cloud 1993, 26-28).

Telephone service came to the station on October 3, 1917, and the USCG telephone inspector visited the station on October 31. Light station families were encouraged to maintain gardens to support the war effort after America's entry into World War I in April 1917. No further improvements were reported by Keeper Austin until 1920, when he replaced pickets and gates in the existing fence and installed gutters on the quarters. Nonetheless, the Lighthouse Service declared the station in Excellent Condition in January, April, June, September, and October of 1914; June and September of 1917; March of 1918; and May of 1919. Keeper Austin was awarded the efficiency flag for having the best-kept station in the district in 1922. He retired from duty on September 30, 1929, after serving for forty-five years.

Joseph M. Burrus ("Cap'n Joe") took over as keeper on October 1, 1929. The light was electrified on October 29, 1929. As duties at the light station increased, the Light-House Board added an assistant keeper position. To house the additional keeper and his family, another addition to the keeper's quarters occurred in 1929, creating a double dwelling. Assistant Keeper Crawford Austin served in the 1930s. As Keeper Burrus made few entries in his logbook, not much is known about repairs or improvements at the station during his tenure. On April 2, 1930, the light station property consisted of the following buildings that could be valued:

1 lighthouse	$16,050
1 oil house	500

1 dwelling	5,670
1 dwelling	7,000
1 coal shed	400

Plans that pre-date 1939 show a more substantial chicken house, although its original location is uncertain (Cloud 1993, 19–21, 30–35, 73; Ocracoke Lighthouse HSR 1990, 12).



Fig 16. Ocracoke Light Station, 1936. (NPS/CAHA Collection)

Sequence Number and Physical History Time Period

10 – Construction of Artificial Barrier Dunes, 1934-1940 CE

Physical History Narrative

In 1934, a project to build artificial barrier dunes from the Virginia state line to Ocracoke Inlet was begun using Works Progress Administration (WPA), Civilian Conservation Camp (CCC), and National Youth Administration labor authorized under the New Deal policies of President Franklin D. Roosevelt. This work was directed by the National Park Service (NPS) before the establishment of the Cape Hatteras National Seashore and used sand fences to raise a line of

barrier dunes. By 1940, 600 miles of fences had been erected on 115 miles of beach. To stabilize the dunes, 142 million square feet of grass and 2.5 million seedlings, trees, and shrubs had been planted. Dunes were built only half the length of Ocracoke because of a lack of funds and conflicting programs for the future development of the island. While the North Carolina Livestock Act of 1934 stopped open grazing on Roanoke Island and from Currituck to Hatteras Inlet after February 1937, the stock law did not apply on Ocracoke Island, where the Ocracoke ponies ranged freely, or on the Outer Banks portion of Carteret County. Because dune building and grass planting could not be successfully accomplished with free ranging stock at large, most of the dune construction occurred in the Outer Banks portion of Dare County. Most Ocracoke properties were still fenced to keep out the free range Ocracoke ponies (Dunbar 1958, 65, 88; Stick 1958, 249).

Sequence Number and Physical History Time Period

11 – U.S. Coast Guard, 1939-1999 CE

Physical History Narrative

President Roosevelt, under the Presidential Reorganization Act of 1939, transferred the operation and administration of the Lighthouse Service to the USCG. From 1939 to 1940, a USCG Station was built on the southern end of Ocracoke Island. During World War II, the U.S. Navy operated a Section Base (1942–1944), Amphibious Training Base (1944–1945), and Combat Information Center (1945) just across Silver Lake Harbor from the lighthouse.

In 1946, the USCG automated the Ocracoke Lighthouse, and its keeper since 1929, "Cap'n Joe" Burrus, left its service. He was a keeper for forty-five years and also served at the Cape Lookout Lighthouse and the Diamond Shoals Lightship. The last keeper was Clyde Farrow, who served from 1946 to 1954 (Ocracoke Lighthouse HSR 1990, 17; Stick 1958, 301; and Cloud 1993, 19).

Around 1950, the USCG replaced the original wooden spiral stairs built into the inside of the exterior wall of the lighthouse with metal stairs located in the center of the tower. Also at this time, an extensive interior rehabilitation of the quarters occurred, including installation of modern kitchen and bathroom facilities. An elevation of the quarters and plot plan from 1950 shows two cisterns at the rear (east) of the building (Ocracoke Lighthouse HSR 1990, 11;

"Narrative Report on the Findings of Historic Structure Examination Conclusions and Recommendations Ocracoke Lightstation Keepers Quarters," Accession 191, Catalog 5037, Box 1, Folder 1, NPS/CAHA Collection).



Fig 17. Coast Guard Station on Ocracoke Island, n.d. (NPS/CAHA Collection).

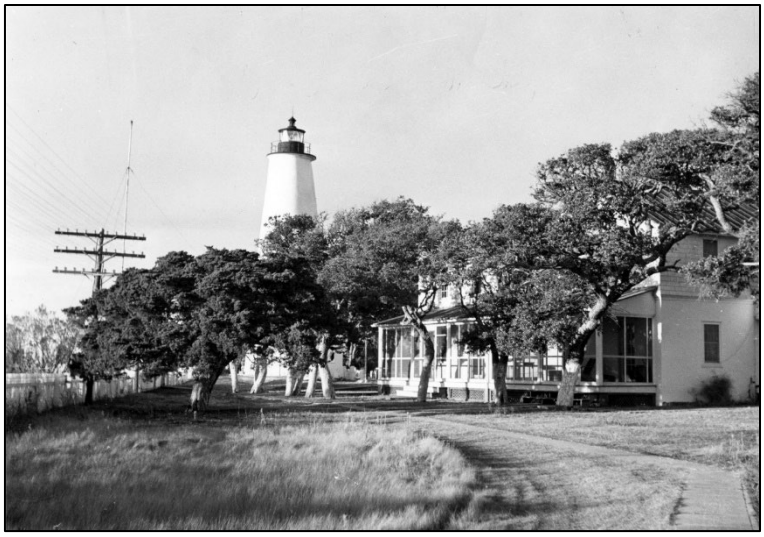


Fig 18. Ocracoke Light Station, ca. 1940s. (The Outer Banks History Center, Manteo, NC/David Stick Collection

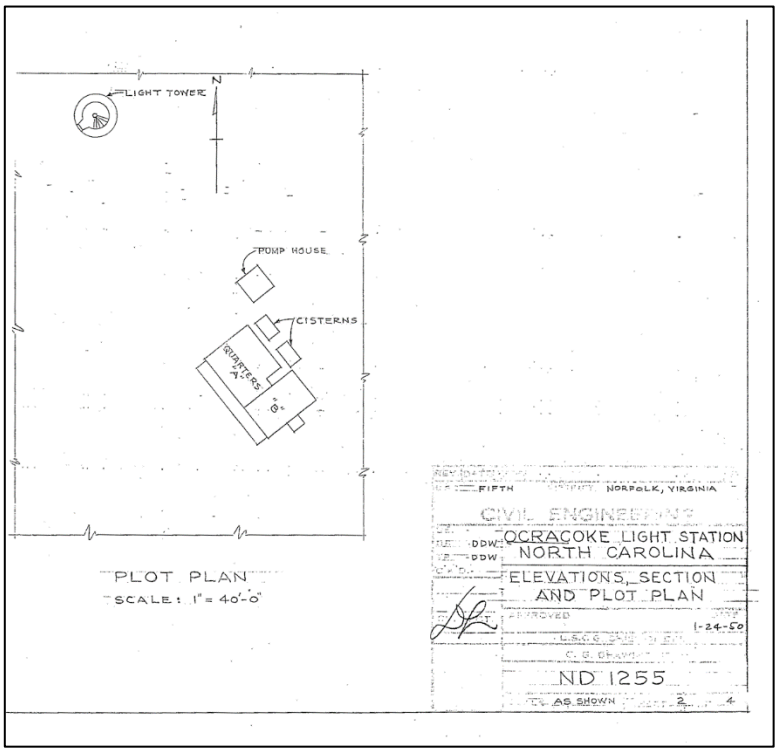


Fig 19. Plot plan, 1950. (NPS/CAHA Collection)

Sequence Number and Physical History Time Period

12 – Establishment of the Cape Hatteras National Seashore, 1953-1986

Physical History Narrative

Congress had authorized Cape Hatteras as the first National Seashore in 1937, but it was another sixteen years before the park was officially established in January 1953. In April 1955, Superintendent Allyn F. Hanks wrote the Commander of the Fifth USCG District to inquire about using the light station buildings:

> The National Park Service is anxious to more adequately meet public obligations on Ocracoke Island as part of the Cape Hatteras National Seashore. Lacking is a suitable base of operations, protection and interpretation. The buildings adjacent to the lighthouse are well adapted for this purpose and, in the event the U.S. Coast Guard no longer requires these units, it would be most helpful to the Service program if permission

> to occupy the grounds and utilize existing improvements equipped, exclusive of the lighthouse facilities, could be granted.

In response to this inquiry, the USCG granted a revocable permit to the NPS on May 17, 1955, for the use and occupancy of the quarters building of the station. Another letter dated April 10, 1957, asked if several outbuildings could be included:

> In view of the Coast Guard revocable permit of 17 May 1955 to the National Park Service granting use and occupancy of that Station, and our need of facilities to continue planned operations there, it is requested that the following buildings be included in the permit for our use and occupancy: (1) garage, (2) chicken house, (3) carpenter shop, (4), pump house. We hereby agree to provide the necessary maintenance to those buildings.

An amendment to that effect was signed on May 6, 1957, granting the use of the garage, chicken house, carpenter shop, and storehouse (pump house) with the stipulation that the NPS keep the buildings in good repair and condition (Allyn F. Hanks, Superintendent to Commander, Fifth Coast Guard District, April 22, 1955 and April 10, 1957, Accession 191, Catalog 5037, Box 1, Folder 1, NPS/CAHA Collection).

A new use agreement between the same parties was signed on February 13, 1974. It allowed the NPS to use the lighthouse to support an antenna required for the park FM radio network, as well as the use of the buildings at the station. The agreement also required the NPS to obtain authorization prior to making any structural changes to or removal of any of the buildings. From 1972 to 1982, the NPS painted and roofed the quarters, toolhouse, and storehouse (pump house). The fence was also painted during this time (Ocracoke Light Station, HS-1A/HS-1B Buildings #501/501B/503, Accession 191, Catalog 5037, Box 1 Folder 1, NPS/CAHA Collection).

In 1984, the NPS and the USCG agreed that the USCG would maintain the fence around the station, and the NPS would be responsible for the quarters and outbuildings at the station. The USCG had always been responsible for the upkeep of the lighthouse. Following complaints from

the Ocracoke village regarding the condition of the station in 1985, the superintendent directed NPS staff to develop additional guidelines for residential occupancy, develop a maintenance and repair schedule for the grounds, and a schedule for repairs to the structures. An inspection of the station in January 1986 found numerous deficiencies and needed repairs. The superintendent contacted the NPS occupants of the station and sought their assistance in disposing of or properly storing personal property scattered around the site. He stated:

> Your help is needed, as quite a lot of personal property has been scattered around the site—primarily behind the residence, behind a storage building, and at the back of the property between the lighthouse and the old outhouse and garden. I ask that you pick up and either dispose of, or properly store any personal property that belongs to you, and that the work be accomplished by March 15. Anything lying around after that date will be considered trash that the Maintenance Division will remove and dispose of.

The initial effort for preservation maintenance of the grounds included trash and debris removal from the site in March 1986 (Superintendent to Mac Basnight and Jim Henning, February 26, 1986, Accession 191, Catalog 5037, Box 1 Folder 1, NPS/CAHA Collection).

A revised use agreement was signed on May 20, 1986. It called for the NPS to maintain the quarters and outbuildings in good repair, as well as the grounds and fence in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties. In October, historical architect Rene Cote of the NPS Southeast Cultural Resources Preservation Center examined the quarters building, outbuildings, and site conditions to determine the historic development of the structures; structural problems; the condition of electrical, mechanical, and plumbing systems; paint failure; moisture problems; roof systems; and fabric analysis. He reported that the exterior appearance of the quarters resembled the basic form after the 1929 addition. Modifications that detracted from the appearance included: the screening of the south porch; the use of white paint for second story cypress shingles; the addition of composition shingles to the rear utility wing of the 1823 structure; the installation of exterior aluminum storm doors and windows; the modification of cisterns to include large concrete block sand filters on

top of the cisterns; the addition of modern extruded aluminum gutters and downspouts to replace the deteriorated system; and the addition of new electrical and plumbing intrusions. Fabric analysis revealed the brick to be in relatively good condition with a few exceptions, the paint in various stages of failure, and the mortar soft but in relatively good condition. The fence system was in various stages of deterioration; vehicular access was undefined; and the surroundings of the 1929 east structure included broken plastic and Styrofoam coolers, auto tires, open plastic garbage bags, containers with trash and refuse, and broken window screens and garden hoses scattered around the site ("Narrative Report on the Findings of Historic Structure Examination Conclusions and Recommendations Ocracoke Lightstation Keepers Quarters," Accession 191, Catalog 5037, Box 1, Folder 1, NPS/CAHA Collection).

In response to this report, the superintendent wrote the NPS employee who lived in the 1929 east structure a letter demanding prompt attention be given to the area around the residence:

> I recently inspected the site, and the area around your residence is simply not acceptable. It looks as bad now as it did before the area was cleaned up in March. Neither of us would tolerate such a situation at any of the park buildings that are open to the public, and I cannot tolerate it at the National Registry property that happens to be your residence. . . . On March 24, I sent you a letter asking that the lumber that you have stored in your attic be removed. Since that lumber is still there, I am directing you to remove it by January 1, 1987. In addition, outbuilding 501-B must be thoroughly cleaned out, as the layer of straw and manure on the floor in that building is accelerating the rate of deterioration of the floor. If, when this work is completed, it is found that the flooring in 501-B has deteriorated to the point where the building can no longer be safely used, then the building is to be left empty, and you will need to find suitable storage for the personal property that is now stored within this building (Thomas L. Hartman to James A. Henning, November 26, 1986, Accession 191, Catalog 5037, Box 1, Folder 1, NPS/CAHA Collection).



Fig 20. Ocracoke Light Station with garage along the fence line, 1952. (NPS/CAHA Collection).



Fig 21. Ocracoke Light Station with garage, concrete oil house, and chicken house, 1956. (NPS/CAHA Collection)



Fig 22. Ocracoke Light Station with garage, concrete oil house, chicken house, carpenter shop, and storehouse, ca. 1960s. (The Outer Banks History Center, Manteo, NC/Aycock



Fig 23. Condition of the site, 1986. (NPS/CAHA Collection).

Sequence Number and Physical History Time Period

13 – Rehabilitation of the Double Keepers' Quarters, 1987-1990

Physical History Narrative

In 1987, the NPS finally began Phase I of structural and interior rehabilitation on the double keepers' quarters. Completed by the Williamsport Preservation Training Center in September, the rehabilitation focused on stabilization and life safety issues. The NPS decided that a historic structure report was needed to determine a logical sequence of preservation work on the structure before Phase II began in January 1988, but it appears that work proceeded without a report. Electrical, plumbing, and sewage system plans were already being prepared by the park staff and HVAC system plans were being prepared by staff of the NPS Denver Service Center. Other work included repairs to chimneys, repairs to existing windows, repairs to shed roof addition, and replacement of wood shingle roofs on utility room additions. The NPS Williamsport Preservation Training Center also developed a scope of work for the carpenter shop, storehouse (pump house), and privy. The final inspection for Phase II occurred on September 22, 1988. The Williamsport Preservation Training Center completed and oversaw all of the work with the exception of the window repairs, which were partially completed, and repairs to the carpenter shop and privy. A heavy termite infestation expanded the scope of work for the storehouse (pump house) during Phase II. Repairs to windows and to the carpenter shop and privy were deferred to Phase III, which was concluded in January 1990 (Chief, Historic Architecture Division to Superintendent, Cape Hatteras, December 29, 1987; Exhibit Specialist, Williamsport Preservation Training Center, Harpers Ferry Center to Deputy Chief, Williamsport Preservation Training Center, HFC, October 27, 1988, Accession 191, Catalog 5037, Box 1, Folder 1 and 2, NPS/CAHA Collection).



Fig 24. Phase I rehabilitation, 1987. (NPS/CAHA Collection)

Sequence Number and Physical History Time Period

14 – Stabilization and Preservation of the Lighthouse, 1987-1999

Physical History Narrative

Several informal inspections of the lighthouse during the early rehabilitation of the double keepers' quarters in 1987 revealed the tower's deteriorated condition and the need for immediate stabilization and preservation. In May 1987, the USCG submitted a project for exterior painting and repairs to the North Carolina Department of Cultural Resources for review. In their response, they questioned the USCG's proposal to replace the existing door with a metal frame and door, stating that the new door frame should be fabricated of wood or the existing door frame repaired. They allowed a steel door for security and maintenance purposes but specified that the door should have only a louvered panel with no glazing. They commented that snap-in muntins or moldings in either the door or windows would not meet the Secretary of the Interior's Standards for the Treatment of Historic Properties. A more serious concern was about the proposal to replace all of the windows and frames. The letter stated:

> We seriously question the need to replace all windows and frames as specified in Section 8G. Our photographs of the Ocracoke Lighthouse indicate that the existing wood windows and frames are in fair-to-good condition. It appears that they could be repaired as needed and repainted. The total replacement of all window frames and sash with new vinyl-clad or aluminum-clad units with snap-in muntins would be a violation of the Secretary of the Interior's Standards.
>
> We recommend that each existing window frame and sash be carefully inspected for its condition. Any deteriorated elements of the window frames, such as sills, stops, jambs, and lintels should be repaired or replaced to match the existing detailing. All sash which are in sound condition should be repaired and glazed as needed. Frames or sash which are too deteriorated to be repaired should be replaced with new frames or sash which have been milled or fabricated to match the existing ones. Any new replacement sash should be of true six-light construction, and identical to the existing sash. Snap-in muntins are not acceptable (David Brook to Marvin H. Barnes Jr., March 27, 1987, Accession 191, Catalog 5037, Box 1, Folder 1, NPS/CAHA Collection).

The Great Window Heist

Beginning in 1988, two events occurred that galvanized the Ocracoke community into taking action to preserve the integrity of the lighthouse. First, the generator that powered the lighthouse when there was a power outage ceased to function. Instead of replacing it, the USCG decided to install two small, battery-powered navigational lights on the gallery hand rails, much to the disdain of the Ocracoke community. In 1989, the USCG let a contract to paint the lighthouse and repair the windows and door. Local resident and author Ellen Fulcher Cloud learned that the contractor had removed the historic wood-clad windows and replaced them with vinyl-clad thermal sash windows and replaced the historic door with a non-historic metal door. She contacted two friends who joined her at the site, where the contractor informed them that the historic windows were to be destroyed but were still on site. The group immediately contacted the USCG, NPS, North Carolina Department of Cultural Resources, and Congressman Walter P. Jones's office. All agreed that the window replacement was in violation of Section 106 of the National Historic Preservation Act (NHPA). The group returned to the lighthouse, found the

windows stored inside, and took them away for safe keeping at the protest of the contractor. They informed all parties of their actions, and a meeting was set up for the following week with the USCG, NPS, and Hyde County Commissioners. At the meeting, the USCG agreed to have the historic windows replaced in-kind, to replace the generator, and to remove the lights from the gallery hand rails.

When nothing had been done by April 1990, the group contacted the USCG but got no satisfaction that they planned to carry out their agreement any time soon. The group was hoping to have the work completed by National Lighthouse Day on August 7. They once again called Congressman Jones's office, who promised that the generator would be ordered that day and the lights taken off the lighthouse by August 7 (Cloud 1993, 45-53; J. C. Malmrose, Commander, U.S. Coast Guard to Thomas L. Hartman, Superintendent, Cape Hatteras National Seashore, February 26, 1990, Accession 191, Catalog 5037, Box 1, Folder 1 and 2, NPS/CAHA Collection).

A crew from the Williamsport Preservation Training Center replaced the non-historic windows with historically accurate wood windows using as much of the surviving fabric as possible. They also removed the non-historic metal door installed by the contractor and constructed a new board-and-batten door as specified by drawings supplied by the North Carolina Department of Cultural Resources. Following this incident, the USCG repeated its suggestion that the NPS consider taking ownership of the Ocracoke Lighthouse while the USCG would maintain the optic (Williamsport Preservation Training Center, "Completion Report Ocracoke Lighthouse Window and Door Replacement Cape Hatteras National Seashore").

Lighthouse Preservation Grants

In 1988, the North Carolina Department of Cultural Resources received a $17,000 Lighthouse Grant from the Bicentennial Lighthouse Fund, which they transferred to the Cape Hatteras National Seashore via a Preservation Letter of Agreement. These funds were used to prepare a historic structure report to assess the structure's condition, document historic fabric, and develop a scope of work for rehabilitation of the lighthouse. In 1989, an additional $11,000 Lighthouse Grant initiated stabilization and preservation work on the structure, which included cleaning

algae from interior brick surfaces, replacing deteriorated interior stair support brackets with stainless steel brackets, hand raking and repointing twenty courses of interior brick mortar joints, and repair of the gallery hatch door.

The NPS absorbed most of the costs of the historic structure report, which was completed in 1990, leaving $12,645 of the original Lighthouse Grant funds unobligated. The North Carolina Department of Cultural Resources approved a request to reallocate the remaining funds for use in Fiscal Year 1990. The scope of work included window sill repairs, window lintel repairs, entrance door lintel repairs, front step and sidewalk repairs, and replacement of Plexiglas in the lantern with Lexan to secure structure from water migration ("Historic Preservation Fund Lighthouse Grants," Accession 360, Catalog 5609, Folder 7, NPS/CAHA Collection).

In 1990, a third grant in the amount of $6,500 continued preservation work on the lighthouse. This funding was sufficient to allow for repairs of the lintels above the door and windows 2 and 3. In addition, inspections were made of the remaining window lintels to determine the extent of deterioration until such time as the park could assign staff to continue the project. Materials for the future work were purchased with the remaining funds in the grant account as of September 30, 1991. At the final inspection for the third grant, all parties noted the warping of the entrance board-and-batten door and advised that the NPS replace it with one of a different design ("Lighthouse Grant Project Ocracoke Lighthouse Phase III Completion Report Cape Hatteras National Seashore," February 10, 1992, Accession 189, Catalog 5035, Box 1, Folder 2, NPS/CAHA Collection).

In 1993, a new well system provided an adequate amount of water to the HVAC site to heat and cool the double keepers' quarters. In 1994, a new generator house constructed on the site of the old chicken house provided backup power to the double keepers' quarters. In 1996, the NPS replaced the HVAC system in the double keepers' quarters ("Section 106 Clearance, Construction of a Well System at the HVAC site of the Ocracoke Keepers Quarters," April 26, 1993, Accession 360, Catalog 5608, Folder 6, NPS/CAHA Collection).

At some point before 1994, the NPS developed a small parking area adjacent to the front gate and also laid a plank boardwalk outside the picket fence to take visitors closer to the lighthouse.

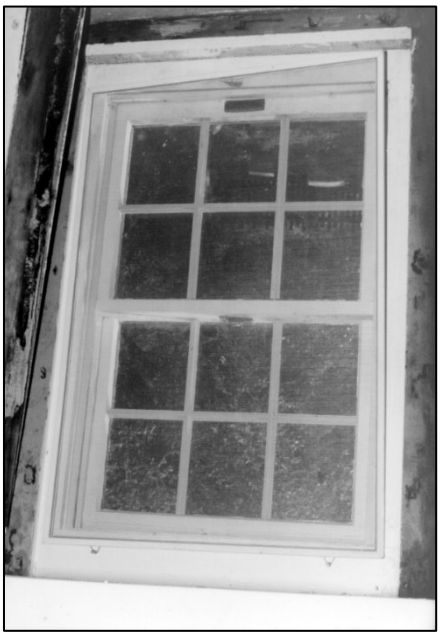


Fig 25. Non-historic replacement window, 1990. (NPS/SER-CRPS Collection).

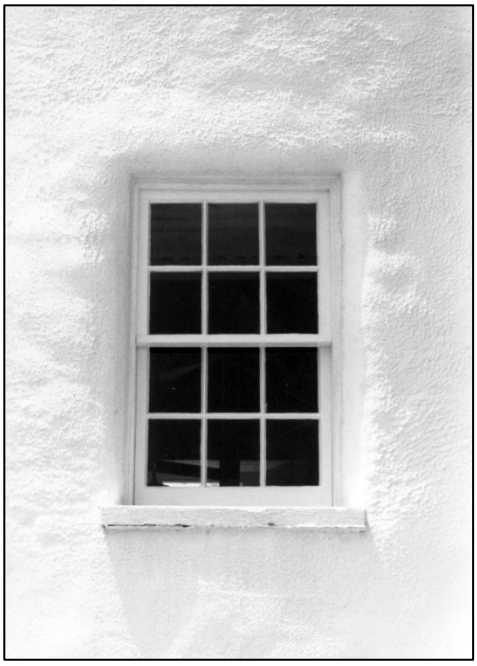


Fig 26. Refabricated window, 1990. (NPS/SER-CRPS Collection).

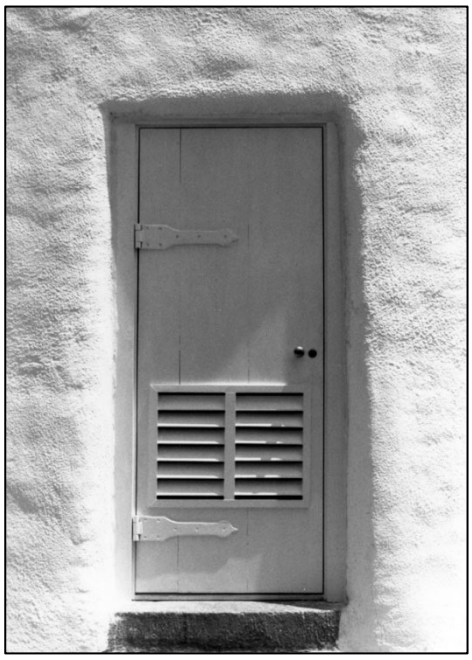


Fig 27. New board-and-batten door, 1990. (NPS/SER-CRPS Collection)



Fig 28. Work on the lighthouse, 1989. (NPS/CAHA Collection)



Fig 29. Lighthouse tower with boardwalk in the foreground and new generator building in the background, 1994. (NPS/CAHA Collection).

Sequence Number and Physical History Time Period

15 – National Park Service, 1999-Present CE

Physical History Narrative

In 1997, the NPS contacted the General Services Administration about receiving the Ocracoke Light Station and Lighthouse through the Surplus Property Program. On June 7, 1999, the USCG transferred ownership of the property to the NPS, which maintains the lighthouse as a functioning aid to navigation. Since the NPS had already been using the station buildings for some years, and due to its location in the heart of the Ocracoke village, there were no major development plans proposed for the existing site. In 2001, the NPS felt that there was a need to expand the parking area in front of the complex since it did not meet DOT standards, and they moved the existing fence forward fifteen feet to increase the existing area for parking. The NPS hoped that this would be a temporary solution until additional land could be acquired for a permanent parking area. In 2014, Eastern National acquired a noncontiguous parcel that the NPS may develop for parking (Russell W. Berry, Jr. to Tom Maguire, July 3, 1997, Accession 191,

Catalog 5037, Box 1, Folder 1, NPS/CAHA Collection; MIS-MDL real estate management database, Southeast Region Division of Land Resources).

In 2003, the NPS placed a donation box and sign along the boardwalk leading to the lighthouse and rebuilt the privy. In November 2009, the lighthouse was closed for numerous repairs, including the replacement of the glass in the lantern, the gallery railing, the ground floor door, and the lightning protection system. It remained dark until March 3, 2010. Work completed in 2010 also included repointing and painting the entire lighthouse. This was the first major work performed on the lighthouse after it had been transferred from the USCG to the NPS in 1999. In conjunction with this work, the boardwalk was extended to its present location, including a ramp up to the door of the lighthouse. At this time a change occurred to the front gate without NHPA Section 106 review when a contractor working on the lighthouse replaced the existing front gate with an automatic gate because he felt it was too difficult to open and close the gate (http://www.lighthousefriends.com/light.asp?ID=355; Doug Stover, personal communication).

Chapter 7: Uses

Functions and Uses

Seq. No. (R)	Major Category (R)	Category (R)	Use/ Function (R, if exists)	Historic (Yes/No)	Current (Yes/No)	Primary (Yes/No)
1	Transportation	Water-Related	Lighthouse (16 CC)	Yes	Yes	Yes
2	Domestic (Residential)	Multiple Dwelling	Multiple Dwelling – Other (01 BE)	Yes	Yes	No
3	Defense	Coast Guard Facility (13 E)		Yes	No	No

Public Access

Public Access

Unrestricted

Public Access Narrative

Ocracoke Light Station is open from October 22-November 21 Thursday-Sunday from 1:00-4:00 pm; November 22-December Friday-Sunday from 1:00-3:00 pm; and intermittently during the rest of the year.

Associated Ethnographic Groups

Seq. No. (R)	Ethnographic Group [Select from drop down pick list.]	Current (Yes/No)	Historic (Yes/No)
	No survey conducted		

Ethnographic Study Status:

N/A

Ethnographic Narrative:

N/A

Chapter 8: Analysis & Evaluation

Analysis and Evaluation Summary

LANDSCAPE CHARACTERISTICS

The centerpiece of the Ocracoke Light Station is the lighthouse. Constructed in 1823, it is the oldest lighthouse in North Carolina still in continuous service. It is the second oldest lighthouse in the United States in continuous service. Boston Light on Little Brewster Island, still in operation, was the first lighthouse built in the United States in 1716. The tower reflects a standardized design used for many early lighthouses. The layout of the site was consistent with other light stations of the day, where support buildings were clustered for easy access along a northeast axis to the keeper's quarters. The lighthouse and oil house occupied a northwest cross axis. A wooden fence enclosed the station and walkways connected the various buildings on site.

The site retains three original support buildings (double keepers' quarters, storehouse, and privy) and two historic outbuildings (concrete oil house and carpenter shop). Most of the historic circulation system survives, which linked major features of the station. Historically significant plantings include mature live oaks and cedar trees around the dwelling, open ground around the lighthouse, areas of grass throughout most of the site, and marsh/wetland along the western edge of the site. Enclosed garden spaces do not survive, but the picket fence that surrounded the station has been maintained over the years, although not in its original location on all sides.

A major breach of preservation philosophy occurred in 1989 when a contractor hired by the USCG removed the original windows and installed vinyl-clad replacements. The historic wooden entrance door was also removed and replaced with a modern metal door. After intervention by community activists, the USCG agreed to pay for the repair/reconstruction of the original wood windows and entrance door, which were fabricated and installed by the NPS in 1990.

Integrity of location and setting remain high. Integrity of materials and workmanship have been diminished by inappropriate material and application techniques. Integrity of feeling and association have been degraded by modern intrusions. Nonetheless, the station retains many of

the elements of a nineteenth- and early twentieth-century light station with few modifications that could not be reversed.

INTEGRITY

Landscapes possessing integrity have the ability to convey historical significance through extant landscape features and characteristics. The effort to determine a landscape's significance according to National Register criteria focuses on seven aspects of integrity: location, design, setting, materials, workmanship, feeling, and association. The persistence of these qualities as they apply to the landscape determines whether the landscape retains enough of its important features to convey its historically significant appearance or associations.

Location. The location of the Ocracoke Light Station is unchanged. The site was chosen because a light station at Ocracoke Inlet was critical to navigating the dangerous shoals of the "Graveyard of the Atlantic." Its location helped mariners determine their position both by day and night. Ocracoke is the second oldest lighthouse in continuous operation in the United States.
The location of the site, complemented by its residential setting, reflects the character of the landscape during the period of significance. Because of the protected location on higher ground on the sound side of the island, the station often remained above flood waters during hurricanes. As such, it was a place of refuge for locals throughout its history.

No resources within the light station have been relocated. The buildings and structures are in their original locations, with the exception of the frame privy, which has been rebuilt several times and is sited slightly north of its original location. The historic circulation features are essentially in their historic alignments. The site retains a high degree of integrity of location. The spatial order of the station is a character-defining feature of the cultural landscape.

Setting. The physical environment surrounding the site includes both natural systems and cultural land use patterns. The light station today is surrounded by residential development, but the remote location of Ocracoke Island helped the village retain much of its historic character.

A character-defining feature of the Ocracoke Light Station is the protected, residential setting of the station with predominately unobstructed views in all directions from the top of the lighthouse to the Atlantic Ocean and the Pamlico Sound. The impact of successional vegetation that has grown up since the construction of the station is predominately to the viewsheds from the ground plane, although the boardwalk on the west affects views from the double keepers' quarters and from the top of the tower.

With the historic village of Ocracoke surrounding the light station and with few changes to the original layout, integrity of setting remains high.

Design. The present lighthouse embodies a distinctive design and method of construction that typified secondary coastal lighthouses on the East Coast of the United States during the first half of the nineteenth century. Secondary lights were located on less prominent points and in broad sounds and bays. They were generally shorter and used less powerful optics than first-order lighthouses, such as Cape Hatteras and Bodie Island.

These early nineteenth-century light stations had a simplistic layout consisting of the light tower, dwelling, garden site, a place to store oil, a system to provide water, privy, and perhaps a chicken house or shelter for a milk cow. The layout of the Ocracoke Light Station was consistent with other light stations of the day, where a clustering of support buildings facilitated easy access. The site retains the original outbuildings identified on the 1893 site plan, although the privy has been reconstructed several times. The site retains most of the original circulation system, which linked major features of the station, although materials have changed in some cases. A picket fence has enclosed the station since at least the late 1800s when it was first described in 1883 maintenance reports as being replaced. A character-defining feature of the Ocracoke Light Station is the axial relationship of the light tower, concrete oil house, double keepers' quarters, storehouse, privy, and cisterns.

Historically important live oaks and red cedars clustered around the dwelling and light tower were first identified in historic images taken by Bamber in 1893. These were painted white up to

the level of the picket fence to keep insects at bay. Many of these survive today and are a character-defining feature of the cultural landscape.

Materials. Brick is the most popular construction material of the surviving 640 lighthouse towers in the United States (Cloud 1993, 22). In addition to brick, other historic building materials used in the construction of the Ocracoke Light Station were granite, iron, copper, bronze, wood, and concrete. In 1950-1951, the original wood staircase of the light tower was replaced with a modern steel staircase, the whitewashed interior of the brick shell wall was sandblasted, and the exterior of the brick shell wall was coated in shotcrete. In 1989, a contractor hired by the USCG removed the original windows and installed vinyl-clad replacements. The historic wooden entrance door was also removed and replaced with a modern metal door. After intervention by community activists, the USCG agreed to pay for the repair/reconstruction of the original wood windows and entrance door, which were fabricated and installed by the NPS in 1990. The double sash windows were retrofitted into the vinyl track of the 1989 thermal replacement windows, which was left in place. Questions exist as to the condition of these windows, the vinyl track in which they have been placed, and the quality of wood chosen for the repaired and reconstructed windows.

Largely in good repair after concerted restoration efforts in the late 1980s and early 2000s, interior work in the 1950s resulted in major changes in the character of the double keepers' quarters associated with inappropriate choices of building materials and components. Additionally, work in 1929 replaced the wood shingle roof with a standing-seam metal roof, which the park replaced in 2008 with the current bright red modern metal roof. The parge coat on the original brick walls has been largely removed and the exposed brick painted white (Opperman 2016, 96).

Plantings at the site historically were live oaks and cedars clustered around the dwelling and light tower, many of which survive today. There were no foundation plantings. Little is known about the garden plots located at the north end of the station on Bamber's site plan although the keepers' families had a garden like most residents of the village. It was damaged in 1933, when overwash from a storm damaged trees, figs, and grapes that grew on the property. A garden on

Ocracoke would have fared better than the garden at the windswept station on Bodie Island that was never successful.

Pedestrian circulation materials are different from those used historically in some cases. Wooden walkways were replaced with concrete in 1916. At some point, the original brick walkway that connected the keepers' quarters and the storehouse was replaced with wood timbers. Historic fencing materials survive although the picket fence has been replaced in kind several times. The Ocracoke Light Station retains a moderate level of integrity of materials.

Workmanship. Integrity of workmanship at the Ocracoke Light Station has been compromised by inappropriate choices of building components and techniques.

Ocracoke Lighthouse
The USCG removed the original wooden spiral stairs built into the inside of the exterior wall of the lighthouse around 1950 and replaced them with metal stairs located in the center of the tower. The new staircase is smaller in dimension, with shorter risers than the original wood staircase, giving an entirely different experience of ascending and descending the tower with no correlation to the existing windows. Cement patches cover the points in the brick shell wall where each tread of the original staircase was anchored. The footprint of the modern staircase is offset from the brick wall by several inches and supported laterally by a series of metal lintels cemented into the shell wall. This required new holes to be made in the brick shell wall for the supporting lintels.

While the exterior brick shell wall of the lighthouse was pargeted at some point early in its history, and may in fact have originally been so, the shotcrete coating applied in 1951 was an inappropriate material and an inappropriate application technique. Work done in 1989 when a contractor removed the original windows and installed vinyl-clad thermal replacements and removed the historic wooden entrance door and replaced it with a modern metal door reflected a poor level of workmanship. Although six of the original window sashes were repaired and another six reconstructed, they were retrofitted into the vinyl tract of the thermal replacement windows, which was left in place. Questions exist as to the condition of these windows, the vinyl

tract in which they have been placed, and the quality of the wood chosen for the windows (Oppermann 2016, 96).

Double Keepers' Quarters

A major rehabilitation project undertaken by the Williamsport Preservation Training Center began in 1987 and concluded in 1988. Although this work preserved many of the character-defining features of the building, extensive termite damage required replacement of many wood elements. On the interior, some of the fireboxes on the first floor have been sealed over. All flue openings on the second floor have been sealed (Opperman 2016, 31).

Storehouse/Carpenter Shop/Privy

In 1988, the park developed a scope of work for the storehouse (pump house) that included numerous repairs/replacement of termite damaged historic fabric and removal of "blown-in sand from around siding." The grade around the building was also lowered to restore the original grade. This was a day labor preservation project performed by the Williamsport Preservation Training Center. Repairs to the carpenter shop were of a similar nature due to termite infestation, including repairs to the entire floor system. The privy required total reconstruction. The window sash of all the outbuildings have been replaced with modern thermal sash windows even though the buildings are not climatized (Bebe Woody to Assistant Superintendent, August 15, 1988, Accession 191, Catalog 5037, Box 1, Folder 1, CAHA Collection).

Modern Additions

The modern boardwalk's materials are consistent with the historic buildings of the light station, but its inappropriate form with high hand railings blocks views of the marsh and beyond. Moreover, two steps providing access to the door of the lighthouse were covered when the boardwalk was extended and a ramp up to the door was added in 2010.

Feeling. Integrity of feeling has been degraded at the Ocracoke Light Station. Although the isolated village of Ocracoke still retains most of its historic character, and the light station's close proximity to the village remains unchanged, modern intrusions have affected integrity of feeling.

These include the HVAC system's location on top of the cistern, the parking area and the boardwalk that currently take visitors from the parking area to the lighthouse, foundation plantings around the buildings, and personal items belonging to staff members who live at the site.

Association. Integrity of association remains high for the Ocracoke Lighthouse. The Fresnel lens and the operation of the lamp as an active aid to navigation remain under the jurisdiction of the USCG, providing a tangible link to the maritime history of the Outer Banks.

Although the continued use of the double keepers' quarters as housing continues its historic use, there is a lack of association between the NPS personnel living in the double keepers' quarters and the operation of the lighthouse. Modern intrusions such as outdoor gas grills, recreation vehicles, and foundation plantings that were not there historically affect integrity of association.

Landscape Characteristics and Features

Natural Systems and Features

Natural systems and features are the natural aspects that have influenced the development and physical form of the landscape, and can include geology, geomorphology, hydrology, ecology, climate, and native vegetation.

Summary:

The Outer Banks of North Carolina refer to a thin slice of land separated from the mainland by a large expanse of shallow water, comprising the Albemarle, Croatan, and Pamlico Sounds. The formation of these barrier islands began fifteen thousand years ago when the ocean level was 300 feet lower than today and North Carolina's coastline extended fifty to seventy-five miles east of its present location. Winds from the west piled up sediment to create a large dune at the easternmost edge of the continental landmass. Then, as glaciers melted and the sea level rose, the dunes became barrier islands paralleling the coastline. Although the sea continues to rise, the

Outer Banks have slowly moved to the west and remained intact because of the unique combination of wind, waves, and weather (Opperman 2009, 7).

Inlets. By protruding so far into the Atlantic, the Outer Banks are particularly vulnerable to hurricanes and storms that continually resculpt the fragile landscape. Inlets form when storm surge and high waves drive water across the islands to the sounds, or vice versa from sound-side flooding/surges. Ocracoke villagers have witnessed the cutting of new inlets from hurricanes: "When it gets by Cape Hatteras the wind will shift back to the northwest and here will come all this water out of the sound and the inlet won't take care of it as fast as it should." As the seawater moves into areas of progressively lower topography, channels form and may erode to the depths that permit a reverse flow (sound to sea) during ebb tide. Most such inlets are temporary features that only last a few days. Historical records dating from 1585 document more than twenty-four different inlets cutting across the Outer Banks at various times. Geographic formations indicate that almost half of the Outer Banks has been covered by inlets at one time or another. During the past 125 years, three inlets remained open as dominant waterways along the coast: Ocracoke, Hatteras, and Oregon (Hartramph Inc./Office of Jack Pyburn, Bodie Island Lighthouse Historic Structure Report (Atlanta, GA: Southeast Regional Office, 2004), 7; Dolan and Lins 1986, 8; Impact Assessment, Inc. 2005, 401).

Sand Dunes. All mid-Atlantic barrier islands have natural dunes of various sizes landward of the beach, formed when sand particles are transported by wind across the beach face and deposited within the overwash flats and vegetated zones, which trap and stabilize the sediment. The oldest and largest dunes on the Outer Banks date to 3,000 to 4,000 years ago. As the islands were forming, alternating periods of erosion and accretion resulted in the development of parallel dune ridges with depressions or swales between them. These dunes were covered with maritime forests of pine and oak (Dolan and Lins 1986, 16).

A characteristic island configuration is: a broad beach, a dune field, overwash terraces, and a fringing marsh on the sound side of the island. Early settlement patterns on the sound side of the island reflected an awareness of the hazards associated with erosion and storm overwash. During

the 1930s and late 1950s, stabilization efforts focused on the construction of sand fences to control these forces of nature. Trapped wind-blown sand formed an unbroken chain of barrier dunes, which were planted with vegetation to further stabilize them. Consequently, all but the most severe storm overwashes were contained seaward of the barrier dunes. These efforts changed the Outer Banks from a system dominated by natural processes to a stabilized system and allowed rapid development seaward to the barrier dunes. One major difference between stabilized barrier islands and natural barrier islands is the change in vegetation patterns that results when the stabilized dune line stops overwash and salt spray and enables vegetation, which usually grows farther away from the natural beach, to survive on its backslope (Dolan and Lins 1986, 16).

Climate Change

The southeast experiences a wide range of extreme weather and climate events, including floods, droughts, heat waves, cold outbreaks, winter storms, severe thunderstorms, tornadoes, and tropical cyclones. These events have contributed to more billion-dollar disasters in the southeast than in any other region of the United States during the past three decades (Jones and Dalton 2012).

Observed Climate Change. Long-term temperature records in the southeast show that average annual temperatures have not significantly changed during the last century; however, since 1970 average annual temperature has increased 2°F. Annual temperature increases in the Caribbean since 1970 have been about 1.5°F. During this time period the greatest changes in average annual temperature occurred during the winter months and the number of freezing days per year decreased. Precipitation records (1901-2007) indicate a regional reduction in rainfall in the summer, winter, and spring from 10 to 25 percent; however, precipitation increased during the fall by as much as 30 percent. Precipitation patterns are also changing, with the intensity of storms and the occurrence and severity of droughts increasing since 1970.

An increase in sea surface temperature since 1970 has been accompanied by an increase in the destructive potential of Atlantic hurricanes that make landfall in the Southeast region, although changes in the frequency of landfalling hurricanes has not been established. Summer wave

heights have increased along parts of the U.S. Atlantic coastline since 1975, attributed to the increase in tropical storm intensity in the Atlantic Basin.

Projected Climate Change. Temperature projections indicate continued warming in all seasons across the southeast along with an increase in the rate of temperature increase through 2099. Projected rates of warming are twice the rates of temperature increases experienced in the southeast since 1975, with the greatest temperature increases projected to occur during the summer months. The number of days with peak temperatures over 90°F are predicted to increase at a greater rate than average temperature. Temperature projections vary based on emission scenarios, with lower emissions scenarios projecting an average temperature increase of about 4.5°F by 2080, while a higher emissions scenario projects an average annual temperature increase of about 9°F, including a 10.5°F increase in summer, and a much higher heat index for the southeastern United States. In the Caribbean, temperature is predicted to increase by about 4 °F by 2080, somewhat below the global average. Climate models also project a continuing decline in days below freezing across the entire region during the coming decades.

Sea surface temperature is projected to increase globally as the oceans absorb increasing heat energy from corresponding projected annual air temperature increases. Tropical storm and hurricane activity is likely to increase in the Atlantic hurricane formation region with global warming as a function of globally observed higher sea surface temperatures. If the intensity of Atlantic tropical storms increases, southeastern ecosystems will likely be exposed to higher peak wind speeds, rainfall intensity, storm surge, and wave heights.

Climate models provide divergent results for future average annual precipitation for most of the southeast and Caribbean; however, data suggests that southeastern states will tend to have less rainfall in winter, spring, and summer and precipitation in the Caribbean is expected to decline by about 12 percent. Because corresponding predicted temperature increases will lead to increased evapotranspiration, moisture deficits and droughts are likely to continue.

Predicted average annual temperature increases will warm oceans and increase the rate that land ice melts. Global average mean sea levels are expected to increase up to 2 feet or more by 2100. Increasing the rate and magnitude of sea-level rise has serious implications for low-lying southeastern coastal wetlands and barrier islands. Many coastal environments along the South Atlantic and Gulf of Mexico coastal margins are experiencing land surface subsidence due to factors such as groundwater withdrawals, changes in sediment delivery via rivers, and the drainage of soils for coastal development. Even if hurricanes do not increase in intensity, an increase in mean sea level will amplify coastal inundation and erosion during hurricane landfall. There are currently 5,000 square miles of dry land within 2 feet of mean sea-level in the coastal areas of the continental United States. While the majority of this land is currently undeveloped, coastal development in the southeast is predicted to increase more than any coastal region in the United States, and any terrain within a few feet above mean sea level could be inundated; just a 2-foot rise in sea level would inundate an area the size of Massachusetts and Delaware.

Currently, sea levels are rising at 0.07 inches per year. Predictions of future sea-level rise through 2100 are between 0.6 to 2 feet. Impacts of rising sea levels include coastal erosion; coastal inundation (including wetlands); increased storm surge; loss of habitat, property, and cultural resources; and degradation of surface and groundwater quality. Highly productive coastal wetland ecosystems, which provide habitat for many species, act as filters to improve ground and surface water quality, provide an economic base for many coastal communities, offer recreational opportunities, and protect local areas from flooding, are particularly vulnerable to sea-level rise (Jones and Dalton 2012, 8-11).

The Ocracoke Light Station is vulnerable to sea-level rise and storm surge. The US Army Corps of Engineers predicts, under current rates of increase in greenhouse gas emissions, that the Beaufort tide gauge, the closest point of reference for Ocracoke, will experience a little less than a foot of sea-level rise by 2030, approximately 1.5 feet of sea-level rise by 2050, and about 5.25 feet of sea-level rise by 2100.

If the rate of greenhouse gas emission increase slows and renewable energy technologies are embraced, it is projected that an intermediate scenario of sea-level rise could unfold. An intermediate scenario would result in about 0.5 feet of sea-level rise by 2030, approximately 0.33 feet of sea-level rise by 2050, and almost 2 feet of sea-level rise by 2100 (fn: The NPS has developed the Climate Change Response Program (CCRP), a cross-disciplinary program to preserve the natural and cultural resources and values under NPS stewardship. The CCRP has collaborated with the University of Colorado at Boulder to develop scenarios of sea-level rise based on local tide gauges and near-term timeframes, http://www.nps.gov/orgs/ccrp/index.htm; personal communication, Janet Cakir, NPS SER Climate Change, Socioeconomics, and Adaptation Coordinator).

A study prepared by the Virginia Institute of Marine Science suggests that even small changes in sea-level rise over the next 100 years show a rapid increase in the amount of salt marsh lost to open water and that increases of 3.3 feet or higher would result in large scale losses of salt marshes in the CAHA area (Perle 1996, 43-61). A study by investigators at East Carolina University to determine the impact of sea-level rise on cultural resources at CAHA is ongoing and will utilize rates adapted from the North Carolina Coastal Resources Commission Science Panel and the rise heights used by the National Oceanic and Atmospheric Administration (NOAA) Sea Level Risk Viewer by NOAA Office for Coastal Management (OCM) (Summary Report September 2013– July 2015 Identify Cultural Resources Sites Affected by Sea Level Rise at Cape Hatteras National Seashore Task Agreement No. P13AC01432, August 4, 2015).

A 2011 study by Lautzenheiser, Bamann, and Gosser documented the disappearance of archaeological sites through coastal erosion in North Carolina. The authors attempted to revisit six prehistoric archaeological sites along the sound side of the Outer Banks, the mainland, and on Roanoke Island. Five of these six sites have been adversely impacted by coastal erosion and rising sea levels. Increasing erosion forced the NPS to move the Cape Hatteras Lighthouse further inland in 1999 (Dawson and Wilson 2012, 10-11). The 2017 study, Identify Cultural Resources Sites Affected by Sea Level Rise at Cape Hatteras National Seashore, also helps to identify sea level impacts.

Ocracoke Registered Natural Heritage Areas

There are three registered Natural Heritage Areas on Ocracoke Island: Eastern End, Central Section, and Western End (fn: The Registry of Natural Heritage Areas is administered by the North Carolina Natural Heritage Program of the North Carolina Department of Environment and Natural Resources. These areas possess natural values, and biological, botanical, zoological, and ecological resources justifying recognition as an outstanding part of the natural heritage of North Carolina. A Registry Agreement between the NPS and the North Carolina Department of Environment and Natural Resources protects outstanding examples of natural diversity and preserves unique and unusual natural features).

Eastern End. The eastern half of Ocracoke Island (east of the "Pony Pens") is rather flat and is primarily composed of sand flats, low dunes, marshes, and shrub thickets. Maritime forests are poorly developed in this section. The eastern tip of the island (east of NC 12 and the ferry terminal) consists of low sand flats that are frequently overwashed by storm tides. In 1985, a pair of federally threatened piping plovers, plus their nest, was first observed on these sand flats, and have been observed in subsequent years' surveys. Several Wilson's plover and least tern nests were recorded in this area in the 1990s and in 2001, respectively, but it is uncertain if they currently nest here. It is anticipated that such birds will nest here in upcoming years if more sand is deposited by natural (or human-influenced) forces.

A population of the federally threatened seabeach amaranth (Amaranthus pumilus) has been recorded on the flats and beaches. This coastal plant is very rare throughout its range, with most present localities being in North Carolina. Despite recent annual surveys, seabeach amaranth has not been observed at the site since 2005; however, this annual plant is erratic in its location and population size from year to year due to its habitat and dispersal mechanisms. The species occurs on sandy beaches between the foredunes and the high tide zone. Seeds are washed out in the tide and may ultimately be deposited in different locations. Because it has been recorded at this site in the past and suitable habitat exists, there is a good probability that this species may occur there now or become established again in the future. Other rare plants growing in the interior of the

site are significantly rare seashore crown grass (Paspalum vaginatum) and fragrant beaksedge (Rhynchospora odorata), which is designated as special concern, vulnerable in North Carolina (Cape Hatteras National Seashore Natural Heritage Area Registry, 2011).

Central Section. The western third of the natural area consists of The Plains, a former sand flat (as late as 1959) that has now become a salt and brackish marsh because of blockage of overwash by dune buildup. A wide variety of marsh plant species, dominated by smooth cordgrass (Spartina alterniflora) and black needle rush, is present on The Plains. A line of relict dunes lies at the eastern edge of The Plains and is somewhat unusual in that the dunes are oriented diagonally to the present-day shoreline of the beach. They were presumably aligned along the former shoreline when they were created, indicating that the old shoreline was nearly north-south in the vicinity. These dunes—the First Hammock Hills—consist of herbaceous and shrub zones, but no maritime forest is present on them. However, maritime forest is present on relict dunes farther east (Hammock Oaks), and the forest extends in small patches for several miles.

The most significant biological feature of the natural area is Island Creek, which flows generally westward to Pamlico Sound near the campground. This stream contains a few small fresh to brackish ponds or pools along its short length, plus marshes along its borders. These ponds and marshes contain a number of rare plants and animals in North Carolina. The marsh killifish (Fundulus confluentus) is found in the pond where NC 12 crosses Island Creek. This fish is very rare in the state.

Given the location of the Seashore, it is subject to a high frequency of naturally occurring storm-, wind-, tide-, and wave-driven processes of erosion, accretion, and overwash that result in a very dynamic environment. Several anthropogenic stressors exist at the seashore that affect vegetation communities. Much of the land immediately outside of the seashore boundary is developed, and the eight villages occurring along the length of the seashore serve as a popular vacation destination. Because of the development throughout the seashore, natural barrier-island processes (e.g., westward migration of the island, overwash, and dune development) have been altered over the last century. Artificial stabilization and re-nourishment of the dunes and

protection and maintenance of the road (NC 12) are the primary causative agents for altered natural barrier-island processes. The footprint of these developments has current and historic influences on the vegetative landscape of the seashore. Other anthropogenic stressors on vegetation communities at the seashore include the influx and expansion of non-native plants, feral hogs rooting damage, and over-browsing by white-tailed deer. The effect of sea-level rise on the seashore's resources remains unknown (Cape Hatteras National Seashore Natural Heritage Area Registry; Byrne, Corbett, and DeVivo 2010, 3–4).

Western End. The natural area was, until at least 1970, composed almost entirely of unvegetated sand flats and very low and scattered sand dunes. Marshes were essentially absent. However, at present, the northeastern half of the area has become brackish or a salt marsh, presumably because a build-up in dunes along the beach has slowed the frequency of overwash and has allowed herbaceous plants to obtain a foothold on the flats. Smooth cordgrass is dominant in some areas, whereas saltmeadow cordgrass is common in the drier spots. There are Salicornia flats, and several clumps of Phragmites are also present.

Seabeach amaranth, a federally threatened species, has been recorded scattered throughout the dune field, usually at the toe of the dunes, however, despite annual surveys it has not been observed in this area since 2003. By nature, seabeach amaranth is an annual plant and can be erratic in its location and population size from year to year due to its habitat and dispersal mechanisms. Because it has been recorded at this site in the past and suitable habitat exists, there is a good probability that this species may occur there now or become established again in the future. Other rare plants that occur on the site include the gulfcoast spikerush (Eleocharis cellulosa), fragrant beaksedge (Rhynchospora odorata), beaked spikerush (Eleocharis rostellata) and savanna nutrush (Scleria verticillata).

One of the largest and most important tern and black skimmer nesting colonies on a barrier island in the state is present on the low dunes. Unlike other tern colonies, this one is quite scattered, consisting not of one large, tight group, but of numerous small groups spread out over a handful of low dunes. The low elevation of the nests above mean high tide has caused a rather

low reproductive success of the birds in many breeding seasons. Common terns and black skimmers nest in large numbers (usually several hundred pairs of each); also nesting in most years are Forster's, least, and gull-billed terns. Generally one or two pairs of Caspian terns have nested in recent years; this species is a rare breeding bird on the Atlantic Coast. One or two pairs of the federally threatened piping plover nest near the western tip of the island. Another rare bird species, reported here is the black rail. It has been heard calling in the brackish marsh during the nesting season and is perhaps nesting, although no surveys have been done here to determine their nesting status (Cape Hatteras National Seashore Natural Heritage Area Registry).

Spatial Organization

Spatial organization is the three-dimensional organization of physical forms and visual associations in a landscape, including the articulation of ground, vertical, and overhead planes that define and create spaces.

Historic Condition:

The spatial organization at the Ocracoke Light Station reflected a landscape pattern of support buildings clustered along a northeast axis to the keeper's quarters. The lighthouse and oil house occupied a northwest cross axis. A wooden fence enclosed the station and walkways connected the various buildings on site.

The earliest site plan of 1890 documents two buildings and a structure at the station in addition to the light tower. With the exception of the keeper's quarters, their use is not indicated. Their locations, however, coincide with a site plan from 1892 and the Bamber 1893 site plan that identifies a frame storehouse and a frame privy located on the northeast to southwest axis. The brick lighthouse sits in the northwest section of the site. A well occupies a central location southeast of the lighthouse. A fence encloses the entire station.

A site plan from 1908 documents the addition of a coal/woodshed between the storehouse and the privy and a cistern adjacent to the dwelling. These improvements occurred when the dwelling received a second story to provide more space to the keeper and his family. The lighthouse is sited in the northwest corner of the property on the highest ground. A curvilinear

entrance road enters the site from the southeast. The entire station is enclosed by a picket fence with two gates: one where the entrance drive enters the site and one providing access to an enclosed area northeast of the light tower. The latter area was the location of a garden plot in the 1893 site plan but is unmarked on the 1908 plan. An annotated version of this plan may have been a working drawing for improvements that occurred later as the concrete oil house and south cistern are sketched in on the plan. According to Keeper Austin's logbook, the construction of the oil house occurred in 1914, and the privy was rebuilt in 1916. A coal shed was one of the buildings given a value on the 1930 property inventory.

An updated version of the 1908 plan shows the addition of the concrete oil house and storage tank and notes its construction date of 1914. This updated plan also documents the 1929 addition to the keeper's dwelling. This is the first plan to show the walkways that linked the dwelling with its clustered outbuildings on the northeast axis and the lighthouse and oil house on the northwest axis. The picket fence remains in place (Mr. John W. Lewis, Plat of Ocracoke Light Station, N.C [map], May 10, 1892, 5th L.H. District, Baltimore, MD, updated in 1897, 1908, and 1929, a copy of the 1897 site plan has not been located. NPS/CAHA Collection).

A 1927 map of the area shows the proximity of the lighthouse to Silver Lake. The USCG took over administration of the light station in 1939. The earliest plot plan dates to 1944 and shows five buildings on site: the lighthouse, concrete oil house, double keepers' dwelling, storehouse, and privy, all enclosed by the same fence line. This plan shows a dock and boathouse on Silver Lake (Plot Plan Ocracoke, N. C. Light Station [map], May 10, 1944, USCG Norfolk District, Norfolk, VA, NPS/CAHA Collection).

A more detailed site plan shows that several changes had occurred by 1958. The "storehouse" became the "pump house," the coal/woodshed is missing, and the privy is unmarked and possibly in a different location following an interior rehabilitation of the double keepers' quarters that included indoor plumbing and central heat. New outbuildings included a chicken house and carpenter shop enclosed by fencing east of the lighthouse and a garage and shed west of the lighthouse. The picket fence remained although the fence line on the west moved in towards the

double keepers' quarters to avoid the low, swampy part of the site. By this time, the NPS had entered into an agreement with the USCG to use the double keepers' quarters and outbuildings. The USCG retained the use of the lighthouse and oil house. Based on a USCG plan, it appears that repairs to the dock occurred in 1958. It is unknown when the dock and boathouse were removed (Plot Plan Ocracoke Light Station [map], May 14, 1958, USCG 5th District, Norfolk, VA, NPS/CAHA Collection).

NPS site plans from the late 1980s and early 1990s indicate that several outbuildings had been taken down. Missing from the site are the chicken house, garage, and shed. These were mentioned in the 1974 Use Agreement between the USCG and the NPS so apparently the USCG took them down between 1974 and 1986, when a revised use agreement was signed. A 1987 NPS site visit report described three board-and-batten outbuildings that were adjacent to the double keepers' quarters: the storehouse/pump house, carpenter shop, and privy. A plan dated 1994 was for a generator shed in the location of the chicken house (Chief, Southeast Cultural Resources Preservation Center to Superintendent, Cape Hatteras National Seashore, January 7, 1987, Accession 191 Catalog 5037, Box 1 Folder 1, NPS/CAHA Collection).

Today, the two-acre light station is located on the southwest end of the seventeen-mile-long Ocracoke Island, which extends southwest from Hatteras Inlet to Ocracoke Inlet between Hatteras and Portsmouth Islands. It is part of the village of Ocracoke, the southernmost community associated with the Cape Hatteras National Seashore in Hyde County, North Carolina. NC 12 connects the village of Ocracoke with Hatteras Island to the north.

A crushed gravel/asphalt parking area that can accommodate six cars (five regular spaces and one accessible space) is the only parking currently available at the Ocracoke Light Station. There is no overflow parking. Visitors park here and walk to the lighthouse via a boardwalk adjacent to the parking area. The lighthouse is only open to the public when a volunteer is present to greet visitors and can show them the inside of the lighthouse. The remainder of the light station is closed to visitors at this time.

NPS personnel enter the site through an automatic gate with an entry code and park in front of concrete curbing north of the double keepers' quarters. NPS personnel living in the south apartment of the double keepers' quarters park in areas delineated by another set of concrete parking blocks. Paved concrete walks connect most of the buildings on site with each other and the lighthouse.

The two-acre station is dominated by the seventy-five-foot brick lighthouse. A concrete walkway links the tower, oil house, and the double keepers' quarters. The axial layout of the site is preserved by the surviving walkways, now paved in concrete. On the northeast side of the keepers' quarters, one original outbuilding (storehouse), a carpenter shop, and two cisterns survive, linked by concrete walkways. A reconstructed privy is located northeast of the storehouse along the property line.

Modern visitor amenities include a raised wooden boardwalk with rails that was extended all the way up to the door of the lighthouse in 2010.

Missing features include the coal shed and garden plots seen on the 1893 site plan and four twentieth-century outbuildings constructed by the Lighthouse Service.

Spatial pattern between lighthouse and support buildings/structures. The spatial organization of the Ocracoke Light Station was consistent with the components of other early light stations. Of primary importance was the light tower followed by the keeper's (s') dwelling. Support buildings were clustered around these two structures. At Ocracoke, a pattern developed of support buildings clustered along a northeast axis to the keeper's quarters. The lighthouse and oil house occupied a northwest cross axis. A picket fence enclosed the station and walkways connected the various buildings on site. Garden plots were located at the perimeter of the property (north).

The footprint of the spatial layout of the site survives much as it was when documented by Bamber in 1893 and is a character-defining feature. The Bamber site plan shows the axial relationship of the light tower, keeper's quarters, and outbuildings. The principal loss has been to

five outbuildings built by the Lighthouse Service. Much of the historic circulation patterns survive although in some cases materials have changed.

The spatial pattern of the lighthouse and support buildings/structures on site, dominated by a central northeast to southwest axis aligned with the double keepers' quarters and a cross axis on the northwest is a contributing feature to the cultural landscape. This spatial pattern is reinforced by the historic circulation system lining the lighthouse, double keepers' quarters, and historic buildings; the enclosing picket fence; and historic vegetation patterns, all contributing features discussed in further sections.

Layout of parking area and boardwalk. Non-contributing features include the layout of the parking area and the boardwalk that carries visitors from the parking area out to the lighthouse.

Landscape Features:

Feature Name: Spatial pattern between lighthouse and support buildings/structures

Feature Contribution: Contributing

Latitude: [enter text here]

Longitude: [enter text here]

CRIS-HS Resource name: [enter text here]

CRIS-HS Resource ID: [enter text here]

FMSS Record Type: [enter text here]

FMSS Record Number: [enter text here]

Is FMSS Record Exact Match?: [enter selection here]

Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Layout of parking area and boardwalk

Feature Contribution: Noncontributing - Incompatible

Latitude: [enter text here]

Longitude: [enter text here]

CRIS-HS Resource name: [enter text here]

CRIS-HS Resource ID: [enter text here]

FMSS Record Type: [enter text here]

FMSS Record Number: [enter text here]

Is FMSS Record Exact Match?: [enter selection here]

Associated CRIS-AR Resource ID: [enter text here]

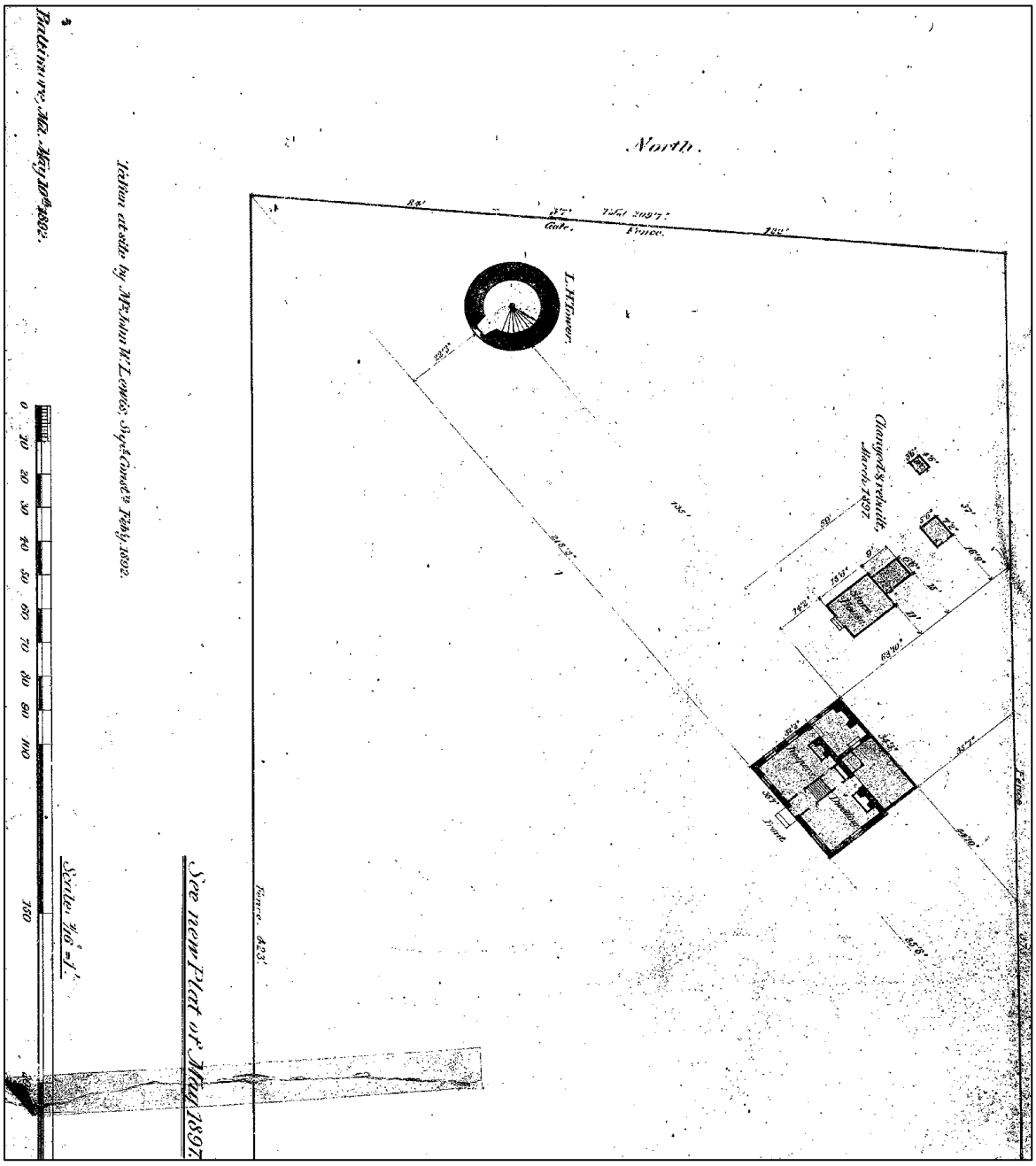


Fig 30. 1892 site plan. (NPS/CAHA Collection).

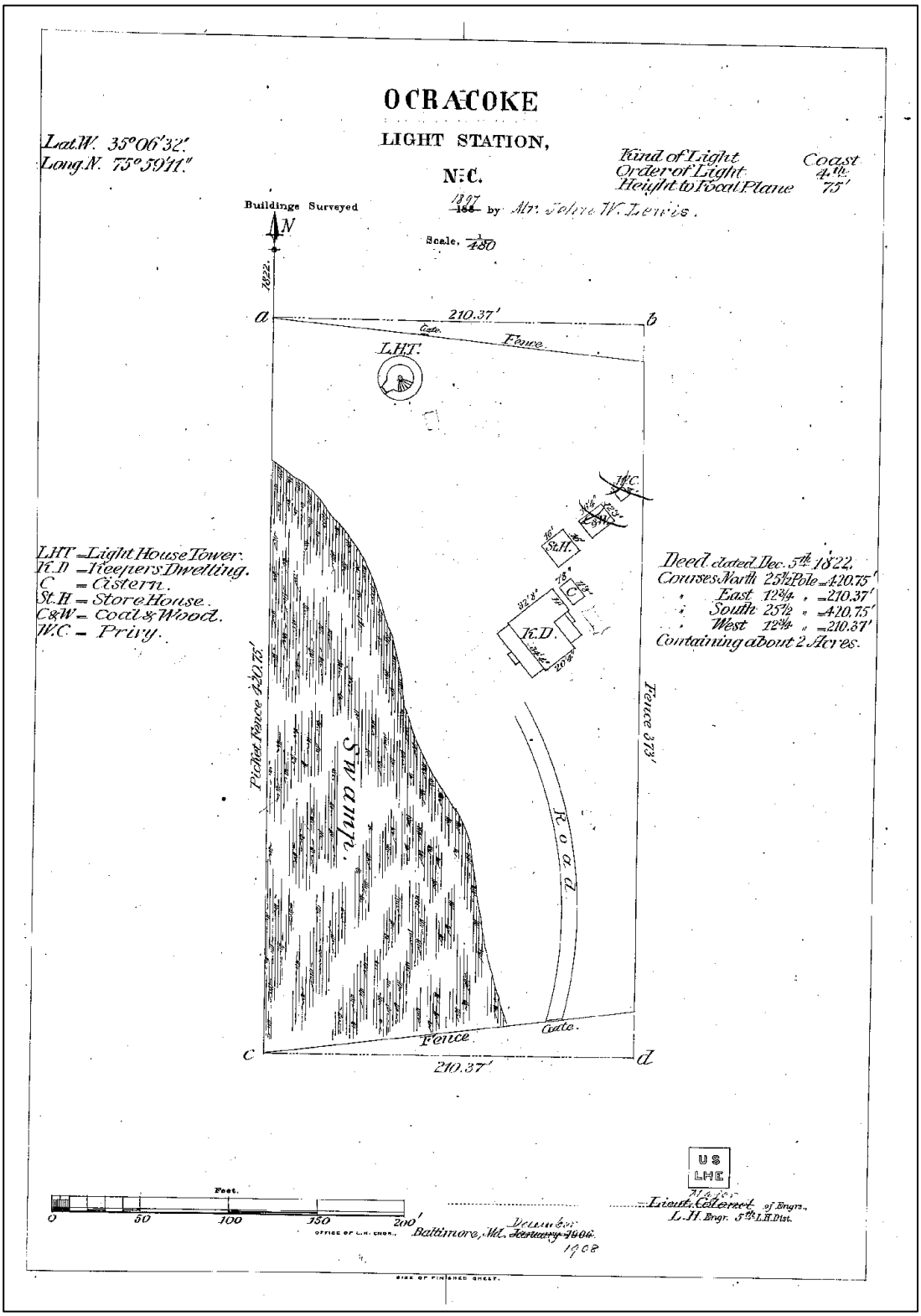


Fig 31. Annotated 1908 site plan. (NPS/CAHA Collection)

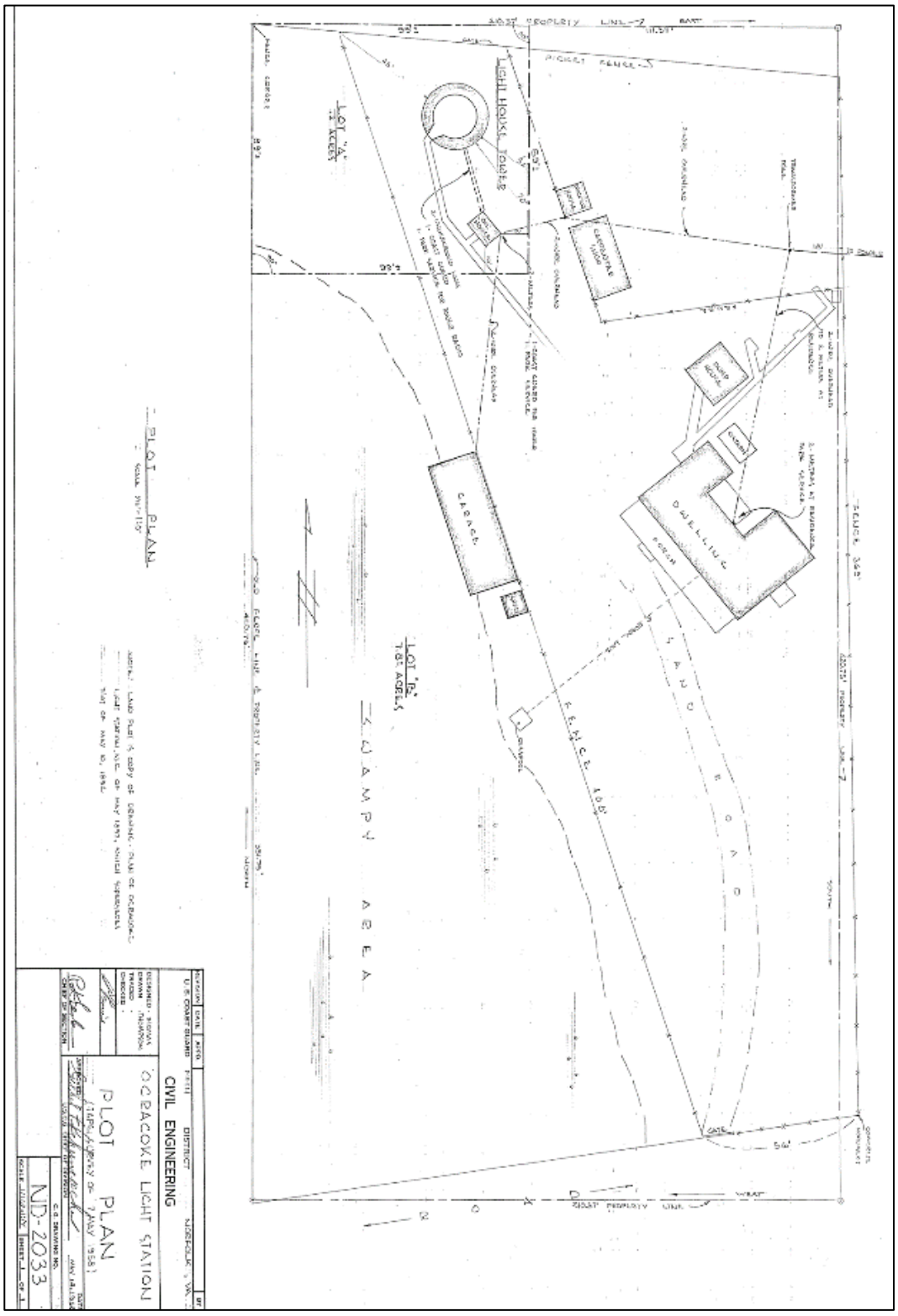


Fig 32. Site plan showing the addition of several new outbuildings, 1958. (NPS/CAHA Collection)



Fig 33. Ocracoke Light Station, 1954, with garage in the foreground and chicken house in the background. (NPS/CAHA Collection)



Fig 34. Ocracoke Light Station, 2013. (© Joseph K. Oppermann - Architect)



Fig 35. Front entry gate, 2014. (NPS/SER-CRPS Collection)



Fig 36. 1966 aerial image of the light station. (NPS/CAHA Collection)



Fig 37. 2015 aerial image of light station. (NPS/SER-CRPS Collection)

Land Use

Land uses are the principal activities in a landscape that form, shape, and organize the landscape as a result of human interaction.

Summary:

The primary land use of the Ocracoke Light Station historically has been navigation. Land use as part of the Cape Hatteras National Seashore has also included recreation, interpretation, law enforcement, maintenance, and administration.

Current land uses at the station include housing, interpretation, recreation, law enforcement, and maintenance. The lighthouse continues to be used as a navigational aid.

Navigation. The need for navigational aid south of Cape Hatteras prompted the Department of the Treasury to build the Ocracoke Lighthouse in 1823. As a result, lighthouse keepers and their

families lived at the Ocracoke Light Station until 1954. In 1939, the Lighthouse Service was incorporated into the USCG. A major change to the operation of the light occurred in 1946, when the USCG automated the light. In the 1950s, the NPS entered into a use agreement with the USCG and began using the light station buildings as a base of operations, protection, and interpretation. In 1999, the USCG transferred the light station and lighthouse to the NPS as part of the Cape Hatteras National Seashore. The NPS maintains the lighthouse as a functioning aid to navigation, and the USCG owns the lens. This land use contributes to the significance of the Ocracoke Light Station cultural landscape.

Housing. Although expanded over the years, the keeper's quarters (now double keepers' quarters) were initially constructed with the lighthouse in 1823 to house the lighthouse keeper and his family. The building continued to house subsequent keepers and assistant keepers through 1954. In 1955 the USCG granted the NPS a special use permit to occupy and use the double keepers' quarters as a base of operations and interpretation for the Cape Hatteras National Seashore on Ocracoke Island. The quarters are still being occupied by NPS employees, and thus housing remains a contributing land use to the cultural landscape.

Interpretation and Recreation. Two related land uses currently associated with the Cape Hatteras Light Station are interpretation and recreation, whereby visitors to the property can learn about the history of navigation around the Outer Banks and specifically the history of the Ocracoke Light Station. As the Ocracoke lighthouse is the oldest, continuously operational lighthouse in North Carolina, visitors can observe the functioning historic Fresnel lens. While recreation has been encouraged around the island since the establishment of the Cape Hatteras National Seashore in 1953, which also led to the interpretation of the light station, these land uses do not contribute to the significance of the Ocracoke Light Station. Nevertheless, these uses are compatible with the significance of the cultural landscape.

Landscape Features:

Feature Name: Navigation

Feature Contribution: Contributing

Latitude: [enter text here]

Longitude: [enter text here]

CRIS-HS Resource name: [enter text here]

CRIS-HS Resource ID: [enter text here]

FMSS Record Type: [enter text here]

FMSS Record Number: [enter text here]

Is FMSS Record Exact Match?: [enter selection here]

Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Housing

Feature Contribution: Contributing

Latitude: [enter text here]

Longitude: [enter text here]

CRIS-HS Resource name: [enter text here]

CRIS-HS Resource ID: [enter text here]

FMSS Record Type: [enter text here]

FMSS Record Number: [enter text here]

Is FMSS Record Exact Match?: [enter selection here]

Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Interpretation and Recreation

Feature Contribution: Noncontributing - Incompatible

Latitude: [enter text here]

Longitude: [enter text here]

CRIS-HS Resource name: [enter text here]

CRIS-HS Resource ID: [enter text here]

FMSS Record Type: [enter text here]

FMSS Record Number: [enter text here]

Is FMSS Record Exact Match?: [enter selection here]

Associated CRIS-AR Resource ID: [enter text here]

Cultural Traditions

Cultural traditions are the practices that have influenced the development of the landscape in terms of land use, patterns of land division, building forms, stylistic preferences, and the use of materials.

Summary:

The use of small boats and local modifications in gear became Outer Banks folkways, largely because of the shallowness of the sounds. Light keepers and lifesavers became increasingly important after the Civil War, and this was especially true on Ocracoke Island, which had both a light station, a lifesaving station, and later a Coast Guard station.

According to the census of 1810, the Shell Castle Island outpost had a population of eighteen whites and ten enslaved people of African descent. These maritime enslaved African Americans were skilled watermen who piloted vessels across shoals into Portsmouth harbor or across the Pamlico Sound to New Bern or Edenton. They also sailed to Cape Lookout as part of the jumping mullet and porpoise fishery encampments (Impact Assessment, Inc. 2005, 409).

After the fall of Roanoke Island in 1862, freed enslaved African Americans flocked to the north end of the island and built more than 500 houses on land appropriated for their use. With most of the able-bodied men drafted into Federal service, however, the community was left with mostly women, children, and elderly men. Acting on an order issued in 1865, the Assistant Commissioner for Freedmen's Affairs, concerned that the community could not make it through the winter, reported in November 1866 that land would be restored to the former owners in order to compel the freed Blacks on Roanoke Island to leave and seek employment (Dunbar 1958, 105–107; Stick 1970, 26; Stick 1958, 166).

Topography

Topography is the three dimensional configuration of the landscape surface characterized by features (such as slope and articulation) and orientation (such as elevation and solar aspect).

Summary:

The topography of the island near the light station was described on historic coastal survey maps as "low sand beach 3 ft above the level of mean water" south of the station and "sand hills" north of the station. An area east of the village was historically called "the Plains" because it was devoid of dunes and vegetation. The area between the village and the ocean was about a mile of sand and "a tidal place, mud flats" (Brazier and Young 1822; Impact Assessment, Inc. 2005, 357, 398).

A 1949 letter published in the North Carolina Historical Review described the topography of the island:

> The island is covered with heavy sand and only jeeps can navigate. Several natives have them and provide taxi service to visitors. . . .
>
> Between Ocracoke village and Hatteras, the terrain is bleak—the sea on one side, the sound on the other, less than a mile separating them. All along the beach are remnants of wrecks—one called the "ghost ship" is still partially intact. Offshore, one sees the masts of wreckage extending above the water level at low tide. The heat was terrific—no trees—just wild grass here and there. There was a flock of wild horses on a patch of grass at the end of the island. We were told that they dig in the sand with their forepaws to expose surface water when they are thirsty. Each home had a rain barrel under the eaves—their source of drinking water. . . .
>
> The south point of Ocracoke near Ocracoke Inlet is less desert-like than the country between it and Hatteras Inlet, but there are a number of sand dunes (C. A. Weslager, "A Letter Concerning a Visit to Ocracoke," North Carolina Historical Review 35, no. 3 (July 1956): 350–51).

Ocracoke village wraps around a body of water once called Cockle Creek or "the ditch," one of the few natural harbors in the area. It eventually became known as Silver Lake and was dredged and deepened in 1931 and again during World War II. Silver Lake has always been a hub of

activity in the village and is considered significant to many villagers (Dunbar 1958, 52; Impact Assessment, Inc. 2005, 355, 403).

Barrier Islands. A typical cross section of a natural barrier island shows several characteristic features. Storm waves and tides carried sand and shells from the beach face to form a broad berm that slopes gently toward the interior of the island. This wide, bare berm serves as a buffer zone in which the wave energy of a moderate storm can be dissipated. Small dunes form on the berm between storms. Behind the wide berm is a zone of low, irregular dunes. Storm tides carry sand into the interior of the island through the depressions between dunes. The dunes form as sand accumulates around salt marsh cordgrass (*Spartina patens*) and sea oats (*Uniola paniculata*). Behind the dunes, storms leave a series of overwash terraces. The distribution of plants found on these flats depends on the elevation of each terrace above sea level. Broad salt marshes border the sound side of the barrier island.

Stabilized barrier islands have an altered beach, dune, and marsh morphology. The most striking difference, other than the artificial barrier dune system, is a much narrower beach width. The stabilized dune line stops storm overwash and salt spray, allowing plants that usually grow farther away from the natural beach to survive on the back slope (Dolan and Lins 1986, 33–35).

Erosion Control at Cape Hatteras National Seashore. Erosion control was a primary component of Mission 66 work at Cape Hatteras, a ten-year NPS development program aimed at upgrading the conditions and meeting the demands of the postwar era. Erosion control was intended to carry on the work begun by the WPA and the CCC in the 1930s and 1940s. With the assistance of the North Carolina Highway Department, the NPS installed thousands of feet of snow fencing, created tens of thousands of cubic yards of dunes, and planted thousands of square feet of grass to protect the park and the state highway from erosion and storm damage. In 1957, Superintendent Allyn Hanks announced that 21,000 pine seedlings would be planted to help prevent erosion on the islands of the Outer Banks.

A long history of free-range grazing by the "wild" horses that roamed freely on Ocracoke Island clashed with NPS efforts to control erosion because they ate grasses planted to stabilize sand dunes that were needed to protect roads and other park developments. Although free-range grazing had been eliminated in Currituck and Dare Counties in the 1930s, such ordinances did not apply to Hyde or Carteret Counties, where the ponies remained free to roam. On November 29, 1954, Director Conrad Wirth directed Region One Director Elbert Cox to proceed with elimination of the wild ponies on Ocracoke within the park boundary, and Superintendent Hanks began to develop a program.

Many island residents, however, were opposed to eliminating the Ocracoke ponies although most were in favor of banning free-range grazing in the village. Many felt that the Ocracoke ponies were a picturesque feature of the historic scene. Moreover, local Boy Scout Master Marvin W. Howard maintained that the local Boy Scout troop was the only known mounted troop in the world. By 1958, there were around fifty ponies still roaming free on Ocracoke, about thirty-five of which belonged to the local Boy Scout troop. A committee representing the troop suggested setting aside a fenced area of marsh to allow the ponies to graze. Park management strongly favored the proposal as it had been delaying erosion plantings until a decision was reached. A compromise resulted in the fencing of three dozen ponies in a three-mile stretch of land. Owners of the remaining ponies were encouraged to fence or remove their animals, and by June 1959, only six ponies remained on the island (Binkley 2007, 145–48).

The "Completion Report of Construction Project, Sand Fixation Program, June 30, 1961" stated that "the Cape Hatteras Seashore staff firmly believes that vegetation is the final sand stabilizing media." A variety of salt-tolerant grasses were planted, and on Ocracoke, it seemed that the elimination of grazing improved the stabilization and re-growth of the dunes (Binkley 2007, 176). Nonetheless, park efforts to stabilize its coastal dune system were hampered by hurricanes in the late 1950s and early 1960s. Ocracoke suffered setbacks in 1958, when Hurricane Helene destroyed 85 percent of beach improvements and in 1960, when Hurricane Donna destroyed one-third of the protective dunes. Island residents generally supported the grass planting program. One island resident who worked for the NPS commented that "if it wasn't for the grass the sand

would just blow the beach all around." Another recalled: "We drove a farm tractor. . . . We were planting Spartina, building back the beach." Others remarked that the dune building "made it possible for the road to stay here—this stabilized it" (Impact Assessment, Inc. 2005, 408; Binkley 2007, 176–77.)

Although park officials remained committed to dune stabilization, an experiment set up before the "Ash Wednesday" storm of 1962 showed massive change on Bodie Island, with its large barrier dune eroded over 100 feet from the ocean. After a 1963 report showed a massive amount of beach had disappeared near the Cape Hatteras Lighthouse, NPS officials became increasingly concerned about the efficacy of their techniques. In truth, the fight against these natural forces was failing.

A series of scientific reports in the 1970s concluded that barrier dunes constructed since the 1930s had actually contributed to a loss of up to 150 feet of beaches and had dramatically altered the ecological and topographical characteristics of the Outer Banks. In 1973, the NPS embraced an entirely new management plan based on the principle that permanent structures in a natural beach setting were unsustainable and that important historic resources might require relocation. This new policy led the NPS to end artificial dune maintenance on park property on Bodie Island in 1982 (Binkley 2007, 177–79, 201–203; Mary Stroh, "A Study of the Shrub and Vegetation Patterns on Bodie Island, North Carolina from 1932 to 1982," 1982, 2).

Topographic Changes. Topographic changes are part of the cultural geography of the Outer Banks of North Carolina, where the opening and closing of inlets, which permit water to flow through the banks between the ocean and the sound, is commonplace. Over the years, different inlets have opened and closed between Ocracoke and Hatteras Islands. In the 1730s, Hatteras Inlet began to close, joining Ocracoke to Hatteras Island. An 1846 hurricane opened a new inlet closer to Hatteras village, which was also called Hatteras Inlet (Stick 1958, 298). The instability of this landscape has resulted in the reshaping of Ocracoke Island over the years.

At the time of statehood in 1789, the Outer Banks featured areas of dense woods that stretched almost to the sea in some places interspersed with low and barren stretches of "bald beaches," which usually marked the sites of former inlets. In striking topographic contrast were the high, windswept sand dunes, constantly changing shape with the direction of prevailing longshore currents (Stick 1958, 74; Dolan and Lins 1986, 4).

Ocracoke Light Station

The topography of the site was relatively level with a slight rise in elevation in the direction of the lighthouse. The Light-House Board graded the site in 1883. In 1914, Keeper Austin reported that he filled in the yard with "mud from ditch to hold the grass in the back yard." A 1986 memo outlining proposed site improvements mentioned "leveling of yard with additional fill material." The NPS developed a parking area for visitors and quarters occupants by placing fill material in the area west southwest of the station. It is not known exactly when this work occurred, but it may have been in conjunction with the work outlined in the 1986 memo (Cloud 1993, 7, 27; Superintendent, Cape Hatteras Group to Mac Basnight and Jim Henning, February 26, 1986, Accession 191, Catalog 5037, Box 1 Folder 1, NPS/CAHA Collection).

Sand removal and utility trench excavation occurred at the site in 1987. In order to create sufficient crawl space for making repairs to the sub-flooring of the double keepers' quarters, "drift" sand was removed using a commercial sand vacuum truck. The NPS abandoned the existing drain field because it ran through an old dump site. New drain field trenches were excavated using both hand and machine methods (Paul Inashima, "Sand Removal and Utility Trench Excavation at the Ocracoke Light Station Keeper's Quarters, Denver Service Center, 1987, 1–4, Accession 360 Catalog 5608, Folder 6, NPS/CAHA Collection).

Today, the station is set back from the marshy Pamlico Sound to the west and Silver Lake to the north. The general topography of the site remains relatively level with a slight rise in elevation in the direction of the lighthouse. Sandy soil conditions predominate, promoting excellent vertical drainage. The double keepers' quarters is sited within a low area with poor horizontal natural drainage. A drain field for the septic system is sited east of the light house ("Narrative Report on

the Finding of Historic Structure Examination," December 30, 1986, Accession 191, Catalogue 5037, Box 1, Folder 1, CAHA Collection).

Ocracoke Light Station Soils. Soils surrounding the Ocracoke Light Station fall into two categories: Duckston fine sand (DuA) and Corolla sand (CrB). The Hyde County Soil Survey describes Duckston fine sand to be nearly level, poorly drained soil occurring on flats and depressions on Ocracoke Island. Areas are elongated in shape and range from 5 to 500 acres in size with rare flooding.

Duckston is classified mainly as habitat for wildlife. It is not suitable for cropland or woodland because of wetness and exposure to salt spray. It is not generally used for urban or recreational development because of wetness, seepage, and flooding.

Intermingled areas of Corolla soils and Newhan soils are found on hummocks, Carteret soils are adjacent to salt marshes, and small areas pond for very brief periods.

Corolla soils are nearly level or undulating, moderately well drained or somewhat poorly drained soils found in areas between dunes and next to depressions and sloughs on Ocracoke Island. Areas are elongated in shape and range from 10 to 200 acres with rare flooding. Corolla soils are classified mainly as habitat for wildlife. They are not suitable for cropland or woodland because of exposure to salt spray, flooding with salt water, and droughts. They are not generally used for urban or recreational development because of wetness, soil blowing, poor filtering capacity, seepage, and rare flooding from strong storms and hurricanes.

Intermingled areas of the poorly drained Duckston soils are found in sloughs and depressions, areas of the excessively drained Newhan soils on hummocks, and the very poorly drained Carteret soils near the edge of salt marshes (National Cooperative Soil Survey, Hyde County Soil Survey (Washington, DC: U.S. Department of Agriculture, 1991), 41–45).

Higher elevation of the light station. The 1846–1850 U.S. Coast Survey showed the topography around the light station as "low sand beach 3 ft above the level of mean water" south of the station and "sand hills" north of the station. As documented on an 1894 map, the area east of the village was historically called "The Plains" because it was devoid of dunes and vegetation. The light station's location on the sound side of the island near the village of Ocracoke offered it more protection than the windswept topography along the ocean side of the island. The station was also known to be a high spot by villagers who sought refuge in the keepers' dwelling during storms, sometimes arriving by boat. The higher elevation of the light station is a contributing feature of the cultural landscape.

Drain field. The drain field for the septic system is a non-contributing feature of the cultural landscape.

Landscape Features:

Feature Name: Higher elevation of the light station
Feature Contribution: Contributing
Latitude: [enter text here]
Longitude: [enter text here]
CRIS-HS Resource name: [enter text here]
CRIS-HS Resource ID: [enter text here]
FMSS Record Type: [enter text here]
FMSS Record Number: [enter text here]
Is FMSS Record Exact Match?: [enter selection here]
Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Drain Field
Feature Contribution: Noncontributing - Compatible
Latitude: [enter text here]
Longitude: [enter text here]
CRIS-HS Resource name: [enter text here]

CRIS-HS Resource ID: [enter text here]

FMSS Record Type: [enter text here]

FMSS Record Number: [enter text here]

Is FMSS Record Exact Match?: [enter selection here]

Associated CRIS-AR Resource ID: [enter text here]

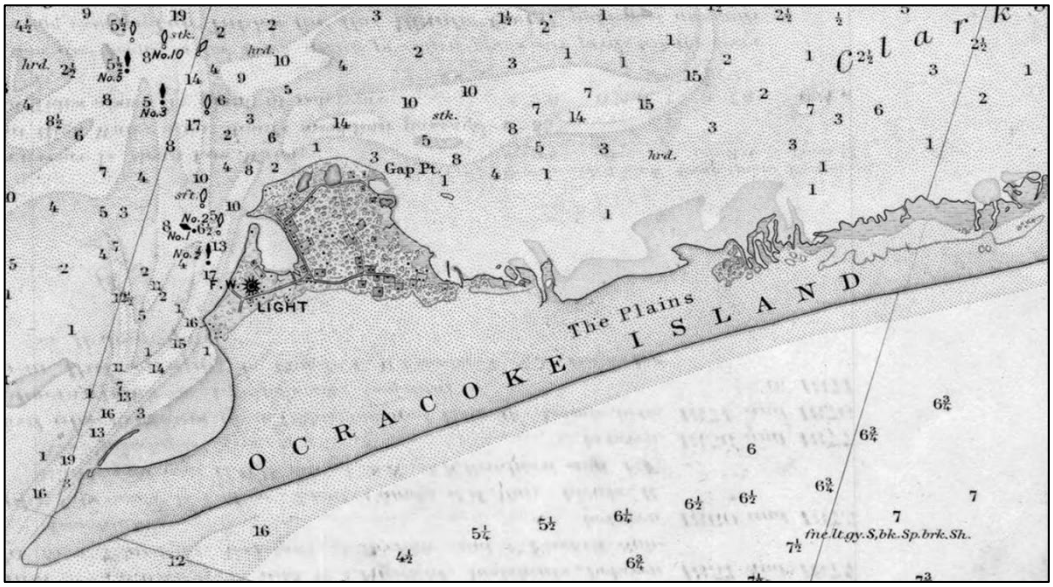


Fig 38. Detail from Coast Chart Pamlico Sound, 1883. (The Outer Banks History Center, Manteo, NC.)



Fig 39. Ocracoke village and Silver Lake with the lighthouse in the background, n.d. (The Outer Banks History Center, Manteo, NC)



Fig 40. Utility trench excavation, 1987. (NPS/CAHA Collection).

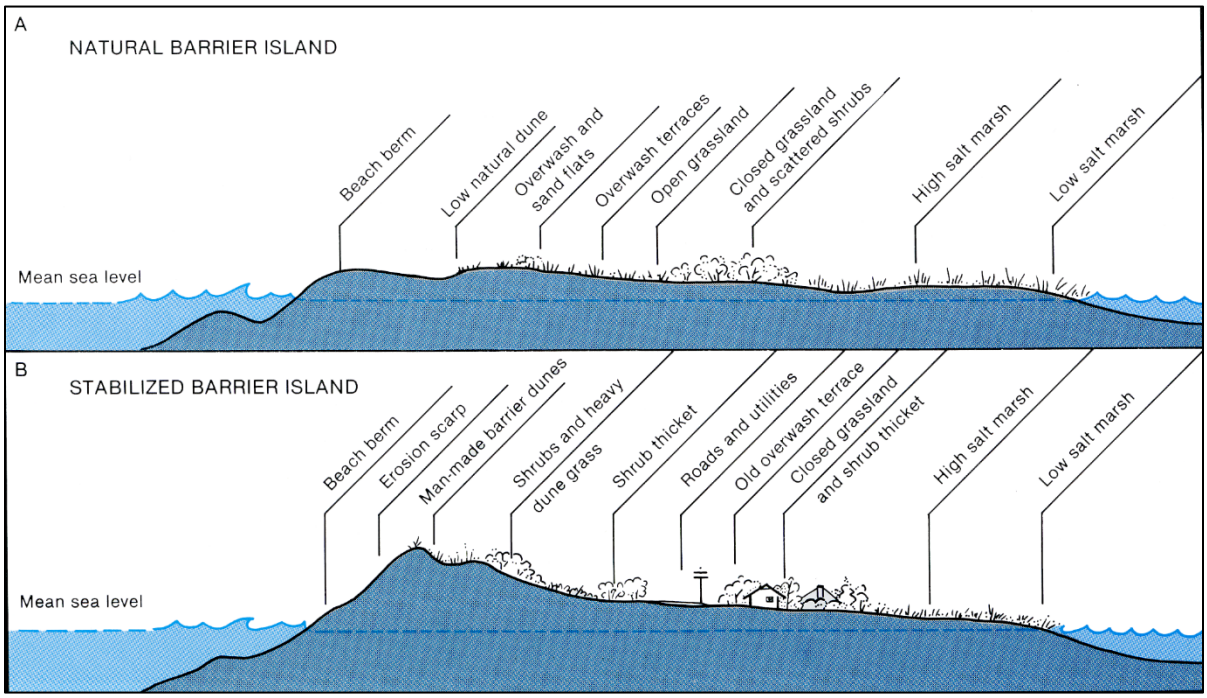


Fig 41. Natural vs. stabilized barrier island cross section. (Reprinted from Dolan and Lins, The Outer Banks of North Carolina)



Fig 42. Unmown grass on drain field, 2013. (NPS/SER-CRPS Collection)



Fig 43. Hyde County soil map, 2014. (Natural Resources Conservation Service).

Vegetation

Vegetation includes deciduous and evergreen trees, shrubs, vines, groundcovers, and herbaceous plants and plant communities, whether indigenous or introduced in the landscape.

Summary:

Nineteenth-century U.S. Coastal Survey maps of Ocracoke Island show the village of Ocracoke on the sound side of the western tip of the island. Although these maps show vegetation interspersed throughout the village, locals referred to trees and shrubs growing in the village as "new growth" in the first part of the twentieth century, as "a bad hurricane killed all the growth on these banks in 1878." Before the NPS began planting grass and trees in the 1930s, the island of Ocracoke was described as "nothing but blowing sand." The beach was "bald, no trees, no grass—just beach gravel, shell, shipwrecks; flat, nothing." The village's location on the sound side of the island afforded it more protection. A more detailed 1927 map of the island shows

extensive areas of trees on the sound side of the island with grassy sand flats on the ocean side of the island. Free-ranging livestock also contributed to a lack of vegetation outside the village, where properties were fenced (Impact Assessment, Inc. 2005, 357, 398).

Ocracoke Light Station

Vegetation patterns at Ocracoke Light Station were influenced by the site's proximity to Ocracoke village and its somewhat protected location on the sound side of the island. At the time of construction, the station had little vegetation and sat near the gently sloping wide beach. By 1900, trees and shrubs surrounded the station. The landscape was characterized by mature live oaks (*Quercus virginiana*) and cedars (*Juniperus virginiana*) around the dwelling, open ground around the lighthouse, enclosed garden spaces at the rear (north) of the property, areas of grass throughout most of the site, and marsh/wetland along the western edge of the site. Whitewash was used to keep bugs from the trees and was applied to a height that matched the picket fence. There were no foundation plantings historically (Warfield 1977; Cloud 1993, 11).

Clumps of shrubs occurred in the northeast and southwest areas of the site, as well as southeast of the dwelling during the nineteenth century. Historic images show the residential nature of the surrounding properties with similar vegetation patterns.

Wesley Austin reported that in September 1913 a hurricane "did very much damage" to the trees within the station. In 1914, he used mud to "hold the grass in back yard." Austin's only mention of cutting grass is in August 1916. He described "Cutting weeds around fence" and "Cutting grass inside reservation." One historic image has been found of a portion of the station near the front gate that shows a mown path west of the walkway and the remainder of the grass left to grow in a more natural pattern. All other historic images show an evenly cut lawn. Images from 1987 indicate that the site was mainly sand in places (Cloud 1993, 29-30).

Beginning in the 1950s, shrubs can be seen along the south elevation of the double keepers' quarters. It is unknown if these were planted or came up from seeds. There is little documentation of the beds flanking the front entrances planted with ornamentals.

Garden Plots. Two garden plots at the light station were documented in the 1893 Bamber site plan. One was west of the lighthouse and was enclosed by a picket fence. The other was in the northeast corner of the station and was not enclosed. The keepers' families had a garden that was damaged in 1933, when overwash from a storm damaged trees, figs, and grapes that grew on the property. Keeper Austin reported in 1916 that he "painted hot house," so it appears that the family was engaged in gardening, which was typical for villagers on the island. Most grew collards, Irish potatoes, sweet potatoes, cabbage, tomatoes, and beets. Many had fig trees, which were said to fare best "when somebody lived nearby. That was because everyone emptied their dishwater on the oyster shells at the base of the fig trees." (Ocracoke Lighthouse HSR 1990, 24; Cloud 1993, 29; and Impact Assessment, Inc. 2005, 400).

Today, the immediate grounds of the station are a choppy mix of centipede grass (*Eremochloa ophiuroides*), clover (*Trifolium spp.*), marsh pennywort (*Hydrocotyle spp.*), and other forbs in a setting of live oaks and eastern red cedars that have been documented since 1893. In August 2014, there were ten live oaks on the south side of the double keepers' quarters, four on the west side, five on the north side, and four on the east side. On the west side were six cedars and one on the north side. Images into the 1950s show the trees around the double keepers' quarters whitewashed as was done historically.

Two bald cypresses (*Taxodium distichum*) are located north of the privy. It is unknown when these trees were planted, although their size suggests that they are twentieth-century trees of less than one hundred years (Personal communication, Sarah Corbett Heath). A vegetable and cut flower garden is located south of the privy along the back fence, but it was not planted in August 2014. In July 2013, it included tomatoes, corn, lilies, and sunflowers. Ornamentals planted inside beds adjacent to the double keepers' quarters and storehouse included: hollies (*Ilex spp.*), hydrangea (*Hydrangea macrophylla*), azalea (*Rhododendron cvs.*), loquat (*Eriobotrya japonica*), gladiolus (*Gladiolus cvs.*), thorny elaeagnus (*Elaeagnus pungens*), lantana (*Lantana camera*), rose (*Rosa cvs.*), rosemary (*Rosmarinus officinalis*), daylilies (*Hemerocallis cvs.*), black-eyed Susan (*Rudbeckia sp.*), Morning Glory (*Ipomoea sp.*), and a chinaberry (*Melia azederach*) volunteer. These ornamentals are

not historic and have been planted by various NPS staff living in the dwelling. Individual trees have been reduced over the years by various storms or natural decline.

A vegetation survey was conducted for the park in 2010. It did not include the developed area of the light station and Ocracoke village, but park staff performed a quick assessment in May 2014. Aside from the human-altered and -maintained areas directly adjacent to the lighthouse, vegetation based on U.S. National Vegetation Classification System includes:

Maritime Evergreen Forest. The vegetated area to the north and east of the lighthouse primarily consists of Maritime Evergreen Forest, dominated by live oak and eastern red cedar. Understory and shrub species include: *Persea borbonia* (redbay), *Morella cerifera* (wax myrtle), and *Ilex vomitoria* (yaupon holly). This community is common throughout the village of Ocracoke.

Brackish Marsh. The area to the west and southwest of the lighthouse consists of two types of brackish marsh. One is a Needlerush High Marsh, which is heavily dominated by *Juncus roemerianus* (black needlerush). The other is a Southern Cattail Seasonally Flooded Temperate Herbacious Alliance, which is dominated by *Typha domingensis* (southern cattail). Other herbaceous species found in this community type include: *Cyperus spp.* (flatsedge), *Mikania scandens* (climbing hempvine), *Schoenoplectus spp*. (bulrush), *Hibiscus moscheutos* (swamp rose-mallow), and *Eleocharis spp.* (spikerush). Interspersed shrubs include wax myrtle and *Baccharis halimifolia* (eastern baccharis) (Sara Strickland, personal communication, 2014).

Missing are the enclosed garden spaces documented on the 1893 Bamber site plan.

Pattern of live oaks, cedars, and bald cypresses. At the time of construction, the light station had little vegetation and sat near the gently sloping wide beach, but by 1900, trees and shrubs surrounded the station. The landscape was characterized by mature live oaks and cedar trees around the dwelling, open ground around the lighthouse, enclosed garden spaces, areas of grass throughout most of the site, and marsh/wetland along the western edge of the site. Except for the

specimen trees in the landscape surrounding the dwelling, there were no foundation plantings historically.

The vegetation of the two-acre light station includes the lawn in a setting of live oak and eastern red cedar that have been documented since 1893. Two bald cypresses are located north of the privy. Although they are not original to the light station, and it is unknown exactly when they were planted, it appears that the bald cypresses are between fifty and one hundred years old. Contributing vegetation includes the live oaks, red cedars, and bald cypresses. The cultural vegetation is a character-defining feature of the historic landscape.

Open expanses now in lawn. The light station vegetation includes the open expanse of lawn consisting of centipede grass, clover, and other forbs among the historic live oak and eastern red cedar. The open expanse in the lawn is a contributing feature to the property.

Native marsh grasses. Native marsh grasses form the western boundary of the site and are a contributing feature of the property.

Ornamentals planted by residents. Non-contributing vegetation includes the ornamentals planted by residents in areas that were not cultivated historically, including the vegetable garden.

Landscape Features:

Feature Name: Live Oaks

Feature Contribution: Contributing

Latitude: [enter text here]

Longitude: [enter text here]

CRIS-HS Resource name: [enter text here]

CRIS-HS Resource ID: [enter text here]

FMSS Record Type: Asset

FMSS Record Number: 1464193

Is FMSS Record Exact Match?: Yes

Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Cedars

Feature Contribution: Contributing

Latitude: [enter text here]

Longitude: [enter text here]

CRIS-HS Resource name: [enter text here]

CRIS-HS Resource ID: [enter text here]

FMSS Record Type: Asset

FMSS Record Number: 1464194

Is FMSS Record Exact Match?: Yes

Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Bald Cypresses

Feature Contribution: Contributing

Latitude: [enter text here]

Longitude: [enter text here]

CRIS-HS Resource name: [enter text here]

CRIS-HS Resource ID: [enter text here]

FMSS Record Type: Asset

FMSS Record Number: 1464195

Is FMSS Record Exact Match?: Yes

Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Open expanses now in lawn

Feature Contribution: Contributing

Latitude: [enter text here]

Longitude: [enter text here]

CRIS-HS Resource name: [enter text here]

CRIS-HS Resource ID: [enter text here]

FMSS Record Type: Asset

FMSS Record Number: 1141339

Is FMSS Record Exact Match?: Yes

Associated CRIS-AR Resource ID: [enter text here]

:

Feature Name: Native marsh grasses

Feature Contribution: Contributing

Latitude: [enter text here]

Longitude: [enter text here]

CRIS-HS Resource name: [enter text here]

CRIS-HS Resource ID: [enter text here]

FMSS Record Type: [enter text here]

FMSS Record Number: [enter text here]

Is FMSS Record Exact Match?: [enter selection here]

Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Ornamentals planted by residents

Feature Contribution: Noncontributing - Incompatible

Latitude: [enter text here]

Longitude: [enter text here]

CRIS-HS Resource name: [enter text here]

CRIS-HS Resource ID: [enter text here]

FMSS Record Type: [enter text here]

FMSS Record Number: [enter text here]

Is FMSS Record Exact Match?: [enter selection here]

Associated CRIS-AR Resource ID: [enter text here]



Fig 44. Ocracoke Light Station, 1893. (NPS/CAHA Collection)

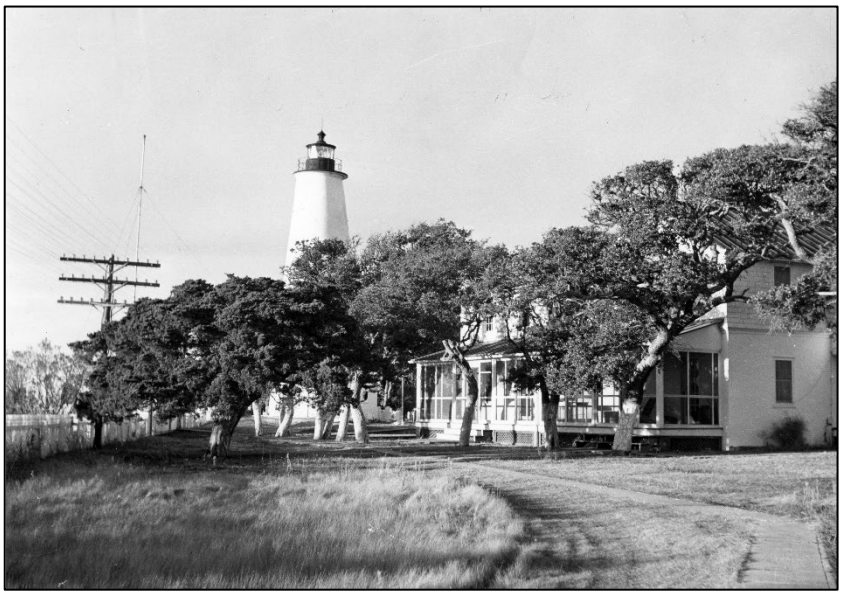


Fig 45. Ocracoke Light Station with uneven pattern of mowing, ca. 1940s. (The Outer Banks History Center, Manteo, NC/David Stick Collection)



Fig 46. Ocracoke Light Station, 1956. Note foundation plantings. (NPS/CAHA Collection).

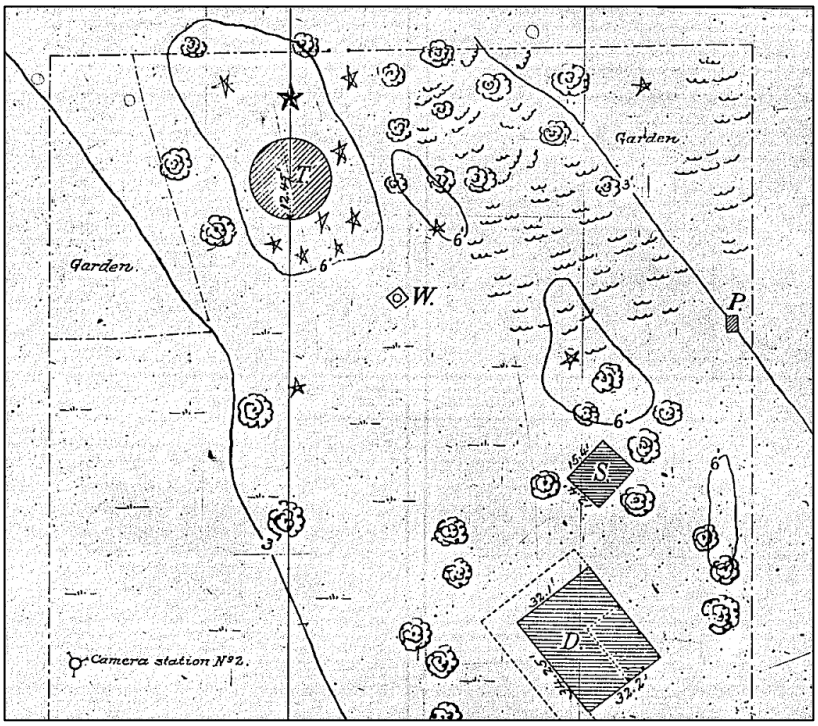


Fig 47. Detail from Bamber site plan, 1893. (NPS/CAHA Collection)



Fig 48. Choppy mix of forbs and grass, 2014. (NPS/SER-CRPS Collection)



Fig 48. Live oaks and cedars looking towards the parking lot, 2013. (NPS/SER-CRPS Collection).

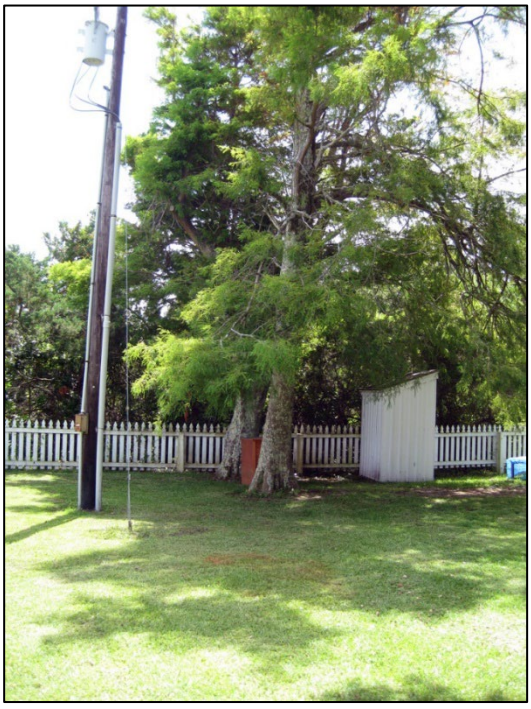


Fig 49. Bald cypresses, 2013. (NPS/SER-CRPS Collection)



Fig 50. Vegetable garden, 2013. (NPS/SER-CRPS Collection).



Fig 51. Double keepers' quarters after the addition of ornamentals, 1994. (NPS/CAHA Collection).



Fig 52. Vegetation to the north of the lighthouse, 2013. (NPS/SER-CRPS Collection)



Fig 53. Area to the west of the lighthouse, 2013. (NPS/SER-CRPS Collection)

Circulation

Circulation refers to the spaces, features, and applied material finishes that constitute systems of movement in a landscape.

Summary:

Walkways/Driveways. Doorways in the dwelling were not at grade and the site was sandy so walkways were an important feature in the cultural landscape. According to Department of the Treasury documents, the Light-House Board relaid brick walks in 1868. As documented in images and a site plan from 1893, a raised brick walkway laid out in an axial arrangement linked the entrances of the dwelling. This raised platform connected the dwelling with the work yard of the station and the light tower beyond (Cloud 1993, 7).

Later site plans show that as the dwelling was enlarged and new outbuildings constructed, the circulation system changed to accommodate these additions. A brick walkway connected the dwelling with the storehouse and a wooden walkway linked the dwelling and the three outbuildings (storehouse, wood/coal shed, and privy). In 1902, Keeper Smith constructed a wooden walkway from the dwelling to the light tower. It is less clear when another walk that led from the northwest corner of the building to the rear of the property was constructed. These boardwalks would have been needed to traverse the sandy topography of the site and created a crisscross of walkways at the station. They were damaged in a September 1913 hurricane but repaired the following month. The Lighthouse Service changed the material to concrete in 1916. Other concrete walkways circumnavigated all sides of the dwelling at some point after the structure was doubled in 1929. Several small walkways between buildings are not well documented on site plans but can be seen in images of the site. It is not known when the original brick walkway that linked the dwelling and the storehouse was replaced with wood timbers (Cloud 1993, 7, 25, 28–29).

In 1987, the NPS Southeast Archeological Center (SEAC) monitored utility trench excavation near the double keepers' quarters. One of the areas monitored was immediately to the west of the existing concrete walkway to the lighthouse. Hand excavation uncovered a scatter of bricks with lime-sand mortar at a depth of approximately 1.1 feet extending for about 8 feet. Although the

bricks were found in a random pattern, it seems likely that these are bricks from the original layout of the site (Paul Y. Inashima, "Archeological Monitoring Report Sand Removal and Utility Trench Excavation at the Ocracoke Light Station Keeper's Quarters," 1987, Accession 360 Catalog 5608, Folder 6, NPS/CAHA Collection).

An unpaved road into the station is first recorded on the 1897 site plan. Historic images from the 1930s and 1940s indicate that access into the station was via a walkway from the front gate, which was paved. By the 1950s, the paved walkway had been taken up and replaced with a two-track gravel/sand drive into the station. The sand drive appears on the 1958 site plan.

As early as 1962, the USCG gave the NPS permission to place fill material in the area west-southwest of the station to develop a parking area for visitors and quarters occupants. It is not known exactly when the parking area was laid out, as the USCG use permit of 1986 reauthorized the use of fill material to develop a parking area, indicating that parking had yet to be completed. A 1986 inspection of the double keepers' quarters reported that parking within the site was undefined, and a 1986 memo about planned improvements to the site recommended "delineation of an access road and parking areas." The Superintendent's Annual Report for 1986 stated that "Ocracoke roads and parking areas constructed, surfaced, and/or resurfaced." Although it does not identify the light station specifically, it seems likely parking area construction occurred in 1986 or shortly thereafter. In July 2001, the NPS submitted NHPA Section 106 compliance to expand the parking area to meet DOT standards (T.N. Miller, Property Officer, Fifth Coast Guard District to Tom Hartman, Superintendent, Cape Hatteras National Seashore, May 19, 1986; "Narrative Report on the Findings of Historic Structure Examination Conclusions and Recommendations," 5; Superintendent, Cape Hatteras Group to Mac Basnight and Jim Henning, February 26, 1986, Accession 191, Catalog 5037, Box 1, Folder 1, NPS/CAHA Collection; Assessment of Actions Having an Effect on Cultural Resources, July 23, 2001, Accession 229, Catalog 5511, Folder 10, NPS/CAHA Collection; and Superintendent's Annual Report, 1986, 10).

The NPS built a plank boardwalk outside the picket fence that led from the parking area to a gate in the picket fence. Once inside the fence, visitors walked up to the front door of the lighthouse.

Images of the station indicate that the boardwalk was first laid between 1984 and 1994. After Hurricane Isabel struck in 2003 and damaged the boardwalk, an incident recovery team from the North Carolina Forestry Service rebuilt it as a raised boardwalk with handrails without going through the compliance process. It was extended all the way up to the door of the lighthouse in 2010.

Roadways. Until the 1950s, there were no paved roads linking Ocracoke to the islands to the north. It was a long journey through thirteen miles of sand tracks to board the Hatteras Inlet ferry and then cross all of Hatteras Island to arrive at the Oregon Inlet ferry. One villager remarked that "it was like going on a safari across a desert to get to Manteo." A 1927 map of Ocracoke village shows a crude network of dirt roads that became more refined by the late 1940s. In 1938, a villager began a taxi service to Hatteras Inlet, navigating sand paths in a station wagon. The Navy built the first concrete road on the island during World War II. The 1950 United States Geologic Survey (USGS) map shows a larger network of unimproved dirt roads throughout the island, with a few improved dirt roads in the heart of the village. An unimproved dirt road linked Ocracoke with Hatteras Island to the north (Impact Assessment, Inc. 2005, 377–79).

While roads and bridges had been completed north of Hatteras Inlet in the early 1950s, the extension of the road from Hatteras to Ocracoke village via a ferry joining the south end of Hatteras to the north end of Ocracoke lagged behind. The difficulty of constructing a paved road on the island's sandy and unstable soils was complicated by outside groups' opposition to paved roads on the island. In 1955, North Carolina Governor Luther H. Hodges made $300,000 available to construct a road across the island, declaring to the island residents, "you must have outlets."

The NPS announced an effort in 1956 to rebuild and stabilize the National Seashore's protective dune system. The purpose was to protect highways and other improvements, but dune stabilization was a slow process. As the state struggled to complete the road in 1957, the NPS borrowed fifteen thousand steel landing mats from the Navy to use over a three-mile section of road on the northern end of Ocracoke to move traffic between the end of the paved road from Ocracoke village to the landing where ferries would leave for Hatteras Island. As soon as the

road to Ocracoke was completed, the North Carolina Highway Commission began ferry service from Hatteras Island (Binkley 2007, 134–36).

Vehicle Ramps. As the work continued on dune stabilization, vehicular access to the beaches, specifically vehicle ramps, became a topic of discussion. In 1963, NPS Director Conrad Wirth wrote Congressman Herbert Bonner explaining that more vehicle ramps would jeopardize NPS dune stabilization efforts. Eighteen ramps allowed commercial fishermen who were legal residents of the village to continue to use vehicles to fish from the shore, as they had done historically. Wirth pointed out that these ramps also allowed the public motorized access to the beach. According to Wirth, "past history has shown that each vehicular access is a vulnerable spot for the ocean to break through and cause extensive damage to the barrier dune and natural features of the area" (Binkley 2007, 179).

Today, NC 12 connects Ocracoke with Hatteras Island via a ferry service at Hatteras Inlet. An approximate fifty minute automobile/passenger ferry from Hatteras Island brings visitors to the north end of Ocracoke Island. There is a twelve mile drive from the ferry landing to Ocracoke village. The light station is located on Lighthouse Road, which is just off NC 12. Ocracoke village can also be reached from the south by way of the Cedar Island ferry or Swan Quarter ferry. These ferry rides take around two hours and thirty minutes each.

Driveway into station. A pea gravel and dirt two-track driveway enters the site from the street and curves around the double keepers' quarters to a location marked with concrete parking bumpers. Residents of the quarters also park adjacent to the south apartment where a concrete parking bumper marks a space. In August 2014, deep ruts were observed in the grass near the south apartment of the double keepers' quarters and the picket fence, but this was following a July 4 hurricane.

The entrance road into the station was changed to a walkway in the 1930s. A two-track unpaved drive eventually replaced the walkway as recorded on site plans and images from the 1950s. This drive remains today and contributes to the significance of the cultural landscape. A parking area

was constructed around 1986. Contributing features of the cultural landscape include the driveway.

Concrete walkways. Access to the station was historically via an unpaved "road" through the front gate. Because the site was so sandy, walkways were an important feature of the cultural landscape, as documented on the 1893 Bamber site plan. Doorways in the keeper's quarters were not at grade, so as it was enlarged and new outbuildings constructed, the circulation system changed to accommodate these additions. A brick walkway connected the dwelling with the storehouse and a wooden walkway linked the dwelling and the three outbuildings (storehouse, wood/coal shed, and privy). In 1902, Keeper Smith constructed a wooden walkway from the dwelling to the light tower. It is less clear when another walk that led from the northwest corner of the building to the rear of the property was constructed. The Lighthouse Service changed the material to concrete in 1916. Other concrete walkways circumnavigated all sides of the dwelling at some point after the structure was doubled in 1929. Several small walkways between buildings are not well documented on site plans but can be seen in images of the site (Cloud 1993, 7, 25, 28–29).

Currently, a rectilinear arrangement of concrete walkways circumvents the double keepers' quarters with links to various sections of the light station. One major axis connects the north door of the double keepers' quarters with the lighthouse door where a decorative metal gate (installed by a contractor in 2010) links the historic walk with the modern boardwalk; another links the front walkway with an area of the site that was formerly enclosed by a picket fence and now ends at the north boundary of the property. These walkways form a V at their intersection. Several walkways are becoming overgrown with grass in some sections, and in several places, the walkways disappears into the grass. These concrete walkways are a contributing feature to the cultural landscape.

Wood walk. A wood walk (originally brick) connects the dwelling with the storehouse. It is non-contributing to the significance of the cultural landscape.

Boardwalk. A raised wooden boardwalk with railings links the visitor parking area with the door of the lighthouse. It doglegs at the place where it originally ended, having been extended in 2010. It is non-contributing to the significance of the cultural landscape.

Parking area. Parking at the site is problematic. The current parking area was constructed around 1986. There are currently only five spaces plus one accessible parking space for visitors in a graveled/asphalt pull in parking area off Lighthouse Road. Usually no more than four SUV-type cars can park at one time. These spaces are adjacent to the boardwalk that takes visitors to the lighthouse, where they can look inside but not climb the lighthouse. The parking area is a non-contributing feature to the cultural landscape.

In 2014, Eastern National purchased an undeveloped lot one block away from the light station that may be used as parking for the site when all permitting and compliance is completed. Since this is not an adjacent lot, a legislated boundary change would be necessary for the park to take ownership of the lot.

Landscape Features:

Feature Name: Driveway into station

Feature Contribution: Contributing

Latitude: [enter text here]

Longitude: [enter text here]

CRIS-HS Resource name: [enter text here]

CRIS-HS Resource ID: [enter text here]

FMSS Record Type: Location

FMSS Record Number: 28969

Is FMSS Record Exact Match?: No

Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Walkway from Double Keepers' Quarters to Lighthouse

Feature Contribution: Contributing

Latitude: [enter text here]

Longitude: [enter text here]

CRIS-HS Resource name: [enter text here]

CRIS-HS Resource ID: [enter text here]

FMSS Record Type: Asset

FMSS Record Number: 1464115

Is FMSS Record Exact Match?: Yes

Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Walkway from southeast of Lighthouse to driveway

Feature Contribution: Contributing

Latitude: [enter text here]

Longitude: [enter text here]

CRIS-HS Resource name: [enter text here]

CRIS-HS Resource ID: [enter text here]

FMSS Record Type: Asset

FMSS Record Number: 1464117

Is FMSS Record Exact Match?: Yes

Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Walkway around Double Keepers' Quarters

Feature Contribution: Contributing

Latitude: [enter text here]

Longitude: [enter text here]

CRIS-HS Resource name: [enter text here]

CRIS-HS Resource ID: [enter text here]

FMSS Record Type: Asset

FMSS Record Number: 1464118

Is FMSS Record Exact Match?: Yes

Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Walkway from Double Keepers' Quarters to Storehouse

Feature Contribution: Contributing

Latitude: [enter text here]

Longitude: [enter text here]

CRIS-HS Resource name: [enter text here]

CRIS-HS Resource ID: [enter text here]

FMSS Record Type: Asset

FMSS Record Number: 1464120

Is FMSS Record Exact Match?: Yes

Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Wood walk

Feature Contribution: Noncontributing - Incompatible

Latitude: [enter text here]

Longitude: [enter text here]

CRIS-HS Resource name: [enter text here]

CRIS-HS Resource ID: [enter text here]

FMSS Record Type: [enter text here]

FMSS Record Number: [enter text here]

Is FMSS Record Exact Match?: [enter selection here]

Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Boardwalk

Feature Contribution: Noncontributing - Incompatible

Latitude: [enter text here]

Longitude: [enter text here]

CRIS-HS Resource name: [enter text here]

CRIS-HS Resource ID: [enter text here]

FMSS Record Type: [enter text here]

FMSS Record Number: [enter text here]

Is FMSS Record Exact Match?: [enter selection here]

Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Parking area

Feature Contribution: Noncontributing - Compatible

Latitude: [enter text here]

Longitude: [enter text here]

CRIS-HS Resource name: [enter text here]

CRIS-HS Resource ID: [enter text here]

FMSS Record Type: [enter text here]

FMSS Record Number: [enter text here]

Is FMSS Record Exact Match?: [enter selection here]

Associated CRIS-AR Resource ID: [enter text here]



Fig 54. Aerial view of light station showing walkways, n.d. (The Outer Banks History Center, Manteo, NC/David Stick Collection)



Fig 55. Series of walkways linking the buildings on site, 1954. (NPS/CAHA Collection)

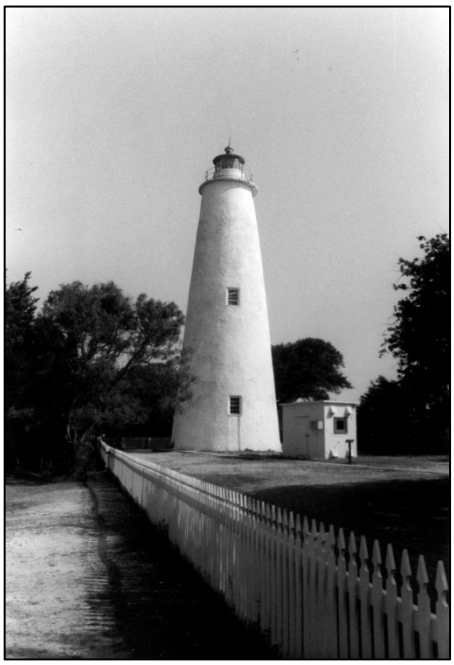


Fig 56. Prior to the construction of the boardwalk, 1984. (NPS/CAHA Collection)



Fig 57. After construction of boardwalk, before extension of boardwalk, n.d. (NPS/CAHA Collection)



Fig 58. Aerial image showing network of roads, 1936. (NPS/CAHA Collection)



Fig 59. Entry road into the light station, 2014. (NPS/SER-CRPS Collection)



Fig 60. Historic walkway terminating at modern decorative metal gate, 2013. (NPS/SER-CRPS Collection)



Fig 61. Historic walkways intersecting, 2014. (NPS/SER-CRPS Collection)



Fig 62. Wood walk, 2014. (NPS/SER-CRPS Collection)



Fig 63. Modern boardwalk, 2013. (NPS/SER-CRPS Collection)



Fig 64. Lighthouse Road and parking area, 2014. (NPS/SER-CRPS Collection).

Buildings and Structures

Buildings are elements constructed primarily for sheltering any form of human activity in a landscape, while structures are elements constructed for functional purposes other than sheltering human activity.

Summary:

From 1820 until the establishment of the Light-House Board in 1852, the administration of lighthouses fell to Stephen Pleasonton, the Fifth Auditor of the Department of the Treasury. During this time, brick came to be the preeminent masonry material used for the outer walls as well as the lining. Its small size, standardized production, and general availability made brick the best choice for southern lighthouses where cut stone was not locally available.

After 1852, the Light-House Board developed a classification system for lighthouses and required the use of the Fresnel lens. Primary coast lights were located at the most prominent points along the coast. The board believed that lights on prominent points should be at least 150 feet above mean sea level. The more important the classification, the larger the order of lens used. First-order lenses provided the largest range; sixth-order provided the smallest. The board also developed a system with different numbers of flashes at timed intervals, as well as use of color (Clifford and Clifford 2000, 78).

In 1910, the Bureau of Lighthouses replaced the Light-House Board, which had become an ineffective means of managing the nation's lighthouse service. Detailed manuals were developed for the light keepers and other personnel. The 1911 "Regulations for the United States Lighthouse Service and Instructions for the Personnel of Vessels and Reservations" discussed the erection of buildings:

> Keepers shall not erect large buildings of a permanent character on lighthouse premises, except as such work may be authorized. Keepers may erect, at their own expense, minor buildings, such as henhouses. Approval must first be obtained, however, from the lighthouse inspector, as to the location, size, exterior appearance . . . , etc.

The 1918 "Regulations for the United States Lighthouse Service" stated:

> Architectural design
>
> Care shall be taken in the design of all lighthouses, keepers' dwellings, fog-signal buildings, and all structures on lighthouse and depot reservations to use simple, dignified, and substantial architectural designs appropriate to the purpose of the structure and in harmony with the location and surroundings. Unnecessary or elaborate ornamentation shall be avoided.
> Drawings and plans.

> Preliminary plans and estimates must be approved before going ahead with detailed plans. These plans shall show the general type of construction proposed, and shall provide in all cases for a design within the limit of funds available for the purpose. Plans for new construction work submitted for approval shall be definite and consistent. They shall show in general the forms of structures, their dimensions, materials with which they are to be constructed, and so far as practicable the character of the foundations on which they are to rest. Minute details of unimportant matters shall not be shown on the drawings, but all details shall be described in the specifications (Clifford and Clifford 2000, 185; "Regulations for the United States Lighthouse Service," 1911, photocopy, 161; "Regulations for the United States Lighthouse Service," 1918, photocopy, 55–56).

Currently, most of the buildings and structures at the Ocracoke Light Station date to the period of significance and include the Ocracoke Lighthouse, the double keepers' quarters, the concrete oil house, two cisterns, a storage house, a carpenter shop, and a reconstructed privy. A generator house was constructed in 1994 on the site of the former chicken house. There are several buildings and structures that are missing from the historic period. These include:

Chicken House. Chickens can be seen in Bamber's images from 1893 and a chicken lot was described in Austin's 1916 logbook. The U.S. Bureau of Lighthouses submitted a plan for a chicken house that pre-dates 1939. The plans were prepared by the Office of the Superintendent, Fifth District, Baltimore, MD, therefore pre-dating the USCG. The construction date and location are unknown. The building was not recorded on a 1944 plot plan, but a building can be seen in dated images from the 1950s and was recorded on the 1958 site plan as a chicken house. The building seen in the 1950s images does not match the pre-1939 drawing. It is possible that the unidentified building outside the fence discussed in the previous section could have been an earlier chicken house since the designs are very similar. The use agreements with the NPS in 1955 and 1974 also mentioned a chicken house. It is not known when the building seen in images from the 1950s was taken down (Cloud 1993, 29).

Around 1994, a new frame building was erected on the site to house a new generator. It was built in the style of the old chicken house with a shed roof (Site Plan Generator Shed [map], July 22, 1994, Accession 360, Catalog 5608, Folder 6, NPS/CAHA Collection).

Stable. There are no images of barns or stables at Ocracoke Light Station, but in 1898, Keeper Smith noted that he whitewashed his "cow stable." Given the light station's close proximity to Ocracoke village, it would not have been difficult to stable a cow (Cloud 1993, 16).

Wood/Coal Shed. In 1903, keeper T.A. Smith asked for permission to build a woodshed stating that the wood was being stored in the rain and that he "would like to have a house to put the wood in and have made an estimation of the cost..." The Light-House Board recorded the construction of a "small wood shed" in 1904 (Cloud 1993, 7-8; Lewis, Ocracoke Light Station, N.C. [map], 1897, 1908, 1929.; Oppermann 2016, 82). It sat between the storehouse and the privy and is recorded on several site plans through 1929. The building was identified as a coal shed in the 1930 inventory of buildings but is missing from a 1944 plot plan.

Pier/Boathouse. The U.S. Bureau of Lighthouses submitted a plan in 1930 for a pier and boathouse, which are recorded on a 1944 USCG plot plan as being northeast of the station on Silver Lake. A 1958 USCG drawing outlined repairs and the extension of the structure (called "dock") and labeled the building on the dock "storehouse." No images with clear documentation have been found although several docks can be seen in images from the 1930s and 1950s of Silver Lake taken from the lighthouse. It is not known when the structure was taken down.

Unidentified Frame Building. Images from 1936 show an unidentified frame building outside the picket fence on the west. According to the 1977 National Register nomination, a building on the site was badly damaged by a 1944 hurricane and collapsed. It seems likely that it was this building, since it does not show up in any images after the 1940s.

Garage/Shed. By 1952, the fence line had been moved forward and a garage and shed constructed flush with the fence line. In addition to the storehouse (pump house), the 1958 site plan includes a

chicken house (discussed below) and carpenter shop enclosed by fencing east of the lighthouse and a garage and shed west of the lighthouse. The front façades of the garage and shed are flush with the existing picket fence line. The 1955 and 1974 special use agreements with the NPS mention the storehouse (pump house), carpenter shop, and garage. A 1977 letter from the North Carolina Department of Cultural Affairs in response to a request from the NPS to remove the garage stated that its removal would not be an adverse effect to the property. The 1977 National Register nomination stated that it would be removed by 1978. Only the storehouse (pump house) and carpenter shop are mentioned in the 1986 special use agreement, indicating that the garage had been taken down ("Revocable Permit," May 17, 1955, "Use Agreement," February 13, 1974, and "Use Agreement," May 20, 1986; and Larry E. Tise, State Historic Preservation Officer to Lawrence D. Roush, Chief, Resources Management and Visitor Protection, May 11, 1977, Accession 191, Catalog 5037, Box 1, Folder 1 NPS/CAHA Collection; Warfield 1977).

Ocracoke Lighthouse (LCS 000016). The Ocracoke Lighthouse (1823) was a brick tower with a solid white coloration, crowned by an octagonal lantern with fifteen lamps fitted with oil heaters and an equal number of sixteen-inch Argand parabolic reflectors. Its focal height was seventy-five feet. In 1849, a new lantern room and lighting apparatus consisting of ten brass lamps and twenty-one reflectors replaced the fifteen that had been used before. The apparatus revolved every two minutes to produce a flashing light. In 1854, the Light-House Board replaced the outdated illuminating apparatus with with a fourth-order Fresnel lens and new lantern and "thoroughly repaired" the tower in March 1855 (Ocracoke Lighthouse HSR 1990, 10; Clifford and Clifford 2000, 21, 31; Cloud 1993, 5; and http://www.lighthousefriends.com/light.asp?ID=355).

The lighthouse received new lanterns in 1860. During the Civil War, retreating Confederate troops dismantled the lens in 1862, but the light was returned to service in 1863. In 1868, the Light-House Board made numerous repairs to the lighthouse, including re-cementing and whitewashing a large portion of the tower, repairing the lantern deck and sashes and frames, and painting the lantern and all exterior and interior wood surfaces (Cloud 1993, 6–7; Warfield 1977).

In 1899, the light received a new fourth-order lamp and various repairs were made. It was described in the 1907 "List of Lights and Fog Signals" as a fixed white light, fourth order standing seventy-five feet above mean high water. Little is known about the treatment to the lighthouse during the late nineteenth and early twentieth centuries. Keeper Wesley Austin, who arrived in 1913, kept a logbook where he recorded his activities and those of various repair crews that worked at the station between 1913 and 1920. The following is an accounting of the work done on the tower during this time:

- May 28, 1913: Repair party arrived and put cement coating on top of tower
- October 25–November 4, 1913: Scraped and whitewashed outside of tower and lantern
- April 6–17, 1914: Whitewashed inside of tower and painted inside stairway
- September 20, 1915: Painted outside lantern of tower and lantern deck
- October 11, 1915: Painted inside of lantern and lantern floor
- April 17, 1916: Whitewashing inside walls of tower
- April 27–May 23, 1916: Whitewashing outside of tower
- June 16, 1916: Rain and wind badly beat off whitewash on outside wall of tower
- April 12, 1917: Painted black outside lantern

The electrification of the light in 1929 coincided with the arrival of Joseph M. Burrus or "Cap'n Joe." By 1937, the light had changed to a flashing white light with a five second light and twenty-five second eclipse. At the time of Keeper Burrus's retirement in 1946, the USCG automated the lighthouse. Since there was no longer a need for a substantial staircase, the USCG removed the original wooden spiral stairs built into the inside of the exterior wall of the lighthouse around 1950 and replaced them with metal stairs located in the center of the tower. The original stairs were removed due to excessive rotting of the boards. The holes left in the all-brick lighthouse were cemented closed and a new floor was installed in the base of the tower. In 1951, the USCG painted the interior and recoated the exterior (Cloud 1993, 6–7, 19, 25–35; http://www.lighthousefriends.com/light.asp?ID=355; Ocracoke Lighthouse HSR 1990, 11; Warfield, 1977).

It appears that the lighthouse languished over the following years with little preservation maintenance undertaken by the USCG. After the creation of the Cape Hatteras National Seashore in 1953, the NPS entered into an agreement with the USCG for the use and occupancy of the other buildings at the station, which the NPS agreed to maintain.

In 1988, the North Carolina Department of Cultural Resources transferred a $17,000 Lighthouse Grant to the NPS to prepare a historic structure report to access the structure's condition, document historic fabric, and develop a scope of work for rehabilitation of the lighthouse. In 1989, after several inspections reported the lighthouse in a deteriorating condition, the USCG finally let a contract for exterior painting and window and door repair. After years of neglect, the USCG wanted to replace the windows and the exterior door, but the North Carolina Department of Cultural Resources felt that the windows could be repaired and objected to the use of a steel door frame. The contractor hired by the USCG removed the original windows anyway and installed vinyl-clad replacements. The historic wooden entrance door was also removed and replaced with a modern metal door. After intervention by community activists, the USCG agreed to pay for the repair/reconstruction of the original wood windows and entrance door, which were fabricated and installed by the NPS in 1990. Five of the early window sash were repaired and another seven reconstructed. The double sash windows were retrofitted into the vinyl track of the 1989 thermal replacement windows, which was left in place. The work, completed on August 3, 1990, included:

- Repair of five of the existing sash;
- Manufacture of seven new sash to match the existing;
- Construction of four new wood window frames to match the existing and repairs to the two remaining frames;
- Removal of non-historic windows and installation of historic/reconstructed windows;
- Construction of a new board-and-batten door, as specified in drawings supplied by the North Carolina Department of Cultural Resources; and
- Removal of non-historic door and installation of new historic character door (Cloud 1993, 45–50; "Lighthouse Grant Project Ocracoke Lighthouse Phase I and II Completion

Report," July 10, 1990, Accession 189, Catalogue 5035, Box 1 Folder 1, NPS/CAHA Collection; Oppermann, Ocracoke Light Station HSR 1990, 152).

Following the completion of a historic structure report, a crew from Cape Hatteras National Seashore began Phase I and II work on the lighthouse, which was completed in July 1990. This work included:

- Total replacement of deteriorated interior stairwell support brackets with stainless steel fabricated to match the existing dimensions.
- Removal of substantial interior algae build-up using water and soft bristle brushes.
- Raking and repointing of joints of fifteen courses of brick, circling the interior base of the lighthouse; repointing of all the mortar joints just inside the door.
- Removal of two of the Plexiglas panels that replaced the original glass in the lantern gallery on the top of the lighthouse to take measurements for replacement glass and the reinstallation of the Plexiglas.
- Inspection of the exterior lantern drum and the condition of the underlying brick and mortar recorded. Those areas opened were repaired with a mortar patch. The gallery floor was treated to stop water migration into the structure. Numerous cracks were raked out, packed with lead wool, and repointed.
- Inspection of the six window lintels to determine their condition for future work.
- Removal and repair of the exterior hatch gallery door (Lighthouse Grant Project Ocracoke Lighthouse Phase I and II Completion Report, July 10, 1990, Accession 189, Catalogue 5035, Box 1 Folder 1, NPS/CAHA Collection).

Phase III concluded in October 1991 and included the following work on the window lintels:

- Removal of the lintels above the entrance door and windows 2 and 3 and replacement with tongue and groove ceiling board that was primed and painted white. There were only six lintel boards over window 2, so a seventh had to be reconstructed. An area of brick approximately 5′ × 4′ × 4′ deep collapsed during replacement of the lintels and had to be relaid. All voids above these lintels were in-filled with new laid brick and mortar. A crack over the doorway was repointed with mortar.

- Inspection of the lintel openings on windows 4, 5, 6, and 7 for future work. All brick above the windows was repointed and raked. The openings were shored up until such time as the park can assign staff to continue the project (Lighthouse Grant Project Ocracoke Lighthouse Phase III Completion Report, Accession 189, Catalogue 5035, Box 1 Folder 2, NPS/CAHA Collection).
- It was noted during the final inspection of the window lintels that the non-historic entrance board-and-batten door was continuing to warp. The NPS subsequently replaced the door with a four-panel door as shown on the 1892 drawing. The two top panels were raised and the bottom two panels were constructed with wooden vents to improve ventilation throughout the lighthouse. The NPS also replaced the modern doorway lintel with a granite lintel as shown on the 1892 drawing.

Ocracoke Lighthouse was switched off in November 2009 and remained dark until March 3, 2010, while new glass was installed in the lantern room, metalwork was repaired, and lightning protection was installed. This was the first major work performed on the lighthouse after it had been transferred from the USCG to the NPS in 1999.

Work in 2011 included repointing brick, replacing balcony rails, installing new windows, adding a universally accessible deck to the lighthouse with a new side metal gate, and painting the entire lighthouse (http://www.lighthousefriends.com/light.asp?ID=355; Doug Stover, personal communication).

Today, the brick lighthouse continues to stand about seventy-five feet tall. Its diameter narrows from twenty-five feet at the base to twelve feet at its peak. A round lantern crowns the tower and houses the fourth-order Fresnel lens. The building has a modern vertical board door of historic design. North, south, and east sides each have two 6-over-6 sash windows. A metal rail circles the lantern balcony at the top. The exterior of the lighthouse is coated in shotcrete and painted white. Numerous repair projects were completed that returned the structure to good condition in 2011. As the second oldest lighthouse in the United States in continuous operation, the lighthouse retains most of its original characteristics and is a contributing feature of the cultural landscape.

Double Keepers' Quarters (LCS 007237). The original building (keeper's quarters) was a one-story brick dwelling with an upper living level. The downstairs was divided into two rooms with a chimney in the middle and an entry in front of the chimney. Stairs led from the entry into the upstairs chambers. The roof was cypress shingles. The 1823 contract called for a building to be attached to the dwelling whose description fits that of a kitchen. The contract mentions a chimney with iron crane, trammels and hooks, and on one side of the chimney an oven, while on the other side there was to be a sink with a gutter to run through the back wall (Ocracoke Lighthouse HSR 1990, 11; Oppermann 2016, 58).

The Light-House Board "thoroughly repaired" the keeper's quarters in March 1855. After the Civil War, the dwelling needed numerous repairs that were completed in 1868. Repairs included: painting of all interior and exterior wood surfaces; extensive renovation of stairways, including 33 feet of newel; repairing one side of the roof and reshingling the other; relaying fire-hearths; plastering; repair of doors, sashes, and hardware in every room; and repair and painting of floors.

In 1883, work included plaster repairs and floor replacements. As documented by plans of 1889 and the 1893 photographs taken by Bamber, the first major change to the keeper's quarters was a frame shed room that was added to the back of the house in 1889. The new room was behind the parlor and extended from the south side of the kitchen to the southeast corner of the house, forming a long rectangle. The Light-House Board added a second story to the original quarters in 1897 to provide additional space for the keeper and his family. A one-story, shed-roofed porch with chamfered posts was added across the front of the house. Six-over-six sash windows replaced the earlier eight-over-eight sash windows (Cloud 1993, 7; Oppermann 2016, 58-61; "Plans of Keeper's Dwelling at Ocracoake [sic] Light Station, N.C., filed February 5, 1889; [H. H. Bamber], Photographs 189 (C. S. 1) and 191 (C. S. 2), Ocracoke Light Station, N. C. May 24, 1893; "Narrative Report on the Finding of Historic Structure Examination," December 30, 1986, Accession 191, Catalogue 5037, Box 1 Folder 1, NPS/CAHA Collection).

Keeper Wesley Austin's logbook recorded his activities and those of various repair crews that worked at the station between 1913 and 1920. The following is an accounting of the work done on the quarters during this time:

- March 4, 1913: painted roof of dwelling
- March 16, 1913: [painted] window shutters on dwelling
- September 17, 1913: touched up dwelling with whitewash
- March 16, 1914: painted boxing around eves [sic] of dwelling
- March 17, 1914: painted outside of dwelling
- April 6, 1916: repaired kitchen (Cloud 1993, 23-32)

Joseph M. Burrus's tenure as keeper began on October 1, 1929. At this time, the keeper's quarters was expanded to create a double dwelling (double keepers' quarters). Though attached to each other, the two quarters were to function independently of each other. The two-story frame addition was attached to the south end of the older dwelling. It was oriented at a right angle to the previous quarters, and the exterior design of the two was very similar. The shed-roofed porch across the façade of the old dwelling extended across the west end of the new dwelling, providing continuity between the two. Exterior wall surfaces of the addition consisted of stucco applied to metal mesh on the balloon-frame construction at ground level and wood shingles on the second story. The roofing material was changed to standing-seam metal (Oppermann 2016, 63-64).

Around 1950, the USCG extensively rehabilitated the quarters. Work included:

- Covering beaded walls with painted wallboard;
- Installing modern kitchen and bathroom facilities;
- Replacing or refinishing floors;
- Lining ceilings and walls with plywood paneling;
- Increasing closet space; and
- Screening in full-length porch added in 1929 ("Narrative Report on the Finding of Historic Structure Examination, December 30, 1986," 3, Accession 191, Catalog 5037, Box 1 Folder 1, NPS/CAHA Collection).

After establishment of the Cape Hatteras National Seashore in 1953, the NPS wanted a base of operations on Ocracoke and first asked the USCG for permission to use the station buildings in 1955. The NPS agreed to maintain the structures in the 1957 use permit, and in 1972 and 1982, the NPS replaced the standing seam metal roof of the double keepers' quarters (Ocracoke Light Station, HS-1A/HS-1B Buildings #501/501B/503, Accession 191, catalog 5037, Box 1 Folder 1, NPS/CAHA Collection).

A major rehabilitation project undertaken by the Williamsport Preservation Training Center began in 1987. The crew accomplished the following during Phase I, which was completed in September:

- Removed sand and debris below the bottom floor joists;
- Constructed concrete support piers upon which would rest new laminated treated beams and new treated supplemental joists to be installed between the existing joists;
- Replaced insect-damaged sill plate of east elevation; repaired stud ends; repaired/replaced supplemental joist as required; treated all exposed wood with 2 percent zinc naphthenate; replaced sub-siding; and repaired damaged stucco;
- Constructed and installed new vents in the foundation walls;
- Replaced and painted four attic window frames and sash;
- Removed all utilities from the exterior of the dwelling, the existing electric panel, and the hot water furnace;
- Cleaned and repaired two cisterns and removed non-historic concrete block filter boxes; and
- Installed underground conduit for electric services (Exhibit Specialist, Williamsport Preservation Training Center, Denver Service Center to Superintendent, Cape Hatteras National Seashore, September 1, 1987, Accession 191, Catalog 5037, Box 1, Folder 1, NPS/CAHA Collection).

The scope of work for Phase II included:

- Supervision of utility contracts;

- Repair of chimneys above roofline;
- Repair/painting of existing windows;
- Repair/replacement of floor joist system of shed roof frame addition, repair/replacement of floor, addition of supplemental rafters to roof that was inadequately framed; and
- Replacement of utility room roof.

This work concluded on September 22, 1988. Exterior painting occurred in 1992 (Exhibit Specialist, Williamsport Preservation Training Center, Harpers Ferry Center to Deputy Chief, Williamsport Preservation Training Center, HFC, October 27, 1988; Assessment of Actions Having an Effect on Cultural Resources, July 6, 1992, Accession 191, Catalog 5037, Box 1, Folder 1 and 2, NPS/CAHA Collection).

In 2008, the park developed a scope of work for exterior restoration. There is no completion report, so it is not clear if this project actually was undertaken. Nevertheless, the proposed work indicates the condition of the building at that time:

- Masonry restoration and cleaning of four chimneys and two brick cisterns;
- Carpentry and millwork to repair all wood siding, sheathing, shingles, windows, doors, associated trim, and exterior wood deck flooring;
- Replacement of all roof areas with standing seam metal and repairing rafters, joists, and lathe as needed;
- Rework gutters and downspouts to better carry rainwater away from the building;
- Repair and make operable all doors, including hardware;
- Repair and make operable all windows, including proper hardware, in preparation for painting;
- Restore period hardware to original condition;
- Prepare and repaint exterior surfaces (Oppermann 2016, 72).

The original building (keeper's quarters) was a one-story dwelling with a gabled roof. A second story was added in 1897 to give the keeper and his family more room and the footprint expanded further in 1929 to accommodate an assistant keeper and his family (double keepers' quarters). In

1950, the USCG began an extensive interior rehabilitation of the quarters, including installation of modern kitchen and bathroom facilities. A major rehabilitation project undertaken by the NPS began in 1987 and concluded in 1988. The building currently contains two apartments for staff housing.

The building's exterior appearance doubled in size throughout the period of service as living quarters for the light station crew and currently for park staff. It is a contributing feature of the cultural landscape and is one of the support buildings original to the light station.

Concrete Oil House (LCS 091909). The low flashpoint of kerosene necessitated a detached oil storage building, which was built by a repair crew in 1914. It was constructed of poured concrete and equipped with a cast iron door and ventilators. It housed the backup generator after the lighthouse was electrified in 1929 (Cloud 1993, 26).

Currently, the rectangular cast-in-place concrete building that measures approximately 8 × 11 × 9.7 feet with a low-sloped shed roof, also of cast-in-place concrete. The west façade has a sheet metal door; historic wood-framed window openings with modern thermal false six-light sash are centered on the north, south, and east façades. Four vent openings, one in each corner, are on both the north and south elevations. The building currently serves as a generator building for the lighthouse. The structure received a new roof and was painted in 2010. Despite these slight alterations, the oil house retains integrity to the period of significance and is a contributing feature of the cultural landscape.

Cisterns (LCS 091911). Rainwater, collected off the roof of the double keepers' quarters, was fed from gutters into two cisterns east of the dwelling. The construction date of the north cistern is unclear. In response to a request from Keeper Smith in June 1901, W. A. Jones, the Lighthouse Engineer, responded with authorization to procure a pump and pipe for the cistern. However, the first appearance of the cistern on a plat map was not until 1908. A repair crew replaced the downspouts in 1911 and rebuilt a concrete top for the north cistern in 1916. The construction date of the south cistern is unknown, but it can be seen in a 1941 aerial image and was recorded on a

1950 plot plan. It is not recorded on site plans from 1944 or 1958 (Cloud 1993, 28; Oppermann 2016, 26, 36).

Repair of the two cisterns and removal of concrete block filter boxes was included in the scope of work for the double keepers' quarters completed in 1988.

The two cisterns are concrete structures with shed roofs that measure approximately 8 × 12 feet and stand on the east side of the double keepers' quarters. The northern cistern is brick with a cast-concrete cap. The southern cistern is cast-in-place concrete with a cast-concrete cap. HVAC units sit atop the south cistern deck. The structures received a new roof and were painted in 2010 to bring their condition to good from fair. The cisterns are no longer connected to the gutters, but remain contributing features to the cultural landscape.

Storehouse (LCS 091907). A frame outbuilding documented on the first site plan of 1890 and identified on the Bamber 1893 site plan as "storehouse" was located on a northeast to southwest axis of clustered outbuildings. It may have been built as early as December 1875, when official correspondence mentions "build store house." According to the 2016 Ocracoke Light Station HSR, the façade of the current building is wider and its footprint more square than the building shown below in a 1893 Bamber photograph. The building's current configuration is shown on the updated 1908 plat.

The 1977 National Register nomination described the building's original use as a dining room that was connected to a smaller kitchen building by a screened-in walkway. Correspondence from Keeper Smith in 1899 described the use of a storehouse as a summer kitchen: "It is so hot in the kitchen in the Summer time it is next to impossible to bear the heat. Consequently we have to use one of the store houses for a Summer Kitchen it is a nice little house except it needs [a] ceiling." Keeper Smith proceeded to submit a proposal for having the storehouse ceiled, including an estimate of what it would cost to accomplish the work. In a letter of 1901, Smith again referred to the Summer Kitchen. The building's use was identified as "pump house" on site

plans from 1950 and 1958 and in USCG use agreements thereafter (Warfield 1977; Oppermann 2016, 77).

In 1988, the NPS developed a scope of work for the storehouse (pump house) that included: reroofing; removing interior concrete slab and re-establishing historic lower floor line; possibly raising the building from 12 inches to 16 inches to restore the original grade; reglazing and painting the window sash on all elevations; replacing doors on the north and south elevations; and removing utility lines and hookups on all elevations. This was a day labor preservation project performed by the Williamsport Preservation Training Center. The NPS also planned to remove blown-in sand and do minor grading for this building and the carpenter shop.

A heavy termite infestation expanded the scope of work during Phase II, which concluded on September 22, 1988. Additional repairs included: repair/replacement of some floor joists; replacement of 75 percent of the sill plates; repair of studs; and removal of deteriorated floor under cement slab and replacement with flooring to match. The building was not re-roofed, as upon closer inspection it was determined that the roof had three to five more years. Also, the NPS decided to lower the grade around the building instead of raising the building.

The storehouse is a one-story building that measures 16 × 16 × 14.8 feet with a front gabled roof with boxed cornice and board-and-batten siding. East and west sides have modern aluminum six-panel doors. Five 6-over-6 light modern thermal sash windows provide natural light to the interior. All windows have aluminum-framed single-sash storm windows. Foundation is brick pier and roof is wood shingles. The structure received a new roof and was painted in 2010 to bring its condition to good from fair. Its use has been labelled as “storehouse” and “pumphouse” on various site plans, although it may have been used as a summer kitchen in the early part of the twentieth century. It is currently being used for storage. The building is a contributing feature of the cultural landscape.

Carpenter Shop (LCS 091908). As seen in images and a site plan from the 1950s, board-and-wire fencing enclosed a chicken house and carpenter shop east of the lighthouse. A garage and shed west of the lighthouse were flush with the picket fence line.

The scope of work for the carpenter shop in 1988 included: return to proper grade on all elevations; repair/replacement of siding as required on all elevations; repair of doors, including replacing bottom boards, realignment of unit, and hardware work; repair of frame, including replacing sill, fabrication of replacement sash on south elevation window, west elevation window; and repair of shutter door on the east elevation. Repairs to the carpenter shop were deferred to Phase III, which concluded in January 1990 (Bebe Woody to Assistant Superintendent, August 15, 1988; Chief, Historic Architecture Division to Superintendent, Cape Hatteras, December 29, 1987; and Exhibit Specialist, Williamsport Preservation Training Center, Harpers Ferry Center to Deputy Chief, Williamsport Preservation Training Center, HFC, October 27, 1988, Accession 191, Catalog 5037, Box 1, Folder 1 and 2, NPS/CAHA Collection).

The carpenter shop is a one-story building that measures approximately 31 × 10 × 12 feet with a wood shingled, side gabled roof and board-and-batten exterior. A single point of entry is in the west façade with flanking modern six-light thermal sash window. The structure was re-roofed and painted in 2010 to bring its condition to good from fair. The carpenter shop is the only surviving of the outbuildings visible in images and a site plan from the 1950s including the chicken house, garage, and shed, and is a contributing feature of the cultural landscape.

Privy (LCS 091910). One of the most essential support buildings included in the original 1823 specifications was a privy. It is recorded on the earliest site plan of 1890 and on the 1893 Bamber plan. It was frame with a wood foundation located northeast of the keeper's quarters on the eastern edge of the property. Plat maps show that the privy was always located along the east property line although, typical of privies, it was moved several times in the general area. A new privy may have been built in the early 1880s, for in 1881 the Light House Engineer provided the Chairman of the U. S. Light-House Board with an estimate "for new outhouse" as well as other work.

Keeper Austin recorded repairing the privy in 1913 and rebuilding it in 1916 with a concrete foundation. Unlike the privies at Bodie Island that were eventually removed, the privy at Ocracoke has been rebuilt over the years. Its location, however, seems to have shifted further north according to a 1944 plot plan and 1987 drain field plan. It was not listed on the 1930 inventory of buildings, which only recorded the more substantial structures on the property (Cloud, Ocracoke Lighthouse, 25, 28; Oppermann, Ocracoke Light Station HSR, 74).

The privy was included in the scope of work for the double keepers' quarters, storehouse, and carpenter shop developed in 1988, but work was deferred until Phase III. The privy required total reconstruction. Maintenance records indicate that it was reconstructed in 2004 and 2010 (Superintendent, Cape Hatteras Group to Chief, Williamsport Preservation Training Center, April 5, 1988; Exhibit Specialist, Williamsport Preservation Training Center, Harpers Ferry Center to Deputy Chief, Williamsport Preservation Training Center, HFC, October 27, 1988, Accession 191, Catalog 5037, Box 1, Folder 1 and 2, NPS/CAHA Collection; Oppermann 2016, 74). The current privy is contributing.

Well. A well was a necessity for the light station. The 1823 contract called for it to be "sunk sufficiently deep to procure good water, a convenient distance from the Light House." Its location, southeast of the light tower, is documented on the 1890 site plan and the 1893 Bamber site plan (Oppermann 2016, 74).

Generator House. In 1994, the NPS proposed to build a new generator house on the last known location of the former chicken house, east of the lighthouse. The new building bears a striking resemblance to the design of the chicken house, with a similar steep-angled shed roofline. The one-story building has board-and-batten walls and a modern false Dutch door on the south elevation. To the left of the false Dutch door is a modern four-panel wood door. A six-light modern wood sash window is just north of center on the west elevation. Gravity dampers are on the north and east elevations. The building is non-contributing.

Landscape Features:

Feature Name: Ocracoke Lighthouse

Feature Contribution: Contributing

Latitude: 35.11073412990821

Longitude: -75.98600713566984

CRIS-HS Resource name: Ocracoke Lighthouse

CRIS-HS Resource ID: 000016

FMSS Record Type: Location

FMSS Record Number: 29670

Is FMSS Record Exact Match?: Yes

Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Double Keepers' Quarters

Feature Contribution: Contributing

Latitude: 35.11032170573148

Longitude: -75.98571687896272

CRIS-HS Resource name: Ocracoke Light Station Keepers' Quarters

CRIS-HS Resource ID: 007237

FMSS Record Type: Location

FMSS Record Number: 29671

Is FMSS Record Exact Match?: Yes

Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Concrete Oil House

Feature Contribution: Contributing

Latitude: 35.11074475243815

Longitude: -75.98580975499857

CRIS-HS Resource name: Ocracoke Light Station Oil House

CRIS-HS Resource ID: 091909

FMSS Record Type: Location

FMSS Record Number: 29675

Is FMSS Record Exact Match?: Yes

Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Cisterns

Feature Contribution: Contributing

Latitude: [enter text here]

Longitude: [enter text here]

CRIS-HS Resource name: Ocracoke Light Station Cisterns (Batch)

CRIS-HS Resource ID: 091911

FMSS Record Type: Location

FMSS Record Number: 29678

Is FMSS Record Exact Match?: Yes

Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Storehouse

Feature Contribution: Contributing

Latitude: 35.11061950739695

Longitude: -75.98568754709002

CRIS-HS Resource name: Ocracoke Light Station Shed

CRIS-HS Resource ID: 091907

FMSS Record Type: Location

FMSS Record Number: 29672

Is FMSS Record Exact Match?: Yes

Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Carpenter Shop

Feature Contribution: Contributing

Latitude: 35.110520061731094

Longitude: -75.98571926759622

CRIS-HS Resource name: Ocracoke Light Station Tool Shed

CRIS-HS Resource ID: 091908

FMSS Record Type: Location

FMSS Record Number: 29674

Is FMSS Record Exact Match?: Yes

Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Privy

Feature Contribution: Contributing

Latitude: 35.11052961323913

Longitude: -75.98565354657966

CRIS-HS Resource name: Ocracoke Light Station Privy

CRIS-HS Resource ID: 091910

FMSS Record Type: Location

FMSS Record Number: 29677

Is FMSS Record Exact Match?: Yes

Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Generator House

Feature Contribution: Noncontributing - Compatible

Latitude: [enter text here]

Longitude: [enter text here]

CRIS-HS Resource name: [enter text here]

CRIS-HS Resource ID: [enter text here]

FMSS Record Type: [enter text here]

FMSS Record Number: [enter text here]

Is FMSS Record Exact Match?: [enter selection here]

Associated CRIS-AR Resource ID: [enter text here]

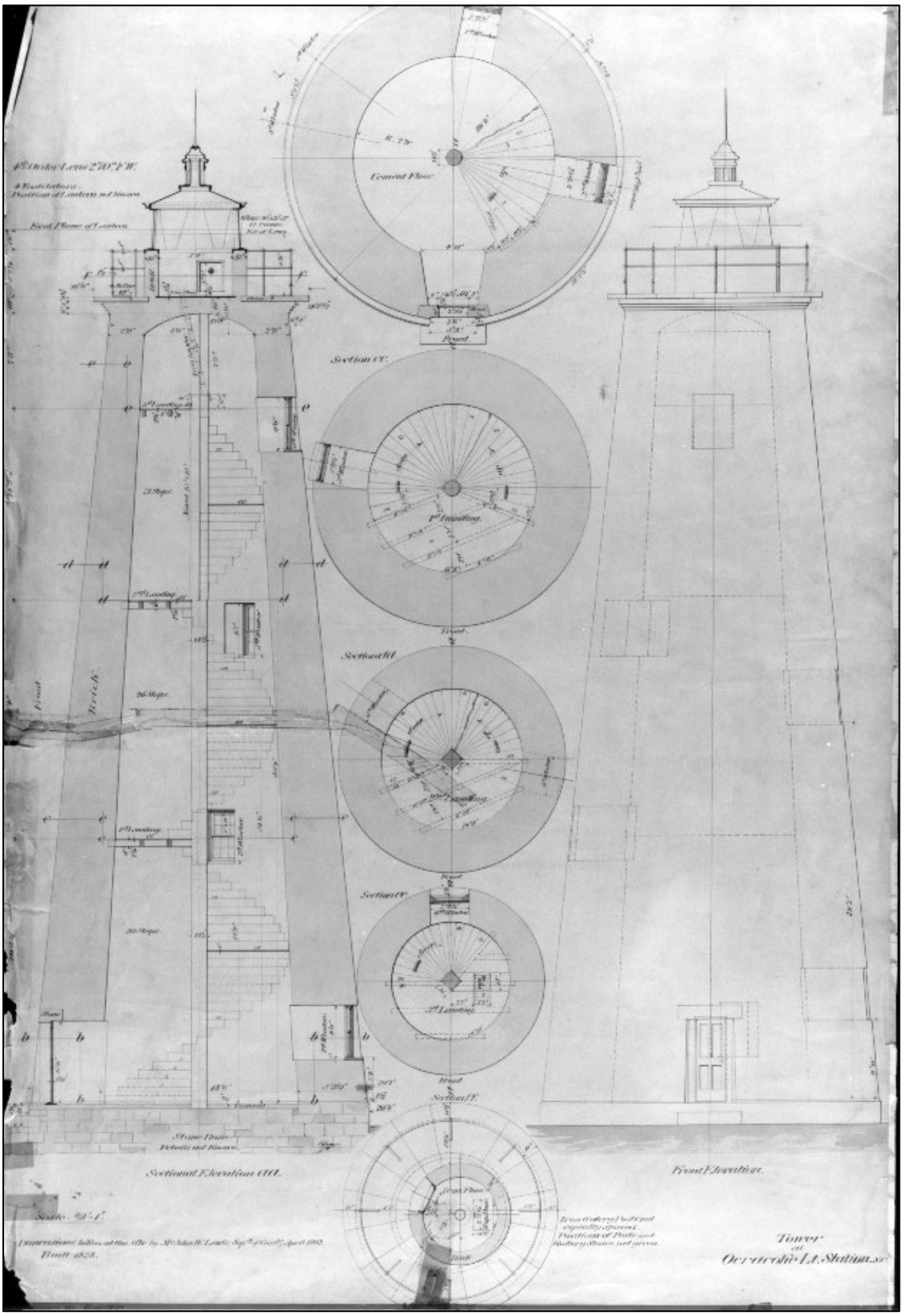


Fig 65. Lighthouse plan, 1892. (NPS/CAHA Collection).



Fig 66. Ocracoke Lighthouse, 1936. (NPS/CAHA Collection).



Fig 67. Ocracoke Lighthouse, 2014. (NPS/SER-CRPS Collection).

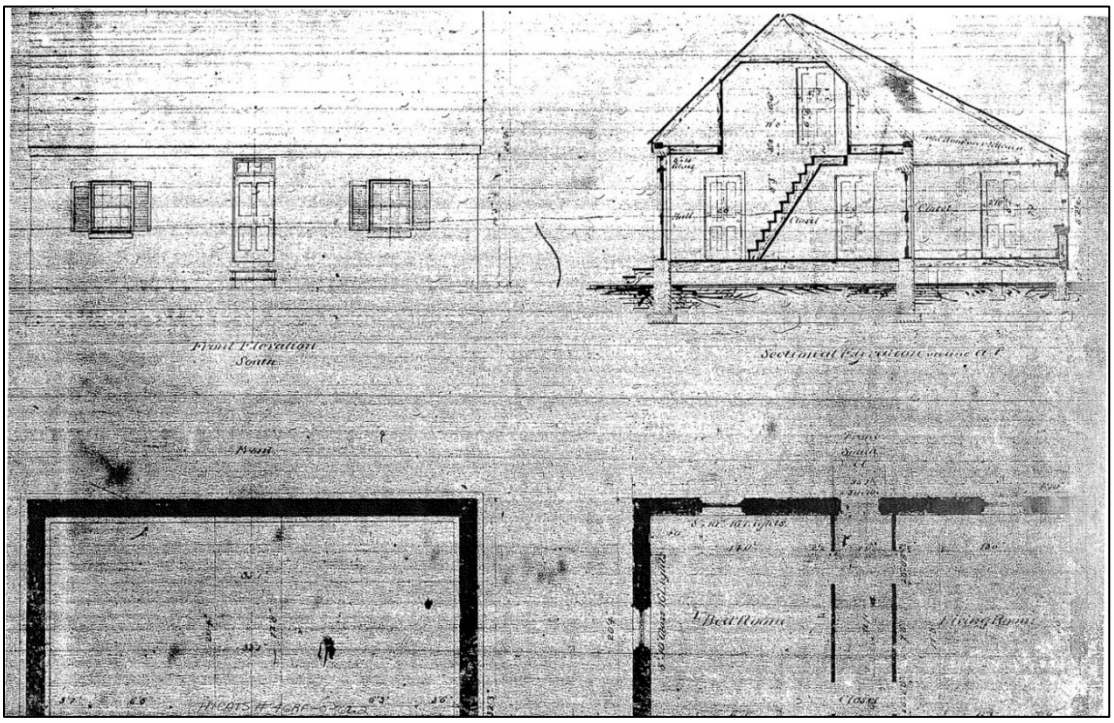


Fig 68. Plan of keeper's quarters showing rear addition, dated 1889. (NPS/CAHA Collection)

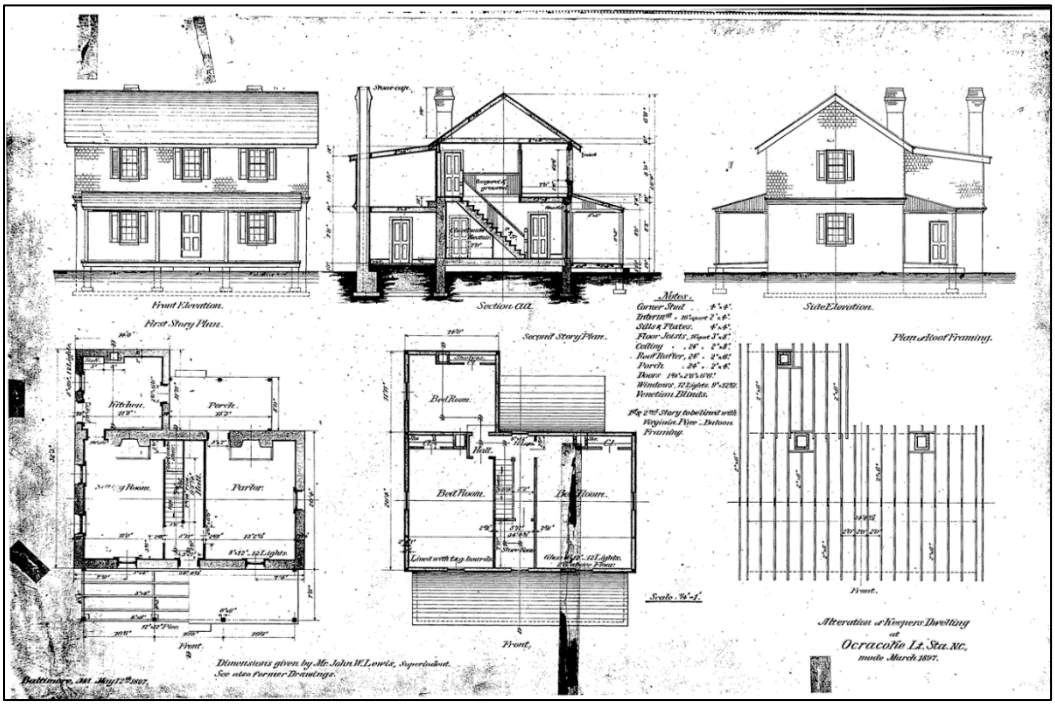


Fig 69. Plan of second story addition, 1897. (NPS/CAHA Collection)



Fig 70. Double keepers' quarters, 2014. (NPS/SER-CRPS Collection)

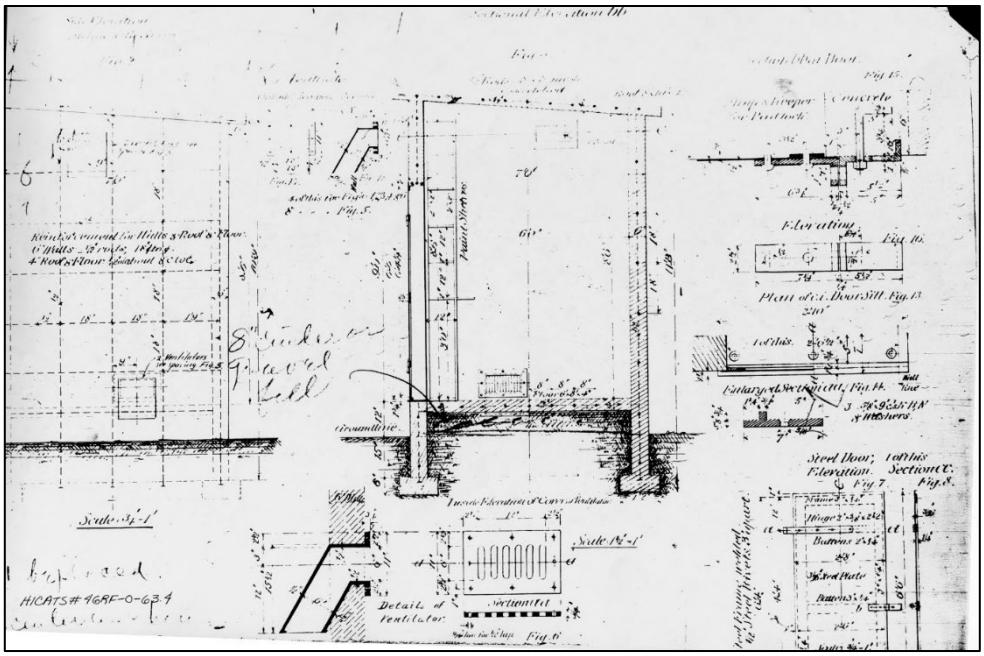


Fig 71. Concrete oil house drawing, 1913. (NPS/CAHA Collection)



Fig 72. Concrete oil house, 1941.(NPS/CAHA Collection).



Fig 73. Concrete oil house, 2013. (NPS/SER-CRPS Collection)

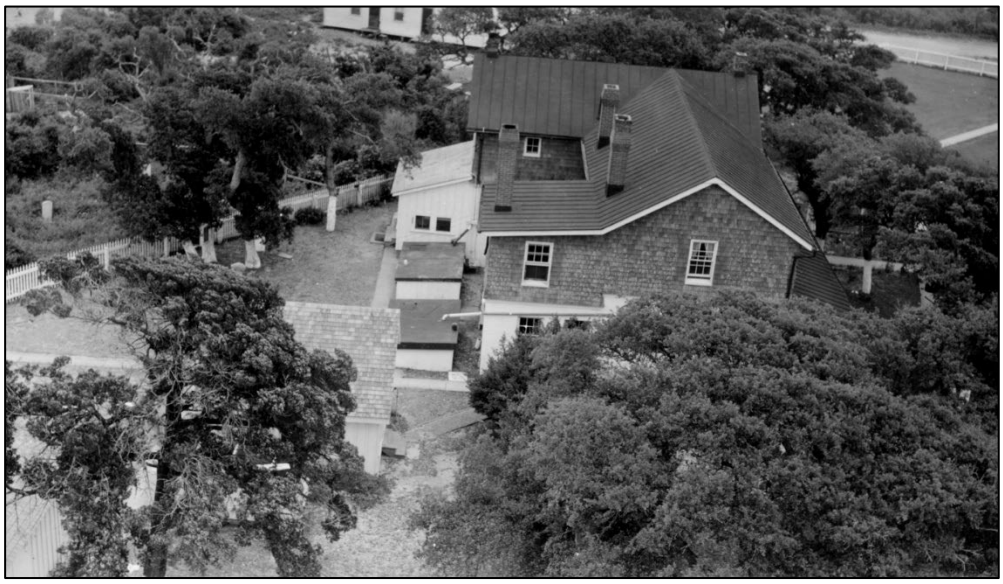


Fig 74. Cisterns, 1941. (NPS/CAHA Collection)



Fig 75. Cisterns, 2005. (NPS/CAHA Collection)



Fig 76. Cisterns, 2014. (NPS/SER-CRPS Collection)



Fig 77. Storehouse, 1893. (NPS/CAHA Collection)



Fig 78. Storehouse, 2014. (NPS/SER-CRPS Collection)



Fig 79. Carpenter shop, 1990. (NPS/SER-CRPS Collection)



Fig 80. Carpenter shop, 2014. (NPS/SER-CRPS Collection)

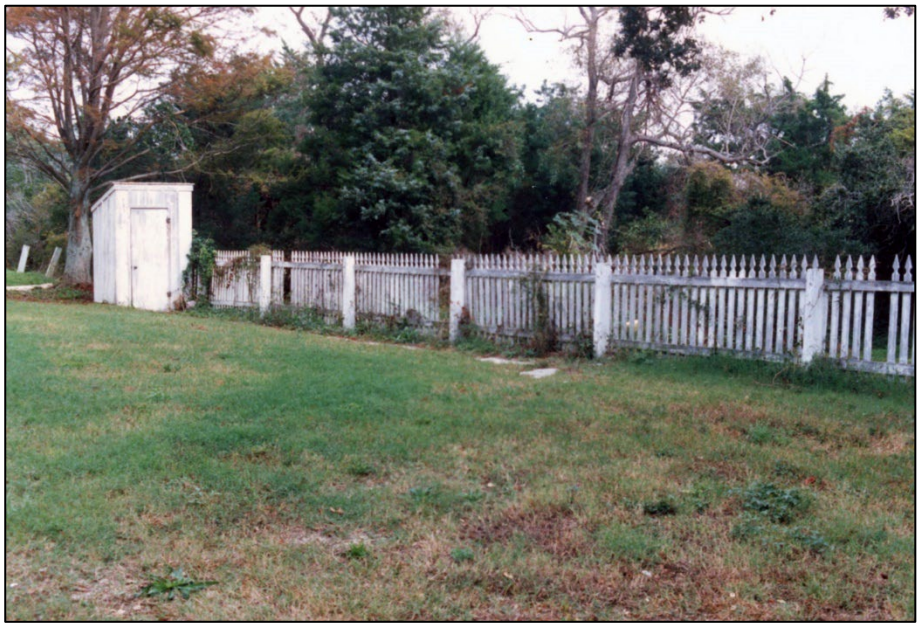


Fig 81. Privy, 1985. (NPS/CAHA Collection)



Fig 82. Privy, 2014. (NPS/SER-CRPS Collection)

Views and Vistas

A view is the expansive and/or panoramic prospect of a broad range of vision that may be naturally occurring or deliberately contrived. A vista is a controlled prospect of a discrete, linear range of vision, which is deliberately contrived.

Summary:

Unlike the open, windswept views of the Bodie Island Light Station, views at Ocracoke would have been influenced by the residential character of the surroundings and the abundance of vegetation within the site. Views west would have been open to the adjacent marsh/wetlands, but other views would have been obstructed by vegetation and buildings. Views out of the light tower would have been unobstructed across Silver Lake to the north, to Pamlico Sound to the west, and to Teaches Hole to the south taking in the residences surrounding the light station.

Views of the light tower were important to the community. In 1988, the USCG decided not to replace the generator that kept the lighthouse lit when there was a power failure, which was a common occurrence on Ocracoke. Instead they placed battery-operated navigational lights on the gallery hand rails. Not only were they visually intrusive, but they were inadequate to light the tower when a power outage occurred. The village objected, and the USCG eventually agreed to remove the lights and replace the generator after meetings with community activists and the NPS and intervention by Congressman Walter P. Jones (Cloud 1993, 52-53).

Views and vistas historically would have been influenced by the residential character of the neighborhood that grew up around the light station and the cultural vegetation at the site. Views to the north and east are blocked by vegetation. Views to the sound beyond are blocked by vegetation.

Sight lines along a central northeast to southwest axis aligned with the double keepers' quarters and a cross axis on the northwest. Views into the light station along the entry drive are much as they were historically, except for the gate key pad that obstructs the view of the double keepers' quarters. Views from the lighthouse back into the station are degraded by cars and trucks parking on site and personal items, such as a Horton Hauler and a small boat and trailer. A camper shell, trailer, and other personal items are stored behind the carpenter shop and cannot be seen from the lighthouse. Despite these intrusions, the sight lines along the primary northeast axis and the northwest cross axis are contributing.

Views to the Pamlico Sound. Historic views of the marsh and Pamlico Sound beyond remain intact and are contributing to the cultural landscape.

360° views from top of lighthouse. From the top of the lighthouse, views to the north are of Silver Lake and Ocracoke village beyond. Views to the east and south are of residential neighborhoods and the Atlantic beyond. Views to the west are of the boardwalk, marsh, residential neighborhoods, and Pamlico Sound beyond. The lighthouse can be seen across Silver Lake when standing next to the Ocracoke Harbor. Views out of the light tower would have been

historically unobstructed across Silver Lake to the north, to Pamlico Sound to the west, and to Teaches Hole to the south taking in the residences surrounding the light station. These 360° views from the top of the lighthouse remain largely intact today and are contributing features to the Ocracoke Light Station cultural landscape.

Views across Silver Lake. Historic views across Silver Lake to the north remain intact and are contributing to the cultural landscape.

Views of boardwalk and parking area. Views to the south are of the parking area and residential neighborhoods beyond. Views to the marsh on the west are partially blocked by the raised boardwalk. Views of the boardwalk and the parking area are non-contributing features of the cultural landscape.

Landscape Features:

Feature Name: Sight lines along a central northeast to southwest axis aligned with the double keepers' quarters and a cross axis on the northwest
Feature Contribution: Contributing
Latitude: [enter text here]
Longitude: [enter text here]
CRIS-HS Resource name: [enter text here]
CRIS-HS Resource ID: [enter text here]
FMSS Record Type: [enter text here]
FMSS Record Number: [enter text here]
Is FMSS Record Exact Match?: [enter selection here]
Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Views to the Pamlico Sound
Feature Contribution: Contributing
Latitude: [enter text here]
Longitude: [enter text here]

CRIS-HS Resource name: [enter text here]

CRIS-HS Resource ID: [enter text here]

FMSS Record Type: [enter text here]

FMSS Record Number: [enter text here]

Is FMSS Record Exact Match?: [enter selection here]

Associated CRIS-AR Resource ID: [enter text here]

Feature Name: 360° views from top of lighthouse

Feature Contribution: Contributing

Latitude: [enter text here]

Longitude: [enter text here]

CRIS-HS Resource name: [enter text here]

CRIS-HS Resource ID: [enter text here]

FMSS Record Type: [enter text here]

FMSS Record Number: [enter text here]

Is FMSS Record Exact Match?: [enter selection here]

Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Views across Silver Lake

Feature Contribution: Contributing

Latitude: [enter text here]

Longitude: [enter text here]

CRIS-HS Resource name: [enter text here]

CRIS-HS Resource ID: [enter text here]

FMSS Record Type: [enter text here]

FMSS Record Number: [enter text here]

Is FMSS Record Exact Match?: [enter selection here]

Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Views of boardwalk and parking area

Feature Contribution: Noncontributing - Incompatible

Latitude: [enter text here]

Longitude: [enter text here]

CRIS-HS Resource name: [enter text here]

CRIS-HS Resource ID: [enter text here]

FMSS Record Type: [enter text here]

FMSS Record Number: [enter text here]

Is FMSS Record Exact Match?: [enter selection here]

Associated CRIS-AR Resource ID: [enter text here]



Fig 83. View across Silver Lake, 1956. (NPS/CAHA Collection)



Fig 84. View west to Pamlico Sound, 1956. (NPS/CAHA Collection)



Fig 85. View south to Teaches Hole, 1956. (NPS/CAHA Collection).



Fig 86. View to the south, 2013. (NPS/SER-CRPS Collection)



Fig 87. View to the north and east, 2013. (NPS/SER-CRPS Collection)



Fig 88. View to the west, 2014. (NPS/SER-CRPS Collection).



Fig 89. View to the north, 2013. (NPS/SER-CRPS Collection)



Fig 90. View to the south, 2013. (NPS/SER-CRPS Collection)



Fig 91. View to the west, 2013. (NPS/SER-CRPS Collection)

Small-Scale Features

Small-scale features are elements that provide detail and diversity for both functional needs and aesthetic concerns in the landscape.

Summary:

Fencing. Fencing on the Outer Banks would probably have been picket, brush, or post-and-rail. Outer Banks residents rarely used Virginia or worm fences, which were popular on the mainland but required more wood and space. Because there was still open range grazing on the island into the 1950s, most Ocracoke villagers fenced their properties. A hierarchy of fencing resulted, with more decorative paling fences used close to the dwelling and more utilitarian fences used farther away (Dunbar 1958, 126).

A fence enclosed the Ocracoke Light Station, described in 1883 maintenance records as a "ttt fence" when it was replaced. It was shown on the 1890 site plan and documented in images taken by Bamber in 1893. It was recorded on all the site plans for the property and had an entrance gate on the south and another gate at the north end of the property.

In 1904, the Light-House Board erected 324 running feet of fencing. It is not known if this was new fencing or replacement fencing. From Keeper Austin's log book we know the following tasks were completed:

- 1913: repaired fence planks in May, but a hurricane in September blew down part of the fence; whitewashed fence.
- 1916: whitewashed the fence.
- 1920: replaced the fence posts and pickets (Cloud 1993, 7, 17, 25–26).

Between 1944 and 1952, the picket fence line on the west was moved in towards the dwelling and a garage and shed constructed flush with the new fence. Other fencing at the site included a board-and-wire fence that enclosed the chicken house and carpenter shop. As recorded on images from 1987, pickets were missing from sections of the fence along the north, west, and east perimeter. The NPS replaced these pickets as part of the work completed at the site between 1987 and 1988. Superintendent Hartman stated: "It's a tedious, time-consuming job. There are thousands of pickets. Yet, when you arrive at the Lighthouse grounds, the shiny white fence is the first thing that strikes you" ("Ocracoke Lighthouse Keeper's Quarters to be Restored," July 17, 1987, Accession 191, Catalog 5037, Box 1, Folder 1, NPS/CAHA Collection).

Around 2001, the NPS moved the southern fence line forward in order to expand the parking area. In 2010, the NPS replaced the wooden pickets in kind along the entire fence. In conjunction with work on the lighthouse that occurred at the same time, a contractor replaced the existing front gate with an automatic gate because he felt it was too difficult to enter and exit the site. This work was done without NHPA Section 106 compliance (Assessment of Actions Having an Effect on Cultural Resources, July 23, 2001, Accession 229, Catalog 5511, Folder 10, NPS/CAHA Collection; Doug Stover, personal communication).

Concrete Curbing. Historically, there were no foundation plantings around the double keepers' quarters or outbuildings. Beds flanking the front entrances of the double keepers' quarters containing ornamentals were added at some point after 1952 when images show no foundation plantings. NPS staff added modern edging to the storehouse and double keepers' quarters at some point before 2005, when images show edging outlining beds with foundation plantings. Concrete parking blocks added north and south of the double keepers' quarters delineated parking spaces.

Telephone Poles. Telephone poles were installed inside the station in April 1916. A telephone in the office followed in October (Cloud 1993, 31).

Boundary Markers. One concrete boundary marker is located at the northeast corner of the property.

Fencing. Picket fencing encloses the site on four sides. A section of fencing extends past the northwest corner. Fencing has been repaired and/or replaced over the years. Entry into the site for park staff is through an automatic gate with controlled access, which was installed by a contractor working on the lighthouse in 2010. At some point, the NPS removed the rear gate. Current fence lines do not correspond to the original fence lines on the south and west, where fence lines were moved to accommodate parking and outbuildings. The wooden picket fence was first described in maintenance records from 1883 when the Light-House Board replaced it. It has enclosed the station as documented on historic maps and images since 1890 and is contributing.

Trash Can Enclosure. A wooden enclosure for two metal trash cans is located along the back (east) fence. Another metal trash can is located north of the parking lot. The wooden trash can enclosure is contributing to the cultural landscape.

Yard Hydrant. A yard hydrant, located north of the cisterns, is attached to a garden hose used to water plants. The yard hydrant is covered with rust. A modern wooden post with a metal bracket

allows the hose to be coiled when not in use. A modern outdoor spigot mounted on a wooden post is located near the rear of the double keepers' quarters. Although the age of the metal yard hydrant is unknown , it is covered with rust and is contributing.

Boundary Marker. A concrete boundary marker painted white is located in the northeast corner of the property and is contributing.

Concrete Curbing. Concrete parking blocks are used to help drivers to align their vehicles and know when to stop. Modern concrete blocks are used in the designated visitor parking area outside the picket fence. Four wooden bollards with reflectors mark the end of the parking area and separate it from the pedestrian boardwalk. Concrete blocks of an unknown age are used to mark staff parking spaces north and south of the double keepers' quarters. Modern edging delineates planting beds around the storehouse and double keepers' quarters. This modern concrete curbing is non-contributing to the cultural landscape.

Metal Grills. Each apartment of the double keepers' quarters has a metal park-type grill of an unknown age. The grills are non-contributing.

Heating, Ventilation, and Air Conditioning (HVAC). Four HVAC units sit atop the south cistern to meet mechanical code for flooding. A wooden panel blocks their view from the north. The HVAC units are non-contributing.

Donation Box. A replica lighthouse donation box is located at a jog in the raised boardwalk. The donation box is non-contributing.

Wayside and Signs. A wooden entry sign mounted on wooden posts is located west of the boardwalk at the edge of the grassed portion of the site. Immediately to the north, a wooden wayside mounted on wooden posts with two locked glass panels contains park maps and brochures. A shed roof protects the glass panels from wind and rain. Informational signage on a

wooden post sits at the beginning of the boardwalk. Various signs direct visitor parking. The wayside and signs are non-contributing.

Bicycle Rack. A metal bicycle rack sits south of the wooden entry sign. The bicycle rack is non-contributing.

Purple Martin House. A plastic purple martin house in mounted on a metal pole east of the drain field. The purple martin house is non-contributing.

Satellite Dish. A satellite dish is mounted on a metal post near the rear (east) of the property. It is out of sight of visitors. The satellite dish is non-contributing.

Landscape Features:

Feature Name: Fencing
Feature Contribution: Contributing
Latitude: [enter text here]
Longitude: [enter text here]
CRIS-HS Resource name: [enter text here]
CRIS-HS Resource ID: [enter text here]
FMSS Record Type: Asset
FMSS Record Number: 586563
Is FMSS Record Exact Match?: Yes
Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Trash Can Enclosure
Feature Contribution: Contributing
Latitude: [enter text here]
Longitude: [enter text here]
CRIS-HS Resource name: [enter text here]
CRIS-HS Resource ID: [enter text here]

FMSS Record Type: [enter text here]

FMSS Record Number: [enter text here]

Is FMSS Record Exact Match?: [enter selection here]

Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Yard Hydrant

Feature Contribution: Contributing

Latitude: [enter text here]

Longitude: [enter text here]

CRIS-HS Resource name: [enter text here]

CRIS-HS Resource ID: [enter text here]

FMSS Record Type: Asset

FMSS Record Number: 1649798

Is FMSS Record Exact Match?: Yes

Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Boundary Marker

Feature Contribution: Contributing

Latitude: [enter text here]

Longitude: [enter text here]

CRIS-HS Resource name: [enter text here]

CRIS-HS Resource ID: [enter text here]

FMSS Record Type: Asset

FMSS Record Number: 1464123

Is FMSS Record Exact Match?: Yes

Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Concrete Curbing

Feature Contribution: Noncontributing - Compatible

Latitude: [enter text here]

Longitude: [enter text here]

CRIS-HS Resource name: [enter text here]

CRIS-HS Resource ID: [enter text here]

FMSS Record Type: [enter text here]

FMSS Record Number: [enter text here]

Is FMSS Record Exact Match?: [enter selection here]

Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Metal Grills

Feature Contribution: Noncontributing - Compatible

Latitude: [enter text here]

Longitude: [enter text here]

CRIS-HS Resource name: [enter text here]

CRIS-HS Resource ID: [enter text here]

FMSS Record Type: [enter text here]

FMSS Record Number: [enter text here]

Is FMSS Record Exact Match?: [enter selection here]

Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Heating, Ventilation, and Air Conditioning (HVAC)

Feature Contribution: Noncontributing - Compatible

Latitude: [enter text here]

Longitude: [enter text here]

CRIS-HS Resource name: [enter text here]

CRIS-HS Resource ID: [enter text here]

FMSS Record Type: [enter text here]

FMSS Record Number: [enter text here]

Is FMSS Record Exact Match?: [enter selection here]

Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Donation Box

Feature Contribution: Noncontributing - Compatible

Latitude: [enter text here]

Longitude: [enter text here]

CRIS-HS Resource name: [enter text here]

CRIS-HS Resource ID: [enter text here]

FMSS Record Type: [enter text here]

FMSS Record Number: [enter text here]

Is FMSS Record Exact Match?: [enter selection here]

Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Wayside and Signs

Feature Contribution: Noncontributing - Compatible

Latitude: [enter text here]

Longitude: [enter text here]

CRIS-HS Resource name: [enter text here]

CRIS-HS Resource ID: [enter text here]

FMSS Record Type: [enter text here]

FMSS Record Number: [enter text here]

Is FMSS Record Exact Match?: [enter selection here]

Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Bicycle Rack

Feature Contribution: Noncontributing - Compatible

Latitude: [enter text here]

Longitude: [enter text here]

CRIS-HS Resource name: [enter text here]

CRIS-HS Resource ID: [enter text here]

FMSS Record Type: [enter text here]

FMSS Record Number: [enter text here]

Is FMSS Record Exact Match?: [enter selection here]

Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Purple Martin House

Feature Contribution: Noncontributing - Compatible

Latitude: [enter text here]

Longitude: [enter text here]

CRIS-HS Resource name: [enter text here]

CRIS-HS Resource ID: [enter text here]

FMSS Record Type: [enter text here]

FMSS Record Number: [enter text here]

Is FMSS Record Exact Match?: [enter selection here]

Associated CRIS-AR Resource ID: [enter text here]

Feature Name: Satellite Dish

Feature Contribution: Noncontributing - Compatible

Latitude: [enter text here]

Longitude: [enter text here]

CRIS-HS Resource name: [enter text here]

CRIS-HS Resource ID: [enter text here]

FMSS Record Type: [enter text here]

FMSS Record Number: [enter text here]

Is FMSS Record Exact Match?: [enter selection here]

Associated CRIS-AR Resource ID: [enter text here]



Fig 92. Picket fence (west) after addition of garage and shed, 1952. (NPS/CAHA Collection)



Fig 94. Storehouse after addition of edging, 2010. (NPS/CAHA Collection)



Fig 95. Boundary marker, 2013. (NPS/CAHA Collection)



Fig 96. Picket fencing along the entry road, 2013. (NPS/SER-CRPS Collection)



Fig 97. Trash can enclosure along the back fence, 2014. (NPS/SER-CRPS Collection)



Fig 98. Yard hydrant attached to garden hose, 2014. (NPS/SER-CRPS Collection)

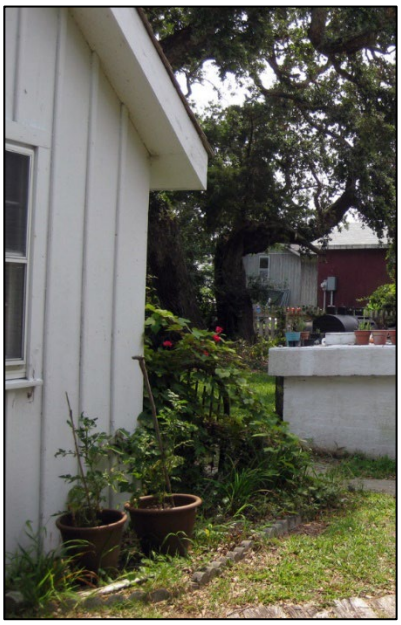


Fig 99. Modern edging pavers lining beds outside the storehouse, 2013. (NPS/SER-CRPS Collection)



Fig 100. HVAC units, 2014. (NPS/SER-CRPS Collection).



Fig 101. Donation box, 2014. (NPS/SER-CRPS Collection).



Fig 102. Signage at entrance to boardwalk, 2013. (NPS/SER-CRPS Collection)

Archeological Sites

Archeological sites are the locations of ruins, traces, or deposited artifacts in the landscape and are evidenced by the presence of either surface or subsurface features. Only sites identified in approved National Register documentation are identified in this report.

Summary:

SEAC monitored work being done on the double keepers' quarters in June 1987. In order to create sufficient crawl space for making repairs to the sub-flooring, "drift" sand was removed by a commercial sand vacuum truck. SEAC uncovered cultural materials from several locations within the areas monitored. After removal of drift sand from the 1929 wing, at a depth of about 2½ feet below the flooring, archeologists recovered loose bricks with a soft mortar. At a depth of about 3 feet below the flooring, a pre-addition midden dating to the mid-nineteenth century was observed and left in situ. In removing the sand from an addition to the 1929 wing, archeologists discovered that the western half of the crawl space lies upon the slabs of an earlier concrete walk. Archeologists also monitored a series of utility trench excavations that included both hand and machine methods. All of the areas monitored, with the exception of the 1929 wing, appeared to be light-to-moderate redepositions of materials with little potential for providing insight into domestic activities at the keepers' quarters (Paul Y. Inashima, "Archeological Monitoring Report Sand Removal and Utility Trench Excavation a the Ocracoke Light Station Keeper's Quarters," 1987, Accession 360 Catalog 5608, Folder 6, NPS/CAHA Collection).

Chapter 9: Condition Assessment

Assessment Interval:

6

Condition

Condition:

Fair

Condition Date:

09/14/2022

Primary Inspector Name:

[opt. enter name here]

Profession/Credentials:

[opt. enter selection here]

Narrative:

The Ocracoke Light Station and its environs are susceptible to some negative impacts, and the overall condition of the Ocracoke Light Station cultural landscape is characterized as "fair." The buildings, structures, trees of the Ocracoke Light Station continue to face threats of English ivy and other invasive exotics. Nonhistoric foundation plantings and plantings in the beds around the double keepers' quarters are incompatible with the cultural landscape and have the potential to cause damage to the buildings on site in the future. Replacement of certain materials and structural elements of landscape features including the windows and doors of the lighthouse and the paving materials of the path between the quarters and storehouse have negatively impacted the material integrity of the property, and inappropriate construction and extension of the boardwalk and the installation of an automatic gate have furthered this negative impact to integrity. The automatic gate was replaced with a CLR-recommended swing gate, and personal items of residents around the site are removed now that the quarters do not serve as housing. The boardwalk extension continues to degrade historic views and vistas. Normal exposure to elements has caused the metal yard hydrant to rust and climate change and consequent rising sea level will only exacerbate negative impacts to the cultural and natural resources on site. Hurricane Dorian (2019) is the most recent example of increased storm events that can damage

the site. While raising some of the buildings, as noted in the EA preferred alternative, will help protect them from future flooding, there is potential for collateral damage to the site's mature, historic trees and vegetation.

Impacts

Seq. No.	Type	Impact Type – Other	Internal Source?	External Source?	Narrative	Date Identified
xx			Yes/No	Yes/No	1000 Char.	mm/dd/yyyy
01	Vegetation/Invasive Plants		Yes	Yes	English ivy and other invasive exotics are currently impacting trees and buildings on site and should be removed.	07/25/2016

02	Planting Practices		Yes	No	Historically there were no foundation plantings around the double keepers' quarters and storehouse. Ornamentals and herbaceous plant material planted in beds around these buildings are impacting historic integrity and may be trapping moisture leading to deterioration of the foundation piers. New herbaceous material should not be added to the beds and as plants decline, they should not be replaced. Chinaberry seedling growing in the bed adjacent to the south apartment of the double keepers' quarters should be removed to avoid damage to the structure.	07/25/2016

03	Removal/Replacement		Yes	No	The material of the original brick walkway that connected the double keepers' quarters and the storehouse is currently wood, which impacts material integrity. In 1989, a contractor hired by the USCG removed the original windows and installed vinyl-clad replacements. The historic wooden entrance door was also removed and replaced with a modern metal door. After intervention by community activists, the USCG agreed to pay for the repair/reconstruction of the original wood windows and entrance door, which were fabricated and installed by the NPS in 1990. The double sash windows were retrofitted into the vinyl track of the 1989 thermal replacement windows, which was left in place. Questions exist as to the condition of these windows, the vinyl track in which they have been placed, and the quality of wood chosen for the repaired and reconstructed windows.	07/25/2016

04	Other	Inappropriate Construction /Installation	Yes	No	The current configuration of the boardwalk with handrails is an inappropriate design that detracts from the spatial character of the light station and degrades views and vistas. It should be removed or returned to its original smaller footprint. An automatic gate installed by a contractor without NHPA compliance should be removed if staff moves out of the double keepers' quarters and the driveway is returned to pedestrian use. It detracts from the picturesque character of the site.	07/25/2016

05	Operations on site		Yes	No	Views inside the light station are being degraded by resident's personal items like Horton Haulers, boats, and camper shells. Guidelines for residential occupancy of these buildings should be developed and enforced.	07/25/2016
06	Exposure to elements		No	Yes	The metal yard hydrant located near the cisterns is covered with rust and attached to a garden hose used to water plants. It should be preserved if further research shows it to be historic. Consult with NPS/SER-CRPS Museum and Archival Services if a metal conservator is needed.	07/25/2016

07	Other	Climate Change	No	Yes	Impacts of rising sea levels due to climate change include coastal erosion; coastal inundation (including wetlands); increased storm surge; loss of habitat, property, and cultural resources; and degradation of surface and groundwater quality. Highly productive coastal wetland ecosystems, which provide habitat for many species, act as filters to improve ground and surface water quality, provide an economic base for many coastal communities, offer recreational opportunities, and protect local areas from flooding, are particularly vulnerable to sea-level rise.	07/25/2016

08	Operations on Site		Internal		In response to Hurricane Dorian (2019) and the threat of continued sea level rise, the park is researching proposals to raise some of the buildings above present grade. While this may preserve these buildings, the contributing vegetation and spatial organization of the site could be impacted.	07/25/2016

Chapter 10: Treatment

Stabilization Measures

Stabilization Measure Narrative (R)	Stabilization Cost (R)	Stabilization Cost Date (R)	Estimate Level (R)	Cost Estimator (R)	Cost Narrative
N/A	N/A	N/A	N/A	N/A	N/A

Approved Treatments

Type	Com-pleted	Approved Treatment Doc.	Doc Date	Narrative	Approved Treatment Cost	Cost Date	Estimate Level	Estimator	Cost Narrative
Rehabilitation		Cultural Landscape Report							

Chapter 11: Bibliography and Supplemental Information

Bibliography

See attached Excel spreadsheet.

Supplemental Information

Seq. No.	Supplemental Information Title	Supplemental Information Narrative
N/A	N/A	N/A

Appendix

Landscape Features

Seq. No.	Feature Name	Feature Contri-bution	CLI Feature ID	Latitude	Longitude	CRIS-HS Resource Name	CRIS-HS Resource ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match?	CRIS-AR ID
	Spatial Organization										
01	Spatial pattern between lighthouse and support buildings/structures	Contributing									
02	Layout of parking area and boardwalk	NC-Incompatible									
	Land Use										
03	Navigation	Contributing									
04	Housing	Contributing									
05	Interpretation and Recreation	NC - Compatible									
	Topography										

06	Higher elevation of the light station	Contributing									
07	Drain field	NC - Compatible									
	Vegetation										
08	Live Oaks	Contributing						Asset	146193	Yes	
09	Cedars	Contributing						Asset	146194	Yes	
10	Bald Cypresses	Contributing						Asset	146195	Yes	
11	Open expanses now in lawn	Contributing						Asset	1141339	Yes	
12	Native marsh grasses	Contributing									
13	Ornamentals planted by residents	NC - incompatible									
	Circulation										
14	Driveway into station	Contributing						Location	28969	No	

15	Walkway from Double Keepers' Quarters to Lighthouse	Contributing						Asset	1464115	Yes	
16	Walkway from southeast of Lighthouse to driveway	Contributing						Asset	1464117	Yes	
17	Walkway around Double Keepers' Quarters	Contributing						Asset	1464118	Yes	
18	Walkway from Double Keepers' Quarters to Storehouse	Contributing						Asset	1464120	Yes	
19	Wood walk	NC - incompatible									
20	Boardwalk	NC - incompatible									
21	Parking area	NC - compatible									

	Buildings and Structures										
22	Ocracoke Lighthouse	Contributing	LCS 000016	35.11073412990821	-75.98600713566984	Ocracoke Lighthouse	000016	Location	29670	Yes	
23	Double Keepers' Quarters	Contributing	LCS 007237	35.11032170573148	-75.98571687896272	Ocracoke Light Station Keepers' Quarters	007237	Location	29671	Yes	
24	Concrete Oil House	Contributing	LCS 091909	35.11074475243815	-75.98580975499857	Ocracoke Light Station Oil House	091909	Location	29675	Yes	
25	Cisterns	Contributing	LCS 091911			Ocracoke Light Station Cisterns (Batch)	091911	Location	29678	Yes	
26	Storehouse	Contributing	LCS 091907	35.11061950739695	-75.98568754709002	Ocracoke Light Station Shed	091907	Location	29672	Yes	

27	Carpenter Shop	Contributing	LCS 091908	35.110520061731094	-75.98571926759622	Ocracoke Light Station Tool Shed	091908	Location	29674	Yes	
28	Privy	Contributing	LCS 091910	35.11052961323913	-75.98565354657966	Ocracoke Light Station Privy	091910	Location	29677	Yes	
29	Generator House	NC - Compatible									
	Views and Vistas										
30	Sight lines along a central northeast to southwest axis aligned with the double keepers' quarters and a cross axis on the northwest	Contributing									
31	Views to the Pamlico Sound	Contributing									
32	360° views from top of lighthouse	Contributing									
33	Views across Silver Lake	Contributing									

34	Views of boardwalk and parking area	NC - incompatible									
	Small-Scale Features										
35	Fencing	Contributing						Asset	586563	Yes	
36	Trash Can Enclosure	Contributing									
37	Yard Hydrant	Contributing						Asset	1649798	Yes	
38	Boundary Marker	Contributing						Asset	1464123	Yes	
39	Concrete Curbing	NC - Compatible									
40	Metal Grills	NC - Compatible									
41	Heating, Ventilation, and Air Conditioning (HVAC)	NC - Compatible									
42	Donation Box	NC - Compatible									

43	Wayside and Signs	NC - Compatible									
44	Bicycle Rack	NC - Compatible									
45	Purple Martin House	NC - Compatible									
46	Satellite Dish	NC - Compatible									