## FORT MONROE HISTORIC PRESERVATION MANUAL AND DESIGN STANDARDS

FINAL DRAFT FOR REVIEW BY THE VIRGINIA DEPARTMENT OF HISTORIC RESOURCE AND THE NATIONAL PARK SERVICE

### HANBURY EVANS WRIGHT VLATTAS + COMPANY AUGUST 2011



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#### PART 1 – OVERVIEW

Introduction
Historic Context
National Historic Landmark District1C
Programmatic Agreement 1D
Management Zones1E
Reuse Plan1F
Project Review Processes 1G

## PART 2 – DESIGN STANDARDS FOR THE TREATMENT OF HISTORIC PROPERTIES

Introduction	2A
Treatment Approaches	2B
Management Zones	2C
Architectural Styles	2D
Materials and Methods	2E
Glossary	2F

#### PART 3 – DESIGN STANDARDS FOR NEW CONSTRUCTION

Introduction	.3A
New Construction	.3B
Additions and Reconstructions	.3C
Site Furnishings	3D
Sustainable Design	.3E

#### PART 4 – RESOURCE INVENTORY

Introduction	A
Resource Summary 4	В
Resource Inventory	С

## Fort Monroe overview

This section provides background information on Fort Monroe. It has a brief history of the fort, a description of the Fort Monroe National Historic Landmark (NHL) District, information on the policies that govern the reuse of the site, and information on the process to rehabilitate and maintain historic properties and for new construction.

	1
1A	Introduction
1B	Historic Context
1C	National Historic Landmark District 1C.1
1D	Programmatic Agreement
1E	Management Zones
1F	Reuse Plan 1F.1
1G	Project Review Processes

## Fort Monroe introduction

The Fort Monroe Historic Preservation Manual and Design Standards (Design Standards) were developed to guide the preservation restoration; and rehabilitation, of the contributing elements to the Fort Monroe National Historic Landmark (NHL) District and to guide new construction, additions, and reconstruction of buildings so that they are compatible with the overall character of the district. The Design Standards were developed as a requirement of the Programmatic Agreement (PA) for the Closure and Disposal of Fort Monroe and are based upon, and consistent with, sound and accepted preservation practices. Implementation and application of the Design Standards are a "Living Document" and may be amended.

The *Design Standards* contain the information to guide residents, developers, property managers, and contractors on the care, treatment, and planning policies for existing historic buildings, structures, objects, and landscapes. They shall be applied to all undertakings at Fort Monroe, including building rehabilitation, new construction, maintenance, or any activity that has the potential to affect historic resources directly or indirectly. The *Design Standards* are not zoning regulations, nor are they building codes. The *Design Standards* are based upon presentation practices and standards and are prescriptive measures to ensure that the historic resources at Fort Monroe are maintained and that new construction will be compatible with the overall character of the Fort Monroe NHL District.

The Fort Monroe Authority (FMA) is charged with the reuse planning and management of Fort Monroe and Old Point Comfort. The Fort Monroe Historic Preservation Officer (FMHPO) is a position maintained by the Fort Monroe Authority (FMA). The FMHPO is the full-time, on-site preservation expert for Fort Monroe and is responsible for applying, and interpreting the *Design Standards*. All undertakings at Fort Monroe must be reviewed by the FMHPO. The *Design Standards* spell out the processes for project reviews and how the *Design Standards* shall be applied.

The Design Standards are organized as follows:

<u>Part 1 - Introduction</u>: The introduction provides background information on Fort Monroe. It has a brief history of the fort, a description of the Fort Monroe NHL District, information on the policies that govern the reuse of the site, and information on the process to rehabilitate and maintain historic properties and for new construction.

Part 2 - Design Standards for the Treatment of Historic Properties: This section explains the philosophies for building rehabilitation, restoration, preservation, and maintenance; establishes planning



principles for the treatment of historic properties; and makes clear what is important to protect, maintain, and preserve. Part 2 also outlines planning principles for each management zone, identifies character defining features, and provides direction on the appropriate ways to maintain, restore, or replace character defining features and materials.

<u>Part 3 - Design Standards for New Construction</u>: This section covers the planning principles for new construction. It also provides guidance for compatible building massing, materials, and architectural features that are appropriate to the character of the Fort Monroe NHL District.

Part 4 - Resource Inventory: This is an inventory of buildings, objects, and landscapes which contribute to the Fort Monroe NHL District. Each resource has a physical description, history, and a description of character defining features. This section shall be used as the basis for building rehabilitation, restoration, preservation, and maintenance.

The *Design Standards* will guide development, construction, preservation, and maintenance in the reuse of Fort Monroe to assure the protection and preservation of this national historic treasure.

# Fort Monroe historic context

Fort Monroe is a diverse collection of buildings, structures, and landscapes rich in military and American history. The concentration of historic resources is along Ingalls Road, Fenwick Road, and within the walled fort, and those areas demand careful attention.



Fort Monroe is a unique site in Virginia in terms of history and geography. It is located in Hampton, Va., on Old Point Comfort where the Hampton Roads Harbor and Chesapeake Bay meet. Old Point Comfort has been the site of fortifications since colonial times. The present Stone Fort was constructed as part of the Third System of coastal fortifications. The Third System forts were designed to be state-of-the-art for siege warfare in the early 1800s, and all of the forts were designed to be substantial masonry structures. Fort Monroe, however, is unique in that it is the largest of the Third System forts; it is built of stone, whereas the others are brick masonry; and it has a moat. The Stone Fort is an exceptional example of engineering and design.

Construction began on the Stone Fort in 1819 and continued until it was declared complete in 1836. As soon as construction began, the fort was home to the Artillery Corps. The evolution of the Artillery Corps into the Field Artillery School and Coastal Artillery School defined the development of Fort Monroe beyond the original stone walls. Structures to aid the Army's mission were



Fort Monroe, Ca. 1861

built, renovated, or torn down inside and outside the fort walls with every major Army building campaign. Though only a few of the original permanent buildings remain, there is a diverse and extensive inventory that portrays Fort Monroe's military history.

The Period of Significance for Fort Monroe, defined as the length of time when a property was associated with important events, activities, or persons; or attained the characteristics which qualify it as a National Historic Landmark, is from the beginning of construction in 1819 until 1961. Culturally, the Civil War is the fort's most significant period. The fort remained occupied by Union Forces and was never attacked by the Confederates. It served as the staging area for attacks along the Confederate seaboard and against Richmond, Va. It was during this period that the fort earned the name "Freedom Fortress." Thousands of slaves came to Fort Monroe seeking refuge. When they arrived at Fort Monroe, they were declared contraband, the spoils of war, by the commanding officer General Benjamin Butler.



Fort Monroe, Ca. 2005

#### PERIODS OF DEVELOPMENT

Fort Monroe has continually evolved over the past 190-plus years since the Stone Fort was begun. Construction was not only limited to the fortification wall, there were also quarters, workplaces and support buildings built both inside and outside the walls. Growth spurts on the site naturally coincide with nationwide Army building campaigns that followed almost every major war effort. The presence of the Artillery Corps also influenced development. Training facilities specific to the Corps and housing for students and instructors are a significant portion of the historic fabric. Many buildings are standard Quartermaster Corps designed offices and housing units, but there are several uncommon structures, such as the Endicott-era batteries that are a part of the inventory because Fort Monroe is a coastal fortification.



Parade Ground

In 1987, the Historic American Buildings Survey (HABS) undertook a comprehensive survey of buildings at Fort Monroe constructed before the 1960 landmark designation. The HABS/HAER documentation, *The Architectural Heritage of Fort Monroe: Inventory and Documentation of Historic Structures Undertaken by the Historic American Buildings Survey*, divided the development of Fort Monroe into six distinct historic periods:

1819 - 1860	The Construction Period
1861 - 1865	The Civil War
1866 - 1899	Post Civil War Expansion
1900 - 1929	Early Twentieth Century Development
1930 - 1945	Depression/WWII Development
1946 - 1987	Post WWII Development

North Gate

These historic periods begin at the construction of the fort and do not include prehistoric periods defined by the SHPO.

<u>The Construction Period</u>: Fort Monroe was the largest fort constructed under the Third System and the fort and buildings constructed during this time are included in this period. The Artillery Corps was established early on at Fort Monroe, thus setting the stage for future development of the post as a training installation. Except for Building 27, the Old Arsenal, all the structures from this period are within the moat.

<u>The Civil War</u>: Although this is an extremely significant period in the fort's history, no structures built during this period remain. Most of the construction during this time was temporary for the war effort and was taken down or replaced in the Army's building campaign in the 1870s.



Postern Gate



Building 83 – The Old Post Office



Coastal Artillery School Housing

<u>Post Civil War Expansion</u>: After the Civil War, the Artillery Corps was reestablished at Fort Monroe. The construction during this period is largely due to a nationwide Army building campaign for renovation and construction. The post Headquarters, the Old Post Office (Building 83), the frame houses inside and outside the moat, and Building 5 are from this period.

Early Twentieth Century Development: During this era, the artillery corps, which encompassed both field and coastal artillery, became separate units. The Coastal Artillery School was located at Fort Monroe. The construction of the Coastal Artillery School Complex (the current-day Training and Doctrine Command (TRADOC) complex) and much of the housing on Fort Monroe is from this period. Construction of the Endicott Batteries was also completed during this period.

Depression/WWII Development: Fort Monroe was severely damaged during the hurricanes of 1933. Funding through the Public Works Administration helped rehabilitate the Fort and made possible other major projects including the seawall, the Coastal Artillery School housing, the completion of Randolph Hall and many of the industrial shop buildings north of Patch Road. This period saw a major trend of development to the north on Ingalls Road.

<u>Post WWII Development</u>: As coastal artillery became obsolete, and the Coastal Artillery School was relocated to California, Fort Monroe became the headquarters for the Army Ground Forces and eventually the U.S. Army Training and Doctrine Command (TRADOC), continuing the installation's long history as a training post. Until Hurricane Isabel in 2003, very little was constructed at Fort Monroe after WWII. The hurricane necessitated that many temporary buildings built during WWII, and damaged by the storm, be demolished and replaced.



Building 138 – Coastal Artillery School Complex

The following map graphically depicts the periods of development as described above. It gives a very clear picture of how the fort developed beyond the original stone walls.



## Fort Monroe national historic landmark district

Fort Monroe was designated a NHL in 1960 and was listed on the National Register of Historic Places in 1966. In the 1970s, the boundary of the NHL was defined as the entire area of Fort Monroe bound by the seawall.

	1C
1C.1	Historic District Boundaries 1C.3
1C.2	Inventory
1C.3	Historic Landscapes 1C.5
1C.4	Historic Viewsheds 1C.7
1C.5	Transportation Networks

1C.6 Archaeology .....1C.11

#### FORT MONROE NATIONAL HISTORIC LANDMARK DISTRICT





Quarters 1



Quarters 17



Battery Parrott

#### 1C.1 HISTORIC DISTRICT BOUNDARIES

Fort Monroe was designated a National Historic Landmark (NHL) in 1960. The Fort Monroe NHL District documentation prepared in 1975 describes the boundaries of the historic district verbally as "...all that land on Point Comfort enclosed by its sea wall." The accompanying map defined the area with a parallelogram that encompassed the entire peninsula to where the sea wall ends near the northern limit of the fort, just below Dog Beach. It also included a portion of Phoebus and almost all of Mill Creek because of the regular polygon drawn to define the district. Phoebus and Mill Creek were not included in the text of the nomination's written description of the fort.

Currently, it is generally accepted that the boundary of the Fort Monroe NHL District is roughly the shoreline of Old Point Comfort along Mill Creek to the north, Hampton Roads to the west and south, and the eastern edge of the district follows the sea wall along the Chesapeake Bay to the point where it ends and then the boundary crosses the peninsula to reconnect to Mill Creek.

The Programmatic Agreement (PA) for the Closure and Disposal of Fort Monroe recognizes the entire 570 acre site of the Old Point Comfort Peninsula, including the area extending north from the seawall to the property line abutting the community of Buckroe, as contributing to the Fort Monroe NHL District.

#### 1C.2 INVENTORY

The 1975 Fort Monroe NHL District documentation does not include an extensive inventory of structures. It mentions the Stone Fort designed by Simon Bernard and the text lists "significant buildings still standing" to include: Quarters 1, Building 17 (Tuileries), Building 27 (The Old Arsenal), Old Point Comfort Lighthouse, Engineer Wharf, Quarters 50, Battery Irwin, Battery Parrott, Battery DeRussy, Battery Church, Battery Anderson, and Battery George Ruggles.

There have been more extensive inventories of the fort. The most recent inventory is included in the *Fort Monroe Historic Architecture Repair and Maintenance Plan* (HARAM), prepared by the Army in 2001. The HARAM is a four-volume set, which extensively documents the historic resources and includes several that were not included in the 1987 survey by the Historic American Buildings Survey *The Architectural Heritage of Fort Monroe*.

As of the date of signature of the *PA*, there are 189 contributing resources to the Fort Monroe NHL District including 175 historic buildings, three historic structures, nine historic landscape features, one historic object, and the Stone Fort which is made up of eleven named or numbered segments. Of these resources, four have been determined to be individually eligible for the National Register of Historic Places (NRHP) and 112 buildings have been determined to have significant interior features. The four resources determined individually eligible for the NRHP are the Chapel of the Centurion, Quarters 1, Quarters 17 (the Lee Quarters), and the Stone Fort.



Image Provided by ERDC/CERL





Cannon Park, Ingalls Road



Continental Park with the Chamberlin Hotel



Pet Cemetery

#### 1C.3 HISTORIC LANDSCAPES

Fort Monroe is a complex, continuously evolving landscape over several periods of history. Previous fortifications, Fort Algernon, an unnamed fort, and Fort George were located on Old Point Comfort in the Colonial Period. Fort Algernon and the unnamed fort burned and Fort George was destroyed by a hurricane. The construction of the Stone Fort, after the War of 1812, began a period of permanent construction on Old Point Comfort. The establishment of the Artillery School of Practice set the course for Fort Monroe to be one of the Army's primary training facilities.

Even before the construction of Fort Monroe was considered complete in 1836, a thriving tourism industry developed as hotels, initially built to house workers constructing the fort, made Old Point Comfort a leading resort destination. Hotels such as the Hygeia and Chamberlin were popular destinations with tourists arriving by steamship via the Baltimore Wharf. There were many iterations of the Hygeia Hotel that were either demolished or destroyed by fire. The first Chamberlin Hotel was also destroyed by fire. A new Hotel Chamberlin, built in the 1920s, still stands as a reminder of Old Point Comfort's resort history.

As the Army's training mission evolved and Fort Monroe became the Coastal Artillery School in 1907, the military development of Old Point Comfort was further expanded outside of the Stone Fort by construction of housing, training and administration buildings for the newly established school. Much of the present day construction along Ingalls Road can be attributed to the Coastal Artillery School.

The Fort Monroe Historic Landscape Inventory, Evaluations and Recommendations prepared in 2010 by the US Army Corps of Engineers Engineering Research and Development Center/Construction Engineering Research Laboratory (ERDC/ CERL), identified seven geographic areas of landscape development based on the evolution of the fort over 100 years and changing uses, missions and technologies (see map on page 1C.4). Those component landscapes are:

- 1. The Stone Fort
- 2. The Ordinance/Quartermaster yards and school
- 3. Ingalls Road
- 4. The Batteries
- 5. Interwar/WWII
- 6. Training and Recreation
- 7. Cold War



Image Provided by ERDC/CERL

#### FORT MONROE NATIONAL HISTORIC LANDMARK DISTRICT



Flag Staff Bastion

#### 1C.4 HISTORIC VIEWSHEDS

Viewsheds encompass all landscape features (land, water, and other environmental elements) that are visible to the human eye from fixed vantage points.

Viewsheds and views have great importance to Old Point Comfort. The views from the fort provided strategic defense. The views to the point and Old Point Comfort Lighthouse still provide navigational aid. There are also viewsheds within the site. These are views of buildings, objects, and landscapes significant in the development and defining the character of Fort Monroe.

The *Fort Monroe Historic Viewsheds* analysis prepared in 2010 by the US Army Corps of Engineers ERDC/CERL inventoried significant historic views and evaluated their integrity. In all, 41 views were identified and evaluated on the basis of significance and integrity (see map on page 1C.6).



Jefferson Davis Memorial Arch



View to Building 5 from the Lincoln Gun





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View
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Viewshed: Viewshed refers to all visible elements that can be seen from a certain viewpoint. Viewsheds are both external and internal. External viewsheds are those with views from viewpoints outside of Fort Monroe, while internal viewsheds are viewpoints from within Fort Monroe.

**Viewpoint**: Viewpoint is the exact point a person is standing when looking at a view.

View: A scene or vista that can be seen when looking in one direction standing at a certain viewpoint. The views in this report are illustrated through photographs.



#### 1C.5 TRANSPORTATION NETWORKS

Historically Fort Monroe has been accessed by a variety of transportation systems, most notably ship and rail. These modes of travel have greatly influenced the current transportation network, which is exclusively roadway. When the stone fort was built, its only connection to a roadway system was to Ingalls Road via the Main Gate. Ingalls Road is, and has always been, Fort Monroe's "Main Street" extending from the current entrance gate to the location of the Baltimore Wharf. Every primary traffic route within the post connects to Ingalls Road.

Rail lines have had the greatest impact on the layout of the circulation system. Although no railroad tracks on the surface remain, in the 1890s, a rail line connected Fort Monroe to the Chesapeake and Ohio Railroad and a trolley line connected Fort Monroe to Hampton and Newport News. An internal rail network, operated by the Army, serviced the Endicott Batteries, Engineer Wharf, and the warehouses located north of Patch Road. McNair Drive follows the alignment of the Chesapeake and Ohio's trestle bridge along the west edge of the Fort. Internal roads such as Eustis Lane, Patch Road, and Fenwick Road follow the Army's rail network. The trolley line terminated at the end of Ingalls Road on the Baltimore Wharf.

A popular method of travel to Old Point Comfort was by steamship. Engineer Wharf, located near the lighthouse, was the only wharf servicing Fort Monroe prior to the Civil War. The current wharf there is a new structure in the historic location. In 1862 the Baltimore Wharf was constructed at the southern end of Ingalls Road. As its name suggests, it serviced steamships from Washington, D.C. and Baltimore. Baltimore Wharf was removed in 1961.



#### FORT MONROE NATIONAL HISTORIC LANDMARK DISTRICT



#### 1C.6 ARCHAEOLOGY

There is one identified archaeological site, 44HT27, within the Fort Monroe NHL District. Site 44HT27 has 21 numbered loci, ten of which and part of an eleventh, are considered eligible for inclusion on the National Register of Historic Places (NRHP), five of which and parts of two other loci are not eligible, three of which and parts of two other loci require further investigation to determine conclusively their eligibility in terms of NRHP criteria.

Additional loci are likely. The archaeological resources located within the landmark district are likely to cover a broad range of time and be significant for their association not only with the military and other historic-period use of the property, but also for the prehistoric and Native American use of the property.

While the entire property is part of a large archaeological site and some areas have significant cultural material that contribute to the importance of Fort Monroe, there are also areas that are unlikely to contain significant cultural material as a result of past land use and disturbances. In order to appropriately manage the resources that are significant, a process has been established to ensure that archaeological considerations are part of all ground disturbing activities at Fort Monroe.

## Fort Monroe programmatic agreement

The Army's decision to close Fort Monroe is an undertaking that requires compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations 36 CFR 800, Protection of Historic Properties. Section 800.14 of the regulations spells out a variety of methods available for Federal agencies to meet Section 106 obligations. A Programmatic Agreement is a document that records the terms and conditions agreed upon to resolve potential Adverse Effects of a Federal agency program, complex undertakings, or other situations, such as the closure of Fort Monroe.



#### 1D.1 SYNOPSIS OF THE PROGRAMMATIC AGREEMENT

The *Programmatic Agreement (PA)* among the United States Army, the Virginia State Historic Preservation Officer (SHPO), the Advisory Council on Historic Preservation (ACHP), the Commonwealth of Virginia, the Fort Monroe Authority (FMA) and the National Park Service (NPS), is based on a number of principles that the concurring parties above agree to be guided by in their future use and management of Fort Monroe. The principles include:

- » The importance of preserving the NHL status of Fort Monroe
- » The use of Historic Property Management Zones as a basis for managing and treating Fort Monroe's historic properties
- » The importance of public access
- » The importance of economic sustainability
- » The desire not to take action that would preclude the use of all or part of Fort Monroe as a National Park or partner with the NPS until such time as the Commonwealth and FMA have evaluated such opportunities

The PA also outlines actions that will be taken by the Army, the FMA, and the Commonwealth of Virginia. The Army's stipulations covered actions that occurred prior to the Army's departure and included activities such as environmental clean-up, property management, mothballing historic properties and completing additional resource identification studies such as a Significant Viewshed Analysis and a Cultural Landscape Study. The FMA is responsible for the development of a Historic Preservation Manual that will contain Design Standards for historic properties and new construction. The FMA is also tasked with the development of an Interpretive and Educational Programs Plan. The Commonwealth of Virginia is responsible for ensuring many things occur once they assume responsibility for the management of the property. These include provisions for conducting ongoing property evaluation and condition assessments; provisions for identifying and treating archeological resources; provisions for appropriate protective mechanisms in the event of sale transfer or lease of property; specifics for a continuing review process for future activities at Fort Monroe, i.e. the establishment of a FMHPO; and other responsibilities.

Administrative Provisions reflecting the implementation of the PA include:

- » Professional standards and qualifications
- » Document review time frames
- » Procedures for addressing late discovery
- » Procedures for resolving disputes
- » Procedures for handling emergency actions
- » Annual reporting and meeting requirements
- » Procedures for amending and terminating the PA
- » Anti-Deficiency Act statement
- » A statement of duration for the PA

#### PROGRAMMATIC AGREEMENT



#### 1D.2 THE FORT MONROE HISTORIC PRESERVATION OFFICER

The Fort Monroe Historic Preservation Officer (FMHPO) is the on-site historic preservation expert assigned to Fort Monroe by the Commonwealth of Virginia. The FMHPO has a variety of duties that are defined by the *Programmatic Agreement for the Closure and Disposal of Fort Monroe*. Those duties include:

- » Function as the historic preservation expert at Fort Monroe for the Commonwealth
- » Review of proposed undertakings at Fort Monroe to evaluate effects to historic properties
- » Act as a liaison between the Commonwealth and project proponents and advise on undertakings affecting historic properties
- » Act as a liaison between the Commonwealth and the public concerning historic preservation issues at Fort Monroe
- » Coordinate Project Reviews with the State Historic Preservation Officer (SHPO) and the Fort Monroe Authority (FMA)
- » Coordinate public notification and stakeholder involvement in undertakings occurring at Fort Monroe
- » Develop a public notification and stakeholder involvement protocol

The terms "undertaking," "activity," and "project" are used to describe a variety of actions including building maintenance, rehabilitation, and new construction and reconstruction. Any undertaking at Fort Monroe has the potential to affect the fort's historic properties. This includes buildings, structures, landscapes, viewsheds, objects, and archaeological resources. An evaluation for potential effect is required for all actions. The FMHPO is the point of contact for these evaluations and will coordinate project reviews with the SHPO and the FMA. Application and interpretation of these Historic Preservation Design Standards is the responsibility of the FMHPO as part of that review process.

The flow chart on Page 1D.4 outlines the process defined in the PA that the FMHPO will follow for the review of undertakings at Fort Monroe. The process is designed to identify historic resources, evaluate the effect of the undertaking, and avoid or minimize Adverse Effects. In cases where an adverse effect cannot be avoided, a legally binding Mitigation Agreement may be developed with agreed upon measures to mitigate the adverse effect. Section 1G of the *Design Standards* outlines the review processes for different types of undertakings that may occur and the steps that project proponents will follow for project review. Identifying historic resources, evaluating the affect of an undertaking, and applying the criteria of adverse effect have been integrated into reviews at specific stages of the project to help project proponents understand what is important to protect, maintain, and preserve.

# Fort Monroe management zones

Seven Management Zones have been established as a foundation for a comprehensive approach for the management and treatment of the diverse and numerous resources found at Fort Monroe. Five zones are established geographically and two are based on resource types. This section defines the geographic boundaries for each zone and identifies the two resource types.




# MANAGEMENT ZONES

There are seven individual zones as laid out in the *PA*. Zones A–E are geographically based upon consideration of historic and existing architectural character, current and past land uses, construction periods and concentration of contributing resources. Two zones are based on resource type: The Endicott Batteries and those properties individually eligible for listing on the National Register of Historic Places.

 Zone A – West Peninsula: Boundaries are the Buckroe/Fort Monroe property line to the north; the shoreline along Mill Creek from Buckroe/Fort Monroe property line and the southern edge of Walker Airfield to the west; a line from Mill Creek along the southern edge of DeRussy Field to Fenwick Road to the south, and; along the Seawall north of the Bay Breeze Community Center (Building 185) to the Buckroe/Fort Monroe property line to the east.

<u>Character:</u> Zone A is very sparsely developed; it is primarily open space with single-story, utilitarian structures.

2. Zone B - East Peninsula, Wherry Quarter: The northern boundary follows a line from the seawall just north of the Bay Breeze Community Center (Building 185) to Fenwick Road, then follow the center line of Fenwick Road to the south of DeRussy Field, then follow a line west to the Mill Creek shoreline at the southern edge of Walker Airfield; the western boundary will follow a line from the center line of Fenwick Road at the Bay Breeze Community Center (Building 185) to south of DeRussy Field, from the Mill Creek shoreline at the southern edge of Walker Field to the intersection of Stilwell Drive and North Gate Road; the southern boundary extends from Mill Creek at the intersection of Stilwell Drive and North Gate Road southeast along the northern edge of the parking lot to the opening of the two 72" diameter culvert pipes in the counterscarp wall north of the Northwest Bastion of the Stone Fort, proceed along the center line of Patch Road north to Griffith Road, then turns east and follow the center line of Griffith Road to Fenwick Road and beyond to the seawall in order to encompass all of the Wherry housing; the eastern boundary extends north along the seawall from the termination of the southern boundary to the beginning of the northern boundary.

<u>Character</u>: Zone B is largely undeveloped at its northern end. Development gradually becomes denser farther south, closer to the stone fort. This zone also encompasses several of the Endicott Batteries. The Endicott Batteries are a separate management zone.

3. Zone C – North Gate Road, Stilwell Drive: The northern boundary for Zone C runs along the Mill Creek shoreline from north of the intersection of Stilwell Drive and North Gate Road to just north of the Stilwell Drive and Pratt Street intersection; the western boundary begins at the Mill Creek shoreline between the storage lot and basketball court east of Building 87 parking lot and heads south crossing Eustis Lane onto Pratt Street, then heads east at Reeder Circle between Building 268 and the tennis courts,

# MANAGEMENT ZONES

moves south along the center line of Murray Street to Patch Road (including Building 168); the southern boundary follows the center line of Patch Road from the intersection of Patch Road and Murray Street to the openings of the two 72" diameter culvert pipes in the counterscarp wall north of the Northwest Bastion of the Stone Fort; the eastern boundary runs from the openings of the two 72" diameter culvert pipes in the counterscarp wall north of the Northwest Bastion of the stone Fort; the eastern boundary runs from the intersection of North Gate Road and Stilwell Drive diagonally to follow eastern edge of the parking lot across from Patch Road.

<u>Character:</u> Zone C has historically been the service area of Fort Monroe. It includes larger scale warehouses and industrial buildings.

4. Zone D (McNair, Ingalls, Fenwick Corridors): The northern boundary for Zone D consists of the Fort Monroe property line at the bridges approaching the main entrance; the western boundary runs south along the shoreline to the southern end of the marina; the southern boundary begins at the southern end of the marina and follows the seawall to a point southeast of Wherry Housing Unit 300; the eastern boundary begins at the intersection of Fenwick Road and Griffith Road and proceeds south along the center line of Fenwick Road at East Gate to the counterscarp then along the southern edge of the counterscarp to Postern Gate, from Postern Gate the boundary follows the southern and western edge of the counterscarp north to Patch Road and continues north across Patch Road and west of Building 168, north along the center line of Murray Street then heads west between Building 268 and the tennis courts at Reeder Circle. At Reeder Circle the boundary proceeds north along the center line of Pratt Street to the intersection of Pratt Street and Stilwell Drive, continues across Stilwell Drive until it hits Mill Creek, then north along the Mill Creek shoreline to the Fort Monroe property line at the entrance bridges.

<u>Character</u>: This is the largest and most densely-developed zone at Fort Monroe. The vast majority is residential, ranging from single-family housing to duplexes and multi-unit apartment buildings. This zone also includes the Coastal Artillery School Complex. Also includes a chapel, YMCA, fire house, old arsenal and offices (77).

# MANAGEMENT ZONES

5. Zone E (Stone Fort and Moat): The northern boundary for Zone E runs along the center line of Patch Road from the intersection of Patch Road and Griffith Road west to the intersection of Patch Road and Murray Street; the western boundary proceeds south from the Patch Road/Murray Street intersection and follows the counterscarp along Moat Walk to Postern Gate; the southern boundary begins at Postern Gate and runs east along the counterscarp to East Gate, from East Gate it continues east following the center line of Fenwick Road and terminates at the intersection of Fenwick Road and Griffith Road (the southern boundary excludes the Water Battery, but includes the green space at East Gate); the eastern boundary begins at the intersection of Fenwick Road and Griffith Road and proceeds north along the center line of Griffith Road to the intersection of Griffith Road and Patch Road (the eastern boundary includes the green space between the counterscarp and Griffith Road as well as the Water Battery, but excluding Wherry Housing).

<u>Character</u>: Zone E is the original historic fort, and as the heart of Fort Monroe it contains many of the oldest buildings on the post. It is evenly divided between administrative and residential buildings, with most of the housing located toward the southern end of the Parade Ground.

- 6. Endicott Batteries: The seven Endicott batteries at Fort Monroe have been established as a management zone based on resource type to separate them from the Management Zones in which they are located. The Individual boundaries for the seven Endicott batteries at Fort Monroe need to be established to separate them from the Management Zones in which they are located. The boundaries shall include the earthen protection system (the sand barrier that was placed around the concrete structure to protect the battery from incoming naval shelling) or space for these barriers where the protection system is now missing. The boundaries shall also include sufficient buffers to establish appropriate historic settings. The boundaries will be based on the historic usage of the individual batteries, i.e., field of fire and working areas, and their respective viewsheds. This information shall be identified and included in the Viewshed Analysis and Cultural Landscape Study to be conducted by the Army pursuant to Stipulations I.D and E and in updating the Fort Monroe NHL District nomination form pursuant to Stipulation I.H.1. Further consultation on a case by case basis is necessary to establish an appropriate buffer for each battery.
- **7. Individually Eligible Historic Properties:** Four properties have been identified as being significant in their own right. They are the: Casemated Stone Fortification, including the Moat and Water Battery, Quarters 1, Quarters 17, and The Chapel of the Centurion (Building 166). Individual boundaries for the four properties identified as being significant in their own right. Boundaries should include sufficient buffers to establish appropriate historic settings. Further consultation on a case by case basis is necessary to establish an appropriate buffer for each individually eligible historic property. These buffers shall be identified and included in the draft NRHP nominations developed by the Army.

# Fort Monroe reuse plan

The Fort Monroe Reuse Plan includes official policies, land use concepts, and fundamental planning principles. It is the officially adopted vision for the reuse of Fort Monroe.





The Fort Monroe Reuse Plan was officially adopted August 2, 2008. It includes official policies, land use concepts and limits, and fundamental planning principles as well as strategies related to preservation, economics, tourism, environment, transportation, infrastructure, and flood control. It is the vision of the reuse of Fort Monroe. The Plan envisions the strategic reuse of contributing historic properties to the Fort Monroe NHL District. Continued preservation of these historic properties and of the significant landscapes and viewsheds is essential in maintaining the integrity of the Fort Monroe NHL District.

There are five planning essentials that are the blueprint for action and should be followed throughout the evolution of the place:

- 1. Protect this historic place and keep it vital
- 2. Open it up, maintain and improve public access
- 3. Establish a large-scale open space park
- 4. Seek economic sustainability
- 5. Allow new development, within strict limits

Land Use Concepts have been developed for each Management Zone defined by the *Programmatic Agreement for the Closure and Disposal of Fort Monroe* (PA). The Management Zones are also the framework for these *Design Standards*. Part 1E defines the boundaries of each Management Zone. In Part 2, the Design Standards for the Treatment of Historic Properties, Part 2C describes the contributing historic resources and defines the Planning Principals for maintaining the historic character of Fort Monroe for each zone. In Part 3, the Design Standards for New Construction, Part 3B describes the land use concepts for each zone and parameters for new construction within the Fort Monroe NHL District.

#### MANAGEMENT ZONES

The Management Zones and associated land uses are:

Zone A: The West Peninsula – This area is devoted to open space uses including recreation fields, public access to the beach, and preserving natural areas.

Zone B: The East Peninsula (including the Wherry Quarter) – The use of this area is undetermined at this time.

Zone C: North Gate Road and Stilwell Drive – This area has contributing buildings planned for adaptive reuse and the potential for new construction that is in keeping with the character of this zone.

Zone D: McNair Drive, and Ingalls and Fenwick Roads – This area has a high concentration of contributing buildings which can be adaptively reused for a variety of uses. The historic buildings will be protected and reused and infill development will be allowed on a limited basis.

Zone E: The Stone Fort and Moat – This area contains some of the most significant historic resources and requires the strictest standards of preservation and protection. A restoration standard will be used for building exteriors. No new infill construction is proposed within the Stone Fort. The adaptive reuse of buildings will look to support the interpretation of the Fort as a historic site.

<u>The Endicott Batteries</u> – As a resource type, the Endicott Batteries are designated as a district management zone. Stabilization, preservation, interpretation measures for the batteries shall be independent of the management zone in which the batteries reside.

Structures Determined Eligible for Individual Listing on the National Register of Historic Places – As a resource type, four individual structures are designated as a district management zone and shall be treated independent of the management zone in which they reside.

# Fort Monroe project review processes

Preserving the integrity of the Fort Monroe NHL District is one of the guiding principles in the future use and management of Fort Monroe. All proposed projects shall be subject to a review process that will take into consideration the Fort Monroe Historic Preservation Design Standards.



G.4	Maintenance 1G.13
G.5	Emergency Actions 1G.15
G.6	Archaeological Considerations 1G.17
	Emergency Actions Archaeology
	Attachment A
	Attachment B

#### 1G.1 INTRODUCTION

Preserving the integrity of the Fort Monroe NHL District is one of the guiding principles in the future use and management of this resource. To do so, it is important to recognize the significant characteristics that contribute to the Fort Monroe NHL District and to acknowledge a responsibility of stewardship to identify, maintain, and protect them. One method of protection is to avoid Adverse Effects to historic resources. Some examples of Adverse Effects are: proposed projects or undertakings that would damage the historic character of a structure, impact archaeological resources, alter the qualities that contribute to the high degree of integrity of the Fort Monroe NHL District, or introduce elements that are incompatible with the historic nature of the district. The Fort Monroe Historic Preservation Design Standards have been developed to guide repair and rehabilitation of historic resources, as well as establish guidelines for new construction. The treatments described in the Preservation Design Standards are based on the "Secretary of the Interior's Standards for the Treatment of Historic Properties" and are intended to help protect the integrity of the Fort Monroe NHL District.

All proposed projects, including building rehabilitation, maintenance and new construction shall be subject to a review process that will take into consideration the *Fort Monroe Historic Preservation Design Standards*. The FMHPO, in consultation with the SHPO and the FMA, is the point-of-contact for project review. This section addresses the step-by-step review procedures for different types of projects to aid the Project Proponent through the process.

Depending upon the nature and scope of the undertaking, proposed projects also may be subject to review by local and state authorities having jurisdiction for health and life safety issues. Project review by these agencies is the responsibility of the Project Proponent. If the project intends to take advantage of the State and Federal Rehabilitation Tax Credit Program, applications are reviewed by the State Historic Preservation Officer and the NPS. Those reviews are also the responsibility of the Project Proponent and operate under a different authority and process than those described in the *Design Standards*.

Overview of Steps in the Historic Resources Review Process

#### 1G.2 REVIEW PROCESS OVERVIEW

The following sections of the *Design Standards* provide step-by-step guidance for any work in the Fort Monroe NHL District. Types of projects that are subject to review include but are not limited to:

- » Rehabilitation of historic structures
- » Additions to historic structures
- » Repairs to historic building fabric
- » New construction
- » Utility work
- » Roadway and parking lot construction
- » Landscaping
- » Projects involving non-contributing buildings within the Fort Monroe NHL District
- » Land disturbance

Project review is required to protect the qualities and character of the Fort Monroe NHL District. Although there are a variety of types of undertakings, they can be grouped into four broad categories; separate procedures have been developed for each.

- » Building rehabilitation and new construction
- » Maintenance
- » Emergency Actions
- » Archaeology

The primary point-of-contact for project review is the FMHPO. The FMHPO will apply a systematic evaluation to each undertaking to determine if historic buildings or landscapes are included in the undertaking and the affect that the undertaking will have on historic buildings, landscapes, and the Fort Monroe NHL District as a whole. The FMHPO, in consultation with the SHPO and the FMA, will work with the Project Proponent to avoid or minimize Adverse Effects to historic resources. This essential principle is incorporated into each review process. The guidance found in the *Fort Monroe Historic Preservation Design Standards* will assist the FMHPO in the determination of Adverse Effects and help the Project Proponent understand what is important to protect, maintain and preserve at Fort Monroe. Projects involving non-contributing resources to the District are also subject to review due to the potential effect to the overall Fort Monroe NHL District.

Part 1D.2 of the *Design Standards Programmatic Agreement* explains the role of the FMHPO and the FMHPO's duty to review proposed undertakings and coordinate project reviews with the SHPO and the FMA. The *PA* defines a process the FMHPO will follow to identify historic resources, evaluate the effect of the undertaking, and avoid or minimize Adverse Effects. This process has been integrated into project reviews to help project proponents understand what is important to protect, maintain and preserve, and avoid Adverse Effects.

The following review processes relate to historic preservation issues. Building code, life safety compliance, building construction permitting, and other reviews are within the purview of the appropriate authorities having jurisdiction. Applications for Historic Preservation Tax Credits are coordinated through the SHPO.

Building Rehabilitation and New Construction



# 1G.3 BUILDING REHABILITATION AND NEW CONSTRUCTION

Building Rehabilitation is defined as making possible a compatible use for a property through repairs and alterations, while preserving those portions or features that convey its historical, cultural, or architectural values. For purposes of project review, the process for building rehabilitation shall apply to any project that proposes to reuse a contributing structure to the Fort Monroe NHL District.

New Construction is defined as any further development of sites within the Fort Monroe NHL District, additions to structures, or the reconstruction of historic structures. In other words, any building project that will require new foundations shall be considered New Construction. The review process for new construction differs from building rehabilitation in that it focuses on site planning issues, building form and massing, and building elements that are in keeping with the characteristics of the Fort Monroe NHL District.

#### STEP 1: PROJECT INITIATION

At the conception of a rehabilitation or new construction project, it must be established that the intent of the undertaking is in agreement with the Fort Monroe Reuse Plan. The Project Proponent shall prepare and submit to the FMA a "Proposed Project Statement" providing, in sufficient detail, a description of the project, including proposed building use, site, affected buildings, grounds, or other historic features that are included in the work, and a brief statement regarding the intent of the project.

The FMA and the FMHPO will review the "Proposed Project Statement" and determine if the proposal is in compliance with the Fort Monroe Reuse Plan as defined in Section 2C and 3B of the Fort Monroe Historic Preservation Design Standards (*Design Standards*). The FMHPO also will determine if contributing historic resources to the Fort Monroe NHL District are affected by this proposal. New construction is a ground disturbance activity and is also subject to the review for Archaeological Resources (Section 1G.6).

#### Project Proponent's Responsibilities

1. Prepare and submit to the FMA the "Project Proposal Statement," including a map illustrating areas of proposed new construction.

# FMA's Responsibilities

 Review the "Proposed Project Statement" and, together with the FMHPO, provide a determination that the proposed project is in compliance with the Fort Monroe Reuse Plan.

#### FMHPO's Responsibilities

1. Review the "Proposed Project Statement" and, together with the FMA, provide a determination that the proposed project is in compliance with the Fort Monroe Reuse Plan.

Building Rehabilitation and New Construction

- 2. Initiate the Historic Resources Review Process.
- 3. If ground disturbance is involved, the FMHPO shall inform the Project Proponent that an Archaeological Resources Review is required. (Section 1G.6)
- 4. Provide the Project Proponent with information from the *Design Standards* that is applicable to the type of undertaking.
- 5. Review and establish with the Project Proponent the remaining steps in the Review Process.

# STEP 2: PRE-DESIGN CONSULTATION

The *Design Standards* shall be applied to a project early in the course of an undertaking. Prior to commencing design work, the FMHPO shall be consulted about the intent of a proposed project. The Project Proponent shall prepare a written "Scope of Work," which shall include information such as proposed exterior renovations, proposed interior renovations, site work/ground disturbance (if applicable), use of the structure, modifications to the structure for accessibility or, if known, to correct life safety issues such as structural repairs or fire protection, and any additional information that will describe the vision of the proposed project.

#### For Building Rehabilitation

The FMHPO will review the Scope of Work and establish the following with the Project Proponent:

- 1. The appropriate Treatment Option (Rehabilitation, Restoration, Preservation, or Reconstruction) for the project as defined in Section 2B of the *Design Standards*.
- 2. The character-defining features of the structure as defined in Section 2D of the *Design Standards* and Preservation Considerations for Individual Structures in Part 4C of the *Design Standards*.
- 3. The appropriate Materials and Methods for the treatment of historic building fabric as defined in Section 2E of the *Design Standards*.

This sets the parameters for the rehabilitation project to comply with the *Design Standards* and also conform to the *Secretary of the Interior's Standards for the Treatment of Historic Properties.* 

#### For New Construction

The FMHPO will review and establish with the Project Proponent that the following are being considered in the proposed design:

 The site constraints, including the Chesapeake Bay Preservation Act buffer zones, contributing and non-contributing resources to the Fort Monroe NHL District, cultural landscapes, viewsheds and other constraints as mapped in Section 3C for the management zone in which the proposed project is located.

Building Rehabilitation and New Construction

- 2. The boundaries of potential areas of New Construction per Section 3C of the *Design Standards*.
- 3. The New Construction Design Standards for infrastructure, site design, landscape design, building design additions (if applicable) and materials per Section 3E of the *Design Standards*.

#### For Additions to Historic Structures

The FMHPO will review with the Project Proponent that the following are being considered in the proposed design:

- Character-defining features of the structure as defined in Section 2D of the *Design Standards* and Preservation Considerations for Individual Structures in Part 4C of the *Design Standards*.
- 2. Appropriate Materials and Methods for the treatment of historic building fabric as defined in Section 2E of the *Design Standards*.
- 3. Site constraints, including the Chesapeake Bay Preservation Act buffer zones, contributing and non-contributing resources to the Fort Monroe NHL District, cultural landscapes, viewsheds and other constraints as mapped in Section 3C for the management zone in which the proposed project is located.
- 4. The standards for infrastructure, site design, landscape design, building design additions (if applicable) and materials per Section 3E of the *Design Standards*.

#### Project Proponent's Responsibilities

- 1. Prepare and submit a Scope of Work for the Project to the FMHPO.
- 2. Consult with the FMHPO regarding the intent of the project and application of the *Design Standards*.

#### **FMHPO's** Responsibilities

- 1. Initiate application of the Design Standards to the project as described above
- 2. Determine the Area of Potential Effect
- 3. Identify Historic Resources within the Area of Potential Effect
- 4. If necessary, initiate the Review Process for Archaeology (Section 1G.6)
- 5. Prepare and distribute a written record of the consultation per the PA

Building Rehabilitation and New Construction

### STEP 3: CONCEPTUAL DESIGN (35%) AND DESIGN DEVELOPMENT (65%)

At the Conceptual Design and Design Development stages of the project, when the design documents are approximately 35 percent and 65 percent complete, the design documents shall be submitted to the FMHPO to verify that the *Design Standards* are being considered and incorporated as established and agreed upon in Step 2.

#### Project Proponent's Responsibilities

- 1. Prepare and submit design documents to the FMHPO.
- 2. Prepare and submit with the 35 percent submittal a written description on how the *Design Standards* are being considered.
- 3. Prepare and submit with the 65 percent submittal documentation addressing concerns made by the FMHPO regarding the Conceptual Design.

#### FMHPO's Responsibilities

- 1. Review documents for compliance with the Design Standards.
- 2. Determine Effect (No Historic Properties Affected or No Effect/No Adverse Effect/Adverse Effect) of the undertaking.
- 3. If a determination of No Adverse Effect is found, and the SHPO concurs, the FMHPO will notify the project proponent that the undertaking may proceed to the next step.
- 4. If determination of Adverse Effect is found, the FMHPO, in consultation with the SHPO, will advise the Project Proponent on ways to avoid or mitigate Adverse Effects.
- 5. Prepare and distribute a written record of the consultations per the PA.

#### STEP 4: CONSTRUCTION DOCUMENTS

At the completion of the design, prior to engaging a contractor, there shall be a final design submittal to verify that the project has incorporated the *Design Standards* and that Adverse Effects have been avoided, minimized, or mitigated.

# Project Proponent's Responsibilities

- 1. Redesign the project to address the issues of Adverse Effect brought by FMHPO at 65 percent Design Submittal.
- 2. Prepare and submit 95 percent complete construction documents.

Building Rehabilitation and New Construction

#### FMHPO's Responsibilities

- 1. Review documents for compliance with the *Design Standards* and consideration of review comments from prior submittals.
- 2. Determine Effect (No Adverse Effect/Adverse Effect)
- 3. If a determination of No Adverse Effect is found, and the SHPO concurs, the FMHPO will approve the project to proceed.
- 4. If a determination of Adverse Effect is still found, the project may not proceed without approval from the FMHPO. The FMHPO shall consult with the SHPO and Project Proponent on specific ways to avoid or mitigate Adverse Effects.
- 5. If an Adverse Effect cannot be avoided, the FMHPO, in consultation with the SHPO, shall develop a legally binding Mitigation Agreement with the agreed upon measures to mitigate the Adverse Effect.
- 6. Prepare and distribute a written record of the consultation per the PA.

# STEP 5: CONSTRUCTION

During the course of construction, if an aspect of the project that has an affect on the character or quality of the historic resource or site changes due to constructability, unforeseen conditions, or any circumstance that would necessitate a change, the FMHPO shall be notified immediately.

#### Project Proponent's Responsibilities

- 1. Notify the FMHPO of changes or deviations in the approved Scope of Work and proposed modification(s).
- 2. Submit documentation on why the deviation must occur and the proposed modification(s), including information on materials, methods, impact on the structure, grounds or immediate area if necessary.

#### **FMHPO's Responsibilities**

- 1. Review the proposed modification for Adverse Effect and advise the Project Proponent.
- 2. If a determination of No Adverse Effect is found, and the SHPO concurs, the FMHPO will approve the proposed modification.
- 3. If an Adverse Effect cannot be avoided, the FMHPO, in consultation with the SHPO, shall develop measures to mitigate the Adverse Effect.
- 4. Prepare and distribute a written record of the consultation per the PA.

Maintenance



#### 1G.4 MAINTENANCE

Maintenance is defined as repair and upkeep to existing building fabric. Section 2.E, "Materials and Methods" of the *Design Standards* provides guidance for repairs and treatments to building materials and building systems that closely follow the "Secretary of the Interior's Standards for the Treatment of Historic Buildings" and focuses specifically on materials found at Fort Monroe. Maintenance can be as simple as repainting exterior trim or more elaborate, such as the restoration of building fabric. For the purpose of Project Review, activities considered as maintenance shall include projects that focus on one building material or system such as:

- » Roof Repair
- » Masonry repair/masonry repointing
- » Repairs to porches and entrances
- » Window restoration
- » Exterior painting
- » Structural repairs
- » Upgrades to mechanical and electrical systems
- » Any work proposed that would alter or replace historic building materials
- » Any work proposed that would alter or affect character-defining features

# STEP 1: PROJECT INITIATION AND CONSULTATION

Prior to starting the work, the FMHPO must be notified of the undertaking. The first step shall be to schedule a consultation with the FMHPO and define the extent of the undertaking. If the proposed undertaking demonstrates compliance with the Fort Monroe Historic Preservation Design Standards, Section 2E, "Materials and Methods," the FMHPO may make a determination of No Adverse Effect and no further review shall be required, provided the work is executed as agreed.

Repair work that has the potential to remove, alter, or replace historic building fabric will require a determination of Adverse Effect and if an Adverse Effect is determined, the FMHPO shall be consulted on ways to avoid or mitigate the Adverse Effect.

### Project Proponent's Responsibilities

1. Schedule a consultation with the FMHPO to discuss the parameters of the undertaking.

# FMHPO's Responsibilities

- 1. Determine if historic properties are affected.
- 2. Provide the Project Proponent applicable information from the *Design Standards* and consult with the Project Proponent regarding appropriate treatments to building materials (Section 2E).

# PROJECT REVIEW PROCESSES Maintenance

- If the proposed work has the potential to affect, alter, or replace character defining features, the FMHPO will make a determination of No Adverse Effect/ Adverse Effect.
- 4. If a determination of No Adverse Effect is found, and the SHPO concurs, the FMHPO will approve the undertaking to proceed.
- 5. If the proposed work is found to have an Adverse Effect on the historic property, the FMHPO, in consultation with the SHPO, shall advise the Project Proponent on ways to avoid, minimize, or mitigate Adverse Effects.
- 6. Prepare and distribute a written record of the consultation per the PA.

# **STEP 2: EXECUTION**

During the course of the work, if an aspect of the project that has an affect on the character or quality of the building changes due to constructability, unforeseen conditions, or any circumstance that would necessitate such a change, the FMHPO shall be notified immediately.

# Project Proponent's Responsibilities

- 1. Notify the FMHPO of changes or deviations in the work and proposed modifications.
- 2. Submit documentation on why the deviation must occur and the proposed modification, including information on materials, methods, and impact on the historic resource.

# FMHPO's Responsibilities

- 1. Review the proposed modification for Adverse Effect and advise the Project Proponent.
- 2 If a determination of No Adverse Effect is found, and the SHPO concurs, the FMHPO will approve the proposed modification.

Maintenance projects may require professional design services; for projects of that complexity, the review process for Rehabilitation shall be followed.

### 1G.5 EMERGENCY ACTIONS

Emergency actions are those actions that are deemed necessary by the Commonwealth as an immediate and direct response to an emergency situation, which is a disaster or emergency declared by the President or the Governor of the State, or other immediate threats to life or property.

When Emergency Actions are required due to natural disaster, fire, structural collapse, or any other catastrophic event, measures to secure and protect the property must be done quickly. Immediate priorities should be to waterproof and stabilize the structure. Temporary roof coverings may be required to protect the interior until the roof can be rebuilt or repaired. Damaged doors and windows should be closed and adequate ventilation should be provided if there is any interior water damage. Utilities should be turned off if the building cannot be occupied to prevent any further accidental damage. Shoring should be provided as needed to ensure life safety and to protect adjacent properties.

Repairs should be done in a timely fashion. Mothballing the structure may be an option if repairs cannot be handled quickly and continuous occupation of the building is not a concern. Intermediate repairs that must be done quickly and are not historically correct must be carefully planned so that they can be effective without causing undue harm to the historic building and can be removed without further damage.

In accordance with the *PA*, the Commonwealth shall notify the SHPO of an emergency action if that action has the potential to affect historic resources. The FMHPO may be called upon to provide comments on the effect of the action on historic resources. In cases where the Commonwealth is unable to consult with the SHPO prior to carrying out the emergency action, the *PA* requires notification of the SHPO within 48 hours after the initiation of the action. The FMHPO may facilitate the consultation between the SHPO and the Commonwealth.

The FMHPO will serve as an integral resource to the SHPO and the Commonwealth in the event of an emergency action.

#### Project Proponent's Responsibilities

1. Notify the FMHPO about the emergency situation.

# **FMHPO's Responsibilities**

- 1. Consult with Project Proponent on the appropriate interim methods to stabilize the resource including temporary substitute materials if necessary.
- 2. Work with the Project Proponent to develop a long-range repair plan that will comply with the Materials and Methods section of the *Design Standards*.

Archaeological Considerations



# 1G.6 ARCHAEOLOGICAL CONSIDERATIONS FOR FORT MONROE

# Fort Monroe's Archaeological Resources

The Fort Monroe NHL District has one recorded archaeological site (44HT27). The site encompasses the entire property and is considered a large, complex archaeological resource. Within the boundaries of the site, a number of concentrations of archaeological resources known as "loci" or "locations" also have been identified.

Fort Monroe has not undergone a comprehensive archaeological survey, however, and additional loci are likely. The archaeological resources located within the landmark district are likely to cover a broad temporal range, and they are likely to be significant for their association not only with the military and other historic-period use of the property, but also for the prehistoric and Native American use of the property. In fact, there are three federally recognized Indian tribes that attach traditional, religious, and cultural importance to properties at Fort Monroe.

While the entire property is part of a large archaeological site and some areas have significant cultural material that contribute to the importance of Fort Monroe, there are also areas that are unlikely to contain significant cultural material as a result of past land use and disturbances. In order to appropriately manage the resources that are significant, a process has been established to ensure that archaeological considerations are part of all ground disturbing activities at Fort Monroe.

The *PA* executed among the United States Army (Army), the ACHP, the SHPO, the Commonwealth of Virginia (Commonwealth), the NPS and the Fort Monroe Authority (FMA) for the closure of Fort Monroe outlines specific steps that future Project Proponents and land managers must take to ensure that Fort Monroe's significant archaeological resources are taken into account during project planning and land management activities.

The following steps outline the process and the responsibilities that are detailed in the *PA* for addressing archaeological issues during project planning. The *PA* also provides for the designation of an individual with the responsibility for managing a range of historic preservation matters at Fort Monroe. The FMHPO will have an important role in ensuring that the provisions in the *PA* regarding archaeological resources are carried out. While the FMHPO may develop a form or additional guidance material for the submission of projects, the following steps outline the responsibilities of a Project Proponent and of the FMHPO.

#### IMPORTANT REQUIREMENTS FOR ALL PROJECTS

Archaeological resources located on Fort Monroe are the property of the Commonwealth of Virginia and their treatment is governed by the terms of the *PA*. As such, the following apply to all projects involving archaeological materials:

The expense of any survey or treatment recommended by the FMHPO and SHPO is the responsibility of the Project Proponent, unless otherwise provided for by the Commonwealth.

All archaeological work shall be conducted by or under the direct supervision of an individual or individuals who meet, at a minimum, the qualifications for archaeology set forth in the Secretary of Interior's Professional Qualifications Standards (62 FR 33707, June 20, 1997).

All archaeological studies shall be consistent with the Secretary of the Interior's Standards and Guidelines for Archeological Documentation (48 FR 4434-37) and the SHPO's Guidelines for Conducting Cultural Resource Survey in Virginia: Additional Guidance for the Implementation of the Federal Standards Entitled Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines (48 FR 44742, September 29, 1983) 1999, rev. 2003) and Guidelines for Archaeological Investigations in Virginia (July 15, 2009), or subsequent revisions or replacements to these documents, and shall take into account the ACHP's publications, Recommended Approach for Consultation on Recovery of Significant Information from Archeological Sites (1999; April 26, 2002) and Section 106 Archaeology Guidance (June 2007; updated April 3, 2009).

Any artifacts recovered during the course of archaeological investigations at Fort Monroe are the property of the Commonwealth of Virginia. As such, all artifacts and associated records generated in the course of the survey will be curated according to the requirements specified in Curation of Federally Owned and Administered Archaeological Collections (36 CFR Part 79) and Virginia Department of Historic Resource's (SHPO) State Curation Standards until arrangements are made to turn the materials over to the SHPO or an FMA or Commonwealth organization meeting national museum standards, as defined by the American Association of Museums, or an organization sponsored by the FMA or Commonwealth meeting national museum standards, that is established or assigned to properly care for artifacts pertinent to Fort Monroe's historic significance. The FMHPO should enter into a curation agreement with the SHPO to standardize and streamline the curation of artifacts resulting from archaeological investigations at Fort Monroe.

Virginia state law requires that archaeological investigations on state land be conducted only after a permit for this purpose has been issued by the SHPO. The FMHPO shall coordinate the submission of permit requests and may elect to enter into an agreement with the SHPO to streamline this process.

All reasonable efforts will be made to avoid disturbing grave sites, including those containing Native American human remains and associated artifacts. All human remains shall be treated in a manner consistent with the ACHP "Policy Statement

# PROJECT REVIEW PROCESSES Archaeological Considerations

Regarding Treatment of Burial Sites, Human Remains, and Funerary Objects," (<u>http://achp.gov/docs/hrpolicy0207.pdf</u>). In the event that human remains are encountered during the course of actions taken as a result of work done under the *PA*, the Commonwealth and the FMHPO will ensure that the appropriate actions are taken. This includes, but may not be limited to consultation with the SHPO on the appropriate course of action and applying to the SHPO for a permit for the removal of human remains in accordance with state regulations.

In the event that archaeological investigations are to be carried on submerged lands, this shall be done under the direct supervision of an archaeologist who meets, at a minimum, the qualifications set forth in the Professional Qualification Standards and has demonstrated experience in maritime history and maritime archaeology. It also may be necessary to obtain a permit from the Virginia Marine Resources Commission in order conduct such investigations.

Ultimately, the Project Proponent is responsible for ensuring that agreed upon measures for identifying and treating archaeological resources are implemented. Early planning is the best way to avoid unnecessary delays and unanticipated costs. The FMHPO is the local primary point of contact and should be consulted at all points during the review process. For additional guidance or information regarding planning and managing archaeological resources, contact the FMHPO.

# STEP 1: PROJECT INITIATION AND PLANNING FOR ARCHAEOLOGICAL RESOURCES

Any project that includes ground disturbance has the potential to have an affect on archaeological resources. This can include utility work, excavation for foundations or footings, and even some types of landscaping activities. The *PA* establishes that all Project Proponents shall notify the FMHPO when ground-disturbing activities are planned as part of a project.

#### Project Proponent's Responsibilities

1. As soon as plans for a project have been developed, the Project Proponent shall submit materials relating to the project to the FMHPO. This submission should provide a detailed description of the project, including all the ground disturbing work that is to be conducted. This includes building and structure demolition, excavation for footings and foundations, installation of utilities such as water, sewer, storm drains, electrical, and gas (see attachment A for additional examples of ground disturbing work). The Project Proponent shall also include a description of the proposed depth and width of planned excavation and identify the equipment that is going to be used. In addition, staging areas that are to be used during a construction project should be identified, as well as access roads and any off-site mitigation, borrow pits, or staging areas that are part of the proposed project.

Archaeological Considerations

- 2. The Project Proponent shall provide the FMHPO with a map illustrating the area of the proposed disturbance (project area).
- 3. The Project Proponent shall request the FMHPO's opinion regarding the potential effect of such activities on archaeological properties prior to initiation of project activities.

# **FMHPO's Responsibilities**

 The FMHPO will review plans for work that include ground disturbing activities. The FMHPO has 30 calendar days to respond to complete project documentation. The FMHPO will make an initial determination regarding the potential of the project to have an effect on historic resources.

If the FMHPO determines that the project does not have the potential to affect historic resources, the FMHPO will notify the Project Proponent and the project may move forward.

If the project has the potential to have an affect on historic resources, the FMHPO will review the project in consultation with the SHPO (within the 30-day time frame).

- If the FMHPO has determined, in consultation with the SHPO, that a project has the potential to affect historic resources, the FMHPO shall, in consultation with the SHPO and the FMA, define the area of potential effect (APE) for the project
- 3. If the FMHPO can document that there is a high probability for the presence of significant archaeological sites; the possibility of the presence of already identified significant archaeological resources (loci), as well as a high potential for the presence of significant (as yet unidentified) archaeological resources) within the proposed project area, then depending on the nature of the proposed project, an archaeological investigation may be recommended. The FMHPO makes a determination regarding need for additional archaeological investigation in consultation with the SHPO (see Attachment A for a list of factors to be considered by the FMHPO and the SHPO in determining the need for survey).

The determination of whether or not archaeological investigations are needed will be made after taking into consideration the nature and scope of proposed ground disturbance, the location, evidence of previous disturbance, and potential of the area to contain significant archaeological deposits.

# STEP 2: IDENTIFICATION AND EVALUATION OF ARCHAEOLOGICAL RESOURCES

Fort Monroe consists of one large archaeological site and, in cases where additional archaeological investigations are recommended, the type of archaeological survey will be determined by the FMHPO, in consultation with the SHPO, on a case-by-case basis. In some cases, an "identification survey," also known as a

# PROJECT REVIEW PROCESSES Archaeological Considerations

Phase I survey, will be recommended. This will consist of a series of shovel tests excavated in a grid pattern to determine the presence or absence of artifacts and to examine the soil conditions of the area. Archaeologists also may excavate larger test units (usually squares) to look more closely for indications of archaeological materials. The level of effort will depend on the nature of the proposed project, the existing conditions of the area, and will be recommended by the FMHPO in consultation with the SHPO.

If archaeological resources are identified during a Phase I survey, and if the resources appear to be potentially significant, or if there is already sufficient evidence that archaeological resources exist (in the areas of known loci or concentrations, for example), that have not yet been evaluated, the SHPO may recommend that additional Phase II evaluation testing be completed to determine conclusively the significance of the resources. The aim of this more detailed approach is to determine whether or not the resources need to be considered further in project planning.

In order to conduct archaeological investigations on state land, the Project Proponent's archaeologist must have a permit. The permit, issued by the SHPO, will be coordinated by the FMHPO. The FMHPO may choose to enter into an agreement with the SHPO to coordinate the issuance of permits programmatically or to explore other methods of streamlining the State Lands Permit process with the SHPO.

# Project Proponent's Responsibilities

- The Project Proponent shall contract with an archaeologist, who meets the Secretary of the Interior's Professional Qualification Standards, to conduct an archaeological survey of the project area (see Attachment B for information on finding an archaeological contractor) in accordance with the recommendations provided by the FMHPO and SHPO.
- 2. The project proponent will supply additional information, if needed, to the FMHPO for coordination of the permit to conduct archaeological investigations on state lands.
- 3. The Project Proponent shall submit the findings of archaeological work to FMHPO and SHPO.
- 4. The Project Proponent shall not undertake any ground disturbing activities until the survey work has been completed and concurrence received from the FMHPO and SHPO.

# FMHPO's Responsibilities

- 1. Coordinate with the Project Proponent and the SHPO regarding the issuance of a permit to conduct archaeological investigations on state land.
- 2. Review the findings of the survey report and provide comments on the findings within 30 days of receipt of a report.

Archaeological Considerations

- 3. Forward the survey report and comments to the SHPO for review.
- 4. Coordinate consultation with other parties (Tribes, stakeholders, consulting parties) as appropriate.

If it is determined, by the FMHPO in consultation with the SHPO, that the archaeological materials are not significant, the Project Proponent will be notified that the project may proceed. If the archaeological materials are determined to be significant, the FMHPO and the SHPO will determine if the proposed project will have an effect on the significant resource. If so, a treatment plan shall be developed.

# STEP 3: TREATMENT OF ARCHAEOLOGICAL RESOURCES

If the FMHPO and the SHPO determine that significant archaeological resources will be affected by a project, the FMHPO and the SHPO shall advise the Project Proponent of the appropriate treatment in accordance with the terms of the PA.

Avoidance of archaeological resources is the preferred treatment option. This often can be accomplished by relocating the project, especially in cases where only a small portion of a site would be impacted. In the case of a utility line extending through a significant archaeological deposit, for example, it may be feasible to move the utility line to avoid the archaeological resource. In such cases, there may be special conditions recommended by the FMHPO and the SHPO, including marking the boundaries of the resources so that they can be avoided during construction.

Another option sometimes used to avoid an archaeological resource is burying a site in situ. In this case fill is placed over the resource, effectively burying it well below the ground surface. Additional fill or mats are sometimes placed over the area so that it is not harmed during construction. This is an option that may work in a case where an access road or a portion of a parking lot is planned for an area where there is an archaeological resource. In such cases, construction can continue if certain conditions for avoiding the site can be met.

If a Project Proponent cannot avoid significant archaeological resources or preserve them in situ, the Project Proponent and their archaeologist shall be advised by the FMHPO and the SHPO to develop a data recovery plan. This is a plan that outlines the steps that will be taken by the Project Proponent's archaeologist to conduct an investigation that essentially recovers the important data from the site through archaeological excavation. The plan must be consistent with the Secretary of the Interior's Standards and Guidelines for Archeological Documentation (48 FR 4434-37) and the SHPO's Guidelines for Conducting Cultural Resource Survey in Virginia: Additional Guidance for the Implementation of the Federal Standards Entitled Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines (48 FR 44742, September 29, 1983) 1999, rev. 2003), and Guidelines for Archaeological Investigations in Virginia (July 15, 2009), or subsequent revisions or replacements to these documents, and shall take into account the ACHP's publications, Recommended Approach for Consultation on Recovery of Significant Information from Archeological Sites (1999; April 26, 2002) and Section 106 Archaeology Guidance (June 2007; updated April 3, 2009).

It is important to remember that data recovery is a destructive process, as it essentially removes the site. It is considered an Adverse Effect on a significant resource, yet sometimes this is the only option that exists. In cases where data recovery is the selected treatment, the Project Proponent shall submit the data recovery plan to the FMHPO and the SHPO for review and comment and ensure that a qualified archaeologist implements the plan.

# Project Proponent's Responsibilities

- 1. Make a reasonable and good faith effort to avoid significant archaeological resources by exploring all viable avoidance options and trying to minimize the affect of the project on such resources.
- 2. Contract with an archaeologist with the appropriate qualifications to develop and implement a treatment plan, including data recovery if appropriate, for the significant archaeological resource.
- 3. Submit plan to FMHPO and SHPO.
- 4. Ensure that all treatment measures are met.

# FMHPO's Responsibilities

- 1. In consultation with the SHPO, advise Project Proponent on appropriate treatment options.
- 2. Coordinate consultation with other parties (Tribes, stakeholders, consulting parties) as appropriate.
- 3. Review treatment plans and ensure that treatment measures are implemented. The review of the treatment plan shall be completed within 30 days of receipt.

# POST REVIEW DISCOVERIES

In the event that archaeological resources are identified unexpectedly during construction after the review process has been completed, the following procedures must be followed in accordance with the *PA*. The provisions for post review discoveries must be included in all contracts for activities that include ground disturbance.

#### Project Proponent's Responsibilities

- 1. In the event that archaeological materials are discovered, all work in the area of the finds must stop immediately, and the FMHPO shall be contacted.
- 2. The contractor responsible for the construction site shall ensure that no unauthorized personnel have access to the site and that no further work is done until the FMHPO has notified the contractor that the work can proceed.
- 3. The Project Proponent shall engage an archaeologist who meets the professional standards set for in the *PA*, to assess the discovery.

Archaeological Considerations

- 4. The archaeologist shall meet on-site with the FMHPO to establish the area where further subsurface resources are likely to occur. Once this area has been identified and steps are taken to mark this area or cordon it off, work can proceed in areas outside of the area where finds are likely to occur.
- 5. If, upon examination, the Project Proponent's archaeologist finds that the archaeological discovery is not significant and does not require further archaeological investigation, the archaeologist shall document this and within two (2) business days provide a copy of the appropriate documentation to the FMHPO. If the FMHPO concurs with the archaeologist's opinion, he will notify the Project Proponent that work may proceed in the area of the discovery. An example of this type of situation is the discovery of an area containing secondary deposits of modern construction debris, or a concentration of rocks identified by the archaeologist as modern and not of prehistoric origin.
- 6. If the Project Proponent's archaeologist finds that the discovery is significant, within two (2) business days the archaeologist shall develop a treatment plan and provide the documentation of eligibility and treatment plan to the FMHPO.
- Once the treatment plan, including any comments received within the two (2) business day time frame, has been completed and finalized, the Project Proponent's archaeologist shall implement the plan.
- 8. The Project Proponent shall notify the FMHPO, the SHPO, and the other stakeholders, as appropriate, when the recovery of information or other agreed-upon treatment measures specified in the treatment plan are complete. Upon this notification, the FMHPO shall notify the contractor that work may proceed in the designated archaeologically sensitive area.
- 9. The Project Proponent's archaeologist shall prepare a technical report.
- 10. The Project Proponent shall provide copies of the draft technical report to the Commonwealth, the FMHPO, the SHPO and any stakeholders identified during the earlier steps of the Post Review Discovery process, for comment.
- 11. A final technical report, addressing comments received within 30 days of receipt of the report, shall be prepared and provided to the same parties to whom the draft was provided.

# FMHPO's Responsibilities

- The FMHPO and the project proponent's archaeologist shall meet on site and establish the area where further subsurface remains are likely to occur. The FMHPO shall then notify the Project Proponent that work may resume outside of the designated archaeologically sensitive area.
- 2. If upon receipt of the documentation from the Project Proponent's archaeologist, the FMHPO determines that the discovery is not significant, the FMHPO

shall notify the Project Proponent that work may proceed in the area of the discovery and maintain the record of the discovery.

- 3. Within two (2) business days of being notified of the discovery, the FMHPO shall notify and consult with the SHPO and other stakeholders, as appropriate. If the resource is likely to be prehistoric, the FMHPO shall also notify the VCI, the Shawnee Tribe, the Absentee-Shawnee Tribe of Indians of Oklahoma, and the Catawba Indian Nation Tribal Historic Preservation Officer (THPO). This notification shall include the FMHPO's assessment of the eligibility of the source in terms of the National Register of Historic Places criteria and the plan for avoidance, protection, or recovery of information from the site. The SHPO and other stakeholders shall have two (2) business days to comment on the plan.
- 4. The FMHPO shall ensure that all comments received within two (2) business days are addressed in the final treatment plan.
- 5. Once the FMHPO is notified that the treatment plan has been implemented, the FMHPO shall notify the contractor that work in the area designated as archaeologically sensitive may proceed.
- 6. The FMHPO shall ensure that all comments received within thirty (30) calendar days of report receipt shall be addressed in the final technical report.

# EMERGENCY ACTIONS ARCHAEOLOGY

Emergency actions are those actions that are deemed necessary by the Commonwealth as an immediate and direct response to an emergency situation, which is a disaster or emergency declared by the President, tribal government, or the Governor of the State, or other immediate threats to life or property.

In accordance with the *PA*, the Commonwealth shall notify the SHPO of an emergency action if that action has the potential to affect historic resources. The FMHPO may be called upon to provide comments on the effect of the action on historic resources. In cases where the Commonwealth is unable to consult with the SHPO prior to carrying out the emergency action, the *PA* requires notification of the SHPO after the initiation of the action. The FMHPO may facilitate the consultation between the SHPO and the Commonwealth.

The FMHPO will serve as an integral resource to the SHPO and the Commonwealth in the event of an emergency action.

In the event of emergencies that are declared by the President or the Governor or in cases where there is an immediate response needed when life or property is threatened, emergency actions affecting historic properties may be necessary. Only those actions carried out within 30 days of a Presidential or Gubernatorial declaration are emergency actions as described herein.

Archaeological Considerations

Emergencies, by their nature, must be managed to prevent harm to people and property. The procedures described here are recommended steps, but it should be noted that threats to human life and safety may require alternate actions. As stated in the *PA*, immediate rescue and salvage operations conducted to preserve life or property are exempt from these provisions.

Overall, emergency actions should be undertaken in a manner that does not prevent future efforts to preserve or interpret the resource and consideration of the effect of the emergency action on other historic properties at Fort Monroe should be considered. For this reason, the FMHPO is an integral, on-site resource in the event of emergencies.

When an emergency action has the potential to affect archaeological resource, the following steps shall be taken:

- 1. The Commonwealth shall notify the SHPO and the FMHPO and other parties, as appropriate of the emergency.
- 2. The FMHPO, on behalf of the Commonwealth, shall develop a plan to address the emergency. The plan should be provided to the SHPO and other parties along wit the notification of the emergency action. The plan should include information such as a description of the archaeological resource, the steps that will be taken to document any features that are encountered, the curation of any artifacts that are recovered, the preparation of a report summarizing the find, the steps that will be taken to avoid unnecessary intrusion into the site, etc.
- 3. If the emergency action involves a project that is being implemented, the proponent of the project should be included in the development of the plan.
- 4. The SHPO should be provided 7 business days to review and comment on the plan. If there is no response from the SHPO or if there is no objection during the review period, the Commonwealth, under the guidance of the FMHPO, shall implement the plan.
- 5. In cases where immediate emergency action is needed, making it impossible for the Commonwealth to consult with the SHPO in advance, the Commonwealth should work directly with the FMHPO and shall notify the SHPO and other parties within 48 hours of initiation of the emergency action. This notification shall include a description of the action taken and the effect of the action as well as any further measures to avoid, minimize, or mitigate potential Adverse Effects to archaeological resources.
- 6. The report shall be provided to the SHPO, who shall have 7 days to review and comment on the proposal where further action is required to address the emergency. If the SHPO does not comment or does not object within 7 days, the Commonwealth may proceed with any additional actions that are needed.

# ATTACHMENT A

# Examples of Activities Associated with Rehabilitation that can Cause Ground Disturbance

- » Demolition of existing buildings or structures
- » Foundation repair
- » New construction
- » Additions to existing structures
- » Construction of parking lots and access roads or driveways
- » Installation of exterior foundation drainage
- » Upgrading of existing utility lines
- » Materials storage and construction staging areas
- » Underground storage tank removal
- » Demolition
- » Landscaping (removal and installation)
- » Irrigation system installation
- » Grading activities
- » Any other activity resulting in moving or compressing of soil or changes in drainage patterns
- Work within an existing builder's trench of a structure (e.g. waterproofing activities on foundation, as long as new ground-disturbance is not part of project)

# The FMHPO, in Consultation with the SHPO, will Consider the Following Factors in Determining Whether a Survey is Needed

- » Likelihood of finding significant archaeological resources
- » Scope of proposed ground disturbance
- » Consideration should be given to the scope of the proposed ground disturbing activity, the age of the building, whether the activity is in an area identified as archaeologically sensitive, and documented evidence of previous ground disturbance.
- » As a general rule, installation of utilities within existing utility trenches typically will not require an identification survey although monitoring by a qualified archaeologist may be appropriate. Consideration should be given to the size and depth of the proposed trench and its proposed location.
- » Construction staging areas and materials storage, if placed on existing impervious surfaces or on pallets, will have limited potential to affect belowground resources.

#### Examples of Work that is Unlikely to Require Archaeological Survey

- » Replacement of utilities within an existing trench
- » Minor landscaping or gardening activities, such as planting of bulbs and/or flowers and shrubs, placement of mulch, aeration of lawns
- » Minor disturbances including installation of signage
- » Ditch cleaning

Archaeological Considerations

# ATTACHMENT B

### Contracting for Archaeological Services in the Commonwealth of Virginia

All archaeological work conducted under the *PA* for Fort Monroe must be conducted by or under the direct supervision on an individual or individuals who meet, at a minimum, the qualifications for archaeology set forth in the Secretary of the Interior's Professional Qualification Standards (62 FR 33707, June 20, 1997).

The SHPO maintains a list of individuals and firms that have expressed an interested in contracting for archaeological work in Virginia. Individuals and firms on the list have not been endorsed in any way and have merely expressed an interest. Project Proponents are advised to review previous work experience and consider the advice of references provided by the contractor before making a hiring decision.

In additional to the professional requirements, all archaeological studies resulting from the *PA*, including data recovery plans, shall be consistent with the Secretary of the Interior's Standards and Guidelines for Archeological Documentation (48 FR 4434-37) and the SHPO's Guidelines for Conducting Cultural Resource Survey in Virginia: Additional Guidance for the Implementation of the Federal Standards Entitled Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines (48 FR 44742, September 29, 1983; 1999, rev. 2003), and Guidelines for Archaeological Investigations in Virginia (July 15, 2009), or subsequent revisions or replacements to these documents, and shall take into account the ACHP's publications, Recommended Approach for Consultation on Recovery of Significant Information from Archeological Sites (1999; April 26, 2002) and Section 106 Archaeology Guidance (June 2007; updated April 3, 2009).

The consultants considered by the Project Proponent should be well-versed in meeting these requirements.
# Fort Monroe design standards for the treatment of historic properties



- 2A Introduction
- 2B Treatment Approaches
- 2C Management Zones
- 2D Architectural Styles
- 2E Materials and Methods
- 2F Glossary

# Design Standards for the Treatment of Historic Properties introduction

The Historic Preservation Manual and Design Standards have been developed to provide an understanding of the significance of the historic resources that contribute to the Fort Monroe NHL District and establish a level of treatment for the historic buildings that is in keeping with the Secretary of the Interior's Standards and Guidelines for the Treatment of Historic Properties.

Part 2, Design Standards for the Treatment of Historic Properties, focuses on the existing built environment. It is organized from general planning concepts to specific details. The review processes explained in Part 1 references the sections that follow. The guidance found herein shall be followed during planning, design and execution of rehabilitation projects.

Section 2B contains the definitions for the four recognized treatment approaches for historic buildings by the Secretary of the Interior: rehabilitation, restoration, preservation, and reconstruction. Each term has specific meanings in terms of building use, level of treatment for historic building fabric, and how the property is recognized as a physical record of its time.

Section 2C provides an overview of the historic resources found in each management zone, a description of the zone, and compatible uses for structures that are in keeping with the Fort Monroe Reuse Plan.

Section 2D, is a graphic description of the architectural styles represented at Fort Monroe and provides an understanding of the different architectural styles and periods of development, what makes each style unique, and the character defining features of each style. This section, used in conjunction with Part 4, the Building Inventory, provides a clear understanding of what is important to protect, retain and preserve at Fort Monroe.



Section 2E examines, in detail, specific materials, building elements and systems and the appropriate means to treat historic building fabric. It follows the format and guidance found in the "Secretary of the Interior's Standards" and focuses on the specific materials and features found at Fort Monroe.

Lastly, Section 2F, a Glossary, defines the many technical terms used throughout the "Design Standards."

# Fort Monroe treatment approaches

The Secretary of the Interior's Standards for the Treatment of Historic Properties four treatment approaches

- 1 Rehabilitation
- 2 Restoration
- 3 Preservation
- 4 Reconstruction

The Secretary of the Interior's Standards for the Treatment of Historic Properties and guidelines define four treatment approaches: Rehabilitation, Restoration, Preservation, and Reconstruction. This section of the Fort Monroe Historic Preservation Design Standards defines these terms and the philosophical approach to an undertaking based on which approach is selected.

Choosing a Treatment Option shall be part of the Project Review Process and shall be done in consultation with the Fort Monroe Historic Preservation Officer (FMHPO). Once the appropriate treatment option is chosen, it shall be the guiding principle for the work and the "Design Standards" shall be suitably applied.



Rehabilitation is the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values. Rehabilitation may include the restoration or preservation of building features or materials.

The Guidelines for Rehabilitation are as follows:

- » A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.
- » The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
- » Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.
- » Changes to a property that have acquired historic significance in their own right will be retained and preserved.
- » Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
- » Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
- » Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
- » Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
- » New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.
- » New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

#### **REHABILITATION AS A TREATMENT**

When repair and replacement of deteriorated features are necessary; when alterations or additions to the property are planned for a new or continued use; and when its depiction at a particular period of time is not appropriate, Rehabilitation may be considered as a treatment.

#### **REHABILITATION AS AN APPROACH**

Rehabilitation will be the most used approach for the treatment of historic properties at Fort Monroe. The Secretary of the Interior's Standards for Rehabilitation are used to determine if a rehabilitation project qualifies as a "certified rehabilitation" for Historic Preservation Tax Credits.

#### RESTORATION

#### **RESTORATION AS A TREATMENT**

When the property's design, architectural, or historical significance during a particular period of time outweighs the potential loss of extant materials, features, spaces, and finishes that characterize other historical periods; when there is substantial physical and documentary evidence for the work; and when contemporary alterations and additions are not planned, Restoration may be considered as a treatment. Prior to undertaking work, a particular period of time, i.e., the restoration period, should be selected and justified, and a documentation plan for Restoration developed. Restoration is the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular point in time. This is achieved through the removal of features from other periods in its history and reconstruction of any missing features from the restoration period. The limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a restoration project.

The Guidelines for Restoration are as follows:

- » The property will be used as it was historically or be given a new use which reflects the property's restoration period.
- » Materials and features from the restoration period will be retained and preserved. The removal of materials or alteration of features, spaces, and spatial relationships that characterize the period will not be undertaken.
- » Each property will be recognized as a physical record of its time, place, and use. Work needed to stabilize, consolidate and conserve materials and features from the restoration period will be physically and visually compatible, identifiable upon close inspection, and properly documented for future research.
- » Materials, features, spaces, and finishes that characterize other historical periods will be documented prior to their alteration or removal.
- » Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize the restoration period will be preserved.
- » Deteriorated features from the restoration period will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, and texture, as well as materials if they are still currently obtainable.
- » Replacement of missing features from the restoration period will be substantiated by documentary and physical evidence. A false sense of history will not be created by adding conjectural features, features from other properties, or by combining features that never existed together historically.
- » Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
- » Archeological resources affected by a project will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
- » Designs that were never executed historically will not be constructed.

Preservation is the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Any work done, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and/or new construction. New exterior additions are not within the scope of this treatment; however, the limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a preservation project.

The Guidelines for Preservation are as follows:

- » A property will be used as it was historically, or be given a new use that maximizes the retention of distinctive materials, features, spaces, and spatial relationships. Where a treatment and use have not been identified, a property will be protected and, if necessary, stabilized until additional work may be undertaken.
- » The historic character of a property will be retained and preserved. The replacement of intact or repairable historic materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
- » Each property will be recognized as a physical record of its time, place, and use. Work needed to stabilize, consolidate, and conserve existing historic materials and features will be physically and visually compatible, identifiable upon close inspection, and properly documented for future research.
- » Changes to a property that have acquired historic significance in their own right will be retained and preserved.
- » Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
- » The existing condition of historic features will be evaluated to determine the appropriate level of intervention needed. Where the severity of deterioration requires repair or limited replacement of a distinctive feature, the new material will match the old in composition, design, color, and texture.
- » Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that could possibly cause damage to historic materials will not be used.
- » Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

#### PRESERVATION AS A TREATMENT

When the property's distinctive materials, features, and spaces are essentially intact and thus convey the historic significance without extensive repair or replacement; when depiction at a particular period of time is not appropriate; and when a continuing or new use does not require additions or extensive alterations, Preservation may be considered as a treatment.

#### RECONSTRUCTION

#### **RECONSTRUCTION AS A TREATMENT**

When a contemporary depiction is required to understand and interpret a property's historic value (including the re-creation of missing components in a historic district or site); when no other property with the same associative value has survived; and when sufficient historical documentation exists to ensure an accurate reproduction, Reconstruction may be considered as a treatment. Reconstruction is the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape, building, structure, or object for the purpose of replicating its appearance at a specific period of time and in its historic location.

The Guidelines for Reconstruction are as follows:

- » Reconstruction will be used to depict vanished or non-surviving portions of a property when documentary and physical evidence is available to permit accurate reconstruction with minimal conjecture, and such reconstruction is essential to the public understanding of the property.
- » Reconstruction of a landscape, building, structure, or object in its historic location will be preceded by a thorough archeological investigation to identify and evaluate those features and artifacts which are essential to an accurate reconstruction. If such resources must be disturbed, mitigation measures will be undertaken.
- » Reconstruction will include measures to preserve any remaining historic materials, features, and spatial relationships.
- » Reconstruction will be based on the accurate duplication of historic features and elements substantiated by documentary or physical evidence rather than on conjectural designs or the availability of different features from other historic properties. A reconstructed property will re-create the appearance of the non-surviving historic property in materials, design, color, and texture.
- » A reconstruction will be clearly identified as a contemporary re-creation.
- » Designs that were never executed historically will not be constructed.

# Fort Monroe management zones

This Section contains a brief analysis of each Management Zone and establishes planning principles for rehabilitation and new construction based on the stipulations of the Programmatic Agreement and the land use concepts of the Fort Monroe Reuse Plan. More detailed guidance for rehabilitations to individual buildings can be found in Part 4, the Resource Inventory. Guidance for new construction and additions can be found in Part 3, Design Standards for New Construction.





#### MANAGEMENT ZONES INTRODUCTION

Seven Management Zones have been established as a foundation for a comprehensive approach for the management and treatment of the diverse and numerous resources found at Fort Monroe. Five zones are established geographically and two are based on resource types. The seven zones are:

- 1. Zone A: The West Peninsula
- 2. Zone B: The East Peninsula
- 3. Zone C: North Gate and Stilwell Drive
- 4. Zone D: McNair, Ingalls, Fenwick Corridors
- 5. Zone E: The Stone Fort and Moat
- 6. The Endicott Batteries
- 7. Individually eligible historic properties for listing on the National Register of Historic Places.

The geographic boundaries of Zones A through E are based on historic and existing architectural character, current and past uses, construction periods, and concentration of contributing resources. The Management Zones do not recommend or suggest any possible future subdivision of Fort Monroe nor are they intended to encourage consideration of each Zone in isolation without acknowledging the implications of future management decisions and treatments on adjacent zones and Fort Monroe as a whole.

# ZONE A West Peninsula

CONTRIBUTING BUILDINGS NON-CONTRIBUTING BUILDINGS BATTERIES



Zone A encompasses the width of the peninsula north of the seawall along the Chesapeake Bay and extends south along the Mill Creek shoreline to include Walker Airfield. This zone historically has been used for training and industrial uses. Wilson Park, an antiaircraft gun park, was located on the Chesapeake Bay north of Battery Anderson and Battery Ruggles. The Dog Beach landfill was in operation in this zone from the mid 1930s through the mid 1950s. The southern portion, including Walker Airfield and almost all of the land west of Fenwick Road, is fill dating from the late 1930s creating the defined shoreline along Mill Creek. A variety of structures have been built and demolished over time. These include barracks, quarters, mess halls, signal light towers, a balloon hanger, storage facilities, and an incinerator. Although few buildings remain, remnants of previous construction, such as foundations and impervious surfaces, are found through out Zone A. As the Army's mission at Fort Monroe changed, so did the use of this Zone, and so did the built environment.

The Fort Monroe Reuse Plan designates this area as "Parks and Recreation" and calls for it to be retained as open space. Planned uses of this area are passive and active recreation such as: camping, public beaches, preserved natural areas, walking trails, and a nature center. The existing alignment of Fenwick Road will be maintained and appropriate parking will be provided.

#### RESOURCES

Contributing Buildings/Structures: Buildings 32 and 38

Non-contributing Buildings/Structures: 211, 247, 1090, 1091, 1092, 1094, 1099, 1102

Individually Eligible Building/Structures: none

Objects: none

Landscape Features: The natural shoreline of Mill Creek and the Chesapeake Bay in the northern portion of Zone A and Fenwick Road



Building 38

#### CHARACTER-DEFINING FEATURES

This zone is primarily a natural area with natural shorelines along Mill Creek and the Chesapeake Bay. Structures in this zone are often obscured by landscape features.

The predominant open space character is unique on the post because the remainder of Fort Monroe is more intensely developed with open spaces-defined by the built environment

The existing building resources within this zone are utilitarian structures that are simply detailed

Fenwick Road follows the alignment of the Fort Monroe railroad. It is an important feature in the landscape

Remnants of the cultural landscape found throughout Zone A that attest to the changing military mission

#### PLANNING PRINCIPLES

Rehabilitation of existing buildings is encouraged. The reuse of buildings should support recreational uses per the Fort Monroe Reuse Plan

The alignment of Fenwick Road shall be maintained

Preservation of the remnants of the cultural landscape is encouraged to tell the story of the changing military mission at Fort Monroe

Demolition of Building 38 is discouraged. It is a unique type of construction at Fort Monroe. The reuse of this property should consider compatible uses that require minimal change to the property

All planned work in Zone A is subject to review and approval by the FMHPO

# **ZONE B** East Peninsula, Wherry Quarter





Recent Construction Along Fenwick Road

Zone B extends northeast of the stone fort and alongside Zone A. Over the years, the use of this zone has changed in response to Fort Monroe's changing military mission. Temporary camps were located in clusters along Fenwick Road and between the Batteries. Barracks occupied much of the area south of Battery DeRussy until the Wherry Housing was constructed in the 1950s. There were several Endicott-era fortifications that have been removed: Batteries Montgomery, Eustis, Bomford, Humphrey and Barber. Patch Road and Fenwick Road approximate the original Mill Creek shoreline. The area north of Patch Road was filled in during the 1930s and this area has been used for baseball and football fields, tennis courts and other recreational facilities. Although part of this zone extends north into the less developed part of the peninsula alongside Zone A, Zone B mainly consists of medium density residential and commercial (administrative) buildings that are primarily one and two story structures. There are two areas of remaining Wherry housing and they are beside Battery DeRussy and along Fenwick Road and the Chesapeake Bay. Wherry housing was also sited between Battery DeRussy and Battery Church, but these units have been demolished. The Wherry residential apartments and duplexes are of a relative simple design.

The Fort Monroe Reuse Plan divides this management zone into three areas. The northern portion adjacent to Zone A is designated as "Parks and Recreation." The western edge adjacent to Zone C is designated "Mixed Use/Workplace and Residential Focus." The majority of the land in Zone B is designated as "to be determined" pending approval of a final reuse concept by the FMA.

## RESOURCES

Contributing Buildings/Structures Wherry Housing: 300, 301, 302, 303, 304, 305, 306, 307, 309, 311, 312, 313, 314, 316, 318, 320, 322, 324, 342, 344, 346, 348, 350, 352, 358, 354, 356, 360, 452, 454, 456, 458, 460, Batteries: 212 (Battery DeRussy); 213/214 (Anderson/Ruggles); 232 (Battery Church)



View of the Wherry Housing Area

Non-contributing Buildings/Structures: 12, 88, 91, 96, 184, 185, 189, 190, 201, 206, 208, 210, 212, 213, 214, 218, 221, 232, 233, 234, 235, 245, 246, 259, 260, 261, 262, 263, 264, 265, 270, 556, 557, 558, 559, T-86, T-246

Individually Eligible Buildings and Structures: none

Objects: none

Landscape Features: The glacis on the northeast front of the Stone Fort, historic circulation patterns

#### CHARACTER-DEFINING FEATURES

Recreational uses have historically been sited along Mill Creek and continue to be

Buildings grouped together by use

Patch Road and Fenwick Road follow the alignment of the Fort Monroe railroad. They are important features in the landscape

#### PLANNING PRINCIPLES

Rehabilitation of existing historic properties is encouraged. Uses of existing/rehabilitated structures shall support the goal of economic sustainability

The alignment of Patch Road and Fenwick Road shall be maintained

The Wherry housing shall not be demolished without full consideration of reuse alternatives that maintain the existing housing. Documentation, including supporting materials that presents evidence of the considered reuse options, shall be provided to the SHPO for review. Measures to address health and safety concerns or to prevent further property damage, which could include partial demolition of a contributing structure, may be undertaken only after consultation with the FMHPO.

All planned work in this Zone is subject to review by the FMHPO.

# **ZONE C** North Gate Road / Stilwell Drive





Building 28: Submarine Mine Depot

Zone C is Fort Monroe's industrial and service core. The majority of the post's historic warehouse buildings and mission support structures such as the Submarine Mine Depot (Building 28) are sited in this area. Almost all of Zone C is fill dating from the 1930s. The fill activity moved Fort Monroe's shoreline along Mill Creek from approximately Patch Road to where it is today. The development of Zone C was heavily influenced by the Fort Monroe railroad. The rail line traversed Zone C along what is now Eustis Lane and continued on to Fenwick Road then north to Dog Beach. Warehouses and industrial buildings were located along the rail and rail spurs creating a pattern of historic development. A number of the buildings in Zone C, a mix of large brick buildings and single-story wood warehouses, date from the 1930s and possess a fair degree of architectural merit. With a few exceptions, these buildings are architecturally quite different from the majority of Fort Monroe's historic resources.

The Fort Monroe Reuse Plan designates the area as "Mixed-Use/ Workplace and Residential Focus" and calls for contributing historic buildings within this area to be integrated with proposed new construction. All new construction, regardless of its intended use, shall take info account the height and floor levels of nearby buildings, and so reflecting the scale and character of Fort Monroe's historical urban fabric.

#### RESOURCES

Contributing Buildings/Structures: 28 (Submarine Mine Depot), 56, 57 (Motor Pool), 59, 135

Non-contributing Buildings/Structures: 58, 72, 74, 75, 104, 168, 243, 252, T-81, T-99, T-100, T-101, T-102, T-104



Building 57: The Motor Pool

Individually Eligible Building / Structures: none Objects: none Landscape Features: The Cadet Battery

#### CHARACTER-DEFINING FEATURES

Buildings 56, 57 and 135 create a unique streetscape at Fort Monroe. They are a cohesive built edge along Patch Road facing the moat.

Patch Road and Stilwell Drive are well-defined circulation routes on the southern and northern boundaries of Zone C. North Gate Road provides a direct connection to the Stone Fort. The interior circulation is less defined due to large expanses of paved surface parking lots.

There is a uniformity of building scale, especially building footprints. The buildings in this zone have larger footprints than the buildings in other zones.

## PLANNING PRINCIPLES

Rehabilitation and adaptive use of the contributing buildings is encouraged. Uses of existing buildings shall be compatible with the historic resource, support the concepts of the reuse plan, and support the goal of economic sustainability.

Demolition of a contributing property shall not occur until after full consideration of reuse alternates and documentation justifying demolition has been provided to the FMHPO for review and approval.

All planned work in this zone is subject to review by the Fort Monroe Historic Preservation Officer (FMHPO).

# **ZONE D** McNair, Ingalls, Fenwick Corridors





Cannon Park



Coastal Artillery School Complex



Continental Park

This zone has four distinct "neighborhoods" and contains the highest concentration of contributing resources at Fort Monroe. Every period of the fort's development is represented in Zone D by at least one structure including the Old Point Comfort Light House which predates the construction of the Fort. To the north, near the main entrance, is the Coastal Artillery School housing complex. The siting and landscaping of the grouping is noteworthy, a highlight of which is the lushly-planted Reeder Circle.

Around Cannon Park is a group of administrative and residential structures that create a separate neighborhood with the feel of a village center.

The southeast corner of Zone D is the Coastal Artillery School Complex. This is a collection of buildings that were built during the early 1900s for the Coastal Artillery School and have been adapted for offices.

The fourth neighborhood is the residential area facing Fenwick Road and the Hampton Roads harbor.

The Fort Monroe Reuse plan calls for rehabilitation of the historic structures and designates this zone as "Mixed Use/Historic Village." Reuse of the structures may incur additions or modifications to the existing structures to comply with accessibility guidelines or life safety concerns. Because this zone is already densely developed, the areas available for infill construction are limited.



Coastal Artillery School Housing and Reeder Circle



Coastal Artillery School Complex



View from Fenwick Road

#### RESOURCES

Contributing Buildings/Structures: 4 (Bandstand), 11, 24, 25, 26, 27, 27-A, 30, 31, 33, 34, 35, 37, 39, 42, 43, 44, 45, 51, 52, 54, 55, 60, 61, 64, 73, 77, 80/81, 83, 87, 90, 92, 93, 100, 101, 102, 103, 109, 110, 111, 112, 113, 114, 115, 116, 118, 119, 120, 121, 123, 124, 125, 129, 130, 131, 132, 133, 134, 136, 137, 138, 140, 141, 142, 143, 144, 146, 147, 148, 149, 150, 151, 152, 153, 154, 158, 161, 163, 167, 171, 182, 183, 186, 187, 188, 191, 192, 193, 194, 195, 196, 200 (Seawall), 204, 205, 1087 (Gazebo behind Building 119), Chamberlin Hotel, St. Mary's Church and Rectory, and the Lighthouse

Non-contributing Buildings/Structures: 13, 36, 40, 71, 76, 89, 94, 107, 108, 122, 145, 170, 172, 177, 180, 197, 202, 203, 207, 219, 220, 222, 223, 224, 226, 227, 228, 229, 230, 231, 238, 242, 248, 266, 267, 560, T-216

Individually Eligible Buildings / Structures: The Chamberlin Hotel and Old Point Comfort Lighthouse are individually listed on the National Register of Historic Places

#### Objects: None

Landscape Features: Cannon Park, Continental Park, Reeder Circle, the Courtyard of the Coastal Artillery School housing complex

#### CHARACTER-DEFINING FEATURES

The residential sections of this zone have the definite feel of a neighborhood, with two- and three-story duplexes and single-family homes (largely constructed of brick) arranged with a regular rhythm and density along tree-lined streets. The Old Arsenal (Building 27), the Hospital (Building 82), and the Coastal Artillery School housing, together with the impressive quarters across the Ingalls Road, lend an atmosphere of importance and formality. The southern end of the street is slightly different in that the buildings

comprising the Coastal Artillery School Complex (Buildings 37, 133, 134, 138, 161, and 163) are of a different style and scale.

Ingalls Road is a major traffic artery providing direct access from the entrance of the fort to the Main Gate of the Stone Fort. It has a diverse collection of built resources and landscape features that contribute to the Fort Monroe NHL District. The scale of the buildings, the setback from the road and the tree canopy create a cohesive streetscape along this main street.

#### PLANNING PRINCIPLES

Historic landscape patterns such as the tree lined streets, foundation plantings, landscaped parks, building setbacks, and circulation shall be maintained and preserved.

Rehabilitation and adaptive use of the contributing buildings is encouraged. Uses of existing buildings shall be compatible with the historic resource, support the concepts of the reuse plan, and support the goal of economic sustainability.

Demolition of a contributing property shall not occur until after a full consideration of reuse alternates, documentation of reuse alternatives, and justification of the reason(s) why they are not prudent and feasible, and economic data to support the proposal for demolition are provided to the FMHPO for review and consultation with the SHPO.

All planned work in this zone is subject to review and approval by the FMHPO.

## ZONE E Stone Fort and Moat



The most valuable historic resource at Fort Monroe is the stone fort itself. Not only does it contain the majority of the oldest structures on post, but it is also the site of historic events of national importance. Several resources in this zone, including the stone fortification and the moat, have been deemed eligible for individual listing on the National Register of Historic Places.

Zone E includes the Stone Fort, the Moat surrounding it, the Glacis to the north east and the Water Battery. The Water Battery was part of the original stone fortification, but was partially demolished in the 1930s. Its Powder Magazine and a cross section of its stone and masonry construction are all that remain.

As the historic center, this zone will require the highest standard of protection. The Fort Monroe Reuse Plan proposes no new construction inside the Stone Fort. This Zone is designated as "Mixed Use and Cultural Focus." Restoration and rehabilitation efforts may include enhancements such as restoring building façades to their historical appearance, and the removal of non-historic building additions.

#### RESOURCES

Contributing Buildings/Structures: 1, 2, 3, 5, 6, 7, 8, 9, 10, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 46, 47, 48, 49, 50, 53, 57, 62, 63, 84, 85, 86, 105, 105A, 117, 126, 127, 128, 139, 155, 156, 157, 159, 166, 209, 216, T-28, The East Gate, The North Gate, The Postern Gate, The Flagstaff Bastion and Battery Gatewood

Non-contributing Buildings/Structures: 41, 78, 198, 217, 240, 478, 479, T-24

Individually Eligible Buildings / Structures: The casemated stone fortification to include the moat and the Water Battery, Quarters 1, Quarters 17, Chapel of the Centurion (Building 166)

Objects: The Lincoln Gun

Landscape Features: Jefferson Davis Memorial Park, The Fort Monroe Live Oaks, The Parade Ground, The Pet Cemetery

#### CHARACTER-DEFINING FEATURES

This Zone has a great variety of architectural styles ranging from the Federal period to International style.



The Parade Ground is the central focus and organizing feature of this zone. It is defined by both soft landscape and hard built edges. The circulation is defined by the "loop" of Bernard Road and the three entry gates.

There is an intangible quality found inside the fort walls of isolation, security, and inward focus.

The Parade Ground, enclosed by Live Oak trees and buildings at the heart of the walled fort, conveys a strong sense of time and place.

#### PLANNING PRINCIPLES

The existing open space shall be preserved and maintained. The parking located on the Parade Ground shall be minimized or eliminated toward the goal of restoring the Parade Ground as a historic landscape feature.

Historic properties shall be reused in a sensitive and appropriate manner, i.e. one which either corresponds with its historic use, or which requires minimal changes to distinctive materials, features, spaces and spatial relationships.

New construction shall be strictly limited in this zone to only necessary additions or modifications to address accessibility, or health and life safety issues. Additions to structures shall be in accordance with the Design Standards for New Construction.

Demolition of a contributing property shall not occur unless necessary to address immediate health and life safety concerns or to prevent further property damage. Partial demolition as a component of a building restoration may be considered by the FMHPO. Proposals for demolition must be reviewed by the FMHPO.

All planned work in this zone is subject to review and approval by the FMHPO.

#### THE BATTERIES



The seven concrete and earthen batteries along the Chesapeake Bay were constructed between the years 1896 and 1906. They are part of a large scale program to modernize harbor and coastal defenses. They are referred to as The Endicott Batteries named for William Endicott, Secretary of War under President Grover Cleveland and chair of the Endicott Board which recommended these modern fortifications be built. They are massive concrete structures with earthen and concrete walls facing the Bay and were fitted with disappearing guns behind their walls.

Now obsolete, the batteries are in various stages of deterioration. Only Battery Parrott is still occupied and Battery Irwin, with its guns still in place, is an interpretive exhibit.

Individual boundaries for the seven Endicott Batteries at Fort Monroe need to be established to separate them from the Management Zones in which they are located. The boundaries include the earthen protection system (the sand barrier that was placed around the concrete structure to protect the battery from incoming naval shelling) or space for these barriers where the protection system is now missing. The boundaries shall also include sufficient buffers to establish appropriate historic settings, and are based on the historic usage of the individual batteries, i.e., field of fire, working areas, and their respective viewsheds.

#### RESOURCES

Contributing Buildings/Structures: 212 (Battery DeRussy), 213/214 (Anderson/Ruggles), 232 (Battery Church), 233 (Battery Irwin), 234 (Battery Parrott), and Battery Gatewood.

#### CHARACTER-DEFINING FEATURES

The Batteries command significant viewsheds, including their field of artillery fire, overlooking the Chesapeake Bay.

The Endicott Batteries at Fort Monroe are constructed almost exclusively out of concrete and steel and are examples of a particular period of military engineering. At Batteries Church, DeRussy, Irwin and Parrott, the streamlined detailing of the steel supports and connections is reminiscent of a battleship or submarine. Battery DeRussy has a particularly significant level of architectural detail, with concrete support pillars crafted to resemble columns, complete with capitals and bases.

#### TREATMENTS

All restoration, preservation, rehabilitation or reconstruction of lost portions of the batteries shall be done in accordance with the Design Standards.



Battery Parrott

Existing historic materials and features, such as the iron railings, doors, and gun mounts, shall be retained to the greatest extent possible or, if removal must occur, safely stored for reuse in the restoration of the structure.

Adequate protections to stabilize and secure the remaining extant portion of the structures from damage or deterioration shall be taken.

Individual boundaries for each battery have been established to create buffers to establish an appropriate historic setting, views to the batteries and views from each battery to maintain their field of fire for historic interpretation.

No removal of historic building fabric may occur unless necessary to address immediate health and safety concerns or to prevent further property damage. Consultation with the FMHPO must occur before any historic building fabric is removed.

#### PLANNING PRINCIPLES

The significant viewsheds to and from the batteries including fields of fire shall be maintained and preserved.

The open space around the batteries shall be preserved by respecting individual "site" boundaries around each structure.

Reuse options, including interpretive opportunities, shall be explored and considered.

Stabilization and rehabilitation of the batteries shall be encouraged through reuse options, restoration/training programs, recreational uses.

No demolition shall occur unless necessary to address immediate health and life safety concerns or to prevent further property damage and only after consultation with the FMHPO and SHPO.

All planned work on the batteries is subject to review and approval by the FMHPO.

#### INDIVIDUALLY ELIGIBLE HISTORIC PROPERTIES









NON-CONTRIBUTING BUILDINGS CONTRIBUTING LANDSCAPE FEATURES

BATTERIES

INDIVIDUALLY ELIGIBLE HISTORIC PROPERTIES

Quarters 17





The Chapel of the Centurion

Three individual buildings plus the Stone Fort, Moat, and Water Battery have been identified as being significant in their own right.

#### RESOURCES AND CHARACTER-DEFINING FEATURES

The buildings identified as eligible for individual listing on the National Register of Historic Places are:

Quarters 1: This building is known as the DeRussy House and also the Lincoln House. It is the oldest non-fortification structure within the Fort walls. It was the residence of the Commanding Officer from 1822 until 1907 and has hosted many famous dignitaries including President Lincoln. Quarters 1 is significant for its age, association with famous people and events, architectural design and context as it bounds the Parade Ground.

<u>Quarters 17, Lee's Quarters</u>: Quarters 17 and 18 were built in 1823 and are two of the earliest permanent officer's quarters constructed at Fort Monroe. Robert E. Lee lived in Quarters 17 from 1831 until 1834 when he supervised the construction of the Fort. Quarters 17 is significant for its age, association with a famous person, architectural character and context within the Fort walls.

<u>The Chapel of the Centurion</u>: The Chapel of the Centurion (Building 166) is a Richard Upjohn inspired Carpenter Gothic structure. It was constructed in 1857 as a memorial to two men who died in a laboratory explosion at the Fort Monroe Arsenal. It was dedicated May 3, 1858. It is the only religious structure within the Fort walls. The Chapel has retained much of its original integrity. Alterations over time, such as the thirty stained glass memorial windows, three of which are from the Tiffany Studios, add to the significance of the Chapel.

The Stone Fort, Moat, and Water Battery: This is a unique example of 19th Century construction. The series of structures comprising the fort's interior and exterior walls, gates and casemates and the



Main Gate into the Stone Fort

surrounding moat is arguably the most important historic resource on the post. It was designed by French Engineer General Simon Bernard and incorporated state-of-the-art military engineering principles of the early 1800s. The Stone Fort is the largest of the Third System coastal fortifications built after the war of 1812. It is significant in military history, engineering, design and association with famous people and events.

#### TREATMENTS

All restoration, preservation, rehabilitation or reconstruction (if appropriate due to loss of a historic property) shall be done according to the Design Standards.

Existing historic materials and features, such as bricks, windows, mantels, sills, lintels, etc. shall be retained to the greatest extent possible, or, if removal must occur, safely stored for reuse in the reconstruction of the property or to replace deteriorated or damaged historic materials and features.

Adequate protections to stabilize, secure, and preserve the remaining extant portions of the historic property from damage or deterioration shall be taken.

Individual boundaries for properties identified as being significant in their own right shall be established and shall include sufficient buffers to establish appropriate historic settings. Further consultation on a case by case basis is necessary to establish what is an appropriate buffer for each individually eligible historic property.

No removal of historic building fabric may occur unless necessary to address immediate health and safety concerns or to prevent further property damage. Consultation with the FMHPO must occur before any historic building fabric is removed.

#### PLANNING PRINCIPLES

Each individually eligible resource shall have a boundary determined that will be defined as the "site" of the resource.

Planned uses for these structures shall be consistent to their historic use or of a compatible nature as to retain historic character and building fabric.

No demolition shall occur unless necessary to address immediate health and life safety concerns or to prevent further property damage and only after consultation with the FMHPO and SHPO.

All planned work on these individual resources is subject to review and approval by the FMHPO.

# Fort Monroe architectural styles

This section examines in detail specific materials, building elements and systems, and the appropriate means to treat historic building fabric. It follows the format and guidance found in the "Secretary of the Interior's Standards" and focuses on the specific materials and features found at Fort Monroe.



## ARCHITECTURAL STYLES



FEDERAL



GOTHIC REVIVAL



SHINGLE



RICHARDSONIAN ROMANESQUE



FOLK VICTORIAN



COLONIAL REVIVAL



BEAUX ARTS



NEOCLASSICAL



CRAFTSMAN



MODERNISTIC

There are a variety of architectural periods represented at Fort Monroe from Federal houses to a modernistic radio station. Each architectural style embodies characteristics of design and construction that make them unique. It is important to understand and recognize the different building styles because they also represent different periods of development and an understanding of how the Fort has evolved. This progression of styles tells Fort Monroe's story of active use by the Army beginning with the Fort's initial construction.

This section of the Design Standards describes the most common architectural styles found and the characteristics that define them. It is to be used as both a tool for identifying building styles as well as establishing the basic character defining features of each style.



Symmetrical in elevation and plan

- Gabled roof of low pitch Cornice emphasized with modillions
- Porch supported by Doric style columns
- Full-width front porch equaling it in height of façade
- Windows aligned horizontally and vertically
- . Front door surrounded by narrow sidelights and a rectangular line of transom lights above
- Windows with double-hung sashes, six panes per sash

Federal style shares many characteristics of late Georgian architectural style, emerging after the American Revolution as one way to distinguish the new nation from Great Britain. The Federal period spans from roughly the end of the Revolutionary War to 1830. Today, the style is found throughout the Eastern United States.

#### IDENTIFYING FEATURES INCLUDE

- » Symmetrical elevation and plan
- » Gabled (most common) or hipped roof of low pitch
- » Entry or full-width porch (portico) dominating the full height of the façade
- » Porch supported by prominent square piers or round columns, typically of Doric style
- » Cornice embellished with dentils, modillions, or other decorative molding
- » Front door surrounded by narrow sidelights and a rectangular line of transom lights above
- » Windows with double-hung sashes, typically with six panes per sash; windows never in adjacent pairs
- » Windows aligned horizontally and vertically
- » Interiors with oval, circular, or octagonal rooms, elaborate door, window, and fireplace enframements, and delicate classical motifs







## ARCHITECTURAL STYLE Gothic Revival

Steeply-pitched roof, side-gabled with steep cross gables -Wall surface extending into gable without break -Windows extending into gables, having point-arch shape -

Open cornices with sheathed parallel to the overlying roof -Entry door extending into gables, having point-arch shape -









Gothic Revival is the imitation of various medieval Gothic architectural styles. The style was popular in America, from approximately 1840 to 1870, gaining momentum because it was one of the first styles to be published in pattern books. It was most commonly used for churches, colleges, and rural houses. While surviving examples are found more frequently in the Northeastern states, important examples can be found in the South.

#### IDENTIFYING FEATURES INCLUDE

- » Steeply pitched roof, usually side-gabled with steep cross gables
- » Gables commonly have decorated verge boards
- » Wall surface extending into gable without break
- » Fanciful decorative ornamentation, cut from wood with the newly perfected scroll saw, typically appearing at windows, roof-wall junctions, porches and doors
- » Open cornices with rafters either exposed or sheathed parallel to the overlying roof
- » Windows commonly extending into the gables, frequently having point-arch shape
- » Single-story porch, either entry or full-width, commonly supported by flattened (slightly pointed) Gothic arches



- Intersecting cross gables and multi-level eaves Asymmetrical façade with irregular, steeply pitched roof line
- Shingled walls without interruption at corners
- Wall cladding of continuous shingles, textured shingles on second story
- Extensive porches

Shingle is an architectural style of the late 19th century, characterized by exterior walls covered with wood shingles, and heavy asymmetrical massing. This style resulted partly from a renewed interest in the shingled Colonial houses of coastal New England, where the greatest concentration of examples are found. Although it is best known for large, architect-designed houses and hotels, it also was used for smaller suburban dwellings. Most examples were built in the 1880s.

#### IDENTIFYING FEATURES INCLUDE

- » Wall cladding and roof of continuous shingles (shingled walls may occur on second story only); original wooden roofing now replaced by asphalt shingles on most examples
- » Shingled walls without interruption at corners (no corner boards)
- » Asymmetrical façade with irregular, steeply pitched roof line
- » Roofs with intersecting cross gables and multi-level eaves
- » Extensive porches, though these may be small or absent in urban examples




# ARCHITECTURAL STYLE Richardsonian Romanesque







Richardsonian Romanesque is a style of masonry building largely based on the Romanesque style of Southeast France. In the U.S., the style was championed by Henry Hobson Richardson (1838-86). In 1879-80, Richardson executed the first of his few Romanesque houses, the rectory for his monumental Trinity Church in Boston. His Romanesque adaptation became very popular for large public buildings during the 1880s, but he completed only a few more houses in this style before his death. In 1888, a sympathetic monograph on Richardson's life and work was published, which greatly increased interest in the style. Most domestic examples are an outgrowth of this revival and were built in the 1890s. Because they were always of solid masonry construction, Richardsonian Romanesque houses were much more expensive to build than were those late Victorian styles, which could be executed in wood. For this reason, such buildings are mostly architectdesigned landmarks. Scattered examples occur throughout the country, but they are most frequent in the larger cities of the Northeastern states.

- » Round-topped arches occurring over windows, porch supports, or entrance
- » Masonry walls, usually with rough-faced, squared stonework
- » Towers, which are normally round with conical roofs
- » Asymmetrical façade
- » Hipped roof with eyebrow dormers
- » Large double-hung windows with one-over-one sash

# ARCHITECTURAL STYLE Folk Victorian



The Folk Victorian style is common throughout the United States, with variations based on geographical distribution. The spread of Folk Victorian architecture was made possible by the advent of the railroad, which transported the heavy woodworking machinery needed for production of inexpensive Victorian-style decorative trim throughout the United States. The railroads also provided local lumber yards with abundant supplies of pre-cut trim from distant mills, and many builders and homeowners simply grafted these pieces onto the traditional folk architecture familiar to local carpenters. Others updated their existing houses with new Victorian-style porches, making strong stylistic statements that are treated as a distinct category. This style generally is elaborated much less than the Victorian styles. Primary areas for application of this detailing were porches and cornice lines.

- » Symmetrical façade (except gable-front-and-wing subtype)
- » Porch with spindle work detailing (Queen Anne-type turned spindles and lace-like spandrels)
- » Square posts with chamfered corners (beveled at a 45-degree angle)
- » Brackets along the cornice line, if boxed
- » Center cross gables added to side-gabled or pyramidal roofs







# ARCHITECTURAL STYLE Colonial Revival









The label "Colonial Revival" refers to the rebirth of interest in the early-English and Dutch-style architecture along the Atlantic Coast of the United States. The Georgian and Adam styles were the foundation of the Revival, with other influences coming from post-medieval English or Dutch Colonial architecture. Early examples tended to be free interpretations, with details inspired by Colonial-era precedents, rather than historically correct copies of these examples. While Colonial Revival was a dominant style for domestic buildings during the first half of the 20th century, different variations were not equally common throughout this period and tended to shift with the changing fashions of the day.

- » Accentuated front door, normally with decorative crown (pediment) supported by pilasters, or entry porch supported by slender columns; broken pediments are rare on Colonial originals
- » One-story side wings, either open or enclosed, usually with flat roof, which is probably an addition if found on Colonial originals
- » Doors commonly have overhead fanlights or sidelights; details are much flatter than those were on Colonial originals
- » Roofs with boxed cornices and minimal overhang at the eaves, frequently decorated with dentils or modillions
- » Dormers, never found in Colonial originals
- » Rectangular windows with double-hung sashes, typically with six, eight, nine, or twelve panes per sash; equally common are multi-pane upper sashes hung above lower single pane sashes, never seen on Colonial originals
- » Windows frequently in adjacent pairs, sometimes triple, or bay windows, never found in Colonial originals

# ARCHITECTURAL STYLE Beaux Arts



#### Symmetrical façade

Façade with quoins (subtle brick quoins for this building) Masonry walls

Cornice lines accented by modillions

Wall surfaces with ornaments Elaborated window crown and surrounds

Paired pilasters

The term "Beaux Arts" (approximate French translation of "Fine Arts") has two meanings for architectural historians. Some use it to describe the entire period from 1885 to 1920, which encompassed various eclectic styles advocated by Americans who studied at France's École de Beaux-Arts. A more limited meaning, however, refers to a single eclectic tradition based on classical precedents elaborated by lavish decorative detailing – perhaps most typical of the many styles inspired by study at the École.

Houses of this style are usually architect-designed landmarks built principally in the prosperous urban centers where wealth was concentrated at the turn of the 20th century. Most domestic examples were constructed before 1915, but the style persisted until the Great Depression of the 1930s.

- » Symmetrical façade
- » Façade with quoins
- » Paired pilasters or columns usually Ionic or Corinthian capitals
- » Wall surfaces with decorative garlands, floral patterns or shields
- » Masonry walls usually smooth, light-colored stone
- » Rusticated first story
- » Roof-line balustrade (found on flat or low-pitched hipped roof designs) and balustraded window balconies
- » Elaborate window crown and surrounds
- » Cornice lines accented with elaborate moldings, dentils, and modillions





# ARCHITECTURAL STYLE Neoclassical





Neoclassical is the last phase of the classical revival in the United States influenced by the later, more refined stage of the Beaux-Arts tradition. Federal government buildings of the first half of the 20th century owed much to the Beaux-Arts interpretation of classical design. This style is distinguished by symmetrically arranged buildings of monumental proportions finished with smooth or polished stone surfaces.

- » Symmetrical façade with balanced windows and center door
- » Façade dominated by full-height porch with roof supported by classical columns
- » A series of colossal pilasters
- » Windows are large single-light sashes
- » Attic story and parapets, with unadorned roof line and unenriched entablature
- » Smooth or polished stone surface



- Low pitch hipped roof with wide, unenclosed eave overhang
- Exposed decorative roof rafters
- Full-width porch supported by square columns

Craftsman-style houses were developed primarily from the work of California brothers Charles Sumner Greene and Henry Mather Greene, who practiced together in Pasadena from 1893 to 1914. About 1903, they began to design simple bungalow-style homes, and by 1909 they had executed several landmark examples that came to be called "the ultimate bungalows." As a result of extensive publicity in magazines, such as Good Housekeeping, Ladies' Home Journal, and Architectural Record, which familiarized the public with the style, a flood of pattern books appeared. Some of these even offered pre-cut kits, which could be assembled by local labor, quickly allowing the one-story Craftsman to become one of the most popular residential styles in America. High-style interpretations are rare outside of California, where they have been called Western Stick-style.

- » Usually single-story, though one-and-one-half and two-story examples exist
- » Low-pitched, gabled roofs (occasionally hipped) with wide, unenclosed eave overhang
- » Roof rafters, usually exposed and decorative
- » Decorative (false) beams or braces commonly added under gables
- » Porches, either full or partial-width, typically supported by short, square upper columns resting on more massive piers or a solid porch balustrade
- » Doors and windows similar to vernacular Prairie houses







# ARCHITECTURAL STYLE Modernistic











The modernistic styles were built from about 1920 to 1940. The earlier form was the Art Deco, which was common in public and commercial buildings in the 1920s and early 1930s. It was, however, extremely rare in domestic architecture; we know of only a few surviving houses, although it was frequently used for apartment buildings. After about 1930, Art Moderne became the prevalent Modernistic form. Although never common, many houses were built in the style and scattered examples can be found throughout the United States.

# IDENTIFYING FEATURES INCLUDE

#### Art Moderne

- » Smooth wall surface, usually of stucco
- » Flat roof, usually with coping at roof line
- » Horizontal grooves or lines in walls
- » Horizontal balustrade elements
- » Asymmetrical façade
- » Typical elaborations: curved corners, corner windows, round windows, glassbrick windows or wall sections, etc.

#### Art Deco

- » Smooth wall surface, usually of stucco
- » Zigzags, chevrons, and other stylized and geometric motifs occurring as decorative elements
- » Towers and other vertical projections above the roof line for vertical emphasis

#### Vernacular

» Vernacular style refers to a building that was not designed by an architect or someone with formal training. These buildings were often based on traditional or regional forms

# Fort Monroe materials and methods



Introduction 2E.3
Masonry and Concrete 2E.4
Wood 2E.9
Architectural Metals 2E.15
Roofing
Windows 2E.29
Entrances and Porches 2E.36
Structural Systems 2E.39
Interiors 2E.43
Mechanical and Electrical Systems 2E.51
Sustainable Design Practices 2E.55
Energy Efficiency (Heating and Cooling) $\ldots \ldots \ldots 2E.56$
Energy Conservation (Power and Lighting) 2E.58
Water Conservation
Inherent Technologies
Materials and Resources 2E.62

# INTRODUCTION

## SUGGESTED GUIDANCE

"The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings" <u>http://www.nps.gov/history/hps/tps/standguide/index.</u> <u>htm</u>

"The Secretary of the Interior's Standards for Rehabilitation & Illustrated Guidelines for Rehabilitating Historic Buildings" http://www.nps.gov/history/hps/tps/tax/rhb/metalso1. htm

"Preservation Brief 17" Architectural Character – Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving Their Character http://www.nps.gov/history/hps/tps/briefs/brief17.htm

"Preservation Briefs" Scroll to bottom of Web page to search by topic. http://www.nps.gov/history/hps/tps/tax/

"US General Services Administration (GSA)" Contains specs for historic buildings that might be referenced.

http://www.gsa.gov/Portal/gsa/ep/historicPortletView. do?pageTypeId=17109&channelPage=%2Fep%2Fchann el%2FgsaOverview.jsp&channelId=-26647 This section of the Fort Monroe Historic Preservation Design Standards has been developed to provide direction, information, and resources for appropriate treatments to historic building fabric, building elements, and character defining features. This section is based on the *Secretary of the Interior's Standards for the Rehabilitation of Historic Structures* and current accepted preservation practices. The intent of this guidance is to establish a quality of work and to avoid adverse effects to historic resources.

It is organized by specific building materials or building elements, such as brick and stone masonry, slate roofing, and wood windows, and cites the common uses and conditions found at Fort Monroe. Recommended practices are given, as well as not recommended practices, to provide an understanding of the nature of the materials and the best practices to maintain and preserve them.

# MASONRY AND CONCRETE

# MASONRY AND CONCRETE

## SUGGESTED GUIDANCE

"Masonry" http://www.naturalcement.org/ http://www.rosendalecement.net/

"Preservation Brief 1" Assessing Cleaning and Water-Repellent Treatments for Historic Masonry Buildings http://www.nps.gov/history/hps/tps/briefs/briefo1.htm

"Preservation Brief 2" Repointing Mortar Joints in Historic Masonry Buildings http://www.nps.gov/history/hps/tps/briefs/briefo2.htm

"Preservation Brief 6" Dangers of Abrasive Cleaning to Historic Buildings http://www.nps.gov/history/hps/tps/briefs/briefo6.htm

"Preservation Brief 15" Preservation of Historic Concrete http://www.nps.gov/history/hps/tps/briefs/brief15.htm

"Preservation Brief 22" The Preservation and Repair of Historic Stucco http://www.nps.gov/history/hps/tps/briefs/brief22.htm

"Preservation Brief 38" Removing Graffiti from Historic Masonry http://www.nps.gov/history/hps/tps/briefs/brief38.htm

"Preservation Brief 42" The Maintenance, Repair and Replacement of Historic Cast Stone http://www.nps.gov/history/hps/tps/briefs/brief42.htm

"Preservation Technical Notes" Masonry No. 4: Non-destructive Evaluation Techniques for Masonry Construction http://www.nps.gov/history/hps/tps/technotes/PTN40/ intro.htm As used here, the term masonry encompasses a number of different building materials, including all types of natural stones, manufactured clay materials (including brick and terra cotta), and cementitious materials, such as cast stone, concrete and mortar. The longevity and appearance of a masonry wall is dependent upon the size of the individual units and the mortar. While masonry is among the most durable of historic building materials, the common factor among masonry materials is that they are porous, to varying degrees, and the material is also very susceptible to damage by improper maintenance or repair techniques, or by harsh or abrasive cleaning methods.

Although generally considered "permanent," masonry is subject to deterioration, especially at the mortar joints. In a properly designed and constructed masonry wall, mortar joints can last for decades without the need for maintenance. However, natural weathering from the elements will eventually cause the mortar to erode and the joints will need to be repointed.

Masonry construction and restoration are highly-skilled crafts, and while concrete is in itself a low-maintenance material, neglecting to perform basic maintenance can result in costly, labor-intensive remedial work. To aid in appropriate restoration and repair work, it is critical to have an understanding of the types of masonry and mortars used on the post so that repair or replacement materials are an exact match to the original in terms of composition, color, texture, strength, finish and porosity. The choice of mortar is just as important, as historical mortar was generally quite soft, consisting primarily of lime and sand with other additives. By the latter part of the 19th century, Portland cement was usually added resulting in a more rigid and less absorbent mortar. Inappropriate treatments can cause more harm than good, and lead to permanent damage to the resource.

This section includes:

- » Brick Masonry
- » Stone Granite
- » Cast Stone
- » Concrete

## MASONRY AND CONCRETE



#### **RECOMMENDED PRACTICES**

Identify, retain and preserve masonry features that are important in defining the overall historical character of the building such as walls, brackets, railings, cornices, window architraves, door pediments, steps and columns; and details such as tooling and bonding patterns, coatings and color.

Protect and maintain masonry by providing proper drainage so that water does not stand on flat, horizontal surfaces or accumulate in curved decorative features.

Clean masonry only when necessary to halt deterioration or remove heavy soiling, and using the gentlest method possible, such as low-pressure water and detergents, using natural bristle brushes. It should be noted, however, that at Fort Monroe there is an ongoing issue with efflorescence at the stone walls surrounding the original historic fort that needs to be addressed.

When cleaning, protect embedded metal items such as Bott's, escutcheons and lintels, from exposure to excessive moisture.

Remove damaged or deteriorated paint only to the next sound layer, using the gentlest method possible (e.g., scraping by hand) prior to repainting.

#### Repoint Masonry

Remove only deteriorated mortar by carefully hand-raking the joints to avoid damaging the masonry. Do not remove sound mortar.

Duplicate historic mortar in, color and texture, and duplicating joints in width, joint profile and detailing.

Composition of the repointing mortar shall be softer (in terms of compressive strength) than the masonry units and as soft or softer than the historic mortar.

# <u>Concrete</u>

Cut damaged concrete back to remove the source of deterioration (often corrosion on metal reinforcement bars). The new patch must be applied carefully so that it will bond satisfactorily with, and match, the historical concrete.

Repair masonry features by patching, piecing-in, or consolidating the masonry using recognized preservation methods. Repair may also include the limited replacement in-kind, or with compatible substitute material, of those extensively deteriorated or missing parts of masonry features when there are surviving prototypes such as terra-cotta brackets or stone balusters. Brick masonry is the most prevalent building material at Fort Monroe. Along with brick, there are numerous limestone accents (details and water tables at the Coast Artillery School Complex), and the stone walls of the original historic fort. Concrete is also a significant material on the post, used in constructing the various Endicott-era batteries. Other masonry building materials used include sandstone, limestone and terra cotta. Fort Monroe's masonry buildings and fortifications are the foundation of the post's status as a National Historic Landmark (NHL), and so the proper treatment of these materials is critical to the protection of this valuable architectural resource.

#### NOT RECOMMENDED

Replacing or rebuilding a major portion of exterior masonry walls that could be repaired so that, as a result, the building is no longer historic and is essentially new construction.

Applying paint or other coatings such as stucco to masonry that has been historically unpainted or uncoated to create a new appearance.

Removing paint from historically painted masonry.

Failing to evaluate and treat the various causes of mortar joint deterioration such as leaking roofs or gutters, uneven settlement of the building, capillary action, or extreme weather exposure.

Sandblasting brick or stone surfaces using dry or wet grit or other abrasives. These methods of cleaning permanently erode the surface of the material and accelerate deterioration.

Cleaning with chemical products that will damage masonry, such as using acid on limestone or marble, or leaving chemicals on masonry surfaces.

Applying high-pressure water cleaning methods, which will damage historical masonry units and the mortar joints bonding them together.

Removing non-deteriorated mortar from intact joints, and then repointing the entire building to achieve a uniform appearance.

Repointing with mortar of high Portland cement content, unless it is the content of the historical mortar.

Applying new or non-historical surface treatments such as water-repellent coatings.

Using a "scrub" coating technique to repoint instead of traditional repointing methods. This technique widens the appearance of mortar joints, and the historical appearance of many buildings at Fort Monroe has already been damaged through its use.

Replacing an entire masonry feature such as a cornice or balustrade when repair of the masonry and limited replacement of deteriorated or missing parts are appropriate.

Applying waterproofing, water-repellent, or non-historical coatings such as stucco to masonry as a substitute for repointing and masonry repairs.

Removing a masonry feature that is not repairable and not replacing it; or replacing it with a new feature that does not convey the same appearance.

Introducing features that were not historically present.





#### SUGGESTED GUIDANCE

"Preservation Brief 8"

Aluminum & Vinyl Siding on Historic Buildings: The Appropriateness of Substitute Materials for Resurfacing Historic Wood Frame Buildings http://www.nps.gov/history/hps/tps/briefs/briefo8.htm

"Preservation Brief 16" The Use of Substitute Materials on Historic Building Exteriors http://www.nps.gov/history/hps/tps/briefs/brief16.htm

"Preservation Brief 10" Exterior Paint Problems on Historic Woodwork http://www.nps.gov/history/hps/tps/briefs/brief10.htm

"Preservation Tech Notes 2" Exterior Woodwork No. 2: Paint Removal from Wood Siding http://www.nps.gov/history/hps/tps/technotes/PTNo2/ intro.htm

"Preservation Technical Notes 4" Exterior Woodwork No. 4: Protecting Woodwork Against Decay Using Borate Preservatives, Preservation Tech Note http://www.nps.gov/history/hps/tps/technotes/PTN39/

"Interpreting the Standards Bulletin 7" Interior Finishes: Painting Previously Unpainted Woodwork

intro.htm

http://www.nps.gov/history/hps/tps/tax/ITS/its\_07.pdf

The Secretary of the Interior's Standards for Rehabilitation and the accompanying guidelines call for respecting the significance of original materials and features, repairing and retaining them wherever possible. This includes any paint, colors and finishes. If it is determined that the element cannot be salvaged, then it should be replaced in kind.

In most cases, wood used for buildings is soft, fibrous and porous, making it particularly vulnerable to damage from abrasive cleaning methods. Because the "summer" wood between the lines of the grain is softer than the grain itself, it will easily be worn away by abrasive blasting or power tools, leaving an uneven surface with the grain raised and often frayed or "fuzzy." Once this has occurred, it is almost impossible to achieve a smooth surface again except by extensive hand sanding, which is expensive and will quickly negate any costs saved earlier by sandblasting. Such harsh cleaning treatment also obliterates historical tool marks, fine carving and detailing, making the use of such methods highly undesirable on any interior or exterior woodwork which has been planed, milled or carved by hand.

While the rehabilitation process tends to focus primarily on the historical character of individual wood frame buildings, of equal importance is the context of buildings that comprise a historic district or neighborhood. Changes to the character-defining features of a building, such as distinctive clapboarding and other wall surfaces and decorative trim, always have an impact on more than just that building; they also alter the historical visual relationship between the buildings in the district. If character-defining weatherboards, clapboards or shingles are replaced on a number of buildings in a historic district, the historical character of the entire district may be seriously damaged.

This section includes:

- » Wood Trim
- » Decorative Elements
- » Wood Siding



#### **RECOMMENDED PRACTICES**

Identify, retain, and preserve wood features that are important in defining the overall historical character of the building such as (but not limited to) siding, cornices, brackets, window architraves, and doorway pediments; and their paints, finishes, and colors.

Protect and maintain wood features by providing proper drainage so that water is not allowed to stand on flat, horizontal surfaces or accumulate in decorative features.

Apply chemical preservatives to wood features that are traditionally unpainted and are regularly exposed to decay hazards, such as the ends of beams.

Retain coatings such as paint that help protect the wood from moisture and ultraviolet light. Paint removal should be considered only where there is paint surface deterioration and as part of an overall maintenance program which involves repainting or applying other appropriate protective coatings.

Inspect painted wood surfaces to determine whether repainting is necessary or if cleaning is all that is required.

Remove damaged or deteriorated paint to the next sound layer using the gentlest method possible (scraping and sanding by hand), then repainting.

Operate electric hot-air tools or electric heat plates with great care when using them on decorative wood features or flat wood surfaces when paint is so deteriorated that total removal is necessary prior to repainting.

Use chemical strippers primarily to supplement other methods such as scraping and sanding by hand, and the above-recommended thermal devices. Detachable wooden elements such as shutters, doors, and columns may – with the proper safeguards – be chemically dip-stripped.

Apply compatible paint coating systems following proper surface preparation.

Repaint with colors that are historically appropriate to the building and district. Retain historic color scheme. Proposed color schemes shall be based on historical documentation. Most buildings in the United States have been and are constructed using wood, and structural framing with wood being prevalent at Fort Monroe. While most of these wood-framed buildings are clad with brick masonry, there are also significant resources on post with wood clapboards, board-and-batten siding, gingerbread and other ornamental woodwork, porches, and columns. Almost all buildings have wooden elements such as cornices and door and window surrounds that contribute to architectural character and significance.

Evaluate the overall condition of the wood to determine whether more than protection and maintenance are required, that is, if repairs to wood features will be necessary.

Repair wood features by patching, piecing-in, consolidating, or otherwise reinforcing the wood using recognized preservation methods. Repair may also include the limited replacement in kind – or with compatible substitute material – of those extensively deteriorated or missing parts of features where there are surviving prototypes such as brackets, molding, or sections of siding.

Replace in kind an entire wood feature that is too deteriorated to repair using physical evidence present as a model to reproduce the feature. Replace with the same wood species. Some examples of wood features include a cornice, entablature or balustrade.

If using the same kind of material is not technically feasible (i.e., it can no longer be manufactured), then a compatible substitute material may be considered. If use of substitute materials in lieu of traditional materials should be used in limited quantities and preferably on secondary elevations. Use of those materials shall be on a case-by-case basis.

Design and install a new wood feature such as a cornice or doorway when the historical feature is completely missing, and only after using documented evidence of the feature's appearance or historical precedent.

It may be an accurate restoration using historical, pictorial, and physical documentation. Where documentation is not available it may be a new design that is compatible with the size, scale, material, and color of the historical building. Differentiate between historic materials and design and new designs.

#### NOT RECOMMENDED CONT'D.

Removing or radically changing wood features which are important in defining the overall historical character of the building so that, as a result, the character is diminished.

Removing a major portion of the historical wood from a façade instead of repairing or replacing only the deteriorated wood, then reconstructing the façade with new material in order to achieve a uniform or "improved" appearance.

Radically changing the type of finish or its color or accent scheme so that the historical character of the exterior is diminished.

Stripping historically painted surfaces to bare wood, then applying clear finishes or stains in order to create a "natural" look.

Stripping paint or varnish to bare wood rather than repairing or reapplying a special finish, i.e., a grained finish to an exterior wood feature such as a front door.

Painting historically unpainted, varnished surfaces.

Failing to identify, evaluate, and treat the causes of wood deterioration, including faulty flashing, leaking gutters, plant material growing too close to wood surfaces, cracks and holes in siding, deteriorated caulking in joints and seams, or insect or fungus infestation.

Using chemical preservatives such as creosote (unless they were used historically), which can change the appearance of wood features.

Stripping paint or other coatings to reveal bare wood, thus exposing historically coated surfaces to the effects of accelerated weathering.

Removing paint that is firmly adhering to, and thus, protecting wood surfaces.

Using destructive paint removal methods such as propane or butane torches, sandblasting or water blasting. These methods can irreversibly damage historical woodwork.





#### NOT RECOMMENDED CONT'D.

Using thermal devices improperly so that the historical woodwork is scorched.

Failing to neutralize the wood thoroughly after using chemicals, preventing new paint from adhering.

Allowing detachable wood features to soak too long in a caustic solution, causing the wood grain to be raised and roughening the surface of the wood.

Failing to follow manufacturers' product and application instructions when repainting exterior woodwork.

Using new colors that are inappropriate to the historical building or district.

Failing to undertake adequate measures to assure the protection of wood features.

Replacing an entire wood feature such as a cornice or wall when repair of the wood and limited replacement of deteriorated or missing parts are appropriate.

Using substitute material for the replacement part that does not convey the visual appearance of the surviving parts of the wood feature or that is physically or chemically incompatible.

Removing an entire wood feature that is not repairable and then not replacing it; or replacing it with a new feature that does not convey the same visual appearance.

Creating a false historical appearance because the replaced wood feature is based on insufficient historical, pictorial, and physical documentation.

Introducing a new wood feature that is incompatible in size, scale, material and color.

# ARCHITECTURAL METALS

## SUGGESTED GUIDANCE

"Preservation Brief 27" The Maintenance and Repair of Architectural Cast Iron http://www.nps.gov/history/hps/tps/briefs/brief27.htm

"Interpreting the Standards Bulletin 46" Modifying Historic Interior Railings to Meet Building Code

http://www.nps.gov/history/hps/tps/tax/ITS/its\_46.pdf

Architectural metal features such as (but not limited to) cast iron façades, porches, and steps; sheet metal cornices, siding, roofs, roof cresting and store-fronts; and cast or rolled metal doors, window sash, entablatures, and hardware, are often highly decorative and may be important in defining the overall historic character of the building. Metals commonly used in historic buildings include lead, tin, zinc, copper, bronze, brass, iron, steel, and to a lesser extent, nickel alloys, stainless steel and aluminum. Historically, metal building components were often created by highly skilled, local artisans, but by the late 19th century, many of these components were prefabricated and readily available from catalogs in standardized sizes and designs.

The strategy for the use of exterior metals involves planning, maintenance, repair, and replacement. Cast iron, stainless steel and bronze should receive the highest consideration for use at Fort Monroe. Where this is not practical, copper and brass are acceptable. Care should be taken during installation and maintenance to eliminate damaging conditions and avoid the use of inappropriate materials. In many instances, dissimilar metals butting against each other have caused an oxidizing reaction, which is only hastened by the damp, salt environment. This reaction might be sparked by an element as small as a bolt or clamp, and could result in the complete failure of a gutter or flashing system. It is most desirable to fabricate entire systems of the same metal, but if this is not possible then care must be taken to use system components that are made of compatible materials or proper isolation between dissimilar metals.

This section includes:

» Cast Metal Building Features such as Railings and Grilles

# ARCHITECTURAL METALS



#### **RECOMMENDED PRACTICES**

Identify, retain and preserve architectural metal features that are important in defining the overall historical character of the building such as (but not limited to) columns, capitals, window hoods, or stairways that are important in defining the overall historical character of the building.

Protect and maintain architectural metals from corrosion by providing proper drainage so that water does not stand on flat, horizontal surfaces or accumulate in curved, decorative features.

Identify the particular type of metal prior to any cleaning procedure and then testing to assure that the gentlest cleaning method possible is selected or determining that cleaning is inappropriate for the particular metal.

Carry out metal surface cleaning tests after it has been determined that such cleaning is appropriate. Tests should be observed over a sufficient period of time so that both the immediate and the long range effects are known to enable selection of the gentlest method possible.

Apply an appropriate protective covering, such as lacquer, to an architectural metal feature such as a bronze door which is subject to heavy pedestrian use.

Clean architectural metals, when appropriate, to remove corrosion prior to repainting or applying other appropriate protective coatings.

Design and install a new architectural metal feature such as a metal cornice or cast-iron capital when the historical feature is completely missing. It may be an accurate restoration using historical, pictorial and physical documentation; or be a new design that's compatible with the size, scale, material, and color of the historical building.

Metals are featured in a variety of applications at Fort Monroe, ranging from ornamental elements to exposed structural components. In those locations where metal components are a prominent architectural feature, details like fasteners and connections contribute significantly to the overall historical character of the building. A prime example is the Endicott Batteries, where the joints and connectors for the various stairs and railings offer insight into construction techniques and methods from the time period in which the batteries were built. The damp, salt air environment of Fort Monroe creates a hostile setting for exterior metals, and certain metals perform better than others under such conditions. Some, such as brass, copper and some varieties of steel, develop a patina over time that serves as a protective coating for the metal and should not be removed.







#### NOT RECOMMENDED

Removing a major portion of the historical architectural metal from a façade instead of repairing or replacing only the deteriorated metal, then reconstructing the façade with new material in order to create a uniform or "improved" appearance

Failing to identify, evaluate and treat the causes of corrosion, such as moisture from leaking roofs or gutters.

Exposing metals which were intended to be protected from the elements, or applying paint or other coatings to metals such as copper, bronze or stainless steel that were meant to be exposed.

Placing incompatible metals together without providing a reliable separation material. Such incompatibility can cause a reaction that corrodes the more chemically-active metal, e.g., copper will corrode cast iron, steel, tin and aluminum.

Removing the natural patina of historical metalwork. The patina may be a protective coating on some metals, such as bronze or copper, as well as a significant historical finish.

Failing to reapply protective coating systems to metals or alloys that require them after cleaning so that accelerated corrosion occurs.

Replacing an entire architectural metal feature such as a column or balustrade when repair of the metal and limited replacement of deteriorated or missing parts are appropriate.

Using a substitute material for the replacement part that does not convey the visual appearance of the surviving parts of the architectural metal feature or that is physically or chemically incompatible.

Removing an architectural metal feature that is not repairable and then not replacing it, or replacing it with a new architectural metal feature that does not convey the same visual appearance.

Creating a false historical appearance because the replaced architectural metal feature is based on insufficient historical, pictorial, and physical documentation; or introducing a new architectural metal feature that is incompatible in size, scale, material, and/or color.

## SUGGESTED GUIDANCE

From Asbestos to Zinc: Roofing for Historic Buildings http://www.nps.gov/history/hps/tps/roofingexhibit/ introduction.htm

"Preservation Brief 4" Roofing for Historic Buildings http://www.nps.gov/history/hps/tps/briefs/briefo4.htm

"Preservation Brief 29" The Repair, Replacement, and Maintenance of Historic Slate Roofs http://www.nps.gov/history/hps/tps/briefs/brief29.htm

"Interpreting the Standards Bulletin 32" Roofing Materials: Slate Roof Treatments http://www.nps.gov/history/hps/tps/tax/ITS/its\_32.pdf

"Interpreting the Standards Bulletin 36" Rooftop Additions http://www.nps.gov/history/hps/tps/tax/ITS/its\_36.pdf Roofs have been called the fifth building elevation. Their shapes denote architectural styles and their materials reflect local traditions, availability of materials and regional influences. Even though many of the structures at Fort Monroe are Quartermaster Corps Standard designs, they still reflect regional influences. (i.e. the use of slate roofs in this area but clay tile for the same design in the southwest).

Roof features such as dormers, cupolas, balustrades, cresting and historic skylights are all important character-defining elements and should be retained and preserved. Their colors, patterns, textures and materials should be retained.

The roof is a highly vulnerable element of a shelter that will inevitably fail. A deteriorated or poorly designed roof will permit the accelerated deteriorated of historic building materials and will cause general disintegration of the basic structure. As such the renovation or other planned reuse of any structure should include a complete internal and external inspection of the roof to determine the causes of failures and to help identify the alternatives for repair or replacement of the roofing. This should be part of a preservation plan regardless of the aesthetic issues relating to a particular roofing material. While the goal of preservation is to retain original material, the benefit of that must be measured against the potential for worn materials to lead to damage elsewhere. In some cases, replacement of components or entire roofing surfaces might be advisable.

Conduct a complete internal and external inspection of the roof structure and the roof covering to determine condition, potential causes of failure, or sources of any leaks. Keep in mind that moisture can travel along structural members and show itself through water stains or rotten wood framing somewhere other than the actual location of the roof leak.

Use preventive measures such as placing wire mesh over downspout openings or over the entire gutter to prevent debris from collecting and water from backing up and collecting underneath the roof surface. Periodic inspection of the underside of the roof from the attic after a heavy rain or ice storm for water stains may reveal leaks in their early stages which can be eliminated before they escalate into larger, more serious repair problems.

This section includes:

- » Slate
- » Metal
- » Asphalt
- » Clay Tile

# SLATE ROOFING



#### **RECOMMENDED PRACTICES**

Retain original slate roofing where the majority of the slate is in sound condition.

Replace any broken, cracked or missing slates with slates that match the original in color, size and thickness.

Use slate straps/hooks that are made of wire, copper or other material that is typical of traditional techniques.

For roofs where repair of missing, broken, and cracked slates or replacement of flashing would affect more than 20% of the slate, consider replacing the roof, especially older roofs at the end of their serviceable lives. Match the original as best as possible in terms of color, thickness, and size.

Retain and reuse original counterflashings rather than remove. This is in part due to the difficulty of introducing new counterflashings that are thru-wall in the way the original are likely to be. For caulking at these and other locations, use a caulk color that matches or blends in with the flashings of adjacent masonry.

Provide slate ridges and hips to match the original, using traditional detailing. Where original was metal, match that in material and profile. Retain and reuse original decorative elements, replicating where these have been removed as part of previous work.

For roof items such as gutters, leaders, etc. – use components that match in material, size and all detailing the original. In most cases, this involves the use of sheet copper.

For any painted wood elements such as cornices, gutter fascia, window trim, etc. retain existing and repaint – or provide new to match existing.

As part of roofing work inspect all brick chimneys and repoint/rebuild at the time roofing work is done. See masonry section.

Remove, where possible, all roof penetrations such as exhaust fans and vent stacks that have been added over time. Avoid the addition of new penetrations through the roof as part of mechanical, plumbing or other trades that are also doing renovation work. Use inoperable chimneys for venting, where possible. If added roof penetrations are unavoidable, locate these at the rear of the building, on flat roofs, or in general where they will be least visible.

Retain any decorative stamped metal fascia pieces, leader heads, leader straps, etc. and reuse. This can be done even when other elements such as gutter linings, leaders, etc. need to be replaced with new. Slate is one of the most traditional and durable roofing materials and one of the most prevalent across a range of building styles. Several of the buildings at Fort Monroe have slate roofs. Even more have asphalt shingle roofs where once there was slate. Ideally, original slate should be retained where that is feasible.







While the lifespan for these roofs is quite long, generally over 100 years, it is understood that many of these buildings have roofs that may have outlived their useful lives and are beyond the point where preservation is realistic. The slate that was used was fairly thin, and it likely is brittle, delaminating and cracked at various locations. Retaining it where flashings need replacement is probably not realistic. Where that is the case, and where existing asphalt roofs will soon need replacement, the use of natural slate should be the goal. Not only will that be a truer material for the buildings and aesthetically more attractive, the lifespan of slate roofs should make them worthwhile investments.

#### NOT RECOMMENDED

Remove existing slate roofing that is in serviceable condition.

Repair roofs using slates that differ in color, size of thickness from the original. Note that some slate is 'fading' and some is not. The intent should be for any slates used for patching and repairs to match once reasonable aging has taken place.

Replace roofing with manufactured materials that are intended to look like slate, with asphalt shingles, or with other material that is inappropriate for the style of the building.

For any painted wood elements such as cornices, gutter fascia, window trim, etc. replace with manufactured products that simulate wood. While it is understood that these products claim to be maintenance-free, the appearance does not match painted wood and would be inappropriate for historic buildings.

Use painted steel components to simulate copper or other natural metal finish.

Replace copper or other metal gutters or other trim with components that do not match in material or profile.

Use a caulk color that will be too prominent at locations where metal roof flashing ties to the building or other locations. For example, no white caulk at intersection of copper flashing and brick wall.

Asphalt patching materials (roof tar, etc.) for repairs, especially where it is visible or adjacent to important architectural features and finishes.



#### **RECOMMENDED PRACTICES**

Identify, retain and repair existing historical metal roofing systems.

Retain components of original roofing where possible. This includes not only primary roofing material, but also items such as gutters, fascias, downspouts, ornamental trim and decorative components.

Clean and recoat pitted metals.

See that any existing/original metal roofing that is painted is repainted as a means of prolonging the roof's life and prevent corrosion.

Investigate conditions thoroughly early in the design process to understand fully the original detailing, and to determine existing elements and their condition.

Remove non-original roofing and any related items that are not a match to the original materials, proportions and other detailing. If original roofing has been covered over by subsequent roofs, remove added roofs and consider retaining original material where the significance of the particular building is of particular note and where new roofing can be added over it in a manner that is both water-tight and aesthetically acceptable.

Provide standing seams, battens, pan width, seam profile and color to match the historic roof.

Improve function and expected life of new roofs and gutters by including expansion joints, etc. that may not have been there in original detailing. If needed, add exterior rainleaders that were not part of the original design, if at all possible. Do this in a way that does not change the appearance of the roofs.

Take care to avoid future deterioration by using appropriate metals and providing adequate separation of dissimilar metals.

For metal roofing components such as flashings, inspect for poor workmanship, thermal stress or metal deterioration. Replace with new at these locations, and where primary roofing is replaced as well. Match original details such as closed

vs. open valleys, ridge details, hanging gutter vs. built-in gutter, shapes of gutters and leaders, and decorative components such as leader boxes, straps, etc.

For any roofs that have or originally had flat-seam metal as the roofing material, match that in replacement material, as these are likely somewhat visible and a membrane or other roofing would change the appearance.





Metal roofing became increasingly common in the U.S. over the course of the nineteenth century, with materials such as sheet iron, tin and copper, and with finishes such as galvanized zinc, terne plate, lead coating and painted finishes.

Types of metal roofing original to buildings at Fort Monroe include primarily standing seam roofs that are painted red. These were present more at porches and other secondary roofs than as the primary roofs of buildings, yet their importance as a roofing material and as character-giving components of buildings is still significant. It is unrealistic to expect that any original metal roofs remain and can be treated as elements for preservation, but metal roofs should be inspected to determine whether this might be the case. In any event, whether partial repairs or full replacement are needed, matching of the scale provided by the original standing seam profiles is of utmost importance.



Example of a prefabricated standing steam roof, which is not recommended

#### NOT RECOMMENDED

Replacing metal roofing using different metals, such as steel or aluminum that is painted to resemble the original material.

Using prefabricated standing seam products that have a different scale of components than the original.

Covering over existing elements such as stone copings in the name of watertightness.

Using dissimilar metals in direct contact, as this will lead to galvanic action that deteriorates the metal.

Assuming that flat or very shallow roofs can be replaced with membrane materials because they are not very visible. Consider views from far away, from locations higher up than street level, etc. when making value judgments about the relative importance of aesthetic options.

Using prefabricated standing seam products that have a different scale of components and are visually different than the originals.

# ASPHALT SHINGLE ROOFING



#### **RECOMMENDED PRACTICES**

As part of a replacement of asphalt shingle roofs, do an initial investigation of historic resources to determine original roofing material. Also, remove some of the existing roofing to look at underlayments and old fastenings to see if evidence of slate or other material exists.

Remove asphalt roofing and replace with materials to match original wherever possible.

When replacing existing asphalt shingle roofs with new, use shingles that best match the color and scale of the slate that would have been on the building initially, such as an architectural grade asphalt shingle.

Continue to use copper for trim pieces such as gutters, leaders, etc. where that was the original.

Asphalt shingles and roll roofing were used as early as the 1890s and may have been the original roofing material for some of the buildings at Fort Monroe. What is of more concern are the roofs that were originally slate or metal and subsequently replaced with asphalt shingles. Here the strong preference is for restoration of the original material. As that might not be feasible in some situations and for buildings of lesser significance, it is still important to consider all available asphalt shingle products and select the one that best replicates the appearance of the original material.

#### NOT RECOMMENDED

Replacing existing asphalt shingles with those of a color that detracts from the overall appearance of the building.

Using alternate roofing materials or shingle types that do not replicate the scale, texture and appearance of the original slate or existing asphalt shingles as closely as possible.

Using lesser quality asphalt shingles that do not convey the appropriate color and scale.

Using asphaltic patching materials (tar, etc.) for repairs, especially in visible locations and adjacent to important architectural features and finishes.

Using prepainted aluminum components to replace copper gutters, leaders, etc.







# SUGGESTED GUIDANCE

"Preservation Brief 30" The Preservation and Repair of Historic Clay Tile Roofs http://www.nps.gov/history/hps/tps/briefs/brief30.htm

### RECOMMENDED PRACTICES

Identify, retain, and repair existing historic clay tile roofing systems.

Retain components of original roofing where possible including combing, ridge caps, edge detailing, closure pieces, etc.

When repairs are necessary, employ professional roofers with experience working with clay tile.

When restoring or repairing a clay tile roof, retain and reuse as many of the historical tiles as possible. If the fastening system fails, re-hang loose tiles using corrosion-resistant nails or hooks.

Promptly replace broken clay tiles to prevent damage to neighboring tiles or to the roof structure, and match the existing tile as closely as possible.

# CLAY TILE ROOFING

Clay tile was a common building material in Europe, and settlers in the American colonies used it for roofing as early as the mid-17th century. In some cities, such as New York and Boston, clay was popularly used as a precaution against fire because of its resistance to burning. The Spanish influence in the use of clay tile is found in the southern, southwestern and western states.



Clay roofing tiles will weather well, but tend to crack or break if hit, as by tree branches, or if they are walked on improperly. Like slates, tiles cannot support much weight. Low quality tiles that have been insufficiently fired during the manufacturing process will develop fine cracks and/or spall under the effects of freeze and thaw cycles on their porous surfaces.

There are only a handful of houses at Fort Monroe with clay-tile roofs. These houses happen to be on the moat walk and are highly visible from the terreplein on the western side of the stone fort. Due to this visual prominence and the rarity of this extant material, it is important to retain these roofs.

#### NOT RECOMMENDED

Replacing broken or missing roof tiles on a historic building with substitute materials such as concrete, metal or plastic tiles rather than matching natural clay tiles. These substitute materials lack the natural color variations that are present in natural clay tile, and they do not have the same texture, shape, thickness or surface irregularities. Also, modern, machine-made clay tile or concrete tiles should generally not be used to patch roofs of older, handmade tile because of obvious differences in appearance.

Replacing broken or missing roof tiles with tiles of a different profile shape or style that does not match the existing clay tiles.

Patching a historic clay tile roof with roofing tar, caulk, asphalt, pieces of metal, or clay tiles that are not the same color, glazing, and texture.

Replacing clay tile roofing with asphalt shingles.

Walking on an unprotected tile roof surface while making repairs, as the tiles could easily be broken.
## WINDOWS

### SUGGESTED GUIDANCE

"Preservation Brief 9" The Repair of Historic Wooden Windows http://www.nps.gov/history/hps/tps/briefs/briefo9.htm

"Preservation Brief 13" The Repair and Thermal Upgrading of Historic Steel Windows http://www.nps.gov/history/hps/tps/briefs/brief13.htm

"Preservation Brief 33" The Preservation and Repair of Historic Stained and Leaded Glass http://www.nps.gov/history/hps/tps/briefs/brief33.htm

"Interpreting the Standards Bulletin 23" Selecting New Windows to Replace Non-Historic Windows http://www.nps.gov/history/hps/tps/tax/ITS/its\_23.pdf

"Preservation Tech Notes 20" Windows No. 10: Temporary Window Vents in Unoccupied Historic Buildings http://www.nps.gov/history/hps/tps/technotes/ptn11/ introduction.htm

"Preservation Tech Notes 20" Windows No. 20: Aluminum Replacement Window for Steel Projecting Units with True Divided Light and Matching Profiles http://www.nps.gov/history/hps/tps/technotes/ptn48/ intro.htm Windows are some of the most character-defining elements of historic structures. The Secretary of the Interior's Standards for Rehabilitation and the accompanying guidelines call for respecting the significance of these original materials and features, repairing and retaining them wherever possible and, when necessary, replacing them in kind.

Evaluating the significance of specific windows and planning for their repair or replacement can, however, be a particularly complex process involving both objective and subjective considerations. In addition to the general preference for preservation, one must consider that moisture problems at windows not only compromise the window materials but also let moisture into the building and damage other materials. Windows, whether operable or not, represent locations on a building where thermal performance is critical and might be improved by window modifications. Windows are complex components incorporating many small parts and combination of materials, many of which are difficult and expensive to match. Because of these factors, historic windows are often replaced with manufacturers' standard products that rarely are exact matches, but fulfill requirements for performance and fit better within budgets. The process of carefully considering the trade-offs between the importance of specific aesthetic concerns and the functional benefits of new products is sometimes omitted.

The intent of this document is to first ensure that proper analysis is done to determine the condition of historic/existing windows and evaluate ways in which to best retain the significant character traits, whether using restoration techniques or with replacement of parts or entire windows. The ultimate determination of significance should be made within the context of the whole building, wherein the windows are one architectural element.

At Fort Monroe there are many types of windows - wood, aluminum, steel, double-hung, casement, residential, industrial, and even valuable historic Tiffany stained glass. Significant features include glazing patterns, moldings, hardware, transoms and sidelights, and accessories such as shutters. There are some original windows, some replacements that are good matches and some replacements that have already altered the appearance of the buildings.

This section includes:

- » Wood Windows
- » Metal Windows

## WOOD WINDOWS



#### **RECOMMENDED PRACTICES**

Identify, retain and preserve existing historical wood windows

Retain original glazing where possible. If glass is intact, it can be removed and reused even in new sashes. Reglaze existing/new glass with putty in a manner that retains the original glazing profile. Paint putty to match the window paint.

Use restoration glass where replacement lights are needed and historically appropriate.

Conserve the original wood material by using methods such as consolidants to add to the longevity.

Utilize methods such as epoxy repair where only small portions of wood components are missing or deteriorated, retaining the remainder of the original wood. Note that this material can be painted but not stained.

Remove accumulated layers of paint with non-abrasive techniques such as chemical strippers, using the least invasive product possible.

Identify lead paint and asbestos-containing elements such as putty and caulking early on in the design so as to best be able to incorporate costs related to dealing with these items as part of the project.

Where window sashes are deteriorated but frames are intact, replace sashes only. Reuse existing hardware, weight pockets and weights, replacing sash cords or chains is encouraged, however, new operating mechanisms that work in the existing frames is acceptable.

Provide additional weather protection and energy conservation to the existing windows by adding, as determined on a case-by-case basis, either interior or exterior storm windows. Match configuration of historic windows in relocation

to style (i.e., double hung), meeting rail, etc. Take care in detailing so as to avoid potential condensation damage to the sill inside the cavity between glass layers. Window assemblies should vent to the exterior.

Improve weathertightness of existing (or new) windows through the use of weatherstripping. Interlocking bronze or compression weatherstripping that is not visible when windows are closed.

Provide insect screening for existing windows that have no screens by installing them at the interior rather than the exterior in order to retain the appearance of the windows at the exterior.

Ideally, retain the original paint. However, as the windows likely have many coats of paint that are making operation difficult, removal of paint and repainting is acceptable for most structures. For paint removal, use the most non-caustic products possible to strip paint without damaging wood. For windows where original paint is relatively intact but is cracked or peeling, scrape and/or sand to achieve an acceptable surface for repainting. Evaluate the appearance of excessive scraping and consider more complete removal where a rough texture would otherwise result. Types of wood windows include doublehung, casement, hoppers, awnings, and fixed windows. Of these some are original, but many have already been replaced.

The majority of windows at Fort Monroe are double-hung windows, with various light configurations. These originally would have been painted wood, yet many have already been replaced with materials that might differ from this – including wood clad with either aluminum or vinyl. Wood windows should be retained and repaired whenever possible. The repair and weatherization of existing wooden windows is more practical than most people realize, and that many windows are unfortunately replaced because of a lack of awareness of techniques for evaluation, repair, and weatherization. Wooden windows which are repaired and properly maintained will have greatly extended service lives while contributing to the historic character of the building. Thus, an important element of a building's significance will have been preserved for the future.

If replacement windows are required, use painted wood units. Clad wood units may be used depending upon location and after consultation with the FMHPO.

If replacement windows are required, they should be in the same size as the historic window, fit the opening properly, and have similar setbacks and shadow lings.

For replacement windows, use those with true divided lights, matching the light configurations of the original windows. Match the sightlines and dimensions of all components. Of primary importance are the dimensions in elevation (muntin and frame widths, and clear glass dimensions). If for durability and added energy or other considerations replacement windows need to have a deeper section than the original, this is acceptable.

If insulating glass must be used, use the thinnest possible panel so as to best allow for matching of the muntin width. To replace true divided lite windows, use interior and exterior grids with spacer bars between the panes of glass. For miscellaneous windows that have accessories such as shutters etc., retain the originals. If shutters have been removed, replace with painted wood to match original.

Repair stone for brick sills that may have been damaged. See masonry section for preservation/rehabilitation techniques.

Where window caulking is added, provide joints with the smallest possible functional width, in no cases wider than one-half inch. Paint the caulk to match either the window or surround, whichever best allows for this component to be least noticeable. Utilize colored caulk where material cannot be painted or where painting is infeasible. Custom caulk colors are readily available.

At locations where incompatible replacement windows have been introduced, when it is time for their replacement, provide windows that are a better match to the documented, historical original in terms of material, operation, light configuration, true divided lights, etc.

If possible, reintroduce windows where original windows have had masonry openings infilled with brick, wood, air conditioning units, etc.

WOOD WINDOWS







### NOT RECOMMENDED

Removing original, historic windows.

Fixing existing operable window sashes in place so they do not operate.

Using vinyl, aluminum, aluminum-clad or other materials that do not match the original.

Using standard, manufactured products for replacement that do not match the existing windows in all visible profiles. Matching the appearance of the existing (or original) likely will require custom-fabricated windows produced by a mill-work house. Manufacturers' "historic" windows are not necessarily appropriate.

Using any product with fake muntins, whether they are applied at the exterior, interior or between lights of glass.

Using insulating glass at windows that originally had divided lights, unless separate insulating units are fabricated for each light condition.

Tinted or highly reflecting glass.

Installing complete, new replacement units within the existing window frame. If replacement windows must be used, remove the existing frame completely so as to not reduce the sightlines and increase the overall appearance of the frame width.

Removing existing windows (whether original or replacement) for purposes of locating mechanical devices such as louvers or air conditioners in original masonry openings. (Note, however, that where louvers must be added, utilizing existing masonry openings might be preferable to creating new openings in a way that detracts from the overall pattern of masonry openings in the building.)

## METAL WINDOWS



#### **RECOMMENDED PRACTICES**

Identify, retain and preserve existing metal windows.

Remove any light rust or flaking paint using brushes, and wipe any bare metal clean with a cleaning solvent such as denatured alcohol. Dry immediately and prime exposed metal with a rust-inhibiting primer, following the manufacturer's instructions for application. Recommended methods for removing light rust include manual and mechanical abrasion using a wire brush, aluminum oxide sandpaper, or a variety of power tools adapted for abrasive cleaning such as an electric drill with a wire brush or a rotary whip attachment. Adjacent sills and window jambs may need protective shielding.

Provide additional weather protection and energy conservation to the existing windows by adding, as determined on a case-by-case basis, either interior or exterior storm windows. Take care in detailing so as to avoid potential condensation damage to the sill inside the cavity between glass layers. Window assemblies should vent to the exterior.

Improve weathertightness of existing (or new) windows through the use of weatherstripping. Interlocking bronze or compression weatherstripping that is not visible when windows are closed.

Provide insect screening for existing windows that have no screens by installing them at the interior rather than the exterior in order to retain the appearance of the windows at the exterior.

Replace sashes only – retain frames and reuse hardware.

For replacement windows, use those that have true divided lights, matching the light configurations of the original windows. Match the sightlines and dimensions of all components. Of primary importance are the dimensions in elevation (the widths of muntins, widths of frames, and clear glass dimensions). If for durability and added energy or other considerations replacement windows need to have a deeper section than the original, this is acceptable.

If insulating glass must be used, use the thinnest possible panel so as to best allow for matching of the muntin width. Use a matching colored spacer so as to avoid a distracting metal appearance at the glass edge.

At locations where incompatible replacement windows have been introduced, when it is time for their replacement, provide windows that are a better match to the documented, historical original in terms of material, operation, light configuration, true divided lights, etc.

Reintroduce windows where original windows have had masonry openings filled in with brick, wood, air-conditioning units, etc.

Metal windows were available as early as 1860, but became popular after 1890 with the introduction of mass production of rolled steel windows. Their use was particularly suited to industrial buildings where fire prevention was a significant issue.

Metal frames permitted the installation of larger windows and windows in series, resulting in a distinctive look of expanses of glass that was used in late 19th and early 20th century commercial and industrial buildings. The popularity extended to institutional and residential buildings as well. After WWII, cheaper, non-corroding aluminum windows became increasingly popular.

Several of the industrial buildings at Fort Monroe have metal windows. Some original steel units still remain in place, but others have been replaced with aluminum.

### NOT RECOMMENDED

Demolishing original windows without a determination of adverse effect on the building's historical appearance and integrity.

Preserving existing replacement windows to the same standard as original, historic windows.

Burning off rust with an oxyacetylene or propane torch, or an inert gas welding gun, should never be attempted because the heat can distort the metal. In addition, such intense heat (often as high as 3800 deg. F) vaporizes the lead in old paint, resulting in highly toxic fumes. Furthermore, such high temperatures will likely result in broken glass.

Using hydrochloric acid to chemically remove corrosion. It can leave chloride deposits, which would lead to future corrosion.

Fixing existing operable window sashes in place so they do not operate.

Using any product with fake muntins, whether they are applied at the exterior, interior or between lights of glass.

Using insulating glass at windows that originally had divided lights. (Unless separate insulating units are fabricated for each light condition.)

Using tinted or highly reflective glass.

Removing existing windows (whether original or replacement) for purposes of locating mechanical devices such as louvers or air conditioners in original masonry openings. (Note, however, that where louvers must be added, utilizing existing masonry openings might be preferable to creating new openings in a way that detracts from the overall pattern of masonry openings in the building.)







## ENTRANCES AND PORCHES



### SUGGESTED GUIDANCE

"Preservation Brief 32" Making Historic Properties Accessible http://www.nps.gov/history/hps/tps/briefs/brief32.htm

"Preservation Brief 45" Preserving Historic Wooden Porches http://www.nps.gov/history/hps/tps/briefs/brief45\_47. htm

### **RECOMMENDED PRACTICES**

Identify, retain, and preserve entrances and porches – and their functional and decorative features – that are important in defining the overall historical character of the building such as doors, fanlights, sidelights, pilaster, entablatures, columns, balustrades, and stairs.

Evaluate the overall condition of materials to determine whether repairs to entrance and porch features will be necessary.

Protect and maintain the masonry, wood, and architectural metals that comprise entrances and porches through appropriate surface treatments such as cleaning (clear away dirt and other debris by sweeping rather than using pressure from a water hose), rust removal, limited paint removal, and re-application of protective coating systems.

Repair entrances and porches by reinforcing the historical materials. Repair will also generally include the limited replacement in kind of those extensively deteriorated or missing parts of repeated features for which there are surviving prototypes such as balustrades, cornices, entablatures, columns, sidelights, and stairs.

Replace in kind an entire entrance or porch that is too deteriorated to repair – if the form and detailing are still evident – using the physical evidence as a model to reproduce the feature. If using the same kind of material is not technically feasible (i.e., can no longer be manufactured), then a compatible substitute material may be considered.

Design and construct a new entrance or porch when the historical entrance or porch is completely missing. Reconstruction of a missing element, such as a porch, must be based on historical, pictorial, and physical documentation.

Maintain porches and double vestibule entrances so that they can retain heat or block the sun and provide natural ventilation.

Design and install additional entrances or porches when required for the new use in a manner that preserves the historic character of the buildings, i.e., limiting such alteration to non-characterdefining elevations. Elevate flower pots on trivets to prevent moisture buildup, and periodically move the pots to different locations.

Porches that have not yet been enclosed should remain open, and where porches have been screened, any framing for non-original screening should be painted a dark color to minimize its visual impact. "Interpreting the Standards Bulletin 4" Exterior Doors: Inappropriate Replacement Doors http://www.nps.gov/history/hps/tps/tax/its/its\_04.pdf

"Interpreting the Standards Bulletin 9" Porches: Inappropriate Porch Alterations http://www.nps.gov/history/hps/tps/tax/ITS/its\_09.pdf







Porch styles at Fort Monroe range from the elaborate brick entryways such as those at Buildings 100, 101, 102 or 103, to simple, screened porches like the ones at Building 14, or Buildings 155 and 156.

## NOT RECOMMENDED

Removing or radically changing entrances and porches (for example, enclosing an existing, historical porch) which are important in defining the overall historical character of the building so that, as a result, the character is diminished.

Stripping entrances and porches of historical material such as wood, cast iron, terra cotta tile, and brick.

Removing an entrance or porch because the building has been re-oriented to accommodate a new use.

Cutting new entrances on a primary elevation.

Altering utilitarian or service entrances so they appear to be formal entrances by adding paneled doors, fanlights, and/or sidelights.

Failing to provide adequate protection to materials on a cyclical basis so that deterioration of entrances and porches results.

Failing to undertake adequate measures to assure the protection of historical entrances and porches.

Replacing an entire entrance or porch when the repair of materials and limited replacement of parts are appropriate.

Using a substitute material for the replacement parts that does not convey the visual appearance of the surviving parts of the entrance and porch or that is physically or chemically incompatible.

Removing an entrance or porch that is not repairable and then not replacing it; or replacing it with a new entrance or porch that does not convey the same visual appearance.

CONT'D.

### NOT RECOMMENDED CONT'D.

Enclosing porches in a manner that results in a diminution or loss of historic character by using solid materials such as wood, stucco, or masonry.

Installing secondary service entrances and porches that are incompatible in size and scale with the historic building, or that obscure, damage, or destroy character-defining features.

Failing to clear away sand or other abrasive materials used to increase traction on icy surfaces when they are no longer needed.

Using salt (sodium chloride) as a de-icing agent, as it can promote corrosion and failure of nails and other fasteners.

Placing rugs, mats or other coverings on wood flooring, as these items can trap moisture underneath and promote decay and rot.

## STRUCTURAL SYSTEMS AT FORT MONROE

The Secretary of the Interior's Standards for Rehabilitation and the accompanying guidelines call for respecting the significance of original materials and features, repairing and retaining them wherever possible. This includes any paint, colors and finishes. If it is determined that the element cannot be salvaged, then it should be replaced in kind.

If features of the structural system are exposed such as load-bearing brick walls, cast iron columns, roof trusses, posts and beams, or stone foundation walls, they may be important in defining the building's overall historic character. Unexposed structural features that are not character-defining, or even entire structural systems, may nonetheless be significant in the history of building technology. Therefore, the structural system should always be examined and evaluated early in the project planning stage to determine both its physical condition and its importance to the building's historic character or historical significance.

### STRUCTURAL SYSTEMS



#### **RECOMMENDED PRACTICES**

Identifying, retaining, and preserving structural systems – and individual features of systems – that are important in defining the overall historic character of building, such as post-and-beam systems, trusses, summer beams, cast iron columns, above-grade stone foundation walls, or load-bearing brick or stone walls.

Protecting and maintaining the structural system by cleaning the roof gutters and downspouts; replacing roof flashing; keeping masonry, wood, and architectural metals in a sound condition; and ensuring that structural members are free from insect infestation.

Examining and evaluating the physical condition of the structural system and its individual features using non-destructive techniques such as X-ray photography.

Repairing the structural system by augmenting or upgrading individual parts or features. For example, weakened structural members such as floor framing can be paired with a new member, braced, or otherwise supplemented and reinforced.

Replacing in kind – or with substitute material – those portions or features of the structural system that are either extensively deteriorated or are missing when there are surviving prototypes such as cast iron columns, roof rafters or trusses, or sections of load-bearing walls to be used as a model for the new construction.

Limiting any excavations adjacent to historic foundations to avoid undermining the structural stability of the building or adjacent historic building. Studies should be done to ascertain potential damage to archeological resources.

Correcting structural deficiencies in preparation for a new use in a manner that preserves the structural system and individual character-defining features.

Designing and installing new mechanical or electrical systems, when required for a new use, which minimize the number of cutouts or holes in structural members.

Adding a new floor when required for a new use only if such an alteration does not damage or destroy the structural system, or obscure, damage, or destroy character-defining spaces, features, or finishes.

## STRUCTURAL SYSTEMS

Structural systems at Fort Monroe are typical for buildings of the 19th Century, featuring masonry bearing walls, heavy timber framing, and post-and-beam construction. Also noteworthy are examples of mid-1800s structural technology, such as the use of decorative cast iron.







#### NOT RECOMMENDED

Removing, covering, or radically changing features of structural systems which are important in defining the overall historic character of the building so that, as a result, the character is diminished.

Putting a new use into the building which could overload the existing structural system; or installing equipment or mechanical systems which could damage the structure.

Demolishing a load-bearing masonry wall that could be augmented and retained, and replacing it with a new wall (i.e., brick or stone), using the historic masonry only as an exterior veneer.

Leaving known structural problems untreated such as deflection of beams, cracking and bowing of walls, or racking of structural members.

Utilizing treatments or products that accelerate the deterioration of structural material such as introducing urea-formaldehyde foam insulation into frame walls.

Failing to provide proper building maintenance so that deterioration of the structural system results. Causes of deterioration include subsurface ground movement, vegetation growing too close to foundation walls, improper grading, fungal rot, and poor interior ventilation resulting in condensation.

Utilizing destructive probing techniques that will damage or destroy structural material.

Upgrading the building structurally in a manner that diminishes the historic character of the exterior (such as installing strapping channels or removing a decorative cornice), or damages interior features or spaces.

Replacing a structural member or other feature of the structural system when it could be augmented and retained.

CONT'D

### NOT RECOMMENDED CONT'D.

Installing a visible replacement feature that does not convey the same visual appearance, e.g., replacing an exposed wood summer beam with a steel beam.

Using substitute material that does not equal the load-bearing capabilities of the historic material and design or is otherwise physically or chemically incompatible.

Carrying out excavations or re-grading adjacent to or within a historic building which could cause the historic foundation to settle, shift, or fail; could have a similar effect on adjacent historic buildings; or could destroy significant archeological resources.

Radically changing interior spaces or damaging or destroying features or finishes that are character-defining while trying to correct structural deficiencies in preparation for a new use.

Installing new mechanical and electrical systems or equipment in a manner which results in numerous cuts, splices, or alterations to the structural members.

Inserting a new floor when such a radical change damages a structural system or obscures or destroys interior spaces, features, or finishes.

Inserting new floors or furred-down ceilings which cut across the glazed areas of windows so that the exterior form and appearance of the windows are radically changed.

## INTERIORS



Historic preservation has traditionally focused on building exteriors. While the exterior of a building may be its most prominent visible aspect, or its "public face," its interior can be even more important in conveying the building's history and development over time. Rehabilitation within the context of the Secretary of the Interior's Standards for Rehabilitation calls for the preservation of exterior and interior portions or features of the building that are significant to its historic, architectural and cultural values. Interior components worthy of preservation may include the building's plan (sequence of spaces and circulation patterns), the building's spaces (rooms and volumes), individual architectural features, and the various finishes and materials that make up the walls, floors, and ceilings.

An interior floor plan, the arrangement and sequence of spaces, and built-in features and applied finishes are individually and collectively important in defining the historic character of the building. Their identification, retention, protection, and repair should be given prime consideration in every rehabilitation project. In evaluating historic interiors prior to rehabilitation, it should be kept in mind that interiors are comprised of a series of primary and secondary spaces. Primary spaces, including entrance halls, parlors, or living rooms, assembly rooms and lobbies, are defined not only by their features and finishes, but by the size and proportion of the rooms themselves–purposely created to be the visual attraction or functioning "core" of the building. Care should be taken to retain the essential proportions of primary interior spaces and not to damage, obscure, or destroy distinctive features and finishes.

Secondary spaces include areas and rooms that "service" the primary spaces and may include kitchens, bathrooms, mail rooms, utility spaces, secondary hallways, fire stairs and office cubicles in a commercial or office space. Changes can often be made in these less important areas without having a detrimental effect on the overall historic character.

## INTERIORS

### SUGGESTED GUIDANCE

"Preservation Brief 17" Architectural Character: Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving Their Character http://www.nps.gov/history/hps/tps/briefs/brief17.htm

"Preservation Brief 18" Rehabilitating Interiors in Historic Building: Identifying and Preserving Character-defining Elements http://www.nps.gov/history/hps/tps/briefs/brief18.htm

"Preservation Brief 21" Repairing Historic Flat Plaster Walls and Ceilings http://www.nps.gov/history/hps/tps/briefs/brief21.htm

"Preservation Brief 23" Preserving Historic Ornamental Plaster http://www.nps.gov/history/hps/tps/briefs/brief23.htm

"Preservation Brief 28" Painting Historic Interiors http://www.nps.gov/history/hps/tps/briefs/brief28.htm

"Preservation Brief 37" Appropriate Methods for Reducing Lead-Paint Hazards in Historic Housing http://www.nps.gov/history/hps/tps/briefs/brief37.htm

"Preservation Brief 32" Making Historic Properties Accessible http://www.nps.gov/history/hps/tps/briefs/brief32.htm

"Preservation Brief 35" Understanding Old Buildings: The Process of Architectural Investigation http://www.nps.gov/history/hps/tps/briefs/brief35.htm

"Preservation Brief 40" Preserving Historic Ceramic Tile Floors http://www.nps.gov/history/hps/tps/briefs/brief40.htm

"Interpreting the Standards Bulletin 4" Inappropriate Replacement Doors http://www.nps.gov/history/hps/tps/tax/ITS/its\_04.pdf "Interpreting the Standards Bulletin 5" Removing Interior Plaster to Expose Brick http://www.nps.gov/history/hps/tps/tax/ITS/its\_05.pdf

"Interpreting the Standards Bulletin 7" Painting Previously Unpainted Woodwork http://www.nps.gov/history/hps/tps/tax/ITS/its\_07.pdf

"Interpreting the Standards Bulletin 8" Interior Alterations to Detached Residences to Accommodate New Functions http://www.nps.gov/history/hps/tps/tax/ITS/its\_08.pdf

"Interpreting the Standards Bulletin 15" Treatment of Interiors in Industrial Buildings http://www.nps.gov/history/hps/tps/tax/ITS/its\_15.pdf

"Interpreting the Standards Bulletin 19" Deteriorated Plaster Finishes http://www.nps.gov/history/hps/tps/tax/ITS/its\_19.pdf

"Interpreting the Standards Bulletin 24" Installing New Systems in Historic Corridors http://www.nps.gov/history/hps/tps/tax/ITS/its\_24.pdf

"Interpreting the Standards Bulletin 25" Altering the Character of Historically Finished Interiors http://www.nps.gov/history/hps/tps/tax/ITS/its\_25.pdf

"Interpreting the Standards Bulletin 31" Retaining Distinctive Corridor Features http://www.nps.gov/history/hps/tps/tax/ITS/its\_31.pdf

"Preservation Tech Notes 43" Historic Interior Spaces No. 3: Preserving Historic Corridor Doors and Glazing in High-Rise Buildings http://www.nps.gov/history/hps/tps/technotes/ptn43/



#### **RECOMMENDED PRACTICES**

Identify, retain, and preserve floor plans or interior spaces that are important in defining the overall historic character of the building. This includes the size, configuration, proportion, and relationship of rooms and corridors; the relationship of features to spaces; and the spaces themselves such as lobbies, reception halls, entrance halls, double parlors, theaters, auditoriums, and important industrial or commercial spaces.

Identify, retain, and preserve interior features and finishes that are important in defining the overall historic character of the building. This includes (but is not limited to) columns, cornices, baseboards, fireplaces and mantels, paneling, light fixtures, hardware, and flooring; and wallpaper, plaster, paint, and finishes such as stenciling, marbling, and graining; and other decorative materials that accent interior features and provide color, texture, and patterning to walls, floors, and ceilings.

Protect and maintain masonry, wood, and architectural metals which comprise interior features through appropriate surface treatments such as cleaning, rust removal, limited paint removal, and reapplication of protective coatings systems.

Protect interior features and finishes against arson and vandalism before project work begins, erecting protective fencing, boarding-up windows, and installing fire alarm systems that are keyed to local protection agencies.

Protect interior features such as staircases, mantels, or decorative finishes and wall coverings against damage during project work by covering them with heavy canvas or plastic sheets.

Install protective coverings in areas of heavy pedestrian traffic to protect historic features such as wall coverings, parquet flooring and paneling.

Remove damaged or deteriorated paints and finishes to the next sound layer using the gentlest method possible, then repaint or refinish using compatible paint or other coating systems. Repaint with colors that are appropriate to the historic building.

Evaluate the overall condition of materials to determine whether more than protection and maintenance are required, that is, if repairs to interior features and finishes will be necessary.

Repair interior features and finishes by reinforcing the historic materials.

Repair will also generally include the limited replacement in kind – or with compatible substitute material – of those extensively deteriorated or missing parts of repeated features when there are surviving prototypes such as stairs, balustrades, wood paneling, columns; or decorative wall coverings or ornamental tin or plaster ceilings.

Replace in kind an entire interior feature or finish that is too deteriorated to repair – if the overall form and detailing are still evident – using the physical evidence as a model for reproduction. Examples could include wainscoting, a tin ceiling, or interior stairs. If using the same kind of material is not technically feasible (i.e., it can no longer be manufactured), then a compatible substitute material may be considered. Use of resources at Fort Monroe has often required that they be adapted to meet the needs of occupancies for which they weren't originally designed. Rooms and building elements have undergone varying degrees of alteration over time in order to serve these new purposes. With some buildings, such as the family housing units, the use has remained consistent and so there is little change. For others, such as the administrative buildings, the use has remained essentially the same but the interiors have been periodically updated and modernized as needed. The general floor plan is usually still intact, and significant elements such as stairs and circulation patterns also remain. There are a few buildings whose purpose has become obsolete, such as the latrines located behind Building #5.

Install permanent partitions in secondary spaces only; removable partitions that do not destroy the sense of space should be installed when the new use requires the subdivision of character-defining interior space.

Enclose an interior stairway where required by code so that its character is retained. In many cases, glazed fire-rated walls may be used.

Place new code-required stairways or elevators in secondary and service areas of the historic building.

Create an atrium or a light well to provide natural light when required for the new use in a manner that preserves character-defining interior spaces, features, and finishes as well as the structural system.

Add a new floor, if required for the new use, in a manner that preserves characterdefining structural features, and interior spaces, features, and finishes.

Accessible spaces:

- » Rest Rooms
- » Egress
- » Elevators

Design and install a new interior feature or finish if the historic feature or finish is completely missing. This could include missing partitions, stairs, elevators, lighting fixtures, and wall coverings; or even entire rooms if all historic spaces, features, and finishes are missing or have been destroyed by inappropriate "renovations" or as a result of fire, flood or other natural disasters/acts of God. The design may be a restoration based on historical, pictorial, and physical documentation; or be a new design that is compatible with the historic character of the building, district, or neighborhood.

Accommodate service functions such as bathrooms, mechanical equipment, and office machines required by the building's new use in secondary spaces such as first floor service areas or on upper floors.

Reuse decorative material or features that have had to be removed during the rehabilitation work including wall and baseboard trim, door molding, paneled doors, and simple wainscoting; and relocating such material or features in areas appropriate to their historic placement.

### NOT RECOMMENDED

Radically changing a floor plan or interior spaces-including individual roomswhich are important in defining the overall historic character of the building so that, as a result, the character is diminished.

Altering the floor plan by demolishing principal walls and partitions to create a new appearance.

Altering or destroying interior spaces by inserting floors, cutting through floors, lowering ceilings, or adding or removing walls.

Relocating an interior feature such as a staircase so that the historic relationship between features and spaces is altered.

Removing or radically changing features and finishes which are important in defining the overall historic character of the building so that, as a result, the character is diminished.

Installing new decorative material that obscures or damages character-defining interior features or finishes.

Removing paint, plaster, or other finishes from historically finished surfaces to create a new appearance (e.g., removing plaster to expose masonry surfaces such as brick walls or a chimney piece).

Applying paint, plaster, or other finishes to surfaces that have been historically unfinished to create a new appearance.

Stripping paint to bare wood rather than repairing or reapplying grained or marbled finishes to features such as doors and paneling.

Radically changing the type of finish or its color, such as painting a previously varnished wood feature.

Failing to provide adequate protection to materials on a cyclical basis so that deterioration of interior features results.

Permitting entry into historic buildings through unsecured or broken windows and doors so that the interior features and finishes are damaged by exposure to weather or through vandalism. Stripping interiors of features such as woodwork, doors, windows, light fixtures, copper piping, and radiators; or of decorative materials.

Failing to provide proper protection of interior features and finishes during work so that they are gouged, scratched, dented, or otherwise damaged.

Failing to take new use patterns into consideration so that interior features and finishes are damaged.

Using destructive methods such as propane/ butane torches or sandblasting to remove paint or other coatings. These methods can irreversibly damage the historic materials that comprise interior features.

Using new paint colors which are inappropriate to the historical character of the building.

Changing the texture and patina of characterdefining features through sandblasting or use of abrasive methods to remove paint, discoloration or plaster. This includes both exposed wood (including structural members) and masonry.

Failing to undertake adequate measures to assure the protection of interior features and finishes.

Replacing an entire interior feature such as a staircase, paneled wall, parquet floor, or cornice; or finish such as a decorative wall covering or ceiling when repair of materials and limited replacement of such parts are appropriate.







Using a substitute material for the replacement part that does not convey the visual appearance of the surviving parts or portions of the interior feature or finish or that is physically or chemically incompatible.

Removing a character-defining feature or finish that is not repairable and then not replacing it; or replacing it with a new feature or finish that does not convey the same visual appearance.

Creating a false historical appearance because the replicated feature is based on insufficient physical, historical, and pictorial documentation or on information derived from another building.

Introducing a new interior feature or finish that is incompatible with the scale, design, materials, color, and texture of the surviving interior features and finishes.

Dividing rooms, lowering ceilings, and damaging or obscuring character-defining features such as fireplaces, niches, stairways or alcoves, so that a new use can be accommodated in the building.

Discarding historic material when it can be reused within the rehabilitation project, or relocating it to historically inappropriate locations.

Installing permanent partitions that damage or obscure character-defining spaces, features, or finishes.

Enclosing an interior stairway with fire-rated construction so that the stairwell space or any character-defining features are destroyed.

Radically changing, damaging, or destroying character-defining spaces, features, or finishes when adding new code-required stairways and elevators.

Destroying character-defining interior spaces, features, or finishes; or damaging the structural system in order to create an atrium or light well.

Inserting a floor within a building that alters or destroys the fenestration; radically changes a character-defining interior space; or obscures, damages, or destroys decorative detailing.

## MECHANICAL AND ELECTRICAL SYSTEMS

The Secretary of the Interior's Standards for Rehabilitation and the accompanying guidelines call for respecting the significance of original materials and features, repairing and retaining them wherever possible. This includes any paint, colors and finishes. In some cases, radiators, grilles and registers are quite ornate and comprise part of the building's design. Every effort shall be made to salvage these pieces, and where appropriate to reuse them as part of the new mechanical system. If it is determined that the element cannot be salvaged, then it should be replaced in kind.

Any installation of new building systems also must be reconciled with efforts to preserve historical finish materials. The amount of material that is demolished to make way for the system upgrades must be minimized whenever possible. Most mechanical systems require upgrading or replacement within 15-30 years due to wear and tear or the availability of improved technology; therefore, historic buildings should not be greatly altered or otherwise sacrificed in an effort to meet short-term mechanical system needs.



### **RECOMMENDED PRACTICES**

Identifying, retaining, and preserving visible features of early mechanical systems that are important in defining the overall historic character of the building. This may include radiators, vents, fans, grilles, plumbing fixtures, switch plates, and lights.

Protecting and maintaining mechanical, plumbing, and electrical systems and their features through cyclical cleaning and other appropriate measures.

Preventing accelerated deterioration of mechanical systems by providing adequate ventilation of attics, crawlspaces, and cellars so that moisture problems are avoided.

Improving the energy efficiency of existing mechanical systems to help reduce the need for elaborate new equipment. Consideration should be given to installing storm windows, insulating attic crawl space, or adding awnings, if appropriate.

Repairing mechanical systems by augmenting or upgrading system parts, such as installing new pipes and ducts; rewiring; or adding new compressors or boilers.

Replacing in kind – or with compatible substitute material – those visible features of mechanical systems that are either extensively deteriorated or are prototypes such as ceiling fans, switch plates, radiators, grilles, or plumbing fixtures.

Installing a completely new mechanical system if required for a new use so that it causes the least alteration possible to the building's floor plan, the exterior elevations, and the least damage to the historic building material.

Providing adequate structural support for new mechanical equipment.

Installing the vertical runs of ducts, pipes, and cables in closets, service rooms, and wall cavities.

Installing air conditioning units if required by the new use in such a manner that historic features are not damaged or obscured and excessive moisture is not generated that will accelerate deterioration of historic materials.

Installing heating/air conditioning units in the window frames in such a manner that the sash and frames are protected. Window installations should be considered only when all other viable heating/ cooling systems would result in significant damage to historic materials.







### NOT RECOMMENDED

Removing or radically changing features of mechanical systems that are important in defining the overall historic character of the building so that, as a result, the character is diminished.

Failing to provide adequate protection of materials on a cyclical basis so that deterioration of mechanical systems and their visible features results.

Enclosing mechanical systems in areas that are not adequately ventilated so that deterioration of the systems results.

Installing unnecessary air conditioning or climate control systems which can add excessive moisture to the building. This additional moisture can either condense inside, damaging interior surfaces, or pass through interior walls to the exterior, potentially damaging adjacent materials as it migrates.

Replacing a mechanical system or its functional parts when it could be upgraded and retained.

Installing a replacement feature that does not convey the same visual appearance.

Installing a new mechanical system so that character-defining structural or interior features are radically changed, damaged, or destroyed.

Failing to consider the weight and design of new mechanical equipment so that, as a result, historic structural members or finished surfaces are weakened or cracked.

Installing vertical runs of ducts, pipes, and cables in places where they will obscure character-defining features.

Concealing mechanical equipment in walls or ceilings in a manner that requires the removal of historic building material.

Installing a "dropped" acoustical ceiling to hide mechanical equipment when this destroys the proportions of character-defining interior spaces.

Cutting through features such as masonry walls in order to install air conditioning units.

Radically changing the appearance of the historic building or damaging or destroying windows by installing heating/air conditioning units in historic window frames.

## SUSTAINABLE DESIGN PRACTICES

Sustainable design practice for existing buildings means making choices that lessen impact on the environment. Historic buildings typically have inherent sustainable design features, such as operable windows for natural ventilation and made of more durable materials that can be repaired rather than replaced. However, buildings are the largest user of energy and electricity and largest contributor to greenhouse gas emissions. This section of the Design Standards focuses on appropriate sustainable design and historic preservation. This includes recommendations to improve energy efficiency, reduce water consumption, recycle materials, reduce waste that would go to landfills, and extend the useful life of buildings which, in turn, extends the benefit of the energy and material resources embodied in them.

This section includes:

- » Energy Efficiency
- » Energy Conservation
- » Water Conservation
- » Inherent Technology
- » Materials and Resources



### **RECOMMENDED PRACTICES**

Insulate attics, crawl spaces and under floor spaces. Provide additional insulation to achieve an R<sub>3</sub>8 in attics and R<sub>25</sub> under floor where the insulation can be installed without destroying historic building fabric.

Seal joints around windows, doors, plumbing penetrations, electrical penetrations, and other openings to reduce air infiltration. Joint sealants should match an adjacent material color or be paintable.

Weatherstrip doors and windows and maintain operable hardware to maximize performance and maintain weathertightness.

Storm Windows shall have the same sash configuration as the historic window, shall be operable and prefinished or painted to match the historic window.

Storm or Screen Doors shall have a narrow profile with a full vision light so as to not obscure the historic door and shall be painted the same color as the historic door.

Maintain Historic Windows – Historic windows with proper maintenance, weatherstripping and storm windows have been proven to perform as well, thermally, as replacement windows. Historic windows can be repaired instead of replaced, saving material from landfills.

Maintain Operable Shutters – Keep shutters and hardware in operable condition and encourage their use to control heat gain in the summer and heat loss in the winter.

Equipment – Zone HVAC systems for efficiency and use programmable thermostats.





Buildings are the largest user of energy and contributor to greenhouse gas emissions. Making buildings energy efficient can save up to 30 percent in energy savings and 35 percent savings on carbon emissions.

## NOT RECOMMENDED

Removing historic finishes and/or features to add insulation to concealed spaces such as wall cavities.

Adding insulation to the exterior of buildings.

Sealants that are incompatible with substrates, sealants that do not match a substrate or can not be painted (such as clear sealants).

Replacing hardware when the existing hardware can be repaired.

Storm windows that do not match the configuration/operation of the historic window. Bare/unfinished aluminum storm windows.

Storm doors that detract from the historic appearance of the door opening by obscuring it with an inappropriate design or style.

Replacing windows with "energy efficient" windows.



### **RECOMMENDED PRACTICES**

Daylighting: Take advantage of existing windows to provide daylighting to reduce artificial lighting loads.

Lighting: Retrofit or relamp existing light fixtures for energy efficient fluorescent bulbs.

Appliances: When replacement becomes necessary, replace appliances, water heaters, mechanical equipment with energy efficient units.



# WATER CONSERVATION

### RECOMMENDED PRACTICES

Plumbing Fixtures: When replacement becomes necessary, replace plumbing fixtures with low-flow, water-saving devices.

Fixtures: Use aerators on sink faucets, use water saving shower heads.

Landscaping: Use native plant species and drought tolerant plant species for landscaping to reduce water consumption for irrigation and re-establish natural environments.

Irrigation: Use efficient irrigation systems, irrigation systems that are set on timers or are programmable.

Recycled Water: Consider capturing rain water for irrigation if rain barrels do not detract from the historic character of the building or neighborhood.

Gray Water Recycling: Consider installing gray water recycling systems to supplement the water demand of irrigation systems.



Т



# WATER CONSERVATION



Using sustainable practices can reduce water consumption by up to 30 percent. However, reducing water usage may have a negative impact on historic landscape features. Sustainable practices for water conservation should include both a reduction in use and incorporating both historic and modern methods of recycling water.

### NOT RECOMMENDED

Water dependent landscape planting and planting prohibited by the Design Standards.

Restricting water for irrigation that may irreparably change the character of a historic landscape or alter the relationship between a building and its surround-ing landscape.

## INHERENT TECHNOLOGIES



#### **RECOMMENDED PRACTICES**

Operable Windows: Maintain operable windows to reduce heating and ventilation demands during temperate seasons.

Transom Windows: Maintain the operability of transom windows over doors for cross ventilation. Transom windows also decrease the need for artificial lighting by allowing "borrowed light" into interior spaces.

High Ceilings – Preserve high ceilings to allow air to circulate and light to enter.

Porches – Retain porches for shading protection and ventilation.

Mature Trees/Planting – Maintain mature deciduous tree cover that provides shade/sun protection in the summer and allows sunlight to enter during the winter. Consider additional planting for summer shading if allowed by other sections of the Design Standards.

Durable Materials – Maintain durable materials such as brick masonry walls that inherently provide thermal protection due to retention, insulation and release through the material.





## INHERENT TECHNOLOGIES

Historic buildings have design features that typically respond to climate and site. When these features are maintained, restored, or reinstated, they can bring about substantial energy savings without compromising historic character.



Enclosing porches, infilling porches with glass to create "sunrooms".

Removing mature trees/landscaping that will alter the established landscaping.

Removing or covering transom windows unless required by life safety codes for fire ratings. If fire ratings are required, maintain the transom window and provide the rated separation independent of the window.

Lowering high ceilings by installing "dropped" ceilings.

Replacement material of lesser quality that does not perform in a comparable manner or less durable replacement materials.



#### **RECOMMENDED PRACTICES**

Maintenance: Maintain historic building fabric and repair as necessary.

Recycled Materials: Use recycled content insulation materials such as cotton insulation in crawl spaces and attics that are 95 percent recycled from post-industrial cotton fibers.

Recyclable Materials: Retain historic materials or building features and reuse in other building rehabilitations.

Salvaged Materials – Consider the use of appropriate salvaged materials for building rehabilitation.

Renewable Resources: For replacement or new construction, use natural, durable materials that are less energy intensive to produce. Use materials made from renewable resources and recycled resources that can also be recycled at the end of their serviceable life. Reuse historic buildings to assist in their preservation, contribute to the special quality of Fort Monroe, and to extend the payback of their embodied energy and materials.

### NOT RECOMMENDED

Use of salvaged materials that are not appropriate to the character of the historic structure or would alter the character. For example: using salvaged material that predates the original construction thus creating a false interpretation or false historicism.

Disposal of materials, fixtures or features that can be upgraded or repaired and reused.
### Fort Monroe glossary

A glossary of architectural and technical terms used throughout the Design Standards.



## A

ACHP – Advisory Council on Historic Preservation

**ADVERSE EFFECT** – an adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify it for inclusion in the National Register of Historic Places in a manner that would diminish the integrity of a property's location, design, setting, materials, workmanship, feeling or association.

**AREA OF POTENTIAL EFFECT** – the geographic area, or areas, within which an undertaking may directly or indirectly cause alterations in the character or use of historic property.

**ARCH** – multiple masonry units combined to structurally bridge an opening in a wall by translating the vertical load into diagonal thrust at the sides of the arch, with the joints between the units radiating from a common center or centers; shapes can be grouped according to the number of centers of the radii. The following types are found at Fort Monroe:

**CAMBER ARCH** – a flat arch with a very slight upward curve along the underside

JACK ARCH – an arch with a horizontal or nearly horizontal underside, and that has little or no curvature

LANCET ARCH – a sharply pointed arch whose centers are farther apart than the width of the arch

**SEGMENTAL ARCH** – a circular arch in which the distance of the sweep is less than a semicircle; not commonly used before 1850

**SEMICIRCULAR ARCH** – a round arch in which the distance of the sweep is a full semicircle, or 180 degrees

SOLDIER ARCH – a jack arch composed of soldier bricks

**ARCHED CORBEL TABLE** – in Early Christian and Romanesque architecture and derivatives, a raised band (often at the top of a wall) composed of small arches resting on corbels; the arcading is regularly punctuated by junctures with pilaster strips

**ARCHITRAVE** – in classical architecture, the bottom band of an entablature, located immediately above the column capitals. A molded trim band surrounding the sides and top of a rectangular wall opening

**ASBESTOS SHINGLE** – a shingle composed of cement reinforced with asbestos fibers; manufactured early-late twentieth century in various sizes, shapes and textures; typically of uniform thickness





Camber Arch







Elliptical Arch

Lancet Arch





Segmental Arch

Semicircular Arch



Arched Corbel Table



Balustrade



Battered Wall





English Bond



1/3 Running Bond



Stretcher Brick



Header Brick

Flemish Bond

Running Bond





Soldier Brick/Sailor Brick

ASPHALT SHINGLE - a shingle composed of rag felt or, after 1970, fiberglass, saturated with asphalt; typically manufactured in large pieces divided on the bottom edge with slots to resemble the size of wood shingles

### B

BALUSTER – one of several small columns or rods that support a railing or balustrade, may be of any size or shape, including a square wrought-iron bar, a thin turned wood spindle, or a neoclassical stone column with base, shaft and capital

BALUSTRADE - a railing with upper and lower rails balusters and pedestals; the rail moldings usually continue across the pedestals. A parapet with balusters, sometimes alternating between solid and pierced sections.

BARGEBOARD – one of a pair of sloped boards at the edge of a projecting eave at a gable end; often decoratively carved or scrolled, especially in Gothic Revival style houses

**BATTERED** – inclined from the vertical axis. A wall is said to batter when it recedes as it rises

BAY - each individual space defined by a structural grid

BEAD – a narrow wood strip, molded on one edge, against which a door or window closes

#### **BELT COURSE** (see Stringcourse)

BEVEL – the angle which one surface of a body makes with another surface when they are not at right angles

BLOCK MODILLION – a plain square or rectangular modillion

BOND – the pattern of interlocking units and joints in a masonry structure. The following bond patterns are found at Fort Monroe:

AMERICAN - a brick wall bond with a course of headers or a row of Flemish bond after every five or six courses of running bond stretchers. Also known as common bond

**ENGLISH** – brickwork with alternate courses of headers and stretchers

FLEMISH – brickwork where each course consists of headers and stretchers laid alternately; each header is centered with respect to the stretchers both above and below

RUNNING - a bond in which all bricks or stones are laid lengthwise; all courses are laid as stretchers with the vertical joints of one course falling midway between those of the courses both above and below

American Bond

**BRACKET** – an angled support that helps transfer the load of a horizontal structural member to a vertical one; similarly, various decorative elements in the corner of an opening or below a projection

**BOXED CORNICE** – a wood cornice formed by enclosing the framing members below overhanging rafter tails; may be of varying configurations with a horizontal or sloped soffit



CAPITAL – the topmost portion of a column or pier

**CASEMENT** – a window sash hinged on one side so that it opens by swinging in or out

**CASEMENT WINDOW** – a window with one or more casement sashes; may also have fixed lights

CAST IRON – an iron alloy, usually including carbon and silicon; a large range of building products are made of this material by pouring the molten metal into sand molds and then machining. Has high compressive, but low tensile strength

**CHAMFER** – an oblique surface produced by beveling an edge or corner, usually at a 45-degree angle, as the edge of a board or masonry surface

**CHIMNEY CAP** – the decorative masonry or metalwork that crowns a chimney; may include a cover to keep out rain

**COLONNETTE** – a small column, usually decorative; in medieval architecture, a thin, round shaft to give a vertical line in elevation, or as an element in a compound pier

 $\operatorname{\textbf{COLUMN}}$  – a slender, vertical element that supports part of a building or structure

**COMPOUND ARCH** – an arch formed by smaller, concentric arches set within one another

**COMPOUND COLUMN** – a central column surrounded by other smaller columns

**COMPOUND PIER** – a pier composed of a conjunction of colonnettes, generally attached to a central shaft; a clustered column

**CONSOLE** – a decorative bracket in the form of a vertical scroll, projecting from a wall to support a cornice, door or window head

 $\label{eq:console} \begin{array}{l} \mbox{CONSOLE TABLE} - \mbox{a horizontal slab attached to a wall and supported on consoles} \end{array}$ 





Rowlock Stretcher Brick

Rowlock Brick





Bracket

Boxed Cornice



Chimney Cap



Column



Corbelling



Cornice Return



Cresting



CUSP

**COPING** – a protective cap, top, or cover of stone, terra-cotta, concrete, metal or wood; may be flat, but commonly sloping, double-beveled or curved to shed water from above

**CORBEL** – in masonry, a projection or one of a series of projections, each stepped progressively farther forward with height; anchored in a wall, story, column or chimney; used to support an overhanging member above, or, if continuous, to support overhanging courses

**CORNICE** – Any molded projection which crowns or finishes the part to which it is affixed. The third or uppermost division of an entablature, resting on the frieze. An ornamental molding, usually of wood or plaster, running round the walls of a room just below the ceiling. The exterior trim of a structure at the meeting of the roof and wall

**CORNICE RETURN** – the continuation of a cornice in a different direction, usually at right angles, as at the gable end of a house

**COURSE** – a horizontal row of repetitive elements, especially masonry, tile or roofing units; a layer of repetitive elements with joints radiating from a common center

CRENELLATED – having a pattern of repeated notches or indentations

 $\ensuremath{\mathsf{CRESTING}}$  – decoration in the form of a series of ornate, pointed shapes located at the top of a parapet or roof ridge

**CUPOLA** – a hemispherical-shaped roof or ceiling, such as the dome of the US Capitol Building; a small structure projecting above a roof that provides ventilation or is used as a lookout, especially with a hemispherical roof on a circular or polygonal drum

CUSP – the intersection of two arcs in a tracery

### D

**DENTIL** – in classical cornices and entablatures, one of a series of small, decorative blocks that alternate with a blank space; typically rectangular with moldings above and below.

**DORMER WINDOW** – a small structure that projects from a sloping roof, with a window in the downslope end; used to light an attic space and to provide headroom; may have a gabled, shed or other shaped roof

### E

**EAVES** – the lower edge of a sloping roof; that part of a roof of a building which projects beyond the wall

 $\label{eq:ELEVATION-a} \mbox{ drawing showing the vertical elements of a building, either exterior or interior, as a direct projection to a vertical plane; any of the secondary faces of a building exterior$ 

 $\mathsf{ELL}$  – an addition to a building that creates an L-shaped floor plan; usually added at the rear of the additional structure

ENGAGED COLUMN – a column attached to the wall behind it

**ENTABLATURE** – in classical architecture, the entire band of horizontal elements above the column capitals; from bottom to top, the entablature is composed of the architrave, frieze and cornice

**EYEBROW DORMER** – a low, curve-headed dormer without side walls; typically used on shingle or slate roofs, with the courses continuous over the top of the dormer



**FAÇADE** – the front wall of a building, or the wall in which the principal building entrance is located, especially when highly ornamented

FAN LIGHT - a window in the arched opening over an entry door

**FENESTRATION** – the design and arrangement of items that fill openings in a building envelope, such as windows, doors, skylights, curtain walls, etc., designed to permit the passage of air, light, vehicles, or people

**FLASHING** – Sheet metal or other flexible material formed to prevent water from entering a building or structure at joints or intersections, such as where a roof meets a wall or where a chimney penetrates a roof

**FLAT ROOF** – a roof with only sufficient slope to effect drainage, usually with a pitch of less than ten degrees

**FLUTE** – in architecture, one of a series of parallel, linear grooves with a curved profile; typically semi-elliptical on column shafts of Greek orders, such as the Doric order, and semicircular on Roman orders, such as the Corinthian order

**FMA** – Fort Monroe Authority (formerly Fort Monroe Federal Area Development Authority)



Dormer Window



Entablature



Eyebrow Dormer



Fan Light



Flute



Gable



Gable Roof



Hipped Roof

FMHPO – Fort Monroe Historic Preservation Officer

**FRAMING** – the structural system of horizontal and vertical components that supports a building

**FRIEZE** – the middle horizontal member of a classical entablature, above the architrave and below the cornice

### G

GABLE – a wall that encloses the end of a gable roof

GABLE ROOF – a pitched roof with two inclined planes having equal angles that meet at a peak in the center and terminate at the end of a gable (see page 9 for illustration)

**GLACIS** – an earthen bank sloping gradually toward the field from the top of the counterscarp or covered way to help make attackers visible from the parapet

**GLAZING** – the clear or translucent material through which light passes into a building; most often glass but includes materials such as acrylic or polystyrene

### H

**HEADER** – a brick oriented with the smaller end exposed on the face of the wall and the smallest dimension vertical; typically used to bind two wythes of the wall together. A brick used as a voussoir of an arch; its middle dimension on a radius of the arch and its shortest dimension along the face of the arch, see *Brick* 

**HIPPED ROOF** – a roof which slopes upward and inward from all four sides of a building, requiring a hip rafter at each corner

**HYPHEN** – a connecting link (for example, a covered walkway) between a large, centrally located house and its dependencies or wings; the house and its hyphens may be in a straight line or form a curve

**INTERIOR END CHIMNEY**– a chimney located outside, and usually attached to, an exterior wall of a house at the gable end, gambrel end, or mansard end

# K

**KEYSTONE** – the center voussoir of an arch, often larger or more ornate than the other voussoirs

### L

LAMB'S TONGUE – the end of a handrail which is turned out or down from the rail and curved so as to resemble a tongue; a cut molding, usually two ovolos separated by a fillet and set off by fillets at the other ends

LANCET – a narrow window or archway with a sharp, pointed arch typical of English Gothic architecture from circa 1150 to circa 1250; one light shaped like a lancet window

LEAF – a hinged part; a separately movable division of a folding or sliding door; one of a pair of doors or windows; one of the two halves of a cavity wall

LIGHT (1/1, etc) – an individual pane of glass within a sash, or the multiple pieces of glass of an art glass window

LINTEL – a structural beam spanning over a door or window opening, or a facing, such as architectural terra-cotta, that appears to be a structural beam

 ${\sf LOUVER}$  – a covering for an opening with a series of angled, fixed slats with spaces between them to admit air; typically the slats slope downward and outward to protect against rain

**LOUVER WINDOW** – a window having louvers which fill all or part of the opening instead of glass

LUNETTE – a crescent-shaped or semicircular area on a wall or vaulted ceiling, framed by an arch or vault; an opening or window in such an area



**MASONRY** – stone, brick or similar elements installed so that the weight of a unit bears on the one below; typically with mortar in the joints between the units

 ${\tt METOPE}$  – the panel between each of the triglyphs in a Doric frieze, often carved; also see triglyph



Interior End Chimney



Keystone



Modillion



Molded Brick



**MODILLION** – one of a series of scroll-shaped brackets supporting the corona of a cornice; common in Corinthian and Composite orders. See also block modillion

**MOLDED BRICK** – a specially shaped brick, usually for decorative work; ordinary brick which is neither cut with a wire nor pressed

**MOLDING** – linear decorative trim in various geometric profiles; term includes both the individual profile shapes and a composite of several shapes

 ${\sf MUTULE}$  – a sloping flat block on the soffit of the Doric cornice, usually decorate with rows of six guttae each; occurs over arch triglyph and each metope of the frieze



NHL – National Historic Landmark

NPS – National Park Service

0

**ORDER** – an arrangement of columns with an entablature; in classical architecture, a particular style of column with its entablature, having standardized details

**DORIC** – the column and entablature developed by the Dorian Greeks, sturdy in proportion, with a simple cushion capital, a frieze of triglyphs and metopes, and mutules in the cornice

**IONIC** – the classical order of architecture classified by its capital with volutes and by its elegant detailing, less heavy than the Doric and less elaborate than the Corinthian

**CORINTHIAN** – the slenderest and most ornate of the three Greek orders, characterized by a bell-shaped capital with volutes and two rows of acanthus leaves, and with an elaborate cornice

**TUSCAN** – a simplified version of the Roman Doric order, having a plain frieze and no mutules in the cornice

**COMPOSITE** – a Roman elaboration of the Corinthian order, having the acanthus leaves of its capital combined with the large volutes of the lonic order, and other details also elaborated

**OVOLO** – a convex molding, less than a semicircle in profile; usually a quarter of a circle or approximately a quarter ellipse in profile

## P

 $\ensuremath{\mathsf{PA}}\xspace$  – Programmatic Agreement for the Closure and Disposal of Fort Monroe

**PARAPET** – the part of a wall that projects above the adjacent roof; typically solid construction but may also be crenelated or pierced, such as a balustrade

**PAVILION** – a detached or semi-detached structure used for entertainment or (as at a hospital) for specialized activities; on a façade, a prominent portion usually central or terminal, identified by projection, height, and special roof forms; in a garden or fairground, a temporary structure or tent, usually ornamented

**PEDESTAL** – a low structure that supports a column or other element, or is part of a balustrade, most often with a square or rectangular plan

**PEDIMENT** – the triangular gable end of a classical building, or the same form used elsewhere; pediments over openings sometimes have curved tops

**PICKET** – a pointed stick, bar or post, most commonly wooden, set as part of a series with space in between to form a picket fence

**PIER** – a square or rectangular masonry or wood post projecting less than a story above the ground that carries the weight of a structure down to the foundation, especially when larger or squatter than a column; may be below a wood frame or part of a wall between a series of openings

**PILASTER** – an engaged column of rectangular cross section, with base and capital, originally always part of a masonry structural pier; most North American examples are applied ornament; typically projects a distance that is one-third or less of the width of the column

**POST** – a slender column, generally round or square in section; usually wood but may also be metal or stone



Parapet



Pedestal



Pediment





Pier

Pilaster



Quoin



Cross-Gabled Roof

Front-Gabled Roof





Side-Gabled Roof







Shed Roof



Raked Cornice

QUATREFOIL – a four-lobed pattern divided by cusps

QUOIN - a large, rectangular block of stone used to physically and aesthetically fix in place an outside corner of a building; typically in a toothed form with alternate quoins projecting and receding from the corner

RAFTER TAIL – the portion of a rafter that projects beyond the exterior wall to support the eaves; may also be a separate piece of lumber joined to the end of the rafter

RAILING – an openwork assembly at the edge of a balcony, stair or similar location to prevent someone from falling off it; typically constructed of a series of vertical posts supporting two or more horizontal rails; may also have vertical balusters between the rails

RAKED CORNICE - the sloping cornice of a triangular pediment or gable end

**RAMPART** – the earthen wall on the inside of the moat

**REDOUBT** – a fort or sort system usually consisting of an enclosed defensive emplacement outside a larger fort, usually relying on earthworks, though some are constructed of stone or brick; meant to protect soldiers outside the main line of defense

**REVEAL** – the side of an opening for a door or window, doorway, or the like, between the door frame or window frame and the outer surface of the wall; where the opening is not filled with the door or window, the whole thickness of the wall

**RIDGE** – the line formed where two sloping roof surfaces meet at the top; may be horizontal or inclined

ROWLOCK – a brick oriented with the smallest face exposed on the face of the wall and the smallest dimension horizontal, see Brick

ROWLOCK ARCH – a segmental arch composed of full (unrubbed) rowlock bricks, especially when formed with concentric rows

RUBBED BRICK - Bricks that have been smoothed and/or shaped by rubbing them on a rough surface; typically have a lighter color than common brick; especially common with jack arch voussoirs

**RUSTICATION** – ashlar masonry with stone blocks with chamfered, or rounded, edges that create deep grooves between the blocks that emphasize the horizontal joint pattern. A series of recessed, horizontal joints in imitation of true rustication, such as brick courses set behind the main face of the wall or chamfered wood

RUSTIC JOINT - a masonry joint in the form of rustication

## S

 $\ensuremath{\mathsf{SASH}}$  – the part of a window frame that holds the glazing, especially when movable

**SASH WINDOW** – a window with a vertically sliding sash, as opposed to a casement window; types include double-hung, single-hung and triple-hung

SHED ROOF – a roof shape having only one sloping plane; also called a pent roof

SHPO - State Historic Preservation Officer

#### SIDE WALL CHIMNEY

**SIDELIGHT** – a narrow window adjacent to a door or wider window, most often one of a pair flanking an entrance door

SKEW CORBEL – a kneeler at the base of a gable coping that extends beyond the side wall; used to support the coping and, sometimes, to terminate the gutter or cornice on the side wall

 $\ensuremath{\mathsf{SLATE}}$  – any kind of stone that splits easily into smooth, thin plates with even thickness

**SOFFIT** – the bottom surface of an arch, especially when the arch has a square cross section. The exposed underside of a relatively narrow surface, such as an architrave, beam, cornice, lintel, stairway, vault or similar element. The flat underside of a roof eave or overhang

 $\mathsf{SOLDIER}$  – a brick placed vertically with its narrowest face exposed on the face of a wall, see *Brick* 

#### SPLASH COURSE - see Water Table

**STOP** – the molding or trim on the inside face of a door or window frame against which the door or window closes; a bead



Rowlock Arch



Skew Corbel



Stringcourse



Telescoping Archway



Transom Window

**STRETCHER** – a masonry unit laid horizontally with its length in the direction of the face of the wall

**STRINGCOURSE** (*see Belt Course*) – a horizontal band of masonry, generally narrower than other courses, extending across the face of a structure and in some instances encircling such decorative features as pillars or engaged columns; may be flush or projecting, and flat-surfaced, molded or richly carved

### Τ

**TERREPLEIN** – the flat part of the rampart, behind the parapet, on which cannons are placed

TIE ROD – a rod in tension, used to bind parts of a structure together

TILE – a ceramic surfacing unit, usually thin in relation to the surface area, made from clay or a mixture of clay and other ceramic materials; has either a glazed or an unglazed finished surface

**TRACERY** – The curvilinear openwork shapes of stone or wood creating a pattern within the upper part of a Gothic window, or an opening of similar character, in the form of mullions which are used ornamentally. By extension, similar patterns applied to walls or panels.

**TRANSOM WINDOW** – a glazed opening above a door or window. (*See also Fanlight*)

**TRIGLYPH**– the characteristic ornament of the Doric frieze, consisting of slightly-raised blocks of three vertical bands separated by V-shaped grooves

**TURNED** – having a circular cross-section that has been produced by turning on a lathe, or sometimes a similar molded or carved shape

### V

VALLEY –the line (or angle) formed where two downward sloping roof surfaces meet at the bottom; may be horizontal or inclined

VESTIBULE – a small foyer leading into a larger space

**VOUSSOIR** – one of the individual masonry units of an arch or vault, usually wedge-shaped with the abutting faces aligned with a radius of the center, typically uniform in size except in Gothic-style arches

### W

**WATER TABLE** – (*see Splash Course*) – in architecture, the projecting decorative molding of a masonry wall at the point where the wall thickens, often just above ground level

WING WALL – a subordinate wall, one end of which is built against another building element; usually acts as a retaining wall

**WROUGHT-IRON WORK** – iron that is hammered or forged into shape, usually decorative, either when the metal is hot or cold

 $\label{eq:WYTHE} WYTHE - a single layer of wall thickness of masonry material, typically the depth of a brick stretcher; generally used to indicate the number of brick thicknesses of a solid wall, or one part of a cavity wall$ 



Voussoir





Water Tables



Wrought-Iron Work

### Fort Monroe design standards for new construction

This section of the Design Standards establishes the guidelines for new construction and additions to historic buildings. It is organized by the management zones and standards for building placement, size, form, materials, and building elements have been developed to maintain the integrity of the overall character of Fort Monroe.

	3
3A	Introduction
3B	New Construction 3B.1
3C	Additions and Reconstructions 3C.1
3D	Site Furnishings 3D.1
3E	Sustainable Design 3E.1

### Design Standards for New Construction introduction

Protecting the integrity of the Fort Monroe National Historic Landmark (NHL) District involves not only the careful and thoughtful reuse and rehabilitation of historic buildings, it also involves maintaining the overall character, ambiance and significant features of the entire site. Throughout the 400 year history of Old Point Comfort, structures and buildings have been erected, demolished, or destroyed by nature. The current built environment was largely built within a 140 year span from the early 1800s to the mid 1900s. To keep Fort Monroe vital and to sustain economic sustainability, new construction on Fort Monroe is desirable. This new construction must respect the historic character of the NHL District, maintain and protect significant landscape elements and view sheds, and enhance the overall setting of Fort Monroe.

The Design Standards for New Construction were developed as a requirement of the Programmatic Agreement for the Closure and Disposal of Fort Monroe. The Programmatic Agreement stipulated that the Fort Monroe Authority (FMA) develop a Historic Preservation Manual for Fort Monroe that contains design standards for rehabilitation and new construction. The Design Standards for New Construction apply to new buildings, additions and reconstructions.

Conformance to the Design Standards will ensure that the overall character of Fort Monroe is maintained. The Design Standards are also intended to be used by the FMA and the Fort Monroe Historic Preservation Officer (FMHPO) to evaluate if proposed new construction is compatible with the Reuse Plan and that new construction does not jeopardize the integrity of the Fort Monroe NHL District.

For planning purposes, Fort Monroe has been subdivided into Management Zones, each with a distinct set of criteria for reuse of buildings, infill, and new development. In Section 3B of the Design Standards, each management zone is analyzed for potential areas for new construction, site character, and building design concepts to be applied in planning new construction.



The Design Standards are not intended to dictate specific architectural styles, types of construction or specific building use. They are intended to provide direction and information and allow the designer to create new construction that is compatible with the architectural character of each Management Zone by observing historic context and building patterns, not simply duplicating what is already there. New construction shall follow the Philosophy Secretary of the Interiors Standards: "New additions, … or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and be compatible with the massing, scale and architectural features to protect the property and its environment."

# Fort Monroe new construction

This section describes the character planning and design concepts for new construction in each of the Management Zones.



Introduction
Zone A 3B.4
Zone B 3B.10
Zone C
Zone D 3B.26
Character Area 1
Character Area 2 3B.34
Character Area 3
Character Area 4
Zone E 3B.48
The Batteries 3B.50
Individually Eligible Resources 3B.54



For over 200 years, continuous building, demolition and rebuilding has shaped Fort Monroe's built environment and the shore line of Old Point Comfort has been altered by erosion, accreted lands and fill. Fort Monroe is a complex site with significant natural and man-made features that set limits on areas for new construction. The *Design Standards* recognize not only the built areas of the fort that are to be maintained, protected and preserved, but also natural features, landscapes and viewsheds. Taking these parameters into account, areas where new construction may occur have been mapped.

#### THE CHESAPEAKE BAY ACT

In 1988, the Virginia General Assembly enacted The Chesapeake Bay Preservation Act (Bay Act) to improve the water quality of the Chesapeake Bay and its tributaries through environmentally responsible land use management. Chesapeake Bay Preservation Areas (CBPAs) are lands where development has the potential to impact water quality most directly. Land in a CPBA is categorized as either a Resource Protection Area (RPA) or Resource Management Area (RMA). RPA's are sensitive lands at or near the shoreline that have intrinsic water quality value due to the ecological and biological processes they perform. RMA's are lands that, without proper management, have the potential to significantly degrade water quality or damage protective features of the RPA. Intensely Developed Areas (IDAs) may be designated as an overlay of CBPAs provided certain conditions are met.

### (Resource Protection Areas and Resource Management Areas will be established at Fort Monroe)

### ARCHAEOLOGY AND AREAS WITH THE POTENTIAL FOR UNSUITABLE FILL

Fort Monroe is a large archaeological site and some areas have significant cultural material that contribute to its importance. There are also areas that are unlikely to contain significant cultural material as a result of past land use and disturbances. Areas of Archaeological sensitivity have been mapped and in order to appropriately manage the resources that are significant, a process has been established to ensure that archaeological considerations are part of all ground disturbing activities at Fort Monroe.

Areas with the potential for unsuitable fill are areas of past landfill activity where the subsoil conditions may be unsuitable for supporting new construction with deep foundations.

#### DEVELOPED AREAS

Zone D is intensely developed and one of the most character defining areas of the fort with limited areas for infill.

Zone E, the Stone Fort and the area within the fort walls, has been identified as requiring the highest standard of protection. There are no sites within Zone E for new construction. Approved additions or reconstruction of a building, or of lost building elements, may be allowed.

The Endicott Batteries have been recognized as a separate Management Zone. Unique planning principles for their stabilization, rehabilitation and reuse have been established or adopted. Individual site boundaries shall be established for each battery to include: areas of existing earthen protection, areas where the earthen protection has been removed, fields of fire, and the area that was historically used to access, arm, and service each structure.

Four individually eligible resources have been recognized as a separate management zone. Refer to the updated Fort Monroe National Historic District Registration form for the individual site boundaries for these properties.

### ZONE A Site Character







Mill Creek



Existing observation platform

The Programmatic Agreement for the Closure and Disposal of Fort Monroe, Va. states:

New construction shall be minimized in order to maintain the current and historic character of Zone A as an area of little permanent development and a more natural setting.

New construction shall be in accordance with established *Design Standards* and implemented only after consultation with the Fort Monroe Preservation Officer.

#### SITE CHARACTERIZATION

Zone A is the northern-most portion of the fort encompassing the width of the peninsula north of the seawall and the area of Walker Field to the south. This narrow neck of land connects Fort Monroe to the Buckroe Beach area. Zone A was historically used for training. Wilson Park, an anti-aircraft gun park and a WWI era rifle range were located near the northern edge of the seawall. Although Zone A is currently a sparsely developed, natural area, a variety of structures and buildings were built and demolished over time in this area. These include signal towers, observation towers, barracks, quarters, mess halls, tents, a balloon hanger and an incinerator. Remnants of previous construction, such as foundations and paved surfaces, are found throughout Zone A. Two remaining historic magazines, Buildings 32 and 38, have been repurposed, but offer a glimpse into the character of past construction. Zone A was also served by the Fort Monroe railroad. The railroad served the Endicott Batteries, the magazines and Wilson Park.

#### LAND USE CONCEPTS

» Parks and recreation

#### INFRASTRUCTURE

» Maintain Fenwick Road as the primary circulation route

#### SITE CONSTRAINTS

- » (Chesapeake Bay Preservation Areas to be established)
- » Avoid areas of potential unsuitable fill for building foundations
- Avoid the sites of the rifle range and Wilson Park
- » Areas with the potential for new construction have a low probability of archaeological discovery

#### RESOURCES

- » Contributing Buildings/Structures: Buildings 32 and 38
- » Non-contributing Buildings/Structures: Buildings 211, 247, 1090, 1091, 1092, 1094, 1099, 1102

#### AREAS WITH THE POTENTIAL FOR NEW CONSTRUCTION

- Passive recreation improvements such as observation platforms or trails may be permitted
- » Temporary structures with minimal impact to the environment may be permitted
- » New construction may be permitted in Zone A south of the site of Wilson Park

#### BUILDING ORIENTATION

New construction shall respond to the historic patterns of Zone A. Historically, buildings were built along, and oriented to, the rail line. They were also organized in groups, or camps, associated with training activities and oriented to the historic circulation system.

- » Orientation of new construction shall respond to the historic circulation system
- » Stand-alone buildings and groups of like buildings are appropriate in Zone A

#### **BUILDING SETBACK**

There are no established setbacks for Zone A. What is historically appropriate is a consistency of spacing between buildings that are grouped together.

- » Consistent setbacks shall be established and maintained along historic circulation corridors
- » A uniform spacing between buildings in groups shall be maintained

#### LANDSCAPE CONCEPTS

There are no contributing landscape features in Zone A, however the site of Wilson Park, the Rifle Range and Walker Field are significant areas to acknowledge when planning new construction.

- » Remnants of past military activities and other cultural landscape features shall remain
- » Do not disturb the live oak trees
- » Incorporate Bay Scapes (native plant species that will improve the environment surrounding the Chesapeake Bay) for new landscaping in Zone A
- » Refer to the "Landscape Planting Plan for Fort Monroe, Virginia" for recommended plant species.



Ca 1946 map of Zone A showing historic building orientation and spacing patterns





View looking south on Fenwick Road



#### STREETS AND PARKING

Zone A was traversed by the historic rail line and Fenwick Road.

- » The alignment of Fenwick Road shall be maintained as the historic circulation corridor (reference aerial map on page 3B.13)
- » Fuller Lane and Incinerator Road shall be maintained as historic access roads
- » Realignment of the northern end of Stilwell Drive (south of Walker Field) should be considered if new construction is focused on that area (reference aerial map on page 3B.13)
- » New roads, other than for service access, shall be discouraged in Zone A
- » Parking shall be dispersed throughout Zone A and screened with landscaping
- » Incorporate permeable paving for new paved areas
- Dog Beach
- Wilson Park Site
- Fenwick Road
- Walker Field

Aerial photo of Zone A



Wilson Park, 1941

#### GENERAL BUILDING CHARACTER

Historically, buildings and structures in Zone A were associated with infantry and artillery training. They did not follow any historic precedents and could be considered, utilitarian, designated for specific use, temporary and, in their own way, "modern." As the training mission changed, so did the related built environment. It is proof of Fort Monroe's changing military mission from an active training base to an administrative post that Zone A is now almost devoid of structures.

- » New construction shall respect the traditional character of the area: simple, utilitarian buildings with little or no historic precedent
- » Stand alone buildings or groups of buildings are appropriate
- » New construction shall have minimal impact on the environment

#### BUILDING FORM

Historic building forms in Zone A were simple, rectangular footprints. Historic structures, such as observation towers, were open frame structures with exposed framing.

- » Building foot prints shall be of a similar scale to buildings 32 and 38
- » Building form may vary; groups of buildings should have similar form and scale

#### BUILDING HEIGHT

With the exception of the observation towers, historic construction in Zone A was one story in height.

- » Building height for new construction in Zone A shall respect the traditional building heights within this zone
- » New construction shall be limited to one story in height
- » Buildings may be on a raised base or platform

#### BUILDING ARTICULATION

Historically the massing and detailing of buildings in Zone A were direct responses to the building's use.

- » Simple Detailing
- » Simple Architectural features
- » Building scale and mass shall be expressed in the materials used and fenestration

#### FAÇADE COMPOSITION

The exterior elevations of the industrial buildings reflect their historic use. Although function takes priority in façade composition, the historic industrial buildings were designed incorporating some basic rules of organization.

» The primary façade shall be designed in a symmetrical configuration; other façades shall be designed in such a fashion as to maintain the scale and rhythm of the surrounding buildings



Buildings oriented to the historic circulation patterns



Simple building footprints and simple building forms



One story building height on a base or a raised platform



Heavy material treatment vs. light material treatment, either is appropriate







Gable or hip roofs, consistent eave lines



Roof projections shall have a utilitarian treatment



Building 38



Historic example of subdividing large expanses of windows

- » A tripartite composition of base, middle and cap shall be used
- » Window heads shall align, window sills may vary
- » The proportion of solid to void, window to wall surface, shall be consistent amongst groups of buildings
- » The proportion of solid to void, window to wall surface should create a balanced composition

#### ROOFS AND CORNICES

Pitched roofs in a variety of forms were commonplace.

- » Gable or hip roofs are appropriate in Zone A
- » The height of eave lines should be consistent throughout the zone

#### ROOF PROJECTIONS

Typical roof projections in Zone A are typically chimneys or vents.

- » Interior chimneys are preferred. If end-wall chimneys are used, they shall be engaged with the façade
- » Chimneys projections in Zone A may be simple in form without decorative corbelling or caps
- » Roof ventilation expressed as a roof projection shall have a utilitarian character

#### MATERIALS AND COLORS

Wood was used almost exclusively in Zone A. More permanent buildings, such as the Magazines, were constructed of masonry.

- » New construction in Zone A may incorporate a variety of modern construction materials that give the sense of scale of historic materials through application and detailing
- » Metal or shingle roofing is appropriate

#### FENESTRATION AND ENTRANCES

- » Windows may be of wood or metal
- » A variety of window types are appropriate for use in Zone A including double hung, single hung, awning, and fixed windows
- » Windows shall have multiple lights. Large expanses of plate glass should be avoided
- » Large expanses of windows shall be broken down with dividing mullions or jambs
- » Entrance porches are not a traditional feature in Zone A. Covered entrances shall be designed as canopies

### ZONE B





Wherry Housing

The Programmatic Agreement for the Closure and Disposal of Fort Monroe, Va. states:

New construction outside of the Wherry Housing area, but still within Zone B, shall, to the greatest extent practicable, be constructed within the same general geographic area of disturbance as previous development, and maintain no more than the same two to three-story height found in the contributing historic buildings in Zone B and in accordance with the *Design Standards*. New construction shall occur only after consultation with the Fort Monroe Preservation Officer.

If any new construction is proposed in the Wherry Housing area, any new construction shall, to the greatest extent practicable, be constructed within the same general geographic area of ground disturbance as previous development, and maintain no more than the same two to three-story height found in the contributing historic buildings of the Wherry Housing area and in accordance with the *Design Standards*. New construction shall occur only after consultation with the Fort Monroe Preservation Officer.

If new construction is proposed in the Wherry Housing area, to the greatest extent practicable, existing cultural landscape features and circulation patterns shall be maintained.

#### SITE CHARACTERIZATION

Zone B is located on the southeastern portion of the Fort Monroe peninsula. It is geographically between Fenwick Road and the Chesapeake Bay with Zone A to the west and north. Over the years, the use of this zone has changed in response to Fort Monroe's changing military mission. Temporary camps were located in clusters along Fenwick Road and between the Batteries. Barracks occupied much of the area south of Battery DeRussy until the Wherry Housing was constructed in the 1950s.

#### LAND USE CONCEPTS

» Parks and recreation / mixed use / to be determined

#### INFRASTRUCTURE

- » The historic rail line crossed Zone B and Patch Road and Fenwick Road follow the alignment of the rail
- » Maintain Fenwick Road, Patch Road and Stilwell Drive as the primary circulation routes
- » Maintain Griffith Road, Bunker Road and New Garden Street as secondary circulation routes

#### SITE CONSTRAINTS

- » (Chesapeake Bay Preservation Areas to be established)
- » Areas of potential unsuitable fill for building foundations
- » For site constraints regarding the Batteries, see the Site Constraints section on the Batteries (page 3B.52)
- » Areas with the potential for new construction have a low probability of archaeological discovery

#### RESOURCES

- Contributing Buildings/Structures Wherry Housing: 300, 301, 302, 303, 304, 305, 306, 307, 309, 311, 312, 313, 314, 316, 318, 320, 322, 324, 342, 344, 346, 348, 350, 352, 358, 354, 356, 360, 452, 454, 456, 458, 460, Batteries: 212 (Battery DeRussy); 213/214 (Anderson/ Ruggles); 232 (Battery Church)
- Non-contributing Buildings/Structures: 12, 88, 91, 96, 184, 185, 189, 190, 201, 206, 208, 210, 218, 221, 235, 245, 246, 259, 260, 261, 262, 263, 264, 265, 270, 556, 557, 558, 559, T-86, T-246
- » Battery Anderson, Battery Ruggles, Battery Church and Battery DeRussy are within this zone. See the section on the Batteries for these structures

#### AREAS WITH THE POTENTIAL FOR NEW CONSTRUCTION

- » Temporary structures with minimal impact to the environment may be permitted East of Fenwick Road
- » Areas on both sides of Fenwick Road has the potential for new construction. The existing circulation routes and the alignment of the historic rail line shall be considered when planning new construction

#### BUILDING ORIENTATION

New construction shall respond to the historic circulation system of Zone B which was the Fort Monroe railroad (Fentress and Patch Roads) and a grid of streets created by New Garden Street, Griffith Street and Bunker Road.

- » New construction shall be sited to reinforce the historic circulation system
- » New construction shall be oriented in the traditional character of Zone B with the entrance façade facing the street and the entrance façade on the narrow building elevation
- » New construction shall be organized in groupings of similar buildings

#### BUILDING SETBACK

There is historically an established building setback that places the buildings in close proximity to the streets and a uniform spacing between buildings.

- » Setbacks along New Garden Street and Bunker Road shall maintain the traditional narrow setback
- » Consistent setbacks shall be maintained along historic circulation corridors
- » Consistent spacing between buildings shall be maintained

#### LANDSCAPE

There are no contributing landscape features in Zone B. Much of Zone B is historic fill and the built environment was oriented to training camps and barracks. Landscaping would not have been a priority.

- » New landscaping shall be modestly incorporated to reflect the historically limited use of planned landscape features in this zone
- » The established cultural landscape surrounding the Bay Breeze Club shall be maintained
- » Incorporate Bay Scapes (native plant species that will improve the environment surrounding the Chesapeake Bay) for new landscaping
- » Refer to the "Landscape Planting Plan for Fort Monroe, Virginia" for recommended plant species
- » Landscaping may be used to screen parking, mechanical equipment or refuse collection areas
- » Screen walls for mechanical equipment or refuse collection may be constructed of materials used for new construction



Ca 1946 historic map of Zone B showing buildings oriented to the rail line and historic street grid



Example of a pattern of the temporary WWII barracks showing consistent setbacks and building spacing



Example of current parking at building entrances

#### STREETS AND PARKING

There are remnants of a historic street grid in Zone B and Patch and Fenwick roads follow the alignment of the Fort Monroe railroad. The northern alignment of Stilwell Drive has been altered, thus affecting how Patch Road intersects Fenwick Road. Parking is currently provided in large surface lots adjacent to buildings.

- » The alignments of Patch Road, Stilwell Drive, and Fenwick Road shall be maintained as historic circulation corridors, except as provided below
- » Realignment of the northern ends of Patch and Stilwell Roads, to their earlier alignments, should be considered if new construction is focused on those circulation routes
- » The grid created by New Garden Street, Griffith Road and Bunker Road shall be maintained
- » Parking shall be located away from primary building façade(s)
- » Internalize parking within developed blocks



Aerial photograph of Zone B showing current conditions and the original alignments of Patch Road and Stilwell Drive

#### GENERAL BUILDING CHARACTER

Much of Zone B is historic fill with minimal permanent construction. Historically, Zone B has been used for temporary training camps with groups of buildings comprising barracks, quarters, mess halls, and latrines. WWII temporary barracks were built along New Garden Street and occupied in this area until the early 2000s.

» New construction shall respect the traditional character of the area: simple, stand alone buildings or groups of buildings



Buildings oriented to the historic circulation patterns



Simple building forms with minimal articulation are acceptable in Zone B



Building form and height may transition across Zone B to respond to Zone A and Zone C

#### BUILDING FORM

Historic building forms in Zone B were simple, rectangular footprints.

- » Simple rectangular forms are appropriate
- » Simple roof forms are appropriate
- » Building footprints shall be of a similar scale as the historic barracks in Zone B
- » Building footprints may be of a similar (larger) scale as the historic industrial buildings for new construction north of Patch Road and west of Pullman Road

#### BUILDING HEIGHT

The majority of the historic structures in Zone B were temporary two-story barracks on a crawl space. Building heights in this zone shall transition from the taller structures in Zone C to one story structures in Zone A.

- » Building height for new construction in Zone B shall respect the traditional building heights within this zone and transition between Zone A and Zone C
- » New construction shall generally be limited to two stories in height throughout Zone B with exceptions for taller structures relating to Zone C north of Patch Road and west of Pullman Street.







Horizontal and vertical window organization

#### BUILDING ARTICULATION

The detailing of new construction in Zone B should be expressive of the temporary barracks that once occupied much of this zone and also respond to the historic buildings as Zone B transitions into Zone C.

- » Entrance façades shall be symmetrically organized
- » The building form may be refined by expressing the structural bays, articulating the corners, or emphasizing entrances
- » Architectural ornament shall be restrained and highlight architectural features such as entrances, fenestration or roof lines
- » Repetitive bays of large windows are encouraged
- » Building façades shall be delineated with a base, middle and cap

#### FAÇADE COMPOSITION

Throughout Fort Monroe buildings adhere to rigid sets of rules for the composition of façades. Although there is very little historic context in Zone B to relate to, the historic structures that once occupied this zone also held to some basic rules of organization

- » The primary façade shall be designed in a symmetrical configuration; other façades shall be designed in such a fashion as to maintain the scale and rhythm of the surrounding buildings
- » A tripartite composition of base, middle and cap shall be used
- » Window heads shall align, window sills may vary, but should generally be consistent without a great deal of variation
- » Windows placement shall respect a vertical and horizontal organization across façades
- » The proportion of solid to void, window to wall surface, shall be consistent with the adjacent character or the area within Zone B

#### ROOFS AND CORNICES

Gables are the predominate roof form in Zone B with simple cornices and shallow overhangs.

- » A variety of roof forms are acceptable in Zone B including gable, hip or flat roofs depending on the area and adjacent context within the zone
- » Eave cornices may be simply detailed, exposed rafter tails at cornices are acceptable
- » Cornice lines for flat roofs shall be defined as the parapet coping, see Zone C for examples

#### ROOF PROJECTIONS

Roof projections in Zone B are typically chimneys used for mechanical ventilation. A few of the Wherry Quarters have simple dormer windows.

- » Interior Chimneys are preferred. If end-wall chimneys are used, they shall be engaged with the façade
- » Do not locate end-wall chimneys on primary building façades
- » Chimney projections in Zone B may be simple in form without decorative corbelling or caps
- » Dormer windows are permitted provided they are simple in design, and are compatible and proportional to the overall building design
- » Roof penetrations for mechanical equipment or elevators shall be located so that they are out of view from the primary façade

#### MATERIALS AND COLORS

Brick is the primary building material used throughout Fort Monroe and is also used in the Wherry Housing units and thus establishes a current palette of material and color. However, historically buildings in Zone B were temporary construction and built of wood with painted wood siding.

- » New buildings should use materials similar to materials used historically in this zone, or used on adjacent buildings
- » Brick as a primary material in Zone B is appropriate throughout Zone B, and shall be used near Zone C where new construction will be influenced by the character of the historic industrial buildings
- » Contrasting trim elements in masonry, such as window sills and copings, may be of limestone or cast stone
- » Brick detailing in the character of the industrial buildings in Zone C is encouraged where appropriate
- » Wood siding may be incorporated in the New Garden Street area of Zone B with brick masonry used for foundations



Typical chimney configurations





Typical dormer configurations



Concealed roof projections



Brick and stone detailing - Building 135 - Zone C


Entrance porch - Wherry Housing

#### FENESTRATION AND ENTRANCES

- » Windows may be of wood or metal
- » Windows shall be operable, the type of operation (single hung, double hung, awning) shall be compatible to the style of the building
- » Entrance porches are not a traditional feature in Zone B. Porches, if used, shall be small scale, simple in design and compatible with overall design of the building
- » Entrances for new buildings responding to the industrial context of Zone C shall be articulated in the massing and composition of the building
- » Avoid blank façades
- » Avoid inappropriate elements (such as garage doors) on primary façades
- » Large expanses of windows shall be broken down with dividing mullions or jambs

ZONE C Site Character / HISTORIC FILL ] LOW ARCHAEOLOGICAL PROBABILITY ŹÓŊĘ/Ç HIGH ARCHAEOLOGICAL PROBABILITY AREA OF POTENTIAL UNSUITABLE FILL APPROXIMATE ORIGINAL SHORELINE ZONE BOUNDARY HISTORIC RAIL ALIGNMENT MILL GREEK 268 108 170 MAR X 57 

148

0′

100′

250'

500′



The Motor Pool Building - Building 57



Building 28



Building 135

The Programmatic Agreement for the Closure and Disposal of Fort Monroe, Va. states:

New infill construction shall be in accordance with established *Design Standards* and implemented only after consultation with the Fort Monroe Preservation Officer.

#### SITE CHARACTERIZATION

Zone C is Fort Monroe's industrial and service core. The majority of the post's historic warehouse buildings and mission support structures such as the Submarine Mine Depot (Building 28) are sited in this area. Almost all of Zone C is fill dating from the 1930s. The fill activity moved Fort Monroe's shoreline along Mill Creek from approximately Patch Road to where it is today. The development of Zone C was heavily influenced by the Fort Monroe railroad. The rail line traversed Zone C along what is now Eustis Lane and continued on to Fenwick Road then north to Dog Beach. Warehouses and industrial buildings were located along the rail and rail spurs creating a pattern of historic development. A number of the buildings in Zone C - a mix of large brick buildings and single-story wood warehouses - date from the 1930s and possess a fair degree of architectural merit. With a few exceptions, these buildings are architecturally quite different from the majority of Fort Monroe's historic resources.

#### LAND USE CONCEPTS

» Mixed-use / Workplace and residential focus

#### INFRASTRUCTURE

- » The historic rail line crossed and extensively influenced the historic development of Zone C. Eustis Lane and Patch Road follow the historic rail alignment
- » Maintain Stilwell Road, Patch Road and Eustis Lane as the primary circulation routes. North Gate Road is not a historic street and may be altered or removed
- » Maintain Murray Street as a secondary circulation route

#### SITE CONSTRAINTS

- » (Chesapeake Bay Preservation Areas to be established)
- » Zone C is historic fill and has a low probability of archaeological discovery

#### RESOURCES

- » Contributing Buildings/Structures: 28 (Submarine Mine Depot), 56, 57 (Motor Pool), 59, 135
- » Non-contributing Buildings/Structures: 58, 72, 74, 75, 104, 168, 243, 252, 268, T-81, T-99, T-100, T-101, T-102, T-104
- » Contributing Landscape Features: Cadet Battery Park (see map on previous page)

#### AREAS WITH THE POTENTIAL FOR NEW CONSTRUCTION

» All of Zone C has the potential for new construction. The historic circulation routes and the alignment of the historic rail line shall be considered when planning new construction

#### BUILDING ORIENTATION

New construction shall respond to the historic circulation system of Zone C which was the Fort Monroe railroad. Eustis Road and Patch Road follow the historic rail alignment and it is clear to see how buildings were organized along the rail and rail spurs for access.

- » Orientation of new construction shall respond to the historic circulation system
- » New construction shall re-establish and reinforce the historic rail alignment
- » Stand-alone buildings are appropriate in Zone C

#### BUILDING SETBACK

Established building setbacks from streets in Zone C differ per building use. Historic industrial and warehouse buildings were built directly adjacent to the rail line with the building set back the width of loading docks, such as Building 135. Historic residential use such as Building 56, is an exception. It is set back from Patch Road.

- » Setbacks shall be established to respond to adjacent properties and historic context
- » Consistent setbacks shall be maintained along historic circulation corridors

#### LANDSCAPE

There is one contributing landscape feature in Zone C: Cadet Battery Park. Historically landscaping, such as foundation planting was minimal if any at all. Much of the area was, and is paved. There is one historic precedent for fencing or screening in Zone C and that is the brick wall and piers of a gated entrance to a previous service yard on Eustis Lane. Although this is a unique feature, the material and construction detailing are appropriate for Zone C and could be used as a precedent for screen walls or equipment enclosures. Visual screening shall be incorporated for clustered parking, on-ground mechanical equipment and refuse collection areas.

- » Maintain and preserve Cadet Battery Park
- » New landscaping shall be modestly incorporated to reflect the historically limited use of landscaping in this zone
- » Landscaping may be used to screen parking, mechanical equipment or refuse collection areas
- » Screen walls for mechanical equipment or refuse collection may be constructed of materials used for new construction
- » Incorporate Bay Scapes (native plant species that will improve the environment surrounding the Chesapeake Bay) for new landscaping
- » Refer to the "Landscape Planting Plan for Fort Monroe, Virginia" for recommended plant species



Ca 1946 historic map showing buildings aligned with the railway and consistent setbacks from circulation corridors



Cadet Battery Park



Cultural landscapes and areas for Bay Scapes



Locate parking internally and away from primary façades

#### STREETS AND PARKING

There is no established street pattern or grid in Zone C. This zone is bound on the southern, western and northern edges by historic circulation corridors and is traversed by Eustis Lane which follows the historic rail line.

- » The alignments of Patch Road, Stilwell Road, Eustis Lane, and Murray Streets shall be maintained as historic circulation corridors
- » New streets may be developed in Zone C that respond to the historic circulation patterns
- » North Gate Road is not a historic street and may be altered or removed
- » Parking shall be located away from the primary building façade(s)



Aerial photograph of Zone C showing current conditions and with historic rail line indicated by the dashed lines

#### GENERAL BUILDING CHARACTER

The historic buildings in Zone C are typically larger in footprint, and simpler in form than other historic buildings at Fort Monroe. They also incorporate an industrial architectural vocabulary that includes large expanses of windows, minimal detailing and expressed structure. The exception is Building 56. Historically a residential structure, Building 56 displays the character of the majority of the other historic structures on Fort Monroe.

- » New construction shall respect the traditional character of the area: simple, stand alone buildings
- » Zone C has the opportunity for larger buildings and greater building density than other management zones

#### BUILDING FORM

Historic building forms in Zone C are simple, rectangular footprints.

- » Simple rectangular forms are appropriate
- » Building footprints shall be of a similar scale as the historic buildings in Zone C
- » Roof forms shall be simple. Sloped roofs or flat roof are acceptable

#### BUILDING HEIGHT

The majority of the warehouses in Zone C are one story in height. The majority of the industrial buildings are two stories in height, typically with a taller first floor.

- » Building height for new construction in Zone C shall respect the traditional building heights within this zone
- » New construction shall generally be limited to two or three stories in height maintaining a coherent overall height within the zone
- » Cornice lines and eave lines shall align or be consistent with adjacent buildings as much as possible



Buildings oriented to the historic circulation patterns



Simple building forms with some articulation and simple roof forms



Industrial buildings are typically two stories in height



Maintain a consistent building height in Zone C



Elevation of Building 28 showing the vertical composition of a base, middle, and cap

#### BUILDING ARTICULATION

The overall character of the industrial buildings in Zone C is expressive of their historic use. Repetitive bays of large industrial windows, expressed structural elements, and minimal architectural ornament define the character of these buildings.

- » The building form may be refined by expressing the structural bays, articulating the corners, or emphasizing entrances
- » Architectural ornament shall be restrained and highlight architectural features such as entrances
- » Repetitive bays of a regular scale and rhythm, especially on long façades are appropriate
- » Building façades shall be delineated with a base, middle and cap
- » The first floor height shall be significantly greater than upper floors: approximately 1/3 taller than upper floors



Building 59 with the structure of the building expressing the repetitive bays on the long elevation



Elevation of Building 57 (the Motor Pool) showing a symmetrical entrance façade elevation; massing articulating the entrance and corners; architectural ornament in keeping with the style of the building, and regular bays with large windows

#### FAÇADE COMPOSITION

The exterior elevations of the historic buildings reflect their past use. Although function takes priority in façade composition, the historic industrial buildings are designed incorporating some basic rules of organization.

- » The primary façade shall be designed in a symmetrical configuration; other façades shall be designated in such a fashion as to maintain the scale and rhythm of the surrounding buildings
- » A tripartite composition of base, middle and cap shall be used
- » Window heads shall align, window sills may vary, but should generally be consistent without a great deal of variation
- » Windows replacement shall respect a vertical and horizontal organization across façades
- » The proportion of solid to void, window to wall surface, shall be consistent with the adjacent character or the area within Zone C. A greater proportion of window to wall surface is appropriate for Zone C

#### ROOFS AND CORNICES

Flat roofs are the primary roof form for the historic buildings in Zone C with parapets and simple copings. Warehouses have gable roofs with simple eave lines and shallow overhangs. The truss roof structure of Building 57 (the motor pool) is unique and expressive of the need for a long-span structure for that building's use.

- » A variety of roof forms are acceptable in Zone C including gable, or flat roofs
- » Flat roofs are appropriate for larger footprint buildings
- » Cornice lines for flat roofs shall be defined as the parapet coping
- » Gable roofs are appropriate for smaller buildings with simple rectangular plans
- » Gable eave and end wall cornices shall be simply detailed with shallow overhangs

#### ROOF PROJECTIONS

Roof projections in Zone C are typically chimneys or mechanical penthouses.

- » Penetrations for mechanical equipment or elevators shall be located so that they are out of view from the primary façade
- » Interior chimneys are preferred. If end-wall chimneys are used, they shall be engaged with the façade
- » Chimneys projections in Zone C may be simple in form without decorative corbelling or caps
- » Massing of chimneys shall be appropriate to the building scale
- » Roof ventilation expressed as a roof projection shall maintain an industrial character



Symmetrical building façades



Horizontal and vertical window organization



Typical roof configurations for Zone C



Roof projections shall have an industrial treatment or may be concealed from view



Brick and stone detailing, Building 135



Brick and metal detailing, Building 57



Break large window areas down with multiple windows and muntins



Individual windows evenly spaced or arranged in groups

#### MATERIALS AND COLORS

Brick is the primary building material used throughout Fort Monroe and is used in conjunction with stone and cast stone details for the larger buildings in Zone C. The historic warehouses are clad in metal panels or siding and this material aesthetic shall be taken into consideration.

- » New buildings should use materials similar to those in Zone C, or respond to materials used on adjacent buildings
- » Brick as a primary material is appropriate throughout Zone C
- » Contrasting trim elements in masonry, such as window sills and copings, may be of limestone or cast concrete
- » Foundations may be expressed in a change of material or a water table
- » Brick detailing consistent with the character of the historic buildings in Zone C is encouraged such as patterned brick work, pilasters and horizontal banding
- » Materials other than masonry, such as metal panels, shall be considered for new construction in Zone C provided they are in keeping with the industrial or warehouse aesthetic and appropriately detailed

#### FENESTRATION AND ENTRANCES

- » Windows may be of wood or metal
- » Windows shall be operable, the type of operation (single hung, double hung, awning) shall be compatible to the district
- » Windows shall have multiple lights. Large expanses of plate glass should be avoided
- » A variety of window sizes is encouraged as single window openings or groups of punched window openings
- » Entrances for new buildings shall be articulated in the massing and composition of the building, responding to the context of Zone C
- » Entrance porches are not a traditional feature in Zone C. Covered entrances shall be designed as canopies
- » Avoid blank façades that do not have the scale and rhythm of the historic buildings in Zone C
- » Avoid inappropriate elements (such as garage doors) on primary façades





Cannon Park



Coastal Artillery School Complex



Coastal Artillery School Complex

The Programmatic Agreement for the Closure and Disposal of Fort Monroe, Va. states:

Only limited new infil construction for the replacement of pre-existing buildings/structures in accordance with the *Design Standards* shall occur and only after consultation with the Fort Monroe Preservation Officer. Any proposed replacement of a building or structure shall have documented historic precedent and be compatible with the existing architectural character of the Management Zone.

#### SITE CHARACTERIZATION

Zone D has four distinct "neighborhoods" and contains the highest concentration of contributing resources at Fort Monroe. Every period of the fort's development is represented in Zone D by at least one structure. To the north, near the main entrance, is the Coastal Artillery School housing complex. Around Cannon Park is a group of administrative and residential structures that create a separate neighborhood with the feel of a village center. The southeast corner of Zone D is the Coastal Artillery School Complex. The fourth neighborhood is the residential area facing Fenwick Road, Chesapeake Bay, and the Hampton Roads harbor.

#### LAND USE CONCEPTS

» Mixed-use / Workplace and residential focus

#### INFRASTRUCTURE

- » Maintain Ingalls Road, McNair Drive and Stilwell Road as the primary circulation routes
- » The access roads from Pratt Road to the rear of the Coastal Artillery School housing are remnants of the street grid of an earlier housing complex in this area

#### SITE CONSTRAINTS

» (Chesapeake Bay Preservation Areas to be established)

#### LANDSCAPE CONCEPTS

- » Maintain the established street planting along Ingalls Road
- » Maintain established landscape areas such as Reeder Circle
- » Maintain the area between McNair Drive and Ingalls Road as "green space"
- » Incorporate Bay Scapes (native plant species that will improve the environment surrounding the Chesapeake Bay) for visual screening, between roads and parking areas and open areas
- » Refer to the "Landscape Planting Plan for Fort Monroe, Virginia" for recommended plant species

#### RESOURCES

- Contributing Buildings/Structures: 4 (Bandstand), 11, 24, 25, 26, 27, 27-A, 30, 31, 33, 34, 35, 37, 39, 42, 43, 44, 45, 51, 52, 54, 55, 60, 61, 64, 73, 77, 80/81, 83, 87, 90, 92, 93, 100, 101, 102, 103, 109, 110, 111, 112, 113, 114, 115, 116, 118, 119, 120, 121, 123, 124, 125, 129, 130, 131, 132, 133, 134, 136, 137, 138, 140, 141, 142, 143, 144, 146, 147, 148, 149, 150, 151, 152, 153, 154, 158, 161, 163, 167, 171, 182, 183, 186, 187, 188, 191, 192, 193, 194, 195, 196, 200 (Seawall), 204, 205, 1087 (Gazebo behind Building 119), Chamberlin Hotel, St. Mary's Church and Rectory, and the Lighthouse
- Non-contributing Buildings/Structures: 13, 36, 40, 71, 76, 89, 94, 107, 108, 122, 145, 170, 172, 177, 180, 197, 202, 203, 207, 219, 220, 222, 223, 224, 226, 227, 228, 229, 230, 231, 238, 242, 248, 266, 267, 560, T-216

#### AREAS WITH THE POTENTIAL FOR NEW CONSTRUCTION

Areas for new construction are limited.

» Additions to buildings for functional purposes may be allowed

ZONE D - CHARACTER AREA D1 Site Design Standards





Aerial photo of Zone D showing current conditions



1927 aerial photo, looking south, showing the pattern of previous construction



Coastal Artillery School housing

100′

0'



500′

250′

# ZONE D – CHARACTER AREA D1 Site Design Standards



Ca 1922 map showing barracks, mess halls and latrines arranged on the site



Diagram showing potential new construction orientated with the street grid and responding to the historic building patterns



Consistent setback line established for perimeter streets

#### SITE CHARACTERIZATION

Character Area D1 is the current entrance to the fort where McNair Drive and Ingalls Road converge. The contributing structures are the Coastal Artillery School Apartments and Building 87, Randolph Hall. There are two open space/park areas in this zone: the courtyard of the apartment complex and Reeder Circle. Prior to the construction of the apartments, this site housed barracks, mess halls and latrines laid out in a highly organized pattern bound within Stilwell Drive, Pratt Road, Reeder Circle and Ingalls Road. Remnants of this pattern can be seen in the driveways behind the Coastal Artillery School Apartments. The residential character of this site is established by the historic apartments and how they are organized on the site to create public and private outdoor spaces.

#### BUILDING ORIENTATION

New construction shall respect and reinforce the historic development pattern as well as respond to the site plan of the Coastal Artillery School Housing.

- » New construction shall be oriented to the street grid
- » New construction shall define a built edge along Pratt Road
- » New construction shall establish green space/courtyards between buildings in a similar manner to historic patterns and the site plan of the apartments

#### BUILDING SETBACK

Historically, buildings adhered to a rigid setback line from the street edge and are evenly dispersed on the site.

- » New construction shall adhere to historic patterns with well defined setbacks from streets
- » The siting of new construction shall be governed by an established planning grid for this site

# ZONE D – CHARACTER AREA D1

Site Design Standards

#### LANDSCAPE

Cultural landscape precedents for this site are Reeder Circle and Courtyard of the Coastal Artillery School housing. These are established landscapes defined by the built environment and maintained as public space. The cultural landscape of this site reflects the regimented lifestyle of the soldier and the continuous evolution of Fort Monroe from an Army training facility to an administrative post.

- » The existing cultural landscape shall be maintained
- » For areas of new construction, rehabilitation of the cultural landscape as a treatment shall allow for the alteration or addition to the cultural landscape to meet continuing uses while retaining the landscape's historic character
- » Refer to the "Landscape Planting Plan for Fort Monroe, Virginia" for recommended plant species



Aerial view of Reeder Circle

#### STREETS AND PARKING

This site is clearly defined by the existing streets and internally the access roads to the apartments are important remnants from when the barracks occupied the site.

- » Eustis Lane, Pratt Street, Reeder Circle and Ingalls Road shall not be altered by new construction
- » The historic street grid behind the Coastal Artillery School Housing shall be considered when planning new construction this area
- » The internal circulation should be reestablished by enhancing the existing roads or new roads to recreate the historic circulation
- » Parking shall be internalized on the site
- » Disperse parking and service areas to the greatest extent possible and screen with landscaping or screen walls compatible to the style of the buildings
- » Parking shall be located so that it is not in front of primary façades



Perimeter streets shall remain unchanged, reinforce historic internal circulation



Internalize parking on the site and disperse parking



Simple footprints, uniform heights, buildings define outdoor spaces



Building heights dependent on location within the site

#### GENERAL BUILDING CHARACTER

This site has an overall residential character. New construction shall have a residential scale and arranged to create a distinct residential neighborhood.

- » Building footprints shall be simple rectangular forms that respond to the street grid
- » The spacing between buildings shall establish a hierarchy of public and private outdoor spaces
- » A uniformity in building height shall be maintained
- » A uniformity of building materials shall be maintained

#### BUILDING FORM

The multifamily residential character is further enforced with simple, repetitive building forms that incorporate architectural elements such as entrance porticos and enclosed porches/sunrooms.

- » Rectangular building footprints are appropriate
- » Simple building forms shall be used and incorporate articulated features such as the entrance porticos

#### BUILDING HEIGHT

A consistent building height with adjacent historic buildings shall be maintained.

- » New construction shall be no taller than two-and-a-half stories in height south of Stilwell Drive
- » New construction north of Stilwell Drive shall be no taller than three stories in height

#### BUILDING ARTICULATION

Articulation of new construction shall be simple and expressed with building elements such as porticos or other architectural features.

» Architectural ornament shall be restrained and highlight architectural features such as entrances



Symmetrical façades with organized window placement

#### FAÇADE COMPOSITION

The primary façade shall be designated in a symmetrical configuration; other façades shall be designed in such a fashion as to maintain the scale and rhythm of the surrounding buildings.

- » A tripartite composition of base, middle and cap shall be used
- » Window heads shall align, window sizes may vary, but should generally be consistent without a great deal of variation
- » Windows placement shall respect a vertical and horizontal organization across façades
- » The proportion of solid to void, window to wall surface, shall be consistent with the adjacent character of the historic buildings



Gable roof with flat or low-sloped roof on building projections

#### ROOFS AND CORNICES

Consistent roof forms shall be incorporated for this site.

- » Gable roofs shall be used for the main body of the building
- » Low sloped or flat roofs shall be used on porticos or architectural features
- » Dormers may have gabled or hipped roofs
- » Cornice lines and eave lines shall align and be consistent with the detailing of adjacent buildings



Gable-end or hip dormers



#### ROOF PROJECTIONS

Roof projections are encouraged on new construction. Typical projections such as chimney and dormer windows reinforce the residential character of this site.

- » Internal chimneys shall be centrally located
- » Dormer windows shall be incorporated on front and rear façades
- » Dormer sides shall be clad in the roofing material

Multiple roof projections including chimneys and dormers



Typical masonry bonding pattern



Single or paired windows with multiple lights



Entrance detail

#### MATERIALS AND COLORS

Brick is the primary building material used throughout Fort Monroe and is used in conjunction with stone or cast stone details, such as window sills and architectural trim in Zone D.

- » Brick as a primary material is appropriate throughout Zone D
- » Contrasting trim elements in masonry, such as window sills, may be of limestone or cast stone
- » Wood shall be used for cornices and other architectural features such as balustrades and portico entablatures
- » Foundations may be expressed with a water table
- » Roofs shall be slate, or a material that emulates slate in appearance

#### FENESTRATION AND ENTRANCES

Doors and windows shall be residential in scale and their placement shall reinforce the overall character of the building design.

- » Windows may be of wood or metal
- » Windows shall be operable, single hung or double hung
- » Windows shall have multiple lights (4/4, 6/6, 9/9)
- » Window sizes should generally be consistent on the body of the building, single windows or pairs of windows are appropriate
- » Entrances shall be articulated with porticos or covered entrances

# CHARACTER AREA D2 Site Design Standards





Housing on Ingalls Road



Building 100



Building 80-81



Ca 1946 map showing former buildings



Setbacks established by historic building façades along Ingalls Road

#### SITE CHARACTERIZATION

Character Area D2 is the center of the densest concentration of historic structures on the fort. The character defining aspects of this area are to be maintained. They include: the streetscape, landscaping, landscape features such as Cannon Park, building relationships to the street and to each other. Ingalls Road is the main street in Fort Monroe connecting the entrance to the fort to the Chamberlin Hotel, Fenwick Road, and the Main Gate of the stone fort. It has a diverse collection of built historic resources and landscape features that contribute to the character of the Fort Monroe NHL District. New infill construction may occur on sites where historic structures have been lost.

#### BUILDING ORIENTATION

New construction shall respect and reinforce the historic development pattern, and:

- » New construction shall be oriented with the primary building façade facing Ingalls Road
- » There is existing secondary access to the rear of each site

#### BUILDING SETBACK

There is a general pattern for residential building setbacks along Ingalls Road. Residences south of Cannon Park are closer to the street, whereas north of Cannon Park, there is more of a front lawn.

#### LANDSCAPE

Cannon Park is a contributing landscape feature to the NHL District. The established cultural landscape also contributes to the district's overall character. Ingalls Road is a tree-lined street and buildings have front lawns, former foundation planting, and are separated by mature trees. This landscape has been established over time and defines the character of Ingalls Road.

- » The established cultural landscape shall be maintained
- » New construction shall reinforce the established cultural landscape, however native plant species are to be incorporated for new landscaping
- » Mature trees shall be retained to the greatest extent possible
- » Rear yards may be created with approved fencing materials
- » Service areas shall be screened with walls or landscaping
- » Refer to the "Landscape Planting Plan for Fort Monroe, Virginia" for recommended plant species



Cannon Park



Landscaping defining back yards

#### STREETS AND PARKING

This sites all front Ingalls Road and have rear access from alleys or Frank Lane for service and parking (surface parking and garages).

- » No new street construction will be permitted for these sites
- » No new surface parking will be permitted for these sites, utilize existing parking for new construction
- » All access for service and parking will be from the rear of the sites
- » No driveways will be allowed from Ingalls Road



Existing streets and parking shall be incorporated in new construction

## CHARACTER AREA D2 Building Design Standards



Overall Building Character, Zone D, Character Areas 1 and 2



Basic building form is articulated with ells, and cross gables



#### GENERAL BUILDING CHARACTER

These sites are in residential settings and the existing residences are typically duplex units that have a high degree of architectural integrity, interest, and detailing. Although there is a variety of building styles, the scale of the buildings, the architectural features that are incorporated, and the use of materials create a cohesive streetscape.

- » Building footprints may be simple or irregular, but there should be symmetry or a balance to the overall plan
- » The massing and form of new construction should be highly articulated
- » New construction shall incorporate distinctive building elements, such as porches, and material detailing that is compatible with the historic buildings
- » Building scale shall be two and a half stories and consistent with other residential buildings on Ingalls Road

#### BUILDING FORM

Although many of the historic duplexes are simple in basic plan, they have highly articulated forms with cross gables and building ells creating interesting rooflines adding interest to the overall massing.

- » A simple main body may be used for the building
- » The form shall be articulated with porches, projecting gables, cross gables, or building ells
- » Changes in building height (i.e. lower eave or rooflines for building ells) may be incorporated on non-primary façades

#### BUILDING HEIGHT

A consistent building height with adjacent historic building shall be maintained.

- » New construction shall be no taller than two-and-a-half stories in height on a raised base
- » Horizontal elements such as water-tables, eave lines and porch roofs should be in keeping with the heights established by adjacent buildings

#### BUILDING ARTICULATION

Articulation of new construction shall be compatible to the character of the adjacent historic buildings. There is a wealth of details, features, and material treatments to draw upon for new construction. The Residences in Zone D have distinctive porches, cornice details and masonry detailing.

#### FAÇADE COMPOSITION

The primary façade shall be designed in a symmetrical configuration; other façades shall be designed in such a fashion as to maintain the scale and rhythm of the surrounding buildings.

- » A tripartite composition of base, middle and cap shall be used
- » Window heads shall align. Window sizes may vary, but should generally be consistent without a great deal of variation
- » Windows placement shall respect a vertical and horizontal organization across façades
- » The proportion of solid to void, window to wall surface, shall be consistent with the character of adjacent historic buildings

#### ROOFS AND CORNICES

Consistent roof forms shall be incorporated for these sites.

- » Gable roofs shall be used as the primary roof form
- » Low sloped roofs shall be used on porches
- » Cornice lines and eave lines shall align and be consistent with adjacent sites
- » Cornices shall be detailed in a manner consistent with the adjacent historic buildings: box or denticulated cornices; cornice returns or pedimented gables; built-in gutters



Building form is further articulated with porches, gable details and masonry details



Façade Composition: Symmetry, horizontal and vertical



## CHARACTER AREA D2 Building Design Standards



Centrally located internal chimneys, interior end-wall chimneys



Masonry detailing, Quarters 101



Masonry detailing, Quarters 101



Porch at Quarters 125

#### ROOF PROJECTIONS

Roof projections on new construction shall be limited to chimneys and dormer windows.

- » Internal chimneys shall be centrally located
- » End wall chimneys shall be engaged with the façade
- » Chimneys shall have corbelled or other ornamental caps
- » Dormer windows in new construction shall be allowed on non-primary façades

#### MATERIALS AND COLORS

Brick is the primary building material used throughout Fort Monroe and is used in conjunction with stone or cast stone details, such as window sills and architectural trim, in Zone D.

- » Brick as a primary material is appropriate throughout Zone D
- » Contrasting trim elements in masonry, such as window sills, may be of limestone or cast stone
- » Wood shall be used for cornices and other architectural features such as railings, columns and latticework
- » Wrought iron railings and details similar to those found on Buildings 80-81 and 100 are appropriate
- » Foundations may be expressed with a water table of brick or contrasting material such as cast stone or expressed with belt courses
- » Roofs shall be slate, or a material that emulates slate in appearance
- » Porch roofs shall be metal

#### FENESTRATION AND ENTRANCES

Doors and windows shall be residential in scale and their placement shall reinforce the overall character of the building design.

- » Windows shall be of wood
- » Windows shall be operable, single hung or double hung
- » Window's lights shall be 2/2 or 6/2
- » Single windows are appropriate
- » Primary entrances shall be emphasized and articulated with porches
- » Entrances for duplex units shall be separated and have separate porches
- » Rear porches are encouraged

# CHARACTER AREA D3

Site Design Standards

# HISTORIC FILL LOW ARCHAEOLOGICAL PROBABILITY HIGH ARCHAEOLOGICAL PROBABILITY AREA OF POTENTIAL UNSUITABLE FILL APPROXIMATE ORIGINAL SHORELINE ZONE BOUNDARY HISTORIC RAIL ALIGNMENT





Looking east towards the Coastal Artillery School Complex



Looking west towards Building 204



Coastal Artillery School Complex on Fenwick Road



Example of formal landscaping leading to the entrance of Building 163





Ca 1946 map showing former buildings



Orient new construction facing Fenwick Road and McNair Drive; maintain established setbacks

#### SITE CHARACTERIZATION

Character Area D<sub>3</sub> is the Coastal Artillery School Complex and related buildings. This is a collection of structures built during a specific time frame and for the specific uses for training and housing soldiers. The buildings of the complex are neoclassical designs and arranged in a campus-style organization. Originally classrooms, laboratories, a library and barracks, they were adapted for office space and became the TRADOC Complex. New construction in this area is limited to locations where historic structures have been lost or noncontributing buildings to the Fort Monroe NHL District may be replaced. These sites are heavily influenced by the scale, design and organization of the Coastal Artillery School Complex buildings and the adjacent Chamberlin Hotel.

#### BUILDING ORIENTATION

New construction shall respect and reinforce the historic development pattern of the Coastal Artillery School Complex.

- » New construction shall be oriented with the primary building façade facing Fenwick Road or McNair Drive
- » For Site 5, the service area(s) for new construction shall not be visible from the housing on Harrison Street and Tidball Road

#### BUILDING SETBACK

There is a general pattern of building setbacks along Ingalls and Fenwick Road.

- » The setback line created by Buildings 37 and 161 shall be maintained along Fenwick Road
- » The setback line along McNair Drive may be very close to the street



Building 133

#### LANDSCAPE

The Coastal Artillery School Complex is the most formally landscaped area of Fort Monroe. The landscaping and plantings respond to the siting of the buildings, the neoclassical designs and emphasize entrances.

- » The established cultural landscape shall be maintained
- » New construction shall reinforce the established cultural landscape, however native plant species are to be incorporated for new landscaping
- » Service areas shall be screened with walls or landscaping
- » Refer to the "Landscape Planting Plan for Fort Monroe, Virginia" for recommended plant species

#### STREETS AND PARKING

McNair Drive and Fenwick Road are established historic circulation corridors and shall be maintained and unaltered by new construction.

- » The eastern edge of McNair Drive, currently open to parking lots, shall be reestablished
- » The northern edge of Fenwick Road, currently open to parking lots, shall be created by extending the curb and sidewalk
- » The southern edge of Tidball Road, currently open to parking lots, shall be established
- » No driveways or vehicle access to these sites will be allowed from McNair Drive or Fenwick Road
- » Parking shall be internal on the site and not in front of the primary entrance, except for on-street spaces
- » Parking for new construction and the existing buildings in this area may be accomplished with a parking structure incorporated into the building design



Existing streets and parking shall be incorporated in new construction



Aerial view of the Coastal Artillery School Complex



Formally designed buildings in a campus-like setting



Rectangular building forms or gabled roof forms are appropriate



#### GENERAL BUILDING CHARACTER

These sites are adjacent to a setting that is not unlike a college campus. The historic buildings of the Coastal Artillery School Complex were classrooms, laboratories and a library. They differ in size, but there is uniformity in the use of materials, detailing and height. This area is also unique in how the buildings are organized. As a complex, it is the most formal arrangement of buildings at Fort Monroe and that formality is carried into the landscape.

- » Building footprints should be simple and have symmetry and balance to the overall plan
- » Façades should be highly articulated
- » New construction shall incorporate distinctive building elements, such as pedimented entrances, and material detailing that is compatible with the historic buildings
- » Building height shall be two stories on a raised base

#### BUILDING FORM

The building form should be simple and rectangular.

- » A simple main body shall be used for the building
- » The form may be articulated by varying the façade planes to accentuate or create a three-part or five-part composition
- » Building "blocks" or ells may vary in height from the main body of the building given there is symmetry to the composition

#### BUILDING HEIGHT

A consistent building height with adjacent historic buildings shall be maintained as well as the strong horizontal elements of the historic buildings.

- » New construction shall be no taller than two stories in height on a raised base
- » Horizontal elements such as water-tables, cornice lines and parapets should be in keeping with the heights established by adjacent buildings

#### BUILDING ARTICULATION

Articulation of new construction shall be compatible to the character of the adjacent historic buildings. There is a wealth of details, features, and material treatments to draw upon for new construction. The simple building forms of the Coastal Artillery School Complex buildings are richly articulated with distinctive masonry detailing and neoclassical features.

- » Engaged pilasters articulating the building corners and expressing the rhythm of bay across the façade is an appropriate form of articulation
- » The use of contrasting materials to highlight architectural features and entrances is appropriate

#### FAÇADE COMPOSITION

The primary façade shall be designed in a symmetrical configuration; other façades shall be designed in such a fashion as to maintain the scale and rhythm of the surrounding buildings.

- » A tripartite composition of base, middle and cap shall be used
- » The base shall be a full story in height creating a piano nobile
- » Window heads shall align. Window heights shall be consistent, widths of window openings may vary but should generally be consistent
- » Windows placement shall respect a vertical and horizontal organization across façades
- » The proportion of solid to void, window to wall surface, shall be consistent with the character of adjacent historic buildings

#### ROOFS AND CORNICES

Flat roofs are the primary roof form for the Coastal Artillery School Complex buildings with parapets and classically proportioned and detailed cornices.

- » Flat roofs are appropriate for new construction in this area
- » Low sloped roofs may be used if the roof slope is concealed by the parapet
- » Green roofs may be incorporated in the design of new construction
- » Cornices shall be appropriately proportioned to the height of the building, column or supporting pilaster
- » Gable roof forms are appropriate if the scale and proportion of new construction is similar to Building 204



Characteristic masonry detailing, Building 37



Façade composition showing base, middle, and cap, symmetry and overall composition



Typical roof configurations for Zone D



Flat roofs or sloped roof concealed by a parapet



Roof penetration set back form façades and concealed from view



Masonry detailing, Building 133



1/1 and 3/3 windows



Entrance detail, Building 138 (Coastal Artillery School Library)

#### ROOF PROJECTIONS

Roof projections in this area of Zone D are typically chimneys, mechanical penthouses, skylights and roof access.

- » Penetrations for mechanical equipment or elevator shafts shall be located so that they are out of view from the primary façade
- » Roof-top equipment shall be screened by either the parapet or in an enclosure consistent with the building façade materials
- » Metal screens or mansard-type roof forms as enclosures for equipment shall not be permitted as they are not in keeping with the character of the NHL District
- » Roof monitors on gable roofs are appropriate provided they are simple in detailing and do not compete visually with the cupola on Building 82, the Old Hospital

#### MATERIALS AND COLORS

Brick is the primary building material used throughout Fort Monroe and is used in conjunction with stone or cast stone details, such as window sills, water tables and cornices in this area of Zone D.

- » Brick as a primary material is appropriate for these sites
- » Contrasting trim elements in masonry, such as window sills, may be of limestone or cast stone
- » Cornices and copings may be of limestone or cast stone
- » Parapets may be of brick or cast stone
- » Foundations / the first floor plinth may be expressed with a projecting water table of brick or contrasting material such as cast stone

#### FENESTRATION AND ENTRANCES

Doors and windows shall be monumental in scale and their placement shall reinforce the overall character of the building design.

- » Windows may be of wood or metal
- » Windows shall be operable: single-hung or double-hung
- » Windows lights shall be 1/1 or 3/3
- » Single window openings, single window openings in groups or pairs of windows are appropriate
- » Primary entrances shall be emphasized and articulated with door surrounds, pediments and transom lights
- » The primary entrance shall be elevated at the piano nobile

# CHARACTER AREA D4

Site Character



### CHARACTER AREA D4 Site Character



Fenwick Road



Old Point Comfort Lighthouse and Keepers Cottage



Continental Park

#### SITE CHARACTERIZATION

This area of Fort Monroe is predominately a residential district facing Fenwick Road and the Chesapeake Bay. It is a narrow neck of land with a diverse collection of historic properties including the oldest structure on Fort Monroe, Old Point Comfort Lighthouse. It is also the location of the Commanding Officer's quarters and a cultural landscape of manicured lawns and foundation plantings has been established reinforcing the prominence of these residences.

#### INFRASTRUCTURE

- » Maintain Fenwick Road as the primary circulation corridor
- » No new roads may be constructed in this area

#### SITE CONSTRAINTS

- » (Chesapeake Bay Preservation Areas to be established)
- » Preserve and maintain the historic viewsheds to and from the stone fort as established in the *Fort Monroe Historic Viewsheds* analysis
- » Old Point Comfort Lighthouse is an active navigational signal. Its visual range cannot be obstructed
- » The area north of Fenwick Road has a high probability for archaeological discovery

#### LANDSCAPE

- » Maintain the established cultural landscape
- » Maintain the earthen berm of Batteries Irwin and Parrott

#### RESOURCES

» All buildings in this area are contributing structures to the Fort Monroe NHL District with the exception of the ca 1980 garages behind the quarters

#### NEW CONSTRUCTION

- » There are no potential sites for new construction in this area
- » Additions to buildings may be allowed





Jefferson Davis Monument Park



Casemate Front

The Programmatic Agreement for the Closure and Disposal of Fort Monroe, Va. states:

No demolition of a contributing property to the Fort Monroe NHL District shall occur unless necessary to address immediate health and safety concerns or to prevent further property damage, and only after consultation with the Fort Monroe Preservation Officer.

No new infill construction shall occur unless to reconstruct documented missing historic properties or landscapes and only after consultation with the Fort Monroe Preservation Officer. New infill construction shall have documented historic precedent and be compatible with the existing architectural character of the Management Zone.

#### SITE CHARACTERIZATION

Zone E is the stone fort, the moat and the glacis. This zone shall receive the highest level of treatment. No new development is proposed for this zone. Additions to structures for access or egress shall be allowed following the design standards for new construction.

#### INFRASTRUCTURE

- » Maintain Ruckman and Bernard Roads as the primary circulation routes
- » No new streets are to be constructed in this zone

#### SITE

- » No construction shall be allowed on the terreplein
- » No construction shall be allowed on the parade ground
- » Zone E is a developed area with no sites or new infill construction

#### LANDSCAPE

- » Maintain the established vegetation
- » Protect the live oaks

#### RESOURCES

» Contributing Structures: All buildings in this area are contributing structures to the Fort Monroe NHL District except for the ca 1980 garages behind the residences, Building 8-A (see map on previous page), and a pump station

#### AREAS WITH THE POTENTIAL FOR NEW CONSTRUCTION

- » There are no potential areas for infill construction in Zone E
- » Additions to buildings may be allowed
- » Reconstruction of buildings or structures may be allowed

# THE BATTERIES Site Character HISTORIC FILL LOW ARCHAEOLOGICAL PROBABILITY HIGH ARCHAEOLOGICAL PROBABILITY 2 AREA OF POTENTIAL UNSUITABLE FILL APPROXIMATE ORIGINAL SHORELINE CHESAPEAKE BAY ZONE BOUNDARY HISTORIC RAIL ALIGNMENT MILL CREEK THE BATTERIES Battery Ruggles Battery Anderson - Battery Church Α Battery DeRussy В Cadet Battery Ε Battery Gatewood Water Battery Battery Parrott Battery Irwin D



Battery Anderson



Battery Church



Battery Irwin

The Programmatic Agreement for the Closure and Disposal of Fort Monroe, Va. states:

No demolition shall occur unless necessary to address immediate health and safety concerns or to prevent further property damage, and only after consultation with the Fort Monroe Preservation Officer.

All restoration, preservation, rehabilitation or reconstruction (if appropriate due to loss of a historic property) shall be done according to the *Design Standards*.

#### SITE CHARACTERIZATION

The concrete and earthen batteries along the Chesapeake Bay were constructed between the years 1896 and 1906 under a nationwide program to modernize harbor and coastal defenses. They are referred to as the Endicott batteries after William Endicott, Secretary of War under Grover Cleveland and chair of the Endicott Board which recommended these modern fortifications be built. Ten batteries were built at Fort Monroe spaced at regular intervals along the Chesapeake Bay shoreline. Batteries Barbour, Bomford, Eustis, and Montgomery have been removed. The six (6) remaining batteries are massive concrete structures that contained disappearing guns and mortars hidden behind, and protected by, earthen berms facing the bay. The earthen protection has been removed from Batteries Church and DeRussy.

These cast-in-place concrete structures were state of the art military engineering when they were constructed. Their detailing is bold and simple and designed for the specific function of their armaments. They are almost devoid of ornamentation except for their iron railings and simple concrete details. Now obsolete, the batteries are in various stages of deterioration. Battery Irwin, with its guns still in place, is an interpretive exhibit.

#### RESOURCES

» Contributing Resources: Battery DeRussy (Building 212), Battery Ruggles (Building 213), Battery Anderson (Building 214), Battery Church (Building 232), Battery Irwin (Building 233), Battery Parrott (Building 234), and Battery Gatewood (inside the stone fort)

#### LAND USE CONCEPTS

No land use concepts for the batteries have been established under the Reuse Plan. Batteries Ruggles, Anderson, Church, and DeRussy are located in areas of Zone B designated by the Reuse Plan as parks and recreation.

- » Rehabilitation and adaptive use of the batteries with functions that are compatible to the recreational land use is encouraged
- » Stabilization and rehabilitation of the batteries for interpretive purposes is appropriate

#### INFRASTRUCTURE

The historic infrastructure for the batteries, including the Army's rail network that served them, has been removed or covered over. Fenwick Road follows the alignment of the rail line.

» New construction adjacent to or within the established site for each battery shall reinforce the historic circulation patterns

#### SITE CONSTRAINTS

- » Chesapeake Bay Preservation Areas to be established
- » Individual site boundaries shall be established for each battery to include: areas of existing earthen protection, areas where the earthen protection has been removed, fields of fire, and the area that was historically used to access, arm, and service each structure

#### LANDSCAPE

- » Reestablish the cultural landscape for each battery including the earthen protection
- » Maintain or reestablish unobstructed views from the batteries to the Chesapeake Bay
- » Incorporate Bay Scapes (native plant species that will improve the environment surrounding the Chesapeake Bay) for new landscaping and to establish the earthen protection
- » Refer to the "Landscape Planting Plan for Fort Monroe, Virginia" for recommended plant species
  - A Battery Church
  - **B** Battery Montgomery
  - C Battery DeRussy
  - D Battery Eustis
  - E Battery Bomford
  - F Battery Gatewood
  - G Battery Parrott
  - H Battery Irwin



Ca 1935 map showing the batteries, their earthen protection and the railroad infrastructure


Battery Church without its earthen protection

Earthen berm protection at Batteries Parrott and Irwin

### AREAS WITH THE POTENTIAL FOR NEW CONSTRUCTION

New construction related to the batteries shall be limited to reconstruction of lost elements or support buildings for interpretive purposes or as support for their adaptive reuse.

- » No new permanent construction unrelated to the rehabilitation or reuse of the batteries shall be allowed within their established sites
- » No new permanent construction shall be allowed to encroach on the view sheds of the batteries (views to the Chesapeake Bay)
- » Additions to the batteries may be allowed for accessibility
- » Additions shall follow the guidance of the Secretary of the Interior's Standards and the Fort Monroe Historic Preservation Manual Design Standards

### INDIVIDUALLY ELIGIBLE RESOURCES

Site Character



### INDIVIDUALLY ELIGIBLE RESOURCES Site Character

There are 189 contributing elements to the Fort Monroe NHL District of Fort Monroe. Four of these are significant enough to merit individual listing on the National Register due to their association with the lives of persons significant in or past, events that have made a significant contribution to our history, or embody distinctive characteristics of a type, period or method of construction.

### RESOURCES

The four contributing elements eligible for individual listing are:

- Quarters 1: The Lincoln House (also known as the DeRussy House)
- Quarters 17: Lee's Quarters

Building 166: The Chapel of the Centurion

The Stone Fort and Moat, including the Casemate Fronts, Flagstaff Bastion, Gates, and the Water Battery

### CHARACTER DEFINING FEATURES

Each Resource has its own character defining features relating to architectural style, period of development and technology present at time of construction and these resources are some of the earliest permanent construction on the post.

**Quarters 1** was constructed in 1819 as permanent quarters for the post's commanding officer and served as such from 1831 until 1907. It is also the site of many important events occurring at Fort Monroe.

**Quarters 17** was built in 1823 as bachelor's officer quarters; Robert E. Lee lived in Building 17 from 1831 to 1834.

The Programmatic Agreement for the Closure and Disposal of Fort Monroe, Va. states:

No demolition shall occur unless necessary to address immediate health and safety concerns or to prevent further property damage, and only after consultation with the Fort Monroe Preservation Officer.

All restoration, preservation, rehabilitation or reconstruction (if appropriate due to loss of a historic property) shall be done according to the *Design Standards*. The **Chapel of the Centurion** (Building 166) was constructed in 1857, adapted from designs published by noted architect Richard Upjohn in 1852. It is a fine example of Gothic Revival Architecture and is notable for its stained glass windows, including two designed by the Tiffany studios.

The **Stone Fort** built between 1819 and 1834 was designed by Simon Bernard and is significant for its association with the Third System forts, its engineering and design, and its association with events and persons that made a significant contribution to our history.

### USE CONCEPTS

- » All of the individually eligible resources are in Zone E and although these resources are grouped into their own management zone, their reuse should be focused on interpretation, consistent with the planning concepts for Zone E.
- » Individually eligible properties shall be used as they were historically, or be given a new use that maximizes the retention of distinctive materials, features, spaces, and spatial relationships.

### INFRASTRUCTURE

» The current infrastructure in place shall be retained. Revisions to infrastructure, such as parking areas, shall be subject to the review processes established by the Design Standards in Part 1G.

#### SITE

- » Each individually eligible resource shall have a boundary determined that will be defined as the "site" of the resource. Refer to the updated NHL District nominated for the boundaries.
- » The historic character of the site shall be retained and preserved.

### LANDSCAPE

» Restoration and reconstruction of landscape features identified in the Fort Monroe Historic Landscape, Inventory and Evaluation, such as the garden behind Quarters 1, shall be taken into account.

### RESOURCES

- » Each resource shall be recognized as a physical record of its time, place and use.
- » Changes to a property that have acquired historic significance in their own right will be retained and preserved.

### AREAS WITH THE POTENTIAL FOR NEW CONSTRUCTION

- » No new infill construction will be allowed within the "site" of each resource.
- » Reconstruction of lost elements, such as outbuildings, may be allowed for interpretive purposes or to facilitate the adaptive use of the resource. Reconstructions shall be based on photographic or other documented sources and will be reviewed by the process outlined in Part 1G.

## Fort Monroe additions and reconstructions





Limit Size of Additions



### Separate Additions to Differentiate Between Old and New



Locate Additions on Inconspicuous Elevations

### ADDITIONS

Additions to historic buildings can extend their useful life. There are many buildings at Fort Monroe with existing additions to provide access, egress, or simply expand the building. Some of these additions contribute to the historic significance of the buildings as evidence of change over time.

Additions also can harm the historic building with the loss of historic material, change in building form, or a change in the relationship between the building and its site. Therefore, the design of additions shall preserve the significant materials and features, preserve historic significance and integrity of the building and the Fort Monroe NHL District.

Additions shall be designed to in such a manner as to:

- » Retain and preserve historic materials, features, and spatial relationships that characterize the property
- » Be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment
- » Undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired
- » Maintain the historical character of the Fort Monroe NHL District

### PLANNING CONCEPTS FOR ADDITIONS

- » Separate an addition from the historic building to differentiate between old and new and to preserve the form of the historic building.
- » Limit the size and scale of an addition. It should not overwhelm the historic building. Additions that render the building out of scale with surrounding buildings are inappropriate.
- » Locate an addition on an inconspicuous elevation of the historic building.

### STANDARDS

- » Additions shall be compatible with the scale, materials, and character of the historic building.
- » Additions shall be compatible with the scale, materials, and character of the surrounding neighborhood.
- » Additions shall be discernible from the historic building.
- » Additions shall be designed and constructed to minimize the loss of historic building materials and ensure character defining features are not destroyed, damaged, or obscured.
- » Additions that are reconstructions of lost building elements shall be based on photographic or other documented evidence.

Additions to Contributing Properties should be avoided. If an addition is necessary for continued use of the property, such as providing access or to meet life safety codes, it should be designed to minimize visual impact and damage to significant features and historic building fabric.



Addition to Building 139 on the Rear Elevation and Differentiating itself from the Historic Building

### RECONSTRUCTIONS



Reconstruction of a lost historic structure to the NHL may be permitted where it is required to understand and interpret a site. Reconstructions shall be considered New Construction and shall follow the Design Review Process for new construction in Part 1G. Reconstructions shall be based on documented evidence such as construction plans, photographs, and written descriptions of the building or structure. Sufficient documentation must be used to ensure an accurate reproduction.

Reconstruction shall also apply to the re-creation of missing or replaced building elements. Reconstruction of lost features must also be based on documented evidence.



Reconstruction of lost building features such as the porches on Building 5 may be permitted

Reconstruction will be used to depict vanished or non-surviving portions of a property when documentary and physical evidence is available to permit accurate reconstruction with minimal.

Reconstruction of a landscape, building, structure, or object in its historic location will be preceded by a thorough archeological investigation to identify and evaluate those features and artifacts which are essential to an accurate reconstruction. If such resources must be disturbed, mitigation measures will be undertaken.

Reconstruction will include measures to preserve any remaining historic materials, features, and spatial relationships.

Reconstruction will be based on the accurate duplication of historic features and elements substantiated by documentary or physical evidence rather than on conjectural designs or the availability of different features from other historic properties.

A reconstructed property will re-create the appearance of the non-surviving historic property in materials, design, color, and texture.

A reconstruction will be clearly identified as a contemporary re-creation.

Designs that were never executed historically will not be constructed.

# Fort Monroe site furnishings

Site furnishings within the Fort Monroe NHL District must not detract from the integrity of the district or alter the character of the landscape. They should not create a false sense of history or portray a historical context that did not exist. There should be a consistency of design elements within each Management Zone and the number of furnishings shall not clutter the historic landscape. Where appropriate, site furnishings such as benches and picnic tables shall be all or partly made with recycled and/or durable materials. To the greatest extent possible, site lighting fixtures shall be the full cutoff type to limit light pollution.

Site Furnishings include:

- » Benches
- » Picnic tables
- » Bicycle racks
- » Trash receptacles
- » Building and street signage
- » Interpretive signage
- » Site lighting
- » Bollards

### CONTEXT

Historically, few site furnishings have been introduced to Fort Monroe and the ones that do exist are utilitarian in nature or do not have a particular historic context or precedent. Site furnishings should be adequate for users to enjoy and the type of furnishings should be appropriate to the setting.

Site furnishings should respond to the character and general stylistic period of each Management Zone. What would be fitting for Zones D & E would be out of context in Zone B. Therefore, a standardized selection of site furnishings to be used throughout the NHL District has not been developed. However, site furnishing selections should be standardized and reflect the character of the area.

### SITING

Areas for site furnishings to be placed shall be identified and include areas such as public building entrances,



service entrances to buildings, outdoor break areas, recreation areas, sidewalks, parking and along interpretive trails or walking tour routes. Appropriate pieces of site furnishings for each identified area shall also be determined. For example, a picnic table may not be appropriate at a building entrance.

Do not place site furnishings so that they compromise the historic setting. Many modern pieces of site furniture, such as bicycle racks and bollards and interpretive signage, have no historic precedent and those should not be installed in front of historic buildings or where they will intrude upon a historic view shed.

### INSTALLATION

Site furnishings shall be placed so that they do not restrict the path of travel and shall be accessible per the Uniform Federal Accessibility Standards. Site furnishings shall be installed in a permanent manner. They shall be set on and anchored to a paved base such as a concrete slab, paved brick area, or other material depending upon the context of the Management Zone in which they are located. The size of the paved area shall be sufficient for the type and use of site furnishing and for accessibility.

### Fort Monroe sustainable design

The Commonwealth of Virginia is committed to using energy in the most efficient manner possible to save taxpayer money and to provide leadership in the efficient use of natural resources. Commonwealth of Virginia Executive Order 48 (EO-48), "Energy Efficiency in State Government," establishes a goal for Commonwealth agencies and institutions to reduce expenditures for conventional energy by 20 percent of 2006 expenditures. Reductions may be achieved through energy efficiency to reduce energy use, purchases of renewable energy to replace conventional energy purchases, or purchases of conventional energy supplies in a more cost-effective manner.

All agencies and institutions of the Commonwealth of Virginia constructing state-owned facilities over 5,000 gross square feet and renovations valued at more than 50 percent of the assessed building value shall be designed and constructed to be consistent with the energy performance standards at least as stringent as those of the US. Green Building Council's LEED rating system or the United State Environmental Protection Agency/ Department of Energy's "Energy Star" rating.

LEED is an internationally recognized green building certification system, providing third-party verification that a building or community was designed and built using strategies aimed at improving performance across important metrics: energy savings, water efficiency, CO<sub>2</sub> emissions reduction, improved indoor environmental quality, stewardship of resources and sensitivity to their impacts. Developed by the U.S. Green Building Council (USGBC), LEED provides building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions. The USGBC is a 501(c)3 non-profit organization committed to a prosperous and sustainable future for our national through cost-efficient and energy-saving green buildings.



ENERGY STAR is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy. It was introduced as a voluntary labeling program designed to identify and promote energy-efficient products to reduce greenhouse gas emissions. ENERGY STAR delivers the technical information and tools that organizations and consumers need to choose energy-efficient solutions and best management practices.