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**BUILDING 1, FORT TILDEN  
HISTORIC STRUCTURES REPORT**



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**Prepared for:**  
**NATIONAL PARK SERVICE-**  
**Gateway National**  
**Recreation Area –**  
**Jamaica Bay Unit –**  
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# BUILDING 1, FORT TILDEN - DRAFT HISTORIC STRUCTURES REPORT

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- **Construction Completion Report** (National Archives)
- **Historical Record of Buildings**, War Department (QMC) Quartermaster Corp Form No. 117 for Building 1 (National Archives)
- **National Register of Historic Places Inventory – Nomination Form**

## **EXECUTIVE SUMMARY**

### **Project Team**

This Historic Structures Report has been prepared by QUINN EVANS | ARCHITECTS, a firm in Washington, DC that specializes in historic preservation work. Baird M. Smith, AIA, FAPT, led the investigation team, assisted by Tom Jester, AIA, as senior historical architect and Kathryn Slattery, staff preservation architect.

The study has been undertaken for the National Park Service – Gateway National Recreation Area (GATE) and was managed by Carol Whipple, FASLA of the Denver Service Center. Barbara Judy, GATE Historical Architect, assisted with research and coordination.

### **Report Purpose**

The overall project scope was to prepare a limited technical report on the history, current conditions, and potential future utilization of Building 1.

This study documents the history and current conditions of the building. Considerable emphasis is placed on the identification of the conditions and guidelines for appropriate treatments and repairs of the significant architectural features. A concept for future building use and preservation treatment is provided in Part 2 – Treatment and Use. Detailed engineering design of new systems would occur in a future project. In addition, the HSR documents current and possible use changes to develop a proposed future rehabilitation plan. This concept report would be equivalent to a 10% concept design submission.

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## **Research Completed**

This investigation has three components:

- *Documentary Research*- This included a review of historic documents available at the National Archives, the NPS Denver Service Center - Technical Information Center, GATE archives, and additional resources provided by GATE staff.
- *Visual Examination of the Building and Site*- On November 16-17, 2006, staff from QE|A conducted a visual survey of the conditions of the exterior and interior of Building 1. Additionally, measurements were taken to facilitate preparation of record drawings.
- *Data Evaluation*- Conclusions and recommendations are based on a systematic evaluation of the documentary and physical analysis.

Because the scope of this investigation was limited to these components and did not include destructive testing and or systems documentation, it is possible that new historical and system-related information could come to light that would augment this report's findings. Although this HSR is not intended to be a living document, a supplement to the report could be created should new information be identified.

## **Major Research Findings**

Despite a considerable number of additive interior alterations, Building 1 retains a high degree of integrity of materials, features and plan configuration.

## **Recommendations for Treatment and Use**

Treatment recommendations to be included in the Part 2- Treatment and Use - Draft. Building 1's use is to continue as the Breezy Point District Headquarters/Visitor Center. This ongoing use is established by the NPS PMIS# 92327.

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## ADMINISTRATIVE DATA

<b><u>Building Location</u></b>	Building 1 is located at Fort Tilden, Jamaica Bay Unit, Gateway National Recreation Center.
<b><u>Proposed Treatment</u></b>	Rehabilitation is the ultimate treatment recommended for Building 1.
<b><u>Related Studies</u></b>	While there are limited resources on Building 1, there are a number of other documents that provide information on Fort Tilden and Gateway National Recreation Area. The most influential texts are listed below. In addition key period documents have been included in Appendix C.
Cultural Landscape Report	The Olmsted Center for Landscape Preservation has prepared in September 2005 a “95% Draft Cultural Landscape Report for Fort Tilden”, Gateway National Recreation Area. This document provides a site history, documentation of existing conditions, and analysis and documentation of Fort Tilden. This report’s findings are not based on primary research.
Development Concept Plan/Environmental Assessment	The National Park Service, in 1986 and 1988, prepared “Development Concept Plan/Environmental Assessment” reports for Jacob Riis/Fort Tilden. These reports detailed the implementation of property improvements, parking, restrooms, and the possible future developments. In the 1990s work began to follow the recommendations of these reports and continues today.

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Fort Tilden Historic Structure Report      The National Park Service, in November 1980, prepared the “Fort Tilden Historic Structure Report: Historic Data Section, Gateway National Recreation Area, New York”. This report details the development history of the site through examination of primary records. This report provided the historical framework for the National Register nomination of the Fort Tilden Historic District.

### **Cultural Resource Data**

National Register of Historic Places Status      Building 1 is not currently listed on the National Register of Historic Places as an individual structure or contributing structure within a historic district.

As a stand alone structure Building 1 may be eligible for the National Register of Historic Places. It was one of the most formal structures built at Fort Tilden during the World War II era and its exterior and portions of the interior remain largely intact.

It is also worth noting that adjacent to the site of Building 1 there is a listed historic district, the Fort Tilden Historic District (Gateway NRA), National Register of Historic Places 20 April 1984 (Refer to Appendix C, National Register of Historic Places Inventory – Nomination Form, to view a graphic illustrating the boundaries of the historic district).

### **Recommendations for Documentation, Cataloging, and Storage of Materials**

QE|A will provide electronic copies of documents used in this report (photos, drawings, text, etc) for future research following the completion of this investigation. All originals cited in this report are located at accessible archive locations (i.e. NPS Denver Service Center, National Archives, etc.). Record drawings produced documenting the current condition of the building will be provided electronically and in paper form to GATE for distribution and record keeping.



## **CHAPTER 1: HISTORICAL BACKGROUND AND CONTEXT**

### **Historical Context for Building 1**

Fort Tilden Military Base was established on February 19, 1917 and officially named on August 1, 1917<sup>1</sup>. The US Army established Fort Tilden to defend the eastern channel entrance to New York Harbor. The Fort encompassed 309 acres and included a Defense (fortification) Area, a Cantonment Area, and a Utility (wharf) area.

There were several periods of significant development and importance at Fort Tilden. The first was between 1917 and 1922 when World War I ended. Early in 1917 some limited construction occurred by Army personnel to provide temporary solutions to facility needs. These buildings were constructed of materials that provided limited protection from the weather. Consequently in late 1917 a contract was awarded for the construction of the first permanent buildings, additional infrastructure and to improve the existing structures. This construction contract included two barracks buildings, officers' quarters, mess hall and lavatory, to name a few.<sup>2</sup>

In the late 1930s and early 1940s another wave of improvements began at Fort Tilden. The number of enlisted personnel stationed at the Fort increased dramatically, bringing the number of personnel to over 1000; previously only a limited caretaking staff resided there.<sup>3</sup> This growth required additional barracks. The construction of site developments that had been planned, but not funded, finally began.

This construction was completed by the WPA of NYC. Building 1 is noteworthy for being the most prominent of several extant permanent buildings designed and constructed at Fort Tilden by the Works Progress Administration (WPA) of

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<sup>1</sup> Wrenn, p. 1-2.

<sup>2</sup> Fort Tilden HSR, pp. 8-10.

<sup>3</sup> Fort Tilden HSR, p. 23.

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New York City. These WPA buildings include Building 1 (Barracks, 1938-9), Building 22 (Commanding Officer's Quarters, 1937-8), Buildings 133-134-135-136 (NCO Quarters, 1935-40), rehabilitation of Building 106 (Double NCO Quarters, 1938), Building 107 (NCO Garage, 1937), Building 204 (WPA Field Office, 1936-9), Building 217 (Commissary Warehouse, 1940-41) and Building 219 (Ordnance Building, 1938.) These structures were designed by the WPA and exhibit architectural references ranging from the Georgian Revival style of Building 1 to the Modern style of Building 219. This stylistic diversity contrasted with the Army Quartermaster standard building plans employing the Colonial Revival style, and distinguishes the Fort Tilden cantonment and utility/wharf area from other military reservations of similar age.

The efforts of the WPA of NYC at Fort Tilden were guided by the Army's vision for permanent structures at Fort Tilden. By 1943, the army had constructed many permanent and temporary structures that defined the Fort Tilden Military Reservation, including twenty-four permanent structures at the cantonment area, of which nineteen survive today. The permanent buildings designed, constructed, and rehabilitated by the WPA of NYC set the character for the cantonment through their scale and workmanship. Among these, Building 1 is the most prominent.

In late 1941 a three-acre parade ground was constructed in front of Building 1. The new parade ground was ringed by newly planted London Plane trees, new roadways, and anchored on the south by Building 1.<sup>4</sup> It was also surrounded by other buildings, many of which remained until after 1974.

Immediately following World War II, Fort Tilden transitioned from an active duty fort and became housing for veterans. This use was short lived, and in early 1951, Fort Tilden was returned to active duty as the United States began its "nation-wide Cold War fortification efforts". Fort Tilden had several Nike (surface-to-air) missile batteries, but these systems were never utilized. By late 1967 the Nike technology was outdated and the installation was decommissioned.<sup>5</sup>

On October 27, 1972 Gateway National Recreation Area (GATE) was established by an act of Congress; this legislation transferred ownership of Fort Tilden from the Army to the National Park Service (NPS).<sup>6</sup>

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<sup>4</sup> Fort Tilden HSR, p.139; London Plane trees are also known as Sycamore trees.

<sup>5</sup> Fort Tilden HSR, pp. 25-28.

<sup>6</sup> Development Concept Plan 1986, p. 4.

<sup>7</sup> [http://www.nps.gov/archive/gate/jbu/jbu\\_maps.htm](http://www.nps.gov/archive/gate/jbu/jbu_maps.htm)

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During this period, many of the World War II temporary mobilization-era structures in the Cantonment and Defense areas were demolished. Additionally, select Nike-era structures in the Defense area were also demolished.

In 1974 four units comprised GATE: the Jamaica Bay Unit, Breezy Point Unit, Sandy Hook Unit, and Staten Island Unit. Today GATE consists of three units: the Jamaica Bay Unit, Sandy Hook Unit, and Staten Island Unit. Originally under the Breezy Point Unit, Fort Tilden is now part of the Jamaica Bay Unit along with Floyd Bennett Field, Jamaica Bay Wildlife Refuge, Canarsie Pier, Plumb Beach, Frank Charles Park, Jacob Riis Park, and Breezy Point.<sup>7</sup> Today the primary focus at Fort Tilden is environmental education.

### Architect/ Builder

The Works Progress Administration (W.P.A.) of the City of New York prepared the final design for Building 1, and was responsible for the materials, equipment, and construction of Building 1. The construction was completed under the supervision of the Post Quartermaster of Fort Tilden.<sup>8</sup> Several documents record the construction of Building 1. These include the War Department Quartermaster Corps (QMC) Form No. 117 for Building 1, the Building Completion Report, and some of the original construction drawings on file at the Denver Service Center – Technical Information Center (DSC-TIC). Refer to Appendix C for copies of these documents. The construction documents on file at the DSC-TIC are dated 1938 and Form No. 117 for Building 1 is dated January 1940.

The earliest dated documents referencing Building 1 are located at the U.S. Army Corp of Engineers, Office of History. The Army archives include 6 drawings for Detachment Barracks at Fort Tilden, N.Y. Refer to Appendix C for copies of these documents. These drawings are dated December 20, 1930. It is known that the building was not constructed until 1939 but these drawings confirm that the planning for the building began many years before it was actually built. The similarities between the Army drawings and the WPA drawings indicate that the WPA finished a design that was well developed.

### Date of Original Construction

During the 1920's the military determined that Fort Tilden had many existing World War I era wooden buildings in need of repair and improvement. It was not until the years leading up to World War II that appropriations became available for some of this work to be completed. The building completion report states that prior to the construction of Building 1, "Enlisted

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<sup>8</sup> 1980 Historic Structures Report, p. 116.

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men had to live in old war time cantonment building(s).”<sup>9</sup> The purpose of the new building was to provide more adequate housing for those men stationed at Fort Tilden. The Building Completion Report was submitted by Paul A. Jaccard, 7<sup>th</sup> C.A.C., Assistant Quartermaster, HDSH, and W.P.A. Officer; this document is not dated. The project was supervised by the Commanding Officer and Post Quartermaster, Fort Tilden, New York.<sup>10</sup>

During 1938-1939 the W.P.A. of the City of New York was responsible for the construction of the New Detachment Barracks, Building 1, at Fort Tilden, New York. Building 1 was one of the first new buildings constructed during this improvement period; it was located to overlook a planned parade ground area.<sup>11</sup> Construction began on August 10, 1938 and work was completed on 25 May 1939.<sup>12</sup> Refer to Figures 1.1 and 1.2 for photos of the building dating from January 1940.<sup>13</sup>

### **Original Construction Materials and Methods**

Building 1 is a two-story brick building with a brick and concrete foundation, concrete floors and columns, and a slate roof (Figures 1.3-1.6). The dimensions of the main building are 86’-11” x 39’-11” with a wing that extends to the south dimensioned 17’ x 23’. The first floor is approximately four feet above grade.<sup>14</sup> Refer to Figure 1.7 for an image of the main entrance dating from 1952.

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<sup>9</sup> Building Completion Report, p. 3. In American military history, a cantonment is a term associated with both temporary and permanent living quarters.

<sup>10</sup> Building Completion Report, p. 4.

<sup>11</sup> Fort Tilden HSR, p. 139.

<sup>12</sup> Building Completion Report, p. 4.

<sup>13</sup> National Archives photographs.

<sup>14</sup> Form 117, p. 1.

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The Building Completion Report also includes the following detailed description of the construction of Building 1:

General Construction consists of exterior 12” brick walls, 4” face brick, 8” common brick, reinforced concrete footings, foundation walls to 1<sup>st</sup> floor line, column and stairs, interior 4” T.C. and glazed 4” T.C. partitions, wood ridge construction for roof including dormers, gables and pediments, Bangor slate roof over slaters felt and sheating, copper flashing, gutters and downspouts, necessary mill work for eaves, gables, pediments, dormer windows, double hung windows; door and trim, kalamein door and trim, steel sash for basement windows; misc. iron consisting of coal chutes basement window guards, pipe railing in yard and for concrete stairs in building, pipe ash hoist, clean out doors, and wrought iron front railings; cement plaster coat for all interior partitions and ceilings, cast stone sills, band course, main entrance headstones and pillars; misc. steel consisting of lintels, bolts, anchor straps, etc., weatherstripping of windows, doors; necessary hardware, sewer and water lines from main sanitary sewer and main water line respectively; painting three (3) coats interior walls, interior and exterior of windows and doors including trim.<sup>15</sup>

The original construction documents include wall sections that show the wall in detail from the foundation to roof, the section is found in Figure 1.8. This section best illustrates the type of construction used for Building 1. Refer to Appendix C for the entire drawing on which this section is located. The walls are not load-bearing; rather the brick envelope is self-supported on the reinforced concrete beam “skeleton” structure. The exterior building walls are solid fourteen inch thick walls with one wythe of four inch face brick, backed by eight inches or two wythes of backing brick and finished on the interior with plaster. One wythe of face brick passes outboard of the concrete frame at the spandrel. This wall system does not include a cavity often found in brick veneer construction. The footings are concrete.

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<sup>15</sup> Building Completion Report, p. 3; a kalamein door is a non-machined wooden door, wrapped in steel and carries a New York City fire label. It was a precursor to today's hollow metal door.

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A wood structural frame bearing on top of the second floor concrete perimeter beam supports the roof. Refer to Figures 1.9 and 1.10.

The Building Completion Report noted that a cement mixer was hired for use during construction and that soil on site was beach sand. The report also states, “There were no difficulties or incidents of unusual character. Work progressed smoothly.”<sup>16</sup>

Figure 1.11 is the basement plan from the WPA construction documents. The basement plan identifies the following spaces: boiler room, fuel room, open basement area, issue room, storage room and kitchen stores.<sup>17</sup>

Figure 1.12 is the first floor plan from the WPA construction documents. This floor included the following spaces: entrance vestibule, hallway, squad room, day room, mess hall, kitchen, pantry, refrigeration room, storage, battery commander’s office, and orderly room.<sup>18</sup>

Figure 1.13 is the second floor plan from the WPA construction documents. The second floor included the following spaces: hall, two squad rooms, two noncommissioned officer rooms, barber shop, and toilet room.<sup>19</sup>

Refer to Appendix C for the known surviving WPA construction drawings.

Based on the field survey conducted for this study, it is believed that the WPA plans accurately reflect the building that as it was constructed. Figures 1.1 and 1.2 further illustrate that Building 1 was built as described in the construction documents and that the Building Completion Report is an accurate description of the building.<sup>20</sup>

A few minor elements differing from the original plan were observed during the field survey. These changes may have been made in the field during construction, or are changes for which no alteration drawings were prepared.

### Utilities

Original utilities, including a hot water heating system, electrical lighting and fixtures, and plumbing work for the

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<sup>16</sup> Building Completion Report, p. 4.

<sup>17</sup> Drawing 646-629901, DSC-TIC.

<sup>18</sup> Drawing 646-629901, DSC-TIC.

<sup>19</sup> Drawing 646-629901, DSC-TIC.

<sup>20</sup> National Archives photographs.

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kitchen and latrines were also installed by the W.P.A. Building 1 had water, sewer, and gas connections. The original building had a coal hot water heating system and an individual heating plant providing steam heat to the building. Two 50 amp, 240 volt electric meters were installed. One 380 cubic foot electric refrigerator was installed.<sup>21</sup>

In the months following the completion of construction, minimal additions and installations were recorded on War Department Quartermaster Corps (QMC) Form 117 dated 8 January 1940. According to Form 117 some additional refrigeration units, a cooler, a stainless steel smoke hood and various electrical switches, et cetera were installed at a minimal cost.<sup>22</sup>

### Cost

The total construction cost for Building 1 was \$102,186.97. Financing was provided by the W.P.A. of New York. The official Project No. was OP-365-97-2-12, Job No. 47. It was explained that \$31,794.11 was spent on materials and \$70,392.86 on labor.<sup>23</sup>

### **Building Uses**

Over the past 65 years Building 1 has been modified from the original use and adapted for new uses.

### Detachment Barracks (1938-1940)

As stated previously, originally Building 1 was constructed as a New Detachment Barrack. The building's intended capacity was 49 enlisted men.<sup>24</sup>

### Post Hospital (1941- unknown)

On March 12, 1941, approximately two years after construction, Building 1 was converted to a Post Hospital.<sup>25</sup> This change included minimal modifications in order to allow the building to function better as a hospital. The conversion to the Post Hospital reduced the building occupancy capacity from 49 men to 43 men.<sup>26</sup> Besides the drawing documenting the conversion from barracks to hospital research undertaken for this study did not find additional supporting material, such as interior photos, documenting this change of use.

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<sup>21</sup> Form 117, p. 1; approximately 5 x 8 x 8.

<sup>22</sup> Form 117, p. 1.

<sup>23</sup> Building Completion Report, p. 4.

<sup>24</sup> Form 117, p. 1.

<sup>25</sup> Wrenn, p. 6.

<sup>26</sup> Form 117, p. 1.

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Headquarters  
(ca.1950s-1973)

Sometime after becoming the Post Hospital, Building 1 was converted to a headquarters building. The 1980 Historic Structures report addresses this briefly stating, "In later years, perhaps in the 1960s, the structure was converted to a headquarters."<sup>27</sup> However, a historic photograph of the main entrance from 1952 indicates that the building was a headquarters by 1952. No other specific supporting material documenting this change of use and occupancy was identified as part of this study.

GATE Park Headquarters  
(1974-present)

In 1972 Gateway National Recreation Area was established including Fort Tilden as part of Breezy Point Unit.<sup>28</sup> The decommissioning of Fort Tilden by the US Army took approximately two years, and in 1974 the property was turned over to the NPS.

In 1980 the Historic Structures Report noted that the building was being used as the headquarters of an Army Reserve unit.<sup>29</sup>

Today Building 1 is the District Headquarters and Visitor Center for Fort Tilden. The focus of the visitor center is environmental education. Eight NPS employees have office in the building. Two spaces in the building are used by outside organizations.

### **Building 1 Significance**

Building 1 is significant for the following reasons:

1. Its role as a significant supporting structure during the World War II era of the history of Fort Tilden.
2. Building 1 was among twenty-four planned permanent structures building in the Cantonment area, replacing earlier WW1 mobilization-era temporary structures and realizing the long-delayed intentions of the army to equip Fort Tilden with improved permanent structures, roads, utilities, and landscaping.
3. Building 1 was designed and construction by the WPA of NYC, which was a significant social and economic program both locally and nationwide.

### **Recommended Period of Significance**

The period of significance proposed for Building 1 is 1939-1945. These dates have been chosen to encompass the period from the date of Building 1's construction as a permanent barracks to the time when the building was used as a hospital during World War II. This period represented the height of the

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<sup>27</sup> Fort Tilden HSR, p. 123.

<sup>28</sup> Development Concept Plan 1986, p. 4.

<sup>29</sup> 1980 Historic Structures Report, p.123.



# BUILDING 1, FORT TILDEN - DRAFT HISTORIC STRUCTURES REPORT

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building's use for specific military functions other than administration. Many building features remain from this period.

The period of significance also is directly related to the involvement of the Works Progress Administration (WPA) of New York City in the design of Building 1. Although it appears that the Office of the Quartermaster General had begun design of Building 1 as early as 1930, it was the WPA that ultimately brought the design to completion and constructed the building. As such, the building is an important example of the partnership between the U.S. Army and the Works Progress Administration during the Depression.

Building 1 is perhaps the most prominent building designed and erected by the WPA of New York City at Fort Tilden. Other WPA buildings at Fort Tilden include Building 22 - Commanding Officers Quarters (1937-38), Building 133-136 -- NCO Quarters (1936-40), Building 204 - WPA Field Office (1936-39), Building 217 - Commissary Warehouse (1940-41), Building 219 - New Ordnance Bldg, 1938, and Portions of the Cantonment Roads & Landscaping at Cantonment (1938).

In 1941, a series of minor alterations were made to building 1 to convert it to a hospital. Documentation has not been uncovered to confirm the length of time that Building 1 was used as a hospital, but it was probably for the duration of the war. The fact that Building 1 was converted shortly after its construction highlights the immediate need for a hospital at Fort Tilden and inherent adaptability of the Building for another use.

At some point after 1945 and by 1952, Building 1 served as the Fort Tilden Headquarters Building. By 1974, the building was taken over and extensively remodeled by the NPS. However, since all of the remaining significant historic features are from the original construction period and from the hospital use, this later period is not considered significant.

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### Figure 1.1

North (front) and east elevations of Building 1. Photo is dated January 1940, less than a year after construction. (National Archives)



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### Figure 1.2

South and east elevations of Building 1. Photo is dated January 1940, less than a year after construction. (National Archives)



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### Figure 1.3

North and west elevations of Building 1. Photo is dated November 2006 (QUINN EVANS | ARCHITECTS).





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### Figure 1.4

South elevation of Building 1.  
Photo is dated November 2006  
(QUINN EVANS |  
ARCHITECTS).



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### Figure 1.5

West elevation of Building 1.

Photo is dated November  
2006. (QUINN EVANS |  
ARCHITECTS)





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### Figure 1.6

East elevation of Building 1.  
Photo is dated November 2006  
(QUINN EVANS |  
ARCHITECTS).



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### Figure 1.7

Photograph dating from 1952  
of the entrance of Building 1.  
The period doors are visible  
behind the screen doors.  
(GATE Museum Collection)



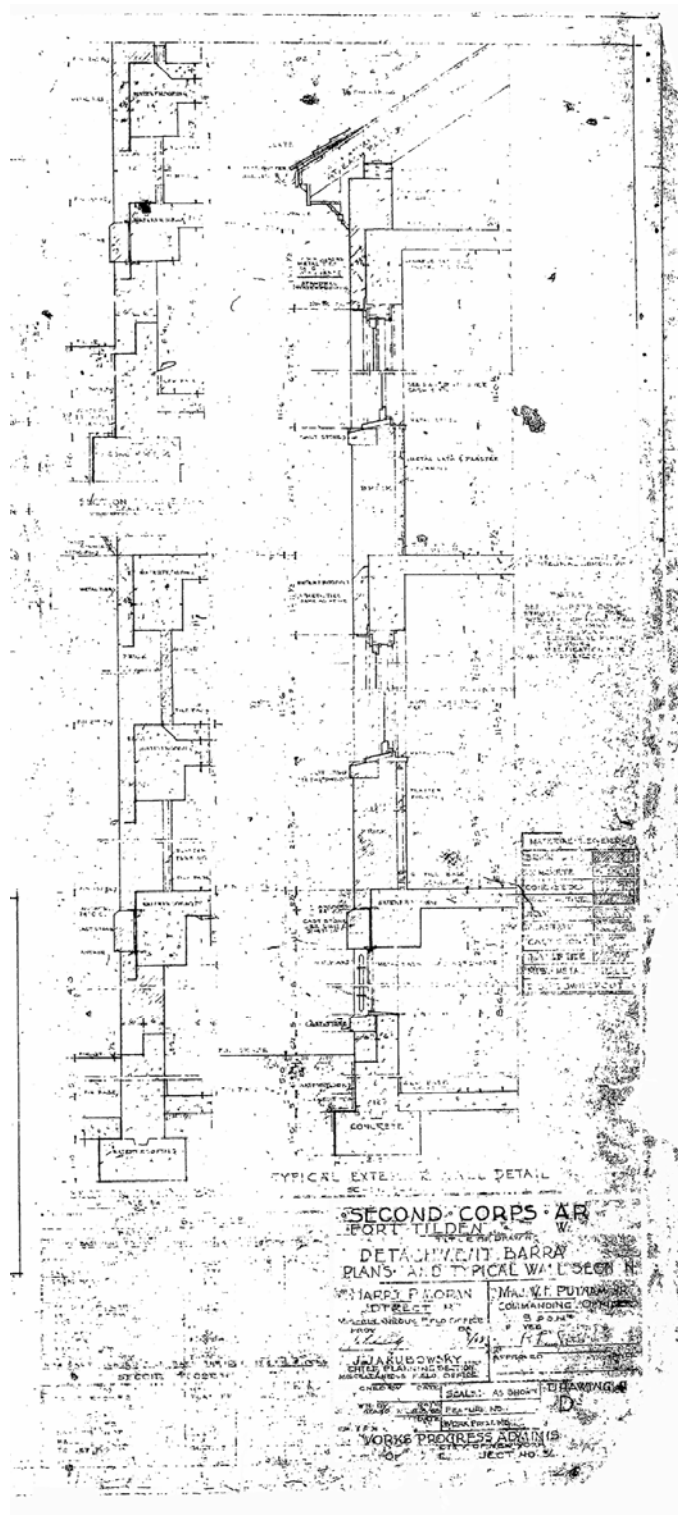


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**Figure 1.8**  
Wall section from original  
construction document.  
Drawing (NTS) is dated 1938.  
(DSC - TIC)



**Figure 1.9**

Photograph showing framing details in the attic. Photo is dated November 2006 (QUINN EVANS | ARCHITECTS).



**Figure 1.10**

Photograph showing framing details in the attic. Photo is dated November 2006 (QUINN EVANS | ARCHITECTS).

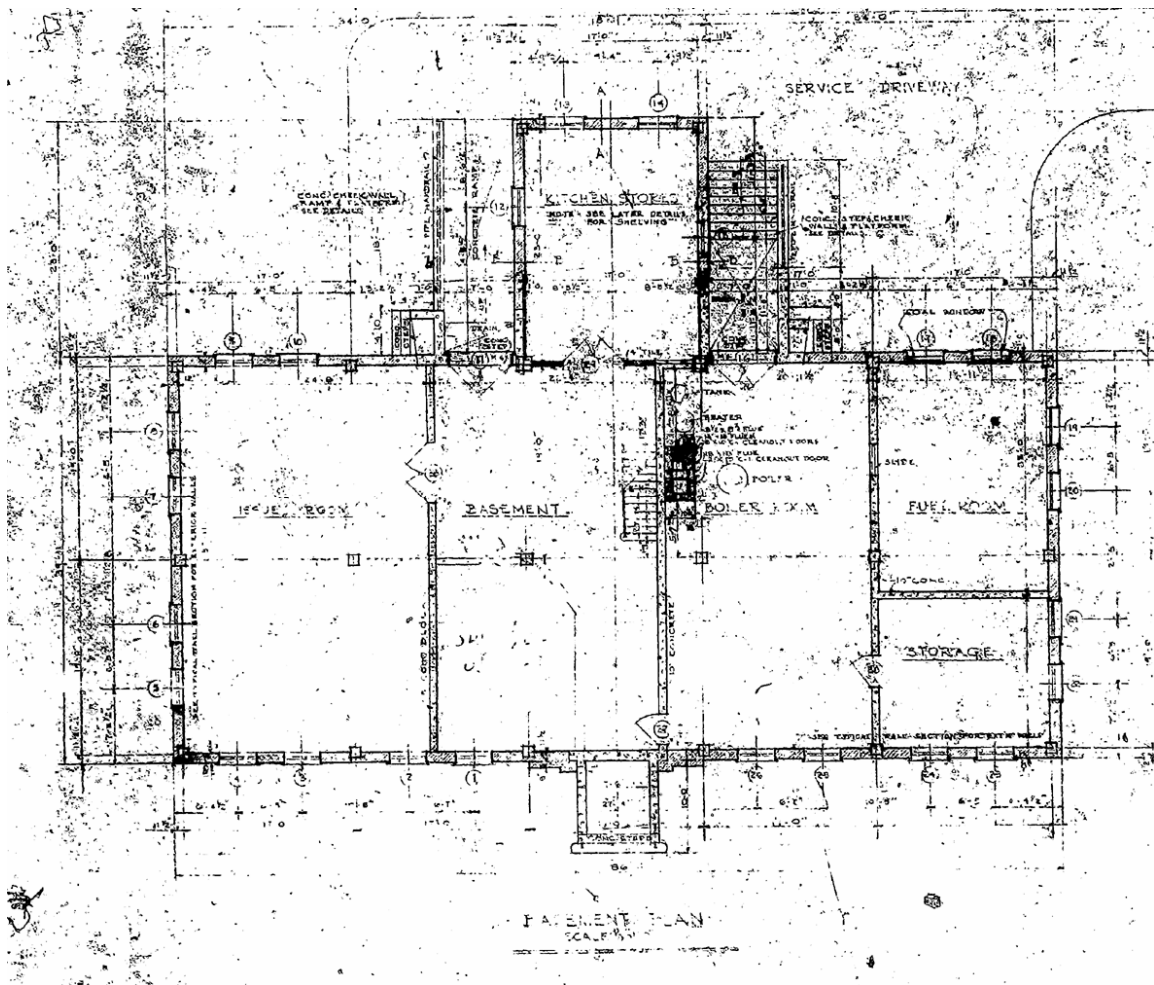


# BUILDING 1, FORT TILDEN - DRAFT HISTORIC STRUCTURES REPORT

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**Figure 1.11**  
Scanned image of the original  
basement floor plan (NTS)  
from the W.P.A. dated 1938  
(DSC-TIC).

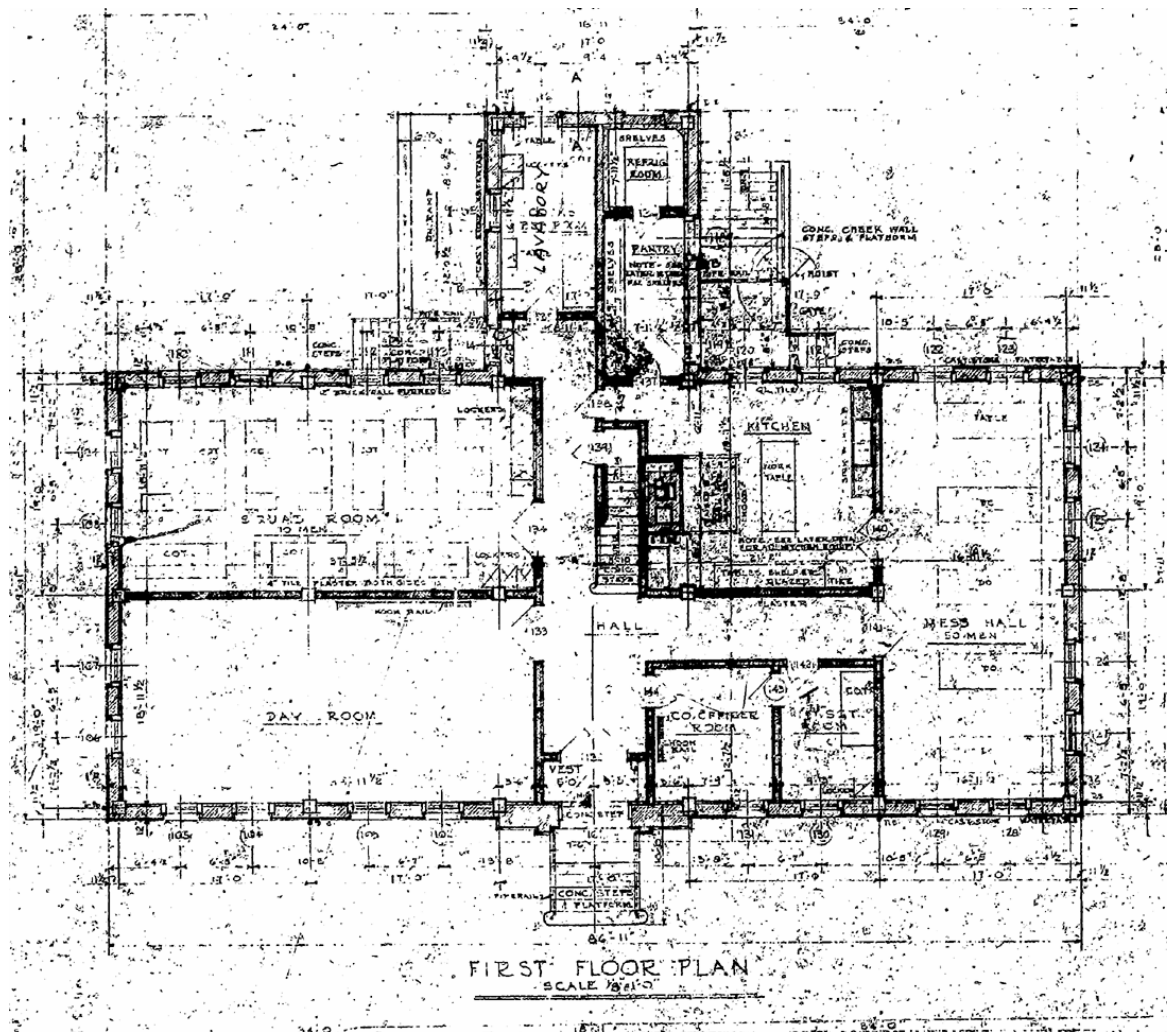


# BUILDING 1, FORT TILDEN - DRAFT HISTORIC STRUCTURES REPORT

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**Figure 1.12**  
Scanned image of the original  
first floor plan (NTS) from the  
W.P.A. dated 1938 (DSC-  
TIC).



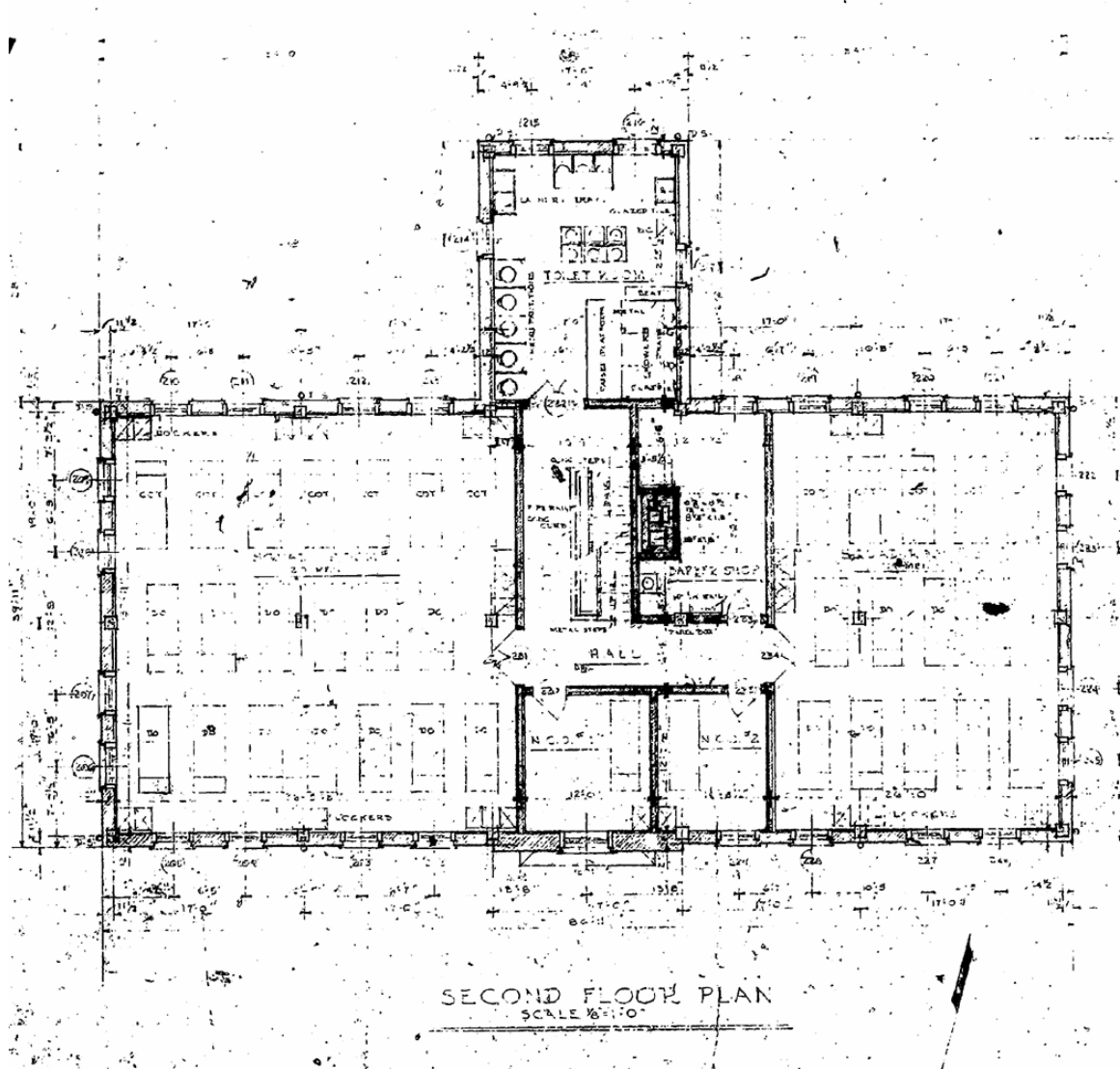
# BUILDING 1, FORT TILDEN - DRAFT HISTORIC STRUCTURES REPORT

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**Figure 1.13**

Scanned image of the original second floor plan (NTS) from the W.P.A. dated 1938 (DSC-TIC).



## **CHAPTER 2: CHRONOLOGY OF DEVELOPMENT AND USE**

### **Major Building Alterations**

As discussed in Chapter 1, Building 1 has been through several program and use changes since its construction in 1939. A number of changes are documented in written record and drawings. Other changes are evident in the layers of construction throughout the building.

1941

The known physical changes made to Building 1 when it transitioned from the New Detachment Barracks to the Post Hospital are documented in a drawing titled “Fort Tilden - Proposed \_\_\_\_\_ For Conversion \_\_\_\_\_ Barracks” (The original document is damaged and the complete drawing title is not legible. Refer to Appendix D). Alterations during this period included changes to the southern wing at the back of the building in the basement (Figure 2.1) and the first floor (Figure 2.2). The work identified in these documents was verified during field survey.

The eastern window on the back wing is noted on the Conversion First Floor Plan (Figure 2.2) with the following instructions, “Remove existing window frame, trim, etc.; brick up opening to match existing conditions...”. This change is visible in the current building. The western opening never held a window, rather the opening was filled with brick during construction, and the eastern window opening was made to match in 1941. Figure 2.3 is a detail of the existing north elevation of the back wing; both windows are bricked in.

The Conversion First Floor Plan (Figure 2.2) illustrates that the existing lavatory was divided into a lavatory and shower for the transition to Post Hospital. At this time all fixtures that were to be in the lavatory as shown on the drawing have been removed. The shower room partition still exists and shower heads, located on the outside wall, are visible. The shower room is now used as storage. Refer to Figure 2.4.

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There is a note on the Conversion First Floor Plan (Figure 2.2) to, "Install Wash Basins as shown in same location on Second Floor." If these wash basins were installed in this location, they are not currently visible and destructive testing would be necessary to confirm that they were installed. Refer to Figure 2.5.

On the Basement Conversion Plan (Figure 2.1) the southern wing shows significant changes. The plan illustrates the conversion of the "Kitchen Stores," as noted on the original construction floor plan, to a women's water closet, a men's water closet, men's and women's dressing rooms, and closet. This work involved relocating doors, installing new light fixtures, and building shelving. Evidence of these partitions is visible today, although it appears that the some partitions were not installed as originally planned. Figures 2.6-2.8 illustrate the current conditions. The door to the women's water closet is not located as shown on the plan in Figure 2.1. Figure 2.8 shows that the location of the women's water closet door partition is not as drawn on the conversion plan. Rather than locating it in a north/south alignment with the men's water closet/drawing room partition, the partition was built perpendicular to the walls dividing the space, approximate 4' from the back wall of the men's water closet.

The basement conversion plan also notes the addition of 6" wide rectangular wall tile and shelving to the storage room. The original boiler room was also to be divided in order to include a store room. This partition was constructed but not as drawn on the conversion plan. Rather than entering from a door centered on the new partition the entrance remains on the east wall. The partition jogs to allow for the entrance of the existing storage room to remain the same. Refer to Figure 2.9.

ca.1970s

The 1980 Historic Structures Report states, "Building No. 1 is a large permanent brick structure which served several building purposes at different periods: first, it was built to be used as an enlisted men's' barracks; later it was converted to serve as a hospital annex; and finally it was used as a headquarters."<sup>1</sup> There is no documentation of physical changes made when it became the Army headquarters or when the property was transferred to the NPS, but after surveying the building clear evidence exists to show that there was significant renovation in the late twentieth century. In fact it appears that the entire building was renovated and then later additional subdivision of space occurred. The major renovation occurred when Building 1 became a NPS property. Long-time NPS staff has

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<sup>1</sup> 1980 Historic Structures Report, p. 116.

# BUILDING 1, FORT TILDEN - DRAFT HISTORIC STRUCTURES REPORT

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anecdotally confirmed that the alterations were done as part of the initial NSP occupancy of the building for offices.<sup>2</sup> Further research for this project may confirm the actual dates of modern alterations.

These two episodes of renovation are illustrated in current photographs attached.

The first renovation probably included the following changes:

- The installation of a suspended acoustical tile ceiling.
  - The installation of pre-finished plywood paneling.
- When this paneling was installed the exterior wall was furred out, radiators were enclosed and window sills were extended. The depths the fur-out varies from seven to twelve inches and is found throughout the building.

The suspended ceilings and wood paneling are found throughout the first and second floor of the building. It appears that when large rooms were subdivided for offices the original plaster walls were furred out and paneling applied concealing the historic fabric. Figure 2.10 shows a space that has both the dropped ceiling and plywood paneling on the walls.

Evidence of the further subdivision of space is hypothesized from details in the building construction. In previously open spaces partitions are built up to the suspended acoustical ceiling; this indicates that the partition was installed after the suspended ceiling was installed. In Figure 2.11 the painted wall on the left side of the image only extends to the underside of the dropped ceiling.

During these two episodes of renovation the spatial layout of the second floor changed significantly. Both original squad rooms were subdivided. The eastern squad room was divided into four private offices, a meeting room, and an open office area. The western squad room was divided into a large open office space, a private office and another meeting room. The toilet room on second floor was also subdivided and the period finishes and fixtures concealed.

### Miscellaneous Alterations

There are miscellaneous alterations to Building 1 that were discovered during survey. These changes were exposed because the existing building does not match the original construction documents. The date of the work is unknown. While it is possible that alterations were made after construction, the

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<sup>2</sup> Communication from Barbara Judy, GATE historical architect, to QUINN EVANS | ARCHITECTS, April 10, 2007.



# BUILDING 1, FORT TILDEN - DRAFT HISTORIC STRUCTURES REPORT

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original construction did not match the construction documents, or were part of the renovations discussed previously in Chapter 2, further investigation and destructive testing is needed to understand the chronology of each of the following miscellaneous alterations.

One example of this on the east side of the first floor is at the entrance to the mess hall. The first floor plan from DSC shows that there are double doors into this space. A photograph of the existing condition is found in Figure 2.12. The existing transom and door frame appear to date from the original construction, located approximately 4' west of the plan location. There is also a pair of modern double doors in the location indicated on the historic plan. There are several explanations to this configuration: a) two sets of double doors were installed to provide an entry vestibule into the mess hall and one set has now been removed, b) the transom was relocated from its original location at some point, or c) the doors were never installed as originally drawn but rather where the transom and door frame are currently located.

Refer to Figure 2.13-2.15 to see a list of identified miscellaneous alterations on each floor. This graphic identifies key discrepancies between the structure as it exists today and the 1938 construction documents/1941 alterations including the miscellaneous alterations and changes made when the NPS took control of the building. No documentation of the alterations illustrated was identified during this study.

January 1995 - Entry Door Replacement

In January 1995 a memorandum was prepared by the park architect recommending that the entry doors (at the front and side entrances) to Building 1, Fort Tilden be replaced and the original transom, trim, masonry openings be preserved. As seen in a 1952 photograph, the original stile-and-rail doors had a divided lite upper panel with a solid lower door with vertically proportioned raised panels. This memorandum outlined options and suggestions for undertaking this work. It includes images of the doors dating from late 1994. This work was complete in 2002 by the NPS. The modern non-contributing replacement panels are flush composite units with surface applied wood trims creating a square pattern.

2006-2007 – Roofing Repairs

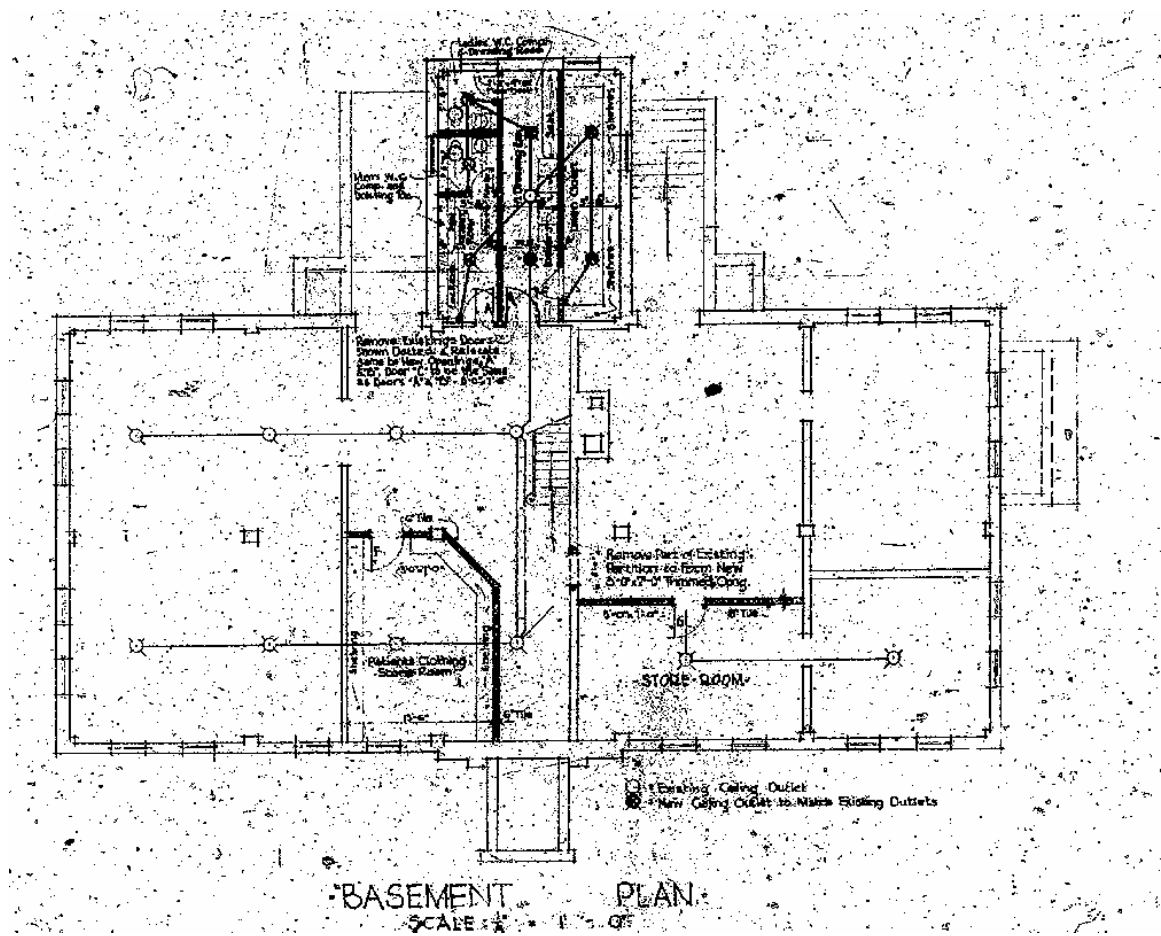
Currently the “Building 1 Roof Repair Project, Jamaica Bay Unit – Fort Tilden” is under contract to replace the valley flashing, replace chimney counter flashing, replace missing broken slate tiles, repair/replace copper gutters and downspouts, replace dormer windows, trim, and counter-flashing, repair wood eaves, and repaint all eaves.

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**Figure 2.1**  
Scanned image of the  
basement floor plan  
illustrating the proposed  
conversion from Detachment  
barracks to Post Hospital;  
this drawing is not dated  
(DSC-TIC).



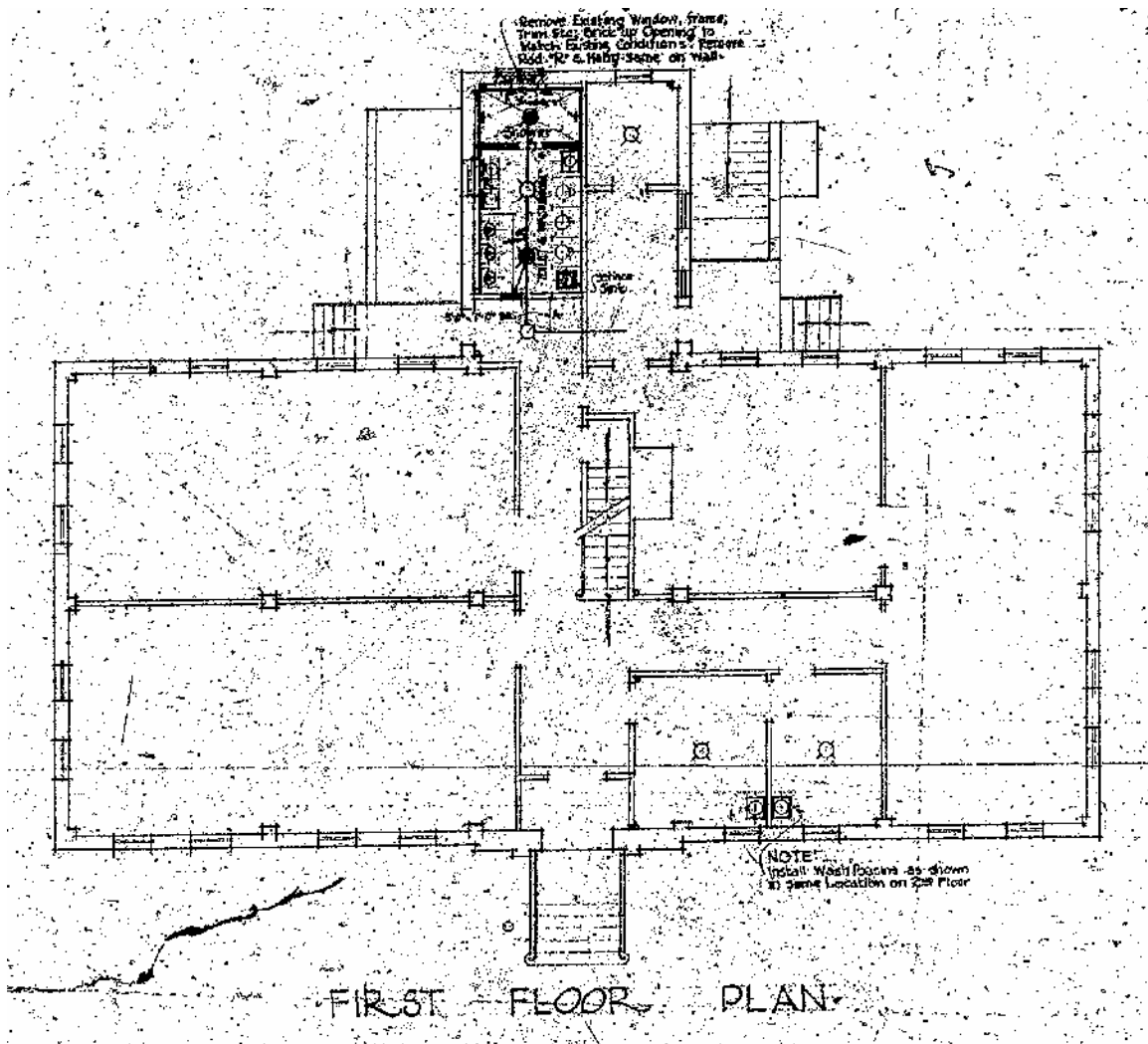
# BUILDING 1, FORT TILDEN - DRAFT HISTORIC STRUCTURES REPORT

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**Figure 2.2**

Scanned image of the first floor plan illustrating the proposed conversion from Detachment barracks to Post Hospital; this drawing is not dated (DSC-TIC).



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**Figure 2.3**

Detail of the South Elevation of Building 1. The arrow highlights the window that was in filled in 1941. Photo is dated November 2006 (QUINN EVANS | ARCHITECTS).



**Figure 2.4**

Photo of first floor shower room created during the 1941 post hospital conversion (Room # 109). The arrow highlights the visible shower head. Photo is dated November 2006 (QUINN EVANS | ARCHITECTS).



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**Figure 2.5**

Photo of second floor office, originally N.C.O. #1 Room (Room # 201). Documents show that originally there was a sink in this room; currently there is no evidence of such a fixture. Photo is dated November 2006 (QUINN EVANS | ARCHITECTS).



**Figure 2.6**

Photo of basement closet located in the back wing that was created during the Post Hospital conversion (Room # 008). Photo is dated November 2006 (QUINN EVANS | ARCHITECTS).





**Figure 2.7**

Photo taken in the basement men's dressing room of the men's water closet (beyond) with fixtures still remaining (Room # 008). Photo is dated November 2006 (QUINN EVANS | ARCHITECTS).



**Figure 2.8**

Photo taken in basement women's dressing room of women's water closet (beyond) with fixtures still remaining (Room # 008). Figure 2.7 shows that the location of the women's water closet door partition is not as drawn on the conversion plan. Refer to Figure 2.1. Photo is dated November 2006 (QUINN EVANS | ARCHITECTS).



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**Figure 2.9**

Photo of basement storage room within the original boiler room (Room # 002). Photo is dated November 2006 (QUINN EVANS | ARCHITECTS).



**Figure 2.10**

Photo of second floor office space on the west side of the building (Room # 203). This photo illustrates the suspended ceiling and plywood paneling installed ca. 1974. Photo is dated November 2006 (QUINN EVANS | ARCHITECTS).



# BUILDING 1, FORT TILDEN - DRAFT HISTORIC STRUCTURES REPORT

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### Figure 2.11

Photo of second floor office space on the east side of the building. The dropped ceiling and end wall paneling appear to have been installed first (Room # 214). Later drywall partitions on the left and right side appear to have been installed to further sub-divide the space. Photo is dated November 2006 (QUINN EVANS | ARCHITECTS).



### Figure 2.12

Photo of first floor double doors placed in a different location than shown on the original plans (Room # 102). Photo is dated November 2006 (QUINN EVANS | ARCHITECTS).





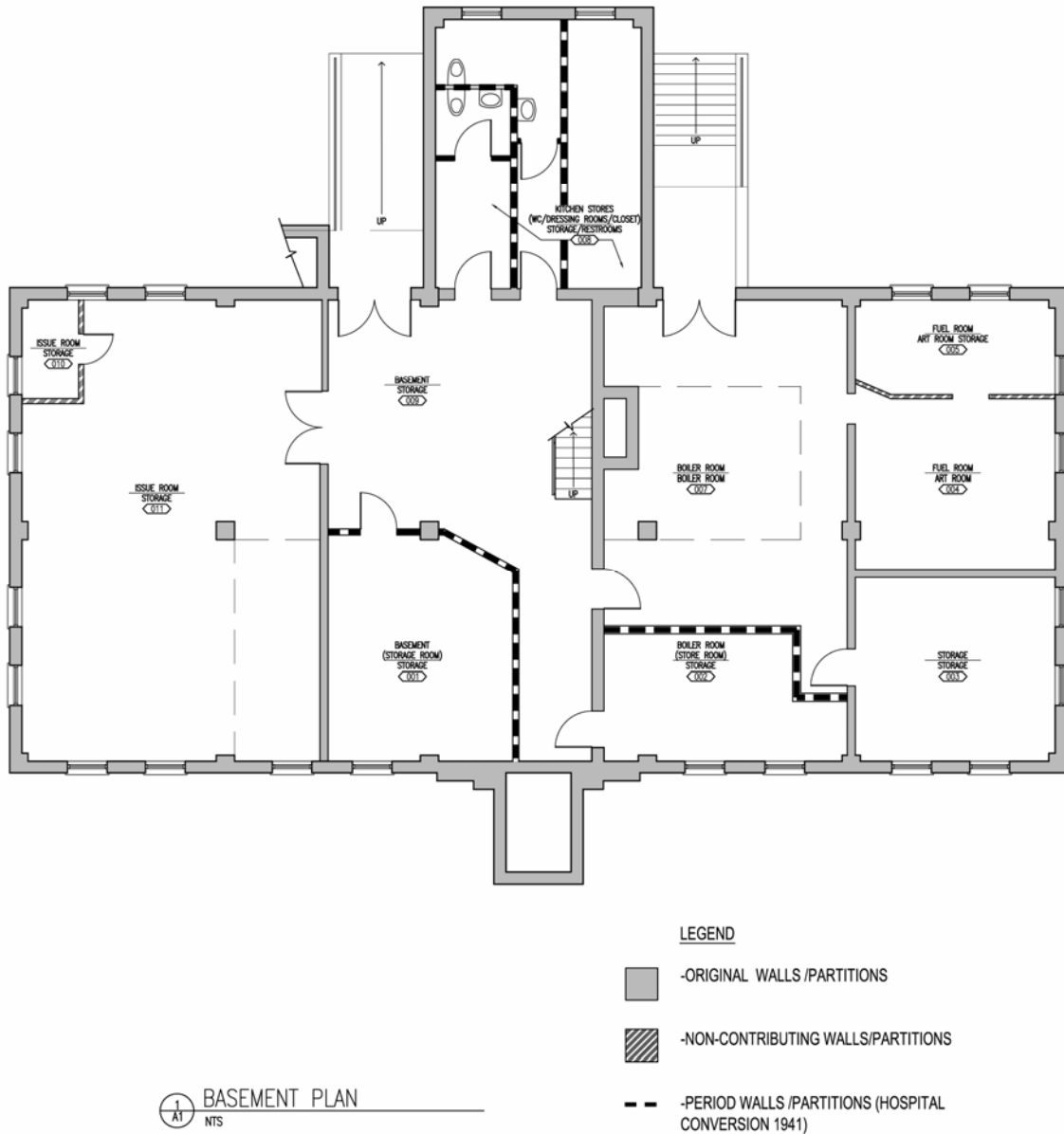
# BUILDING 1, FORT TILDEN - DRAFT HISTORIC STRUCTURES REPORT

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**Figure 2.13**

The following diagram of the basement highlights alterations made to the building; refer to legend for timeline of alterations.



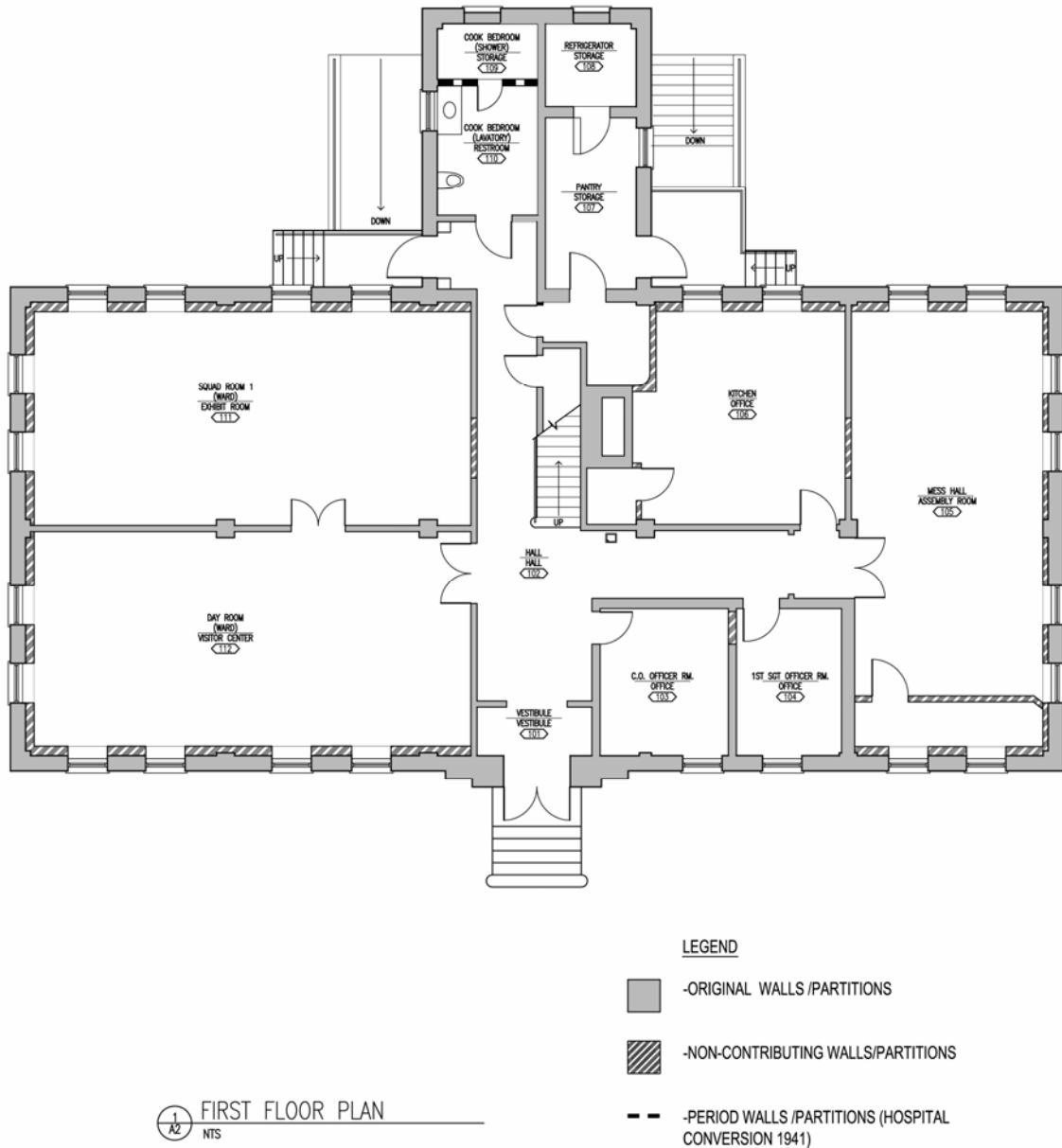
**BUILDING 1, FORT TILDEN - DRAFT HISTORIC STRUCTURES REPORT**

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**Figure 2.14**

The following diagram of the first floor highlight alterations made to the building; refer to legend for timeline of alterations.



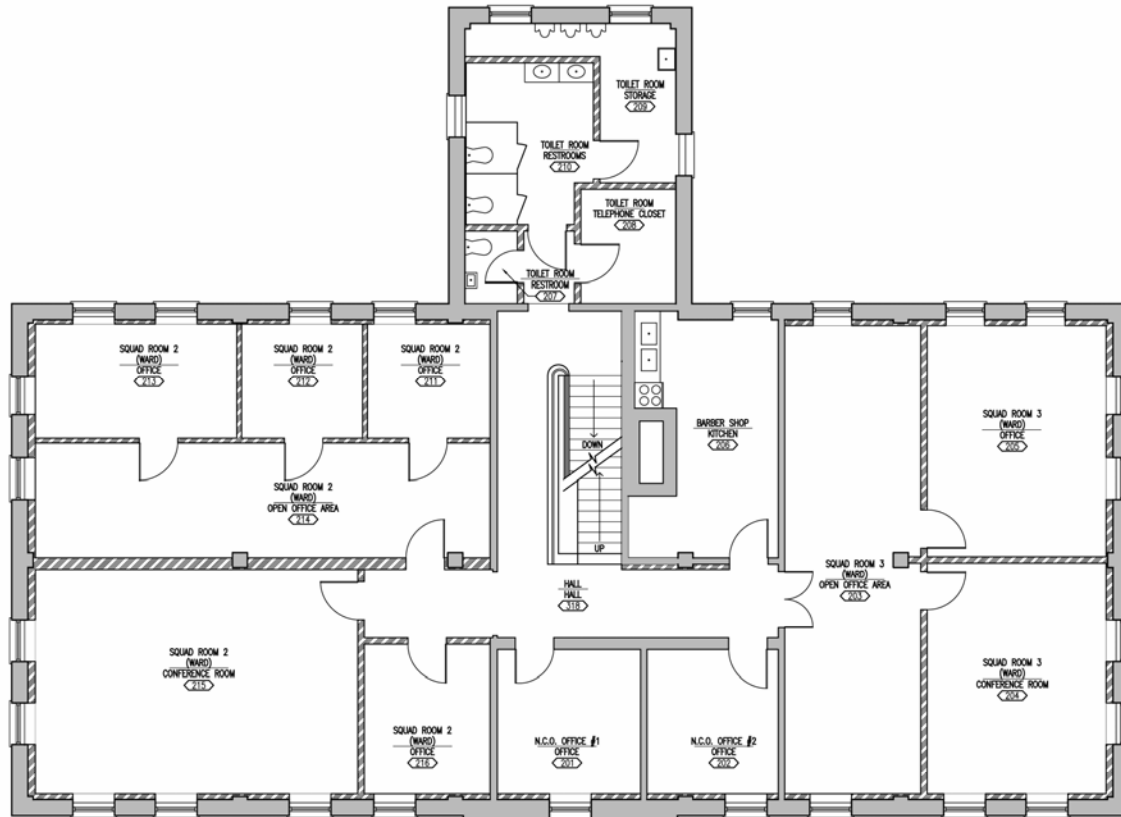
# BUILDING 1, FORT TILDEN - DRAFT HISTORIC STRUCTURES REPORT

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**Figure 2.15**

The following diagram of the second floor highlights alterations made to the building; refer to legend for timeline of alterations.



**LEGEND**

- ORIGINAL WALLS /PARTITIONS
- NON-CONTRIBUTING WALLS/PARTITIONS
- PERIOD WALLS /PARTITIONS (HOSPITAL CONVERSION 1941)

SECOND FLOOR PLAN  
NTS

## **CHAPTER 3: PHYSICAL DESCRIPTION AND CHARACTER-DEFINING FEATURES**

### **Character-Defining Features Definition**

The purpose of this chapter is to describe the building's character-defining features. Character-defining elements are the materials, features, finishes, and spaces that convey a property's historic and architectural significance. These elements "contribute" to the integrity of the original design and important later alterations. Character-defining features are the tangible elements that embody a property's significance.

Building 1's character-defining features are identified below. Treatments for these character-defining features are discussed in Chapter 5.

### **Significant Site and Building Features**

Building 1 is a two-story brick building with an attic and basement; the attic is unoccupied and unfinished. The building was designed in the Georgian Revival style. It has a T-plan and there is a central staircase connecting all levels. Building 1 is a simple, balanced building that is symmetrical in both plan and elevation. Refer to Figure 1.1. The first floor level is approximately four feet above grade.

On the following pages in this section is an inventory of significant features of this building. Evaluation of the current conditions of these features is provided in Chapter 4.

#### Site

The principal contributing site features that help define Building 1 is the formal parade ground to the north the building. When constructed the parade ground was bordered by buildings, and tree-lined roadways that created an area for military parades, gatherings, etc. The period tree-lined roadways and parade ground are extant. Refer to Figure 3.1, a 1997 aerial photo of the site.

#### Vegetation

The primary significant site features are the tree plantings and manicured turf setting of the grounds and approaches to

Building 1. Refer to Figure 3.2. These features survive from the period planting plan installed when Building 1 was first constructed. Other features, such as the columnar yew plantings at the building entry and the concrete bollards at road edges have disappeared.

Period Walkways and Roads

Period site improvements included concrete roads, walks and service yards. These period features survive, though Murray Road in front of Building 1 has received an asphalt overlay in recent years.

**Significant Exterior and Interior Building Features**

**Exterior**

The significant features of the exterior are numerous. Collectively, the features convey the intended Georgian Revival design, which retains a high degree of integrity. Important, character-defining elements are discussed in detail below.

Stucco

Portland cement stucco is used for the exterior finish in the pediment above the main entrance. Refer to Figure 3.5.

Masonry

The exterior building shell is a red brick laid in a common bond pattern, five stretcher courses between each header course, with a cast stone water table four feet above grade. Refer to Figure 3.6.

Building 1 also has a brick chimney that connects to the basement furnace. Refer to Figure 3.7.

At the back of the building over the eastern back entrance is evidence on the brick that there was a covering over the entrance at one time. Refer to Figure 3.8. No historic drawings or reports have been found documenting the installation or removal of the hypothesized covering.

Cast Stone

Building 1 has several character-defining cast stone features including cornerstone, window sills, and water table.

The building's cast stone cornerstone is located at the northeast corner of the building. Refer to Figure 3.9.

At the double-hung windows and the basement windows, there are projecting cast stone window sills with an integral drip. The profile varies slightly between the two window types. Refer to Figure 3.10.

The cast stone features, including the water table and window sills, have been painted. The integral color and textures of this concrete matrix would have been the intended period finish, not the current bright white. Refer to Figure 3.11.

Pointing

Most of the period white-grey mortar is intact, and only limited areas have been repointed. The period shallow concave tooling is also present.

Windows

*Nine-Over-Nine Double Hung Windows*

The type is found on the first and the second floors. This window is a nine-over-nine double-hung wood window. Wood framed insect screens were added to the exterior at some point. These frames are typically still in place; although in many locations aluminum storm windows have been attached to the window frame or insect screen frames. The storm windows are non-contributing. There are iron lintels above each window. Refer to Figure 3.12.

Figure 3.13 illustrates the two windows that have been replaced with modern aluminum frame double hung windows.

*Steel Hopper Windows*

Some of the basement window openings have their period steel hopper windows with wire glass. Glazing has been broken or replaced with new glass, other panes have plexi-glass as glazing replacement, and others have no period glazing remaining. Refer to Figure 3.14. The basement windows have iron security guards; these may be period but are not original to the building. Refer to Figures 1.2 and 1.2; the security guards were not yet installed in these period photographs.

*Six Lite Casement Window*

A small 6-pane casement window is located on the north side of the attic in the pediment above the main entrance. This window is now covered by a double hung storm window. Refer to Figure 3.15.

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Dormers	<p><i>Dormer Windows</i></p> <p>The fourth window type is currently undergoing replacement. These are the windows located in the dormers on the south side of the roof. These six-over-six divided light double hung windows, similar to the primary windows, just smaller in proportions. Figure 3.16 illustrates the replacement windows recently installed.</p>
Roofing	<p>Building 1 has a hipped roof with “Bangor” slate tiles, two dormer windows, and a cross gable at the front. The dormers are sided with slate tiles as well. Refer to Figure 3.17.</p>
Wood Eave	<p>Building 1 has a significant wood eave built from an assembly of profiled and flat millwork. Refer to Figure 3.18. The eave detail adorns not only the roof edge but the main entry and the cross gable pediment.</p>
Copper Elements	<p>The copper elements of the building are notable character-defining features; these include copper gutters, conductor, and downspout system. Refer to Figure 3.19.</p>
Entries, Entrance Steps and Railings	<p>The main entrance to the building is largely intact. It is defined by a pair of double doors (non-period), a period round-headed divided light transom window, brick quoin and voussoir detailing, cast stone keystone, cast stone entablature and a built-up wooden cornice. The entrance has painted concrete steps and landing with period black wrought iron decorative railings. The entry was changed from its period appearance when the doors were exchanged for modern replacements and the transom was altered. Refer to Figure 3.3 and 3.3a for a current and period image of the entry.</p> <p>There are two back entrances that mirror each other. They are located in corners where the south wall intersects the back wing. These entries consist of single modern doors, a period six-pane divided light transom window, period door frame, concrete steps and landing with round iron railing. Refer to Figure 3.4.</p>
Miscellaneous Features	<p>A notable character-defining feature is the pair of period iron coal chute covers for two basement windows. Refer to Figure 3.20.</p>
Non-Contributing Conditions	<p>The exterior lighting is neither period nor appears to be significant in its own right, is not contributing, and is viewed as an intrusion. The type of sodium-halide lighting does not complement the character of Building 1. Refer to Figure 3.21 for an example of the existing exterior lighting.</p>

**Interior**

The designed character of the interior of the Building 1 was quite modest. Over the years many of the period features have been concealed by additive alterations or removed.

Additive alterations in Building 1 are those changes made to the interior of the building that did not require removal of period features and partitions. Typically these changes are subdivisions of existing spaces or the addition of materials over period elements. If the additive alterations are not historically or architecturally significant, the changes are “reversible.” Removal of these additive features could be undertaken to return a space to its basic original configuration or appearance.

Other alterations in Building 1 have resulted in the loss of period features and materials, such as doors, partitions, etc. The degree to which these changes have altered the building’s integrity varies.

**First Floor Plan Configuration and Spatial Character**

On the first floor, the original plan configuration is largely intact and is character-defining.

To the east of the main corridor historically housed a “Day Room,” (Room 112), and a “Squad Room” (Room 111). Figures 3.22 and 3.23 illustrate these spaces. Originally the Squad Room was accessed via double doors from the central hallway, but these doors have been removed and closed in. Today Room 111 is accessed from Room 112 through non-period doors that were a later alteration.

West of the center corridor, the first floor historically housed the “Kitchen” (Room 106), two NCO offices/bunk rooms (Rooms 103 and 104), and the “Mess Hall,” (Room 105). The plan configuration of these spaces is intact. An audio-visual closet has been added to the north end of the former mess hall, and the original door from the mess hall into the former kitchen has been removed and the wall closed.

The plan configuration of the south wing off the central corridor is also intact. This area historically housed a “Lavatory,” (Rooms 109 and 110), “Pantry” (Room 107), and “Refrigerator Room” (Room 108). Figure 3.24 illustrates Rooms 107 and 108.

Almost all of the spaces on the first floor (except the bathrooms and storage rooms, were characterized by plaster wall finishes and plastered ceilings with surface mounted lighting. The addition of plywood paneling to most partitions and perimeter walls and the addition of suspended ceilings have altered the original character of these spaces. Removal of these later



intrusive alterations would enable the concealed features to be returned, and the period spatial volumes and character could be fully recovered. In essence, the nature of the intrusions means the spatial character has not been permanently lost, but is concealed by additive alterations.

First floor spaces that are more sensitive to change include the overall circulation zones that are intact as well as the major interior spaces, which include the former Mess Hall (Room 105), Squad Room (Room 111), and Day Room (Room 112).

Second Floor Plan  
Configuration and Spatial  
Character

On the second floor, the original plan configuration is largely intact and the circulation core is unaltered. Because the circulation core is unaltered and because the period plan could easily be recovered by removal of additive alterations, the plan configuration should be viewed as character-defining.

East of the main corridor was originally a large Squad Room, or bunk room, for 21 soldiers. Originally one large room with windows on three walls, the spatial character in this location has been altered through the subdivision of the space into offices (Figure 3.25). The double doors leading into this room from the hallway have been removed, and the opening has been closed.

The plan configuration of the historic spaces immediately west of the central hallway on the second floor is intact. South of the corridor was originally a “Barbor Shop,” which today is a kitchen (Room 206). North of the corridor historically had two “NCO” rooms, now offices (Rooms 201 and 202), and these rooms are intact in plan. West of these rooms was another “Squad Room” for 15 soldiers. This space has been subdivided and now forms offices (Rooms 202, 204), and conference room (Room 205).

In the south wing on the second floor, partitions have been added over the years that changed this historic toilet/shower room into toilets (Room 207 and 210), a telephone closet (Room 208), and a storage space (Room 209).

Like the first floor spaces, the second floor spaces have been altered from their historic appearance. Almost all of the spaces were characterized by plaster wall finishes and plastered ceilings with surface mounted lighting. The addition of plywood paneling to most partitions and perimeter walls, the installation of suspended ceilings, and the addition of new partitions (subdivision) has altered the original character of these spaces. Removal of these later intrusive alterations would enable the concealed features to be returned, and the period spatial volumes and character could be recovered. In essence, the nature of the

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intrusions means the spatial character has not been permanently lost, but is concealed by additive alterations.

Second floor spaces that are more sensitive to change include the original Squad Rooms (Squad Room 2 and Squad Room 3), where an open volume character would be most appropriate. The second floor corridor circulation configuration and stairs should also be maintained and not changed.

### Basement Plan Configuration and Spatial Character

In the basement, almost the entire period plan configuration is intact and unchanged since 1941. A small storage room has been added in the southeast corner of Room 001, and the partition between the Art Room (Room 004) and Art Room Storage (Room 005) is not original. Alterations made in 1941 to the south basement wing are intact, but these spaces are not significant enough to state that they couldn't be changed. All basement spaces are of a modest character, and almost any changes would be acceptable as part of a rehabilitation project.

### Attic Plan Configuration and Spatial Character

The attic was originally unfinished and remains so today. This space retains its period finishes and spatial character. The attic includes a concrete floor and ceilings that are exposed rafters with wood plank decking. Structural wood columns and a wood ridge beam also characterize the attic space Figure 3.26.

Although the attic is less important than the occupied spaces on the first and second floor, the attic space should be maintained in an open configuration to the greatest extent possible. Period features such as the structural wood columns should not be concealed.

### Flooring

The finished flooring for most of Building 1 appears to have been bare concrete. It may have been painted. In most rooms the period floor finish has been concealed by the addition of vinyl composition tile flooring.

### Interior Partitions Walls

It is assumed from sound testing and analysis existing historic drawings that the typical period construction of the interior partitions was hollow clay tile although no destructive testing has occurred to confirm this. The room partitions had a plaster finish or wall tile. Currently in most rooms the plaster has been concealed with a modern paneling system.

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Glazed Terra Cotta Tile	<p>The period wall tile is visible in certain locations. The tile is rectangular, approximately 4" x 6", with a glossy white finish. The drawings identify this as salt glazed terra-cotta tile. Field survey confirmed it was originally in the refrigeration room on the first floor, the passageway to the kitchen from the pantry, and the toilet room on the second floor. The original kitchen (Room 106) has glazed terra cotta tile, portions of which are most likely obscured by modern furring. The tile is visible in a closet that was added much later in this room. Refer to Figure 3.27 and 3.28.</p>
Doors and Door Hardware	<p>Typically, the period doors have been replaced with modern doors, although many period interior door frames and transoms remain. The period frames and transoms are metal and have several layers of paint. Refer to Figure 3.29.</p> <p>The Building Completion Report indicates that some kalamein doors were purchased. Kalamein door construction, a pre-cursor to modern fire-rated doors, was a wood framed door sheathed in metal. Two of these period metal doors appear to remain, one in the basement, the other as the access door to the attic. Refer to Figures 3.30 and 3.31, respectively.</p> <p>These two doors have the only remaining period hardware. Refer to Figure 3.32 for the hardware for the attic door (Figure 3.31). The hardware is period oil rubbed bronze assembly, knob in escutcheon.</p> <p>The only information currently available regarding the original design intent of the interior doors can be based on the earliest historic drawings from 1930, which included elevations of the doors in the door schedule; refer to Figure 3.33 and 3.34.</p>
Stairs and Railing	<p>The period concrete stairs and metal railings between the basement, first and second floors, and the metal ships ladder to the attic remain. Refer to Figure 3.35. These elements provide an example of the functional, modest nature of the building.</p>
Ceilings	<p>The designed ceiling was plaster on concrete. In most rooms this ceiling has been concealed with a suspended acoustical ceiling tile system, but it is assumed that the designed ceiling finishes are intact in most spaces. Refer to Figure 3.36.</p>
Wood Trim and Baseboards	<p>Some of the interior spaces retain their wood baseboard (often concealed behind furred-out perimeter walls). Most windows in the building also retain their period wood casing and stools.</p>

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Non-Contributing Conditions      The existing lighting, pre-finished plywood paneling and associated furred out framing, and most interior doors are not original and are not sympathetic changes to the buildings overall character.

**Figure 3.1**

Aerial photo of cantonment area. The “Defense Area” is out of view. Photo is dated 1997. (NPS)

Rockaway Beach  
Boulevard

Cantonment Area

Parade Ground

Building 1



**Figure 3.2**

These London Plane (Sycamore) trees are part of the period plantings. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 3.3**

The main entrance is a significant character-defining feature. The entrance includes brick quoins, a cast stone entablature, cast stone key stones, and a decorative wood cornice. Panel doors are replacements, but the transom above the infill panel appears to be original. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)





**Figure 3.3a**

Under magnification, this photograph from the GATE Museum Collection, dated 1952, may show that the original entrance doors were similar to Type 7 in Figure 3.34. (GATE Museum Collection)



**Figure 3.4**

An image of the western rear entrance. The transom window, railing, concrete steps and landing are original features. The windows and door in this image are modern non-contributing elements; the wood shed is temporary protection for the construction project underway. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 3.5**

The exterior portico is finished with textured Portland cement stucco that is most likely original. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 3.6**

Photo detail of typical brick and mortar at Building 1. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)





**Figure 3.7**

Photo of brick chimney. Photo is dated November 2006.

(QUINN EVANS | ARCHITECTS)



**Figure 3.8**

Photo of eastern rear entrance, showing evidence that at one point a something, perhaps an awning/shed roof, was attached to the brick. Photo is dated November 2006.

(QUINN EVANS | ARCHITECTS)



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### Figure 3.9

Photo detail of cornerstone of Building 1 located on the east side of the north elevation. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



### Figure 3.10

Photo of the cast stone sill with integral drip; the cast stone was originally unpainted. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 3.11**

Photo of the cast stone water table. The cast stone features (water table and window sills) have been painted. The integral color of the concrete matrix would have been the intended period finish. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 3.12**

Typical historic nine-over-nine double hung wood window without the modern exterior storm window that is commonly found on Building 1. The steel lintel is also visible. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)





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**Figure 3.13**

Photo of western corner of Building 1. Windows that have been replaced with a non-contributing and incompatible aluminum sash are circled. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 3.14**

Example of typical period basement window, which includes the steel frame, glazing, sill and iron security bars. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



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**Figure 3.15**

Detail of period attic casement window on north elevation. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 3.16**

Detail of rear elevation dormer. A new sash to match the period window design has been installed; complete rehabilitation of dormer in progress. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



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### Figure 3.17

Detail of slate roof. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



### Figure 3.18

Detail of original building eave assembly taken during recent roof repair project. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)





**Figure 3.19**

Detail of downspout and conductor head, which is most likely original. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 3.20**

Detail of period metal coal chute cover on the building's northeast corner. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



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**Figure 3.21**

The current exterior lighting is not period, and is incompatible with the period character of the building. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 3.22**

Room 111 looking east. This exhibit room was originally a “Squad Room” for 21 soldiers. Suspended ceilings have obscured the original room volume. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)





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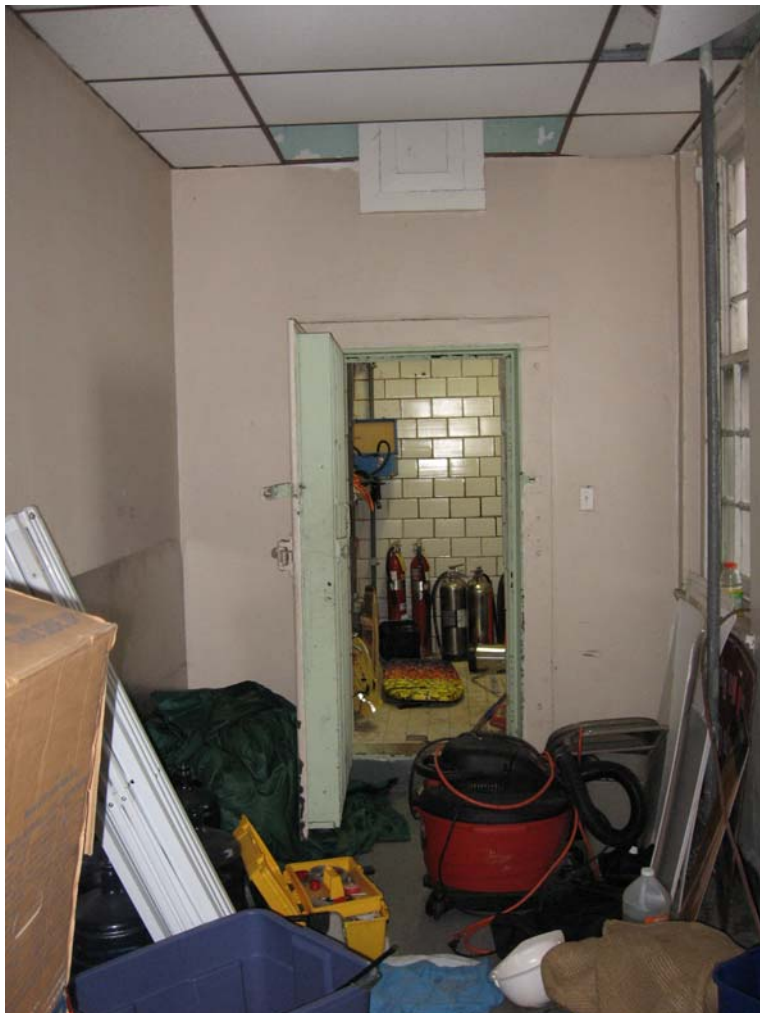
**Figure 3.23**

Room 112 looking west. This space was originally designated as the “Day Room.” Visible is the original door opening into the hallway, and the non-period doors added into the former squad room. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 3.24**

View of the former pantry looking into the former and period refrigeration room. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 3.25**

View of Room 214 looking east. This view shows a part of the former Squad Room that has been subdivided over the years into a series of offices. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 3.26**

This view shows one of the two wood columns and the wood ridge beam in the attic. The attic's spatial character is unchanged from its period appearance. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 3.27**

This photo shows the space between the existing modern lavatory partition (wood framed at left) and the period back wall of the lavatory space (glazed terra cotta wall tile). Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 3.28**

The period refrigerator is a specialty construction element that contributes to the character of the interior. It is defined by the glazed terra cotta tile and original door. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)





**Figure 3.29**

Typical, period metal door frame and metal transom with the non-contributing flush wood door. The transoms are hoppers and could be opened for ventilation. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 3.30**

Photo of period kalamein door located in the basement. Kalamein doors wood doors wrapped in metal. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 3.31**

Detail photo of period kalamein door located at the top of the steel ship's ladder to the attic. The original hinges and closer are also visible in this photo. Photo is dated February 2007. (NPS, Barbara Judy)



**Figure 3.32**

Photo of period door hardware located on the door accessing the attic. Additional hardware elements on this door are visible in Figure 3.31. Photo is dated February 2007. (NPS, Barbara Judy)



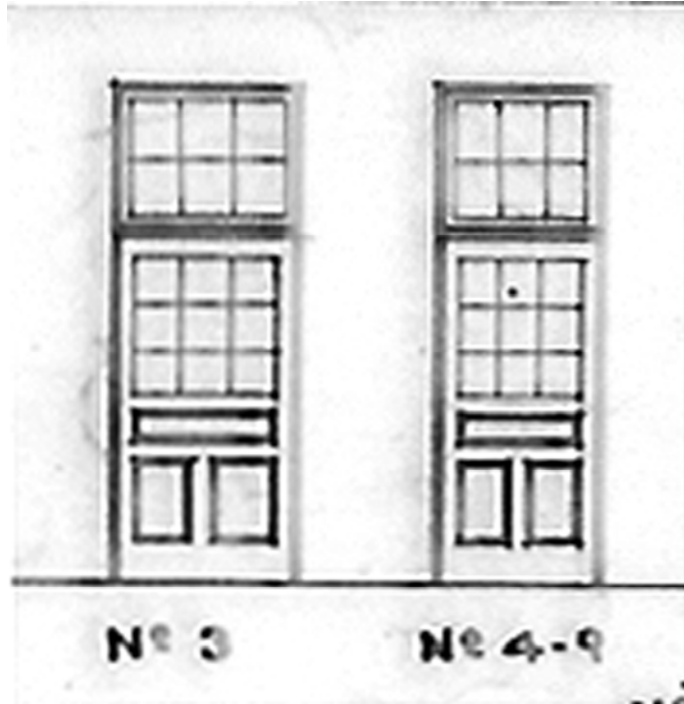
# BUILDING 1, FORT TILDEN - DRAFT HISTORIC STRUCTURES REPORT

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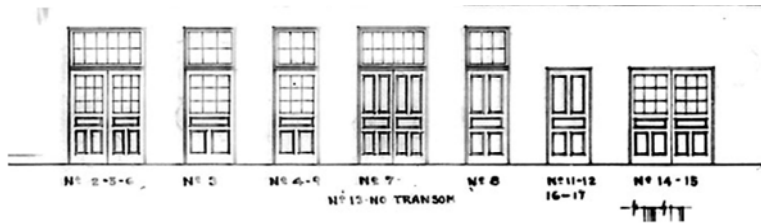
**Figure 3.33**

Door Elevation Details from Sheet Number 621-850, dated December 20, 1930. This drawing was prepared by the Office of the Quartermaster General prior the WPA involvement in the project, but provides the original design intent of the interior doors (refer to Appendix C under the U.S. Army Corps of Engineers – Office of History for additional details).



**Figure 3.34**

Door Elevation Details from Sheet Number 621-850, dated December 20, 1930. This drawing was prepared by the Office of the Quartermaster General prior the WPA involvement in the project, but provides the original design intent of the interior doors (refer to Appendix C under the U.S. Army Corps of Engineers – Office of History for additional details).



**Figure 3.35**

Photo of concrete stairs, painted concrete curb, steel ships ladder and pipe railing; period features of the building. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 3.35**

Example of typical suspended ceiling found on the first and second floors. Pre-finished plywood paneling has also been added to the walls and columns. These features are non-contributing and are incompatible with the period character of the building. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



## **CHAPTER 4: CURRENT CONDITIONS ASSESSMENT**

### **Significant Exterior and Interior Building Features**

This chapter discusses the conditions of the significant exterior and interior building features from the period of significance (1938-1945). This chapter also reviews the conditions of other non-contributing features that are considered intrusions.

The following condition assessment criteria will be used for architectural elements: excellent, good, fair, and poor.

- *Excellent* is defined as elements that perform their original function and require no renewal or repair. Often these would be newly installed.
- *Good* is defined as elements that perform their original function and require only limited repair or renewal.
- *Fair* is defined as elements with only minor or limited areas of failure. Elements would require some repair or corrective action.
- *Poor* is defined as elements that only marginally function as originally intended. Deterioration or loss is significant and repair work, partial replacement, or full replacement is required.

### **Exterior**

Summary:

The overall condition of Building 1 is fair. The building is close to 70 years old and is located where it is affected by weather that is occasionally harsh. Major significant features are in good to fair condition. There is some biological growth on parts of the masonry, and some localized masonry deterioration is evident at many of the window lintels. The current roof condition is poor, but this deficiency is being addressed by a current roof repair project.

Outlined below is the current condition of the major exterior and interior elements of the building.



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Stucco	<p>The Portland cement stucco in the attic pediment above the main entrance appears to be in fair condition. Observation from the ground with binoculars did not reveal significant damage to this building element. It is possible that minor repairs are needed to the stucco in this location.</p>
Cast Stone	<p>The Building's cast stone elements are in good condition. All cast stone has been painted, covering the period exposed finish.</p>
Masonry	<p>The exterior brick walls are in fair condition. There is some efflorescence on the front of the building near the main entrance. A few areas on the building also exhibit some biological growth. Refer to Figure 4.3. Typically it is found below the water table where the brick meets grade (possibly the result of water ponding) and at certain locations on the façade that are missing gutters. At these locations, water has been washing down the façade for many years, and with limited amounts of direct light, biological growth has grown. Refer to Figure 4.4.</p> <p>Step cracking in the brick is visible in a number of locations around the building. The cracking is visible on all sides of the building. This cracking is typically associated with the window heads. The window lintels are steel, and most are corroded to varying degrees. The rust has caused the steel to expand and caused cracking in the brick. In a few locations, the expansion of the steel lintels has allowed water to infiltrate the façade and cause damage to the brick.</p>
Pointing	<p>The Portland cement mortar is generally in good condition. Few locations were observed with open joints and missing mortar. Inappropriate replacement pointing was not observed.</p> <p>Cracking in some locations has created open joints and a few masonry cracks in excess of 1/4 inch. No significant out-of-plane movement of the brick masonry was observed, but a probe of the typical masonry cracking condition is recommended to confirm that the masonry is not a structural concern. Refer to Figure 4.5 and 4.6.</p>
Windows	<p><i>Nine-Over-Nine Double Hung Windows</i></p> <p>Most of the nine-over-nine wood windows are in fair condition. Paint is peeling or missing from most of the windows. Most sashes have missing or deteriorated glazing putty. Many of the windows have damaged or missing sash cords and pulleys. Additionally, a few windows have panes of glass missing. Refer</p>

to Figure 4.7.

A variety of non-historic screens and storm windows are used throughout the building. Refer to Figure 4.8.

#### *Steel Hopper Windows*

The basement level steel hopper windows are in poor condition. In some windows glazing has been broken or replaced with new glass, other panes have plexi-glass as a glazing replacement, and others don't have any glazing remaining. Some of these windows are painted shut, while others are no longer operational due to significant corrosion and wracking. Most of the steel frames are painted and the paint is failing. Racking may also be a problem with a few of these windows. Refer to Figure 4.9.

#### *Wood Casement Window*

The attic-level casement window on the north elevation is also in fair condition. The frame appears to be deteriorating from water damage, and the window has peeling paint. Refer to Figure 4.10.

#### *Dormer Windows*

The dormer windows on the south elevation are in excellent condition. The windows have recently been replaced with double-hung six-over-six windows to match the period sash configuration. The entire dormer assembly is also undergoing a complete rehabilitation to repair and replace siding, framing, trim, and flashing. Refer to Figure 4.11.

### Roofing

There is currently a project underway to repair the roof, which was in poor condition. At the time of survey the immediate need for roof repairs was evident. The slate was in poor condition. Some of the shingles had become dislodged, some were cracked and spalling, and others were missing. Refer to Figure 4.12.

The missing tiles created holes in the roof that was allowing water to penetrate and birds and animals to nest and live in the attic space. The roof is wood framed and the damage caused by holes includes mold, mildew and rot, to the framing. Refer to Figure 4.13. Because the attic floor slab is concrete, deterioration to the interior from roof leaks has been more limited than if the attic floor framing had been wood.

Existing copper roof flashing is in poor condition and requires replacement.

Following the completion of the roof project, the roof will be in excellent condition and will be watertight.

Wood Eave

The wood eave was in poor condition at the time of survey. Refer to Figure 4.14. As part of the roofing project mentioned above, the severely deteriorated sections of the eave are being replaced in kind to match the period eave sections that are in salvageable condition. Refer to Figure 4.15. The replacement eave will be painted to match the crème color that is based on paint color investigation conducted by the NPS staff recently. Refer to Figure 4.16.

Copper Elements

The period copper rain leaders and down spouts are in serious disrepair. Many sections of the copper are missing and several down spouts have fallen down. Refer to Figure 4.17. With these critical pieces missing, rain and any other precipitation was causing additional damage to building because the water was not properly being removed from the roof. Without a proper drainage system, water is washing over the edge of roof and down the side of the building where rain leaders and/or downspouts are missing. This condition has caused damage to the both the wood eave and the brick walls. Refer to Figure 4.18. These poor conditions are being fully addressed as part of the roof repair project currently underway.

Entrance Steps and Railing

The front (main) entrance is in good condition. The period concrete steps are in good condition, and the wrought iron railings vary in condition from good to fair. These steps have been painted gray, and this paint is peeling in some locations and missing in others. The wrought iron rails are painted black. Some paint is peeling on the railings, and in some locations, particularly at the railing base, there is corrosion present. Refer to Figure 4.1.

Both of entrance steps on the rear side of the building are in poor condition. The concrete steps in these locations exhibit spalling, cracking, and some biological growth. Reinforcement on the underside of the slab is exposed and corroded.

Portions of the rear entrance step handrails are period and some have been replaced to match the original design. At many locations they are not well attached, and there is corrosion and peeling paint. Refer to Figure 4.2.

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Miscellaneous Features            The iron coal chute covers are in good condition. During survey, QE|A was unable to determine if they continue to be operable, but there is some rust and minimal peeling paint. Refer to Figure 4.19.

Non-Contributing Conditions    The non-contributing existing exterior lighting is in fair condition. During the survey, QE|A was unable to determine if all fixtures were operable.

### **Interior**

The interior of the building has undergone considerably more change over the past 68 years than the exterior. The overall condition of Building 1's interior is poor when considering the condition of both period and modern features. The interior has not been well maintained, and little investment has been made to replace outdated or deteriorated building components.

Flooring                                Building 1's interior flooring was originally concrete. The floor slabs were concrete, poured with two-by-four foot formwork. This pattern of the formwork is visible in the basement. These slabs appear to be in good condition and structurally sound. Refer to Figure 4.20.

Most of the concrete floor has been concealed with 12" by 12" vinyl composition tile (VCT) that is non-contributing. The overall condition of the concrete flooring is good. However, the vinyl composition tile is generally in poor condition. Many tiles are cracked, missing, or loose. Tiles are generally quite worn. Refer to Figure 4.21.

In a few areas, later VCT is visible over another layer of 9" by 9" vinyl tile that is most likely vinyl asbestos tile (VAT).

Plaster Walls                         As discussed in Chapter 3, the period plaster walls in the occupied spaces of the first and second floor have been built-up or furred out and concealed with gypsum wall board, or pre-finished plywood paneling, both of which are non-contributing. Above the suspended ceiling the layers of alterations are visible in some locations; refer to Figure 4.22. The wall board was adhered directly to the plaster. Holes have been created to allow for wires and conduit to pass through. The wall board is loose and pulling away from the walls.

Plaster systems used on Building 1's interior vary. Ceilings are a skim coat plaster on the concrete floor structure. Plaster, on the interior partitions and perimeter walls, is most likely a two- or three-coat plaster system. Investigations are needed in a future phase to confirm the plaster system used, and to confirm that metal lath shown in the historic drawings was used for the

partitions and perimeter walls.

Without destructive testing, it was not possible to fully document the condition of the plaster walls. In some locations, the plaster was clearly in sound condition behind modern non-contributing overlays. However, some damaged and deteriorated plaster was observed, particularly at the perimeter walls where some water infiltration has occurred. The source of water infiltration varies from condensation, steam radiators, and window leaks. In these locations, the plaster visible through the furred out walls is flaking, bubbling, and, in some instances, completely disintegrated. Refer to Figure 4.23.

Glazed Terra Cotta Tile

The glazed terra cotta tile that remains in the first floor storage locker is in fair condition and has no evidence of any cracking or crazing. Refer to Figure 4.24.

Doors and Door Hardware

Almost all of the interior doors in Building 1 are not original and thus modern non-contributing components. However, the metal door frames are period and are in fair condition. In general the modern interior doors are in poor condition. There are many different door types of varied quality and age installed throughout the building. Some have been more abused than others and some have water damage. Those were set within the period metal door frames do not match and appear cheap in quality next to the heavy frames. The period transom windows that remain have been painted multiple times. Refer to Figure 4.25.

Typically, the existing door hardware is in fair condition and is modern and non-contributing. It appears to be of low quality next to the heavy metal period door frames. The style and type of hardware is not consistent through out the building and the replacement hardware is incompatible with Building 1's historic character. In many locations the hardware installed does not meet the needs of the user so modern surface mounted locks have been added. These additions are intrusive and may be damaging period finishes.

Surviving door hardware provides a design reference for the selection of compatible replacement hardware in terms of the scale, material, and quality.

Stairs and Pipe Railing

The concrete stairs are in fair condition. They are well worn and the paint is peeling. The iron hand rails are period and have multiple layers of paint, which is peeling in some locations. The concrete curb to which the railing is attached is in good condition. Refer to Figure 4.26.

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Ceiling The period plaster ceilings have been concealed by a suspended acoustical tile system in most locations. Non-contributing suspended acoustical ceilings are generally in fair condition, and little evidence exists of deterioration caused by water infiltration. Suspension grids are generally in fair condition, but some of the 2 by 4 foot acoustical panels are bowing at the centers, and some panels are broken or missing. Refer to Figure 4.27.

Wood Trim and Baseboards Most of the plain, unadorned wood baseboards are in fair condition. It is difficult to determine if the existing baseboard is period or a reproduction to match the baseboard that is now concealed by the paneling in most of the building.

Window casings, stools, and aprons are in fair condition. Not all areas could be fully evaluated due to the concealed conditions around these features.

Non-Contributing Conditions It is likely that most of the period lighting fixtures were pendant-types or wall mounted, but this lighting appears to have been replaced by the current lighting that probably dates from the 1970s. Much of the existing lighting fixtures are florescent and are contained within the existing suspended ceiling. These fixtures are in fair condition. Other lighting fixtures in the building are surface and wall mounted incandescent fixtures.

The pre-finished non-contributing plywood paneling and associated furred out framing is non-contributing and generally in poor condition. This is also true of gypsum board layers that have been laminated to some of the period plaster partitions. At the windows there is water damage that is causing the paneling to delaminate, and some paneling is loose and not well attached to its substrate.

As noted above, almost all of the interior doors are non-contributing and are in poor condition.

### **Brief Description of Building Systems**

Mechanical The heating system for Building 1 is a steam radiator system with a basement boiler, the date of which is unknown. The building does not have a central cooling system, and the only cooling is provided by those windows that have individual air-conditioning units. The mechanical system was not evaluated during the site survey.

A comprehensive survey of existing conditions is needed in a future project phase to determine what HVAC upgrades for the

building is needed.

Electrical

The electrical system was not evaluated during the site survey. Currently, the distribution is concealed in areas where period surfaces have been concealed by modern paneling. The period electrical work would have been surface mounted and may remain in the concealed spaces.

Plumbing

The plumbing system was not evaluated during the site survey. However, most extant plumbing fixtures in Building 1 appear to be modern, non-contributing components in poor condition. In general, the modern kitchen and restrooms are in a serious state of disrepair and require substantial renewal. It is likely that complete renewal/replacement of the plumbing fixtures and lines is needed, and a comprehensive survey of the plumbing systems is recommended in a future project.

Co-mingled with the modern plumbing fixtures are a select number of period plumbing fixtures that are among the small-scale features that may be contributing elements, especially the ones that served a public health purpose. Floor-by-floor, these period fixtures can be found as follows:

- In the basement plumbing fixtures remain that are assumed to be period. These include two water closets and two lavatories; they were not accessible and do not appear to be operational. Refer to Figures 2.7 and 2.8.
- On the first floor, there are no operating period plumbing fixtures. There are visible period shower heads in southern storage room attached to the modern restroom.
- On the second floor, the staff facilities are a mixture of fixtures dating from different eras. There is a single water closet and small lavatory that barely works, appears to be part of the original design and may include a period lavatory. Refer to Figure 4.28. Other modern fixtures were added and appear to be located where the period pieces were originally. The southern wall of the lavatory was constructed 3 feet off the perimeter wall. In this space the period urinals remain. Refer to Figure 4.29. The raised shower slab still remains and has been enclosed; it now functions as a telephone closet.



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### Figure 4.1

Photo of main entrance to Building 1. The cornice, door, transom, and stair are in fair condition and have peeling paint and visible wear. The wrought iron stair railing is original. In the detail photo below, deteriorated sections of railing are visible and may require repair or replacement. Photos are dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 4.2**

Photo of the east entrance on the south elevation. The rail, which is galvanized steel, has peeling paint. The concrete steps and landing is cracked and spalling. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 4.3**

Wall condition showing some biological growth and damp brick on the west side of the main entrance. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)





**Figure 4.4**

The building foundation walls have been poorly maintained and ivy and biological growth is present on the brick at these locations. In some locations water ponding is common where there is not positive drainage away from the building. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 4.5**

This photo illustrates the continuous nature of the window head cracking and lintel corrosion that extends between windows in some locations. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 4.6**

A large crack and open joint on the southwest corner of the building permits water infiltration, contributing to the deterioration of the brick. The cause of the cracking should be confirmed before any masonry repairs are undertaken. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 4.7**

Typical nine-over-nine wood window. This particular top sash is no longer staying in place and there are pieces of glazing missing. Brick molding is typically in poor condition. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)





**Figure 4.8**

Photo of typical nine-over-nine wood. This particular example has a modern storm window attached to the period wood window frame beyond. The wood window is heavily weathered, there is minimal paint remaining, the steel header is rusted, and paint from the cast stone sill is washing off and staining the brick. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 4.9**

Photo of typical steel hopper window, illustrating a unit with missing glazing. Significant corrosion, like that shown in this photograph, is common. Replacement windows are the recommended treatment. Historic window details have not been uncovered, but the existing windows can be used to design a compatible replacement matching the historic sightlines. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 4.10**

Photo of the wood casement window in the attic. The condition of this window was hard to assess because of the storm window, but the glazing putty appears to be deteriorated and the sash has failing paint. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 4.11**

A current roofing repair project being undertaken by the National Park Service includes repair of the rear elevation dormers. New window sash, matching the historic sash appearance, are being installed. Photo is dated February 2007. (NPS, Barbara Judy)





**Figure 4.12**

This photo illustrates common problems found on many areas of the slate roof: broken and shifted. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 4.13**

Hole in roof structure allowing water infiltration and animal intrusions. This condition is being addressed by the current roofing project. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 4.14**

Photograph of typical eave deterioration. This condition is being addressed by the current roofing project. Deterioration of the wood eave is exacerbated by the missing gutters and downspouts. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 4.15**

This photograph illustrates a section of wood eave that is being removed and replaced to address rotted and missing wood. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)





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**Figure 4.16**

A roofing project is currently underway. Progress to replace broken and missing slate tiles, repair deteriorated sections of the wood eaves, replace roof flashing, and replace missing copper gutters and downspouts is shown at right. A section of wood eave that has recently been replaced to address rotted and missing wood is visible. Photo is dated February 2007. (NPS, Barbara Judy)



**Figure 4.17**

This image shows where lengths of gutter and downspouts are missing. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 4.18**

Photograph of period copper conductor and downspouts. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 4.19**

Corrosion on the period cast iron coal chute cover. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 4.20**

Evidence of the planking formwork. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 4.21**

This image illustrates the typical vinyl composition tile (VCT) that is typical throughout all of Building 1. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)





**Figure 4.22**

This image illustrates the layering effect on the interior walls (wallboard over plaster). Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 4.23**

Example of typical water damage around window openings. Wood stools are deteriorated and plaster is water damaged. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)





**Figure 4.24**

Period glazed terra-cotta tile in the passage from the historic pantry to the kitchen is in good condition. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 4.25**

Period metal interior double door transom with multiple layers of paint in the foreground; non-period door pair in background. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 4.26**

The period concrete stairs connecting the first and second floor and interior railing are in fair condition. At right is the steel ships ladder that connects the second floor to the attic. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 4.27**

This photograph illustrates the common damage to existing suspended ceiling; note the period ceiling and wall finishes beyond. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 4.28**

A period lavatory located on the second floor. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



**Figure 4.29**

Period urinals that have been abandoned in the second floor bathroom. Photo is dated November 2006. (QUINN EVANS | ARCHITECTS)



## **CHAPTER 5: Treatment Recommendations**

### **Introduction**

In the previous chapters, this report identified the historically and architecturally significant features of Building 1, along with their conditions. This chapter outlines the overarching guidelines and recommendations for the proper treatment of these significant, character-defining features. The following recommendations are based on historic research, limited field survey, and the project request for Building 1 submitted to PMIS (Project Management Information System) for funding which indicate the expected future use of this building. Most of the following recommendations will apply to any potential use of the building.

### **Projected Building Use Program**

The project request for Building 1, PMIS 92327, dated January 13, 2003 and revised December 27, 2006, outlines the anticipated future program for the building, and this program is essentially the current building use. Gateway National Recreation Area may also consider alternatives for re-use of Building 1 by park partners for programs that are compatible with park purposes. Under a park partner re-use scenario, a range of uses may be considered for the building including offices, classrooms, assembly areas and other uses don't require massive changes to the building.

Building 1 currently serves as the Breezy Point District Headquarters and Visitors Center. In addition to its office function, the building serves as a visitor contact and information center. The building is a starting point for Fort Tilden interpretive walks. Some permits are also issued from Building 1.

Fort Tilden Building 1 is currently occupied by NPS staff and partners, and is visited by both the general public and students on classroom visits. NPS staff number eight (8). Two partner organizations use office space in the building; these organizations are the Special Olympics and Rockaway Artists

Alliance. In addition to general public visits to the building, there is a classroom space on the first floor that accommodates up to thirty-five (35) students on field trips to Fort Tilden.

Visitation by the public to the Fort Tilden park unit is estimated to be about 100,000 people per year.<sup>1</sup> It is unknown how many of these visitors enter Building 1.

### **Treatment Alternatives**

The National Park Service (NPS) has developed standards and guidelines for approaches to various treatments of historic properties. These are published in The Secretary of the Interior's Standards for Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings. These standards are very widely utilized and understood by historic preservation professionals, architects, engineers, contractors and craftsman around the country. Three principal treatment options apply to existing buildings: preservation, rehabilitation, or restoration. Another, reconstruction, does not apply to Building 1.

The most fundamental decision involving the future of an historic building is to determine the appropriate treatment. According to the NPS, the choice of a treatment depends on many factors, including the property's historic significance, physical condition, proposed use, and code requirements.<sup>2</sup> These issues are each addressed in a comprehensive fashion in this HSR and the recommended "ultimate" or "preferred" treatment choice is described below.

Three optional treatments were identified and evaluated. The varying approaches differ in scope and approach. The approaches considered but not adopted, are described at the end of this chapter.

### **Selecting an Appropriate Treatment**

The three optional treatments are defined by the NPS as follows:

***Preservation** is defined as the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather the extensive replacement and new*

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<sup>1</sup> PMIS 92327.

<sup>2</sup> Kay D. Weeks and Anne E. Grimmer, *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* (Washington, DC: U.S. Department of the Interior, National Park Service, 1995), 1.



*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-related work to make the properties functional is appropriate within a preservation project.”<sup>3</sup> The treatment emphasizes repair and conservation of significant building features and strives to retain existing materials and features while employing as little new materials as possible.<sup>4</sup>*

***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 point 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. Prior to undertaking work, a documentation plan for Preservation should be developed.<sup>5</sup>*

***Rehabilitation*** *is defined as 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.<sup>6</sup>*

***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 time is not appropriate. Prior to undertaking work, a documentation plan for Rehabilitation should be developed.<sup>7</sup>*

***Restoration*** *is defined as the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction 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.<sup>8</sup>*

***Restoration as a treatment.*** *When the property’s design, architectural, or historical significance during a particular*

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<sup>3</sup> *Standards for the Treatment of Historic Properties*, 17.

<sup>4</sup> *Ibid.*, 9-20.

<sup>5</sup> *Ibid.*, 21.

<sup>6</sup> *Ibid.*, 61.

<sup>7</sup> *Ibid.*, 66.

<sup>8</sup> *Ibid.*, 117.

<sup>9</sup> *Ibid.*, 121.



*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.<sup>9</sup>*

In selecting the most appropriate overall treatment for Building 1 based on the NPS guidelines, there are three overriding facts:

- Most of the character-defining features are from the original period of construction. Building 1 has been altered over the years with less-than-appropriate alterations. The building can be updated while preserving its overall historic character.
- The building is in fair to poor condition and has a lower level of integrity on the interior. Comprehensive work is needed to bring Building 1 to a more functional condition.
- Changes are needed to improve accessibility and egress to allow the building to remain in use. Planning for these improvements must carefully consider the potential impacts to significant features and spaces. These changes would also be required if the building's use changes in the future. The treatment must accommodate a wide range of improvements.

**Recommended Treatment Approach**

Based on the discussion above, the overall treatment of **rehabilitation** is the most appropriate given this property's significance, condition, and use. The Secretary of the Interior has established ten *Standards for Rehabilitation*. With these Standards in mind, QUINN EVANS | ARCHITECTS suggests a number of overarching guidelines to address rehabilitation issues at Building 1:

- Character-defining elements shall be repaired rather than replaced. Features not dating to period of significance may be altered or removed as needed when the building is rehabilitated.
- New mechanical, electrical, plumbing and fire protection systems can be installed, but these new elements should be sensitively integrated. Concealment is not a specific guideline. The goal will be to preserve as much as possible the historic and architectural

integrity of the interior and exterior of the property.

- Intrusions or other less-than-sensitive building modifications should be removed and replaced with materials more compatible with the building's historic character.
- Restoration of individual elements to their original condition or appearance is appropriate within the overall rehabilitation treatment. For instance, interior paint colors and decorative treatments from the original construction period could be replicated, assuming there is sufficient documentation based on detailed field investigation.

**Treatment Zones**

Although rehabilitation is the recommended treatment for the building, there are some areas in the building that have less architectural and historical significance (i.e., the basement and attic). The following clarifies the appropriate treatment for selected areas of the building.

Exterior

An overall approach of rehabilitation is recommended for the entire exterior of the building including site features. The exterior retains almost all of its original character-defining features. These features should be retained and repaired to the greatest extent possible.

Interior

A rehabilitation approach is also recommended on the first and second floor common spaces. Even in these spaces (hallways, original barracks), the number of historic features to be retained is relatively small given the overall utilitarian nature of the original design. For this reason, retention of these features, as well as the original plan configuration, is particularly important. It is recommended that later, non-contributing partitions, ceilings, and elements that are concealing the original features be removed so that the modest character-defining features can be rediscovered.

In the basement, there is historic fabric in the form of original structure and some partitions, so rehabilitation is also the recommended treatment. In this location there is wide latitude to continue the practice of installing new building systems and equipment within the space. As long as historically significant materials are repaired, virtually any range of compatible alterations could be permissible.

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The attic, which can only be accessed via a ship's ladder, was never a fully occupied space. As such, the attic can also be considered a rehabilitation zone where mechanical equipment can be located if necessary. Again, as long as contributing materials and features are repaired, a range of compatible alterations could be considered for this space.

### Treatment Recommendations

Based on the overall conditions of the character-defining features, specific treatment recommendations have been developed for exterior and interior features, as well as for new elements that may be required to fully upgrade the building.

### Exterior Treatment Recommendations

#### Stucco

Portland cement stucco in the North Elevation pediment was not visually examined closely during the field investigations. It is not clear whether repairs to the stucco area are needed. In this time period the stucco was typically 1 part Portland cement and 3 parts local sand.

If deterioration advances, a repair stucco mix will need to be developed to be compatible with the historic stucco.

#### Brick Masonry

The existing brick masonry is good condition in most locations. In a few locations step cracking is evident through some brick units.

Ivy and other vegetation should be removed from the façade (estimated to be 5% of the façade). The roots should be entirely removed so it will not grow back. Trees on the east side of the building should be pruned back considerably so that the building is not permanently shaded.

The brick should be cleaned with a mild detergent and bristle brushes. Low-pressure water cleaning with a fan-tipped nozzle may be used to remove dirt, minor stains, and biological growth. The pressure wash should not exceed 300psi.

#### Steel Window Lintels

It appears that most of the steel window lintels (shown as steel angle attached to the concrete spandrels in the historic drawings) require repairs and possibly replacement (Figure 4.6). This will address some of the masonry deterioration that has most likely been caused by freeze-thaw damage from water infiltration. Expansion of the corroded steel lintels has also exacerbated this condition.

#### Pointing Joints

Only limited repointing (estimated to be less than 10%) of the brick is necessary. Where required, mortar analysis (characterization) is recommended to develop a repair mix that

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matches the visual qualities, composition, texture, and physical properties of the existing mortar. In particular, effort should be made to match the sand (size distribution, color, shape, and surface luster) in the current mortar as closely as possible. The repair mix should not be harder in compressive strength than the existing mortar. Although the original drawings do not identify the mix for the original mortar, based on the time period it can be assumed the mortar contains Portland cement. Recent mortar characterization for WPA-era Quarters 133-6 determined that a moderate-strength original mix was used (1:1:5) at that building. Mortar analysis will be critical to designing an appropriate pointing mortar for Building 1.

Pointing mortar should also match the tooling of the existing joints—a minor concave joint profile.

### Masonry Probe Recommendation

A probe in one area where the brick is severely cracked is recommended. The purpose of the probe is to determine whether any significant structural issues are present. Based on the visual survey, it appears that the deterioration is caused primarily by water infiltration.

The probe would most likely involve removing 4-6 bricks to provide visual access to the conditions behind the outer brick wythe. This might be done in an area with more significant cracks that is also close to a deteriorated steel lintel (Figure 4.6).

### Masonry Crack Repair

Assuming that no structural repairs are necessary, the minor cracks in the mortar can be addressed through repointing. Cracks should be carefully cut back and pointed.

### Cast Stone

The existing cast stone features on the building are in good condition, but some of the cast stone features (water table, entrance elements, and window sills) have been painted, obscuring the original unpainted and textured finish (Figure 4.1 and 4.8).

Cast stone was also used for the building's water table, and this cast stone should be treated in a similar manner to other cast stone elements.

These elements appear to be in good condition, and should be returned to their original texture and light brown color. The recommended repairs include careful chemical paint removal. If the cast stone elements are too porous to be returned to their original exposed aggregate finish, a compatible paint finish, matching the original finish color, should be considered to prevent water from contacting the internal reinforcing bars within each cast stone unit.

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A few joints between units are missing mortar and pointing is needed. This includes the window sills and main entrance entablature/keystone/pilaster caps. Mortar analysis (characterization) is recommended for the pointing between cast stone units to design a compatible pointing mortar.

### Entrance Steps and Railing

The existing concrete steps are in good condition and do not require extensive repair. Power washing to remove loose paint is suggested as well as repainting. Around the base of the sides of the steps, confirmation should be made that positive slope exists away from the steps and building.

Several areas of the iron railing are severely corroded and require repairs or partial replacement to match the original design and detail (Figure 4.1). Sections in fair condition can be scraped to bare metal and repainted.

### Rear Elevation Concrete Stairs/Stair Landings/Pipe Railings

The existing concrete stairs and landings on the rear of the building are in poor condition. Spalling and corroded rebar are present on the undersides of both rear landings. This concrete requires repair to prevent further deterioration. The damaged area should cut out, corrosion on rebar should be removed, and the deteriorated concrete should be replaced (cast in place).

Pipe railings on these landings and steps are in fair to poor condition. Some sections appear to be original, while other sections are later replacements that do not match exactly the historic railing detailing and locations. New railings, matching the existing historic railing design, are recommended for the sections of railing that are modern and do not match the historic pipe railing design.

### Windows

#### *Nine-Over-Nine Double Hung Windows*

Most of the existing nine-over-nine wood windows are original and in repairable condition. It is recommended that all sashes be removed from the opening and refurbished off-site. This procedure would include paint stripping, wood repairs, glazing putty replacement, and priming/painting.

Repairs to the window frames would be made in-situ. Window sash can be reinserted in their original openings, and sash cords and pulleys can be repaired as needed. Weather-stripping should also be added to the windows.

Other woodwork on the exterior includes brick molds on the windows and dormer trim. These features should all be evaluated to determine if any rot requires replacement in kind. Sound materials should be scraped, caulked, and repainted.

Given the different vintages of the storm windows found in Building 1, it is recommended that all exterior storm windows be replaced. This approach will improve the energy performance of the windows and protect the reconditioned window assemblies.

*Steel Hopper Windows*

The existing steel hopper windows for the basement are in extremely poor, non-working condition (Figure 4.9). Significant corrosion has occurred in most of the steel windows. Repair does not appear to be a viable preservation alternative for most of the windows. However, it may be possible to retain one or two of the original basement hopper windows that are functional as a reminder of the original construction.

Replacement windows for these openings should match the existing and maintain the existing sightlines to the greatest extent possible. It is likely that another steel window is the best choice to accomplish this objective. The metal security grates will make it difficult, if not impossible, to install storm windows in these openings, but interior storm windows can be considered.

*Wood Casement Window*

The single existing North Elevation casement window in the attic of the central bay can be repaired. It is recommended that this sash be removed from the opening and refurbished off-site. This procedure would include paint stripping, glazing putty replacement, and priming/painting. It is also recommended that a new exterior storm window be provided.

*Dormer Windows*

At the time of the field survey, the two dormer windows on the South Elevation were either missing or concealed by plywood on both sides. As part of the current roofing repair project that is underway, new dormer windows are being installed.

Woodwork

The wood cornice is in poor condition, but this deteriorated building feature is being repaired as part of the current roofing project (Refer to Figures 4.11 and 4.16). This roofing project will address rotted sections of the eaves that are deteriorating because the roof lacks a proper drainage system. Sections of rotted wood are being replaced to match the existing, adjacent areas. Those areas that are not beyond repair will be stripped and painted.



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### Roofing, Gutters, and Downspouts

An interim roof repair project is currently underway at Building 1. As such, it appears that the required roofing repairs to address roof leaks and deterioration observed during the site visits are being addressed.

The project manual indicates that the scope of work includes the following base bid work: replacement of copper valley, chimney and dormer counter flashing, as well as replacement of missing and broken slate shingles. Optional bid work, which is being undertaken, includes copper gutter replacement, conductor head and leader replacement, replacement of damaged eaves (cornice), painting of existing and new wood cornice, and dormer window and trim replacement.

Based limited survey of the condition of the existing slate, QUINN EVANS | ARCHTECTS believes that the roofing has nearly reached the end of its service life. Complete replacement of the slate roofing will be needed in the next five years.

### Doors

The exterior doors on Building 1, with the exception of the west basement door, are not original and are in poor condition. These doors were replaced in 2002.

It is recommended that the front door be replaced with a new custom wood door that matches the historic door design. The surviving historic drawings do not include the details of the entry door, but an image from the GATE archive shows the door appearance ca. 1950s; refer to Figure 3.3a. A hardwood such as red oak or cedar will provide better durability.

The two metal doors on the rear elevation that provide access to the first floor are in poor condition. It is recommended that new, custom wood doors, matching the design of the historic doors, be installed. The earliest historic drawings, dating to 1930, include elevations that can be used to design the replacement doors; refer to Figures 3.33 and 3.34.

Doors to the basement on the rear elevation are also in poor condition. The west basement metal doors appear to be the original Kalemein doors and can be used as the model for designing replacement metal doors that match the historic metal door design for these locations.

### Drainage System

The downspouts on the building are connected to a below-grade drainage system, and the inlets have been cleared as part of the current roof repair project. The system is functioning properly.

No drainage appears to be provided at the bottoms of the rear ramps leading into the basement. This condition has resulted in

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frequent periods of standing water and water leaking into the basement, a condition that should be rectified. Area drains should be installed at the bottom of both ramps and connected to the below grade drainage system.

It is also recommended that the areas around the building be regraded to ensure that a positive slope away from the building is achieved

### Miscellaneous Features

The iron coal chute cover is in fair condition. It is recommended that this original feature be stripped to bare metal and repainted. The metal security bars are in fair to poor condition, and most have some areas of corrosion and surface loss. These elements should also be stripped and repainted.

## Interior Treatment Recommendations

### Introduction

The overall condition of interior finishes and materials of Building 1 range from fair to poor. Some contributing elements are in fair condition and can be repaired, while other elements are in poor condition and will require renewal or replacement. Few finishes or systems have been upgraded over the past 25 years, and many features installed have altered or concealed the building's historic character. The building's appearance on the interior is generally "dated," and maintenance has been deferred in many areas.

Recommendations for the interior are focused on the removal of non-contributing elements and retention of the remaining contributing and character-defining features.

### Flooring

The original scored concrete floor finish is extant but typically is concealed by vinyl asbestos tile (VAT)/ vinyl composition tile (VCT). It is recommended that all VCT, which is typically 12" by 12" be removed. New VCT or other flooring can be installed where desired and would be consistent with the *Standards for Rehabilitation*. New flooring should be reversible so that it can be removed in the future without causing damage to the original concrete flooring.

### Perimeter Walls and Ceilings

Most of the original plaster walls and ceilings are extant beneath the furred out walls and suspended ceilings. It is recommended that all existing suspended ceilings and furred out walls be removed. None of these elements are historic and all are in poor condition.

It is recommended that the wall plaster on the perimeter be retained and repaired. Any required electrical outlets could be surface mounted.

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Opportunities exist to re-discover the original higher ceilings. Depending on the mechanical system selected for the rehabilitated building, it may be desirable to return the ceilings and rehabilitate the original plaster finish. Exposed systems (radiators, lighting, etc.) were part of Building 1's original design. As such, the introduction of exposed systems (lighting, ducts, etc.) would be compatible with Building 1's historic character. Another option would be to install suspended gypsum board ceilings in some selected locations with recessed lights and use new suspended acoustic ceiling tile ceilings in secondary spaces. If this approach is pursued, it is recommended that the ceilings not be lowered below the window heads.

### Window Trim and Casings

Wooden window trim and casings are in fair to poor condition. It is recommended that these elements be stripped of paint off-site and reinstalled.

### Baseboards

The wooden baseboards in Building 1 are simple in detail and not ornate. As such, it is recommended that these elements be retained. Where sections are beyond repair or missing, new baseboard, matching the original dimension and profile, should be installed.

### Glazed Terra Cotta Tile

The glazed terra cotta wall tile in the foyer to the original kitchen, in the original refrigerator room, and in the second floor toilet room are in good condition. With minor cleaning, this wall finish material can be retained in these spaces.

Penetrations in the glazed terra cotta tile should be avoided to the greatest extent possible. Inserting holes in this type of partitions tile is difficult, a challenge to repair, and nearly impossible to replace in kind. Care should also be taken when undertaking selective demolition to protect extant terra cotta tile. Some partitions and furring were installed over and around the glazed terra cotta tile, which could easily be damaged during construction. This recommendation applies directly to the former kitchen (Room 106).

### Interior Partitions and Spatial Organization

Destructive investigations were not undertaken as part of this study, but it is likely that the surviving original partitions were made from 4 inch terra cotta tile with a plaster finish. It is also likely that the openings in these non-bearing partitions are framed with steel jamb and lintel elements that are concealed. Testing to establish the wall construction is recommended at the beginning of any future rehabilitation project.

Some of the original partitions have been furred out with additional layers of gypsum board or fiberboard. Additionally,

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over the years spaces like the first floor Day Room and Squad Room and second floor Squad Rooms have been subdivided—using wood stud partitions and gypsum board. Much of the interior also has prefinished plywood paneling that is in poor condition and non-contributing.

Those partitions that are original, based on the historic plans, should be retained. However, it is recommended that all non-historic partitions and finishes be removed. To the extent possible, it is also suggested that the NPS consider an open office plan for the former second floor Squad Rooms. This would allow the original spatial character within the building to be recaptured.

For example, should the future use be offices, an open office plan or a series of partitions that incorporates ample glazing might be considered.

### Doors and Door Hardware

Almost all of the interior doors are not original, but many of the door frames and transoms in the common corridors are intact and should be retained. The metal door frames need to be stripped of paint in-situ and repainted. New doors more in keeping with the historic appearance are recommended in all openings. The design for the replacement doors can be based on the earliest historic drawings from 1930, which include elevations of the doors in the door schedule; refer to Figures 3.33 and 3.34.

### Stairs and Railings

The building's main staircase is intact and retains its original railing. The railing should also be scraped in place and repainted.

Concrete steps are in fair condition and do not require work beyond cleaning and painting.

### Plumbing Fixtures

A number of the original and period plumbing fixtures are extant. It may be possible to retain some of these fixtures as active or passive features when the building is rehabilitated, depending on the reuse program.

## **Building Systems** **Recommendations**

### Mechanical System

Based on the limited observation of the mechanical system, it appears that the radiator heating system may be deteriorated and poorly functioning. Currently cooling is only provided by a few window air conditioning units, so thermal comfort is not uniform for all occupants of the building. A comprehensive survey of the mechanical system is recommended to determine

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the best HVAC approach to Building 1.

### Electrical System

Extensive interior renovations are recommended for Building 1, and it appears that a complete electrical service replacement is needed. The extent to which existing electrical components can be reused will be determined by a comprehensive electrical survey in a later project phase.

### Plumbing System

Based on the observed conditions of Building 1's plumbing system, a comprehensive plumbing upgrade of the plumbing fixtures and lines is strongly recommended. The existing plumbing fixtures date from a variety of time periods and are generally in poor condition. A number of period fixtures are extant in the basement and on the second floor, and these fixtures should be evaluated for their reuse potential.

### Accessibility Recommendations

#### Building Entrance

Building 1 is not currently accessible to persons with mobility impairments, and the creation of an accessible entrance is required by the *Americans with Disabilities Act and Architectural Barriers Act Accessibility Guidelines* if the building is rehabilitated. For this reason, a wheelchair ramp is recommended to create an accessible entrance to the first floor. Two ramp options to provide Building 1 with an accessible entrance are explored as concepts in Chapter 7. (Refer to Figures 7.1 and 7.2).

#### Elevator

A wheelchair ramp would provide access to the first floor of Building 1, but the basement and second floors cannot currently be reached by someone using a wheelchair. Should rehabilitation scenarios result in a change of building use, increase of building occupancy, establishment of a unique program for the second floor or basement, or other alterations described in Chapter 2 of the *Americans with Disabilities Act and Architectural Barriers Act Accessibility Guidelines*, dated July 2004, then consideration should be given to installing an elevator in Building 1.

Should an elevator be required by the nature of the rehabilitation program, or desired, it is suggested that an elevator be centrally located directly off the main corridor opposite the existing stair (Figure 7.1). This proposed location will probably allow the elevator penthouse to be integrated beneath the existing roofline, eliminating the need for a projection in the roof. This location would also work well with either of the preliminary concepts for accessibility and egress that are explored in Chapter 7. (For purposes of determining how much space would be required to accommodate an elevator, a 2,000 lb elevator was used in Figure



7.1.)

**Building Egress  
Recommendations**

The final program for Building 1 will determine the alteration thresholds that will dictate the specific code requirements for building egress. Based on the preliminary code review and life safety analysis conducted for this study, two means of egress from each occupied level would be required.

Should a more intensive use be planned that included a change in occupancy and substantial rehabilitations, more stringent life safety requirements would likely be triggered. However, if the building use remains the same and alterations are limited, it is likely that fewer life safety upgrades would be required. In both cases, assuming that it is determined that Building 1 is eligible for listing in the National Register of Historic Places, the building would be permitted to utilize the historic building sections of the IEBC 2006 (Chapter 10) to comply with life safety requirements.

Currently Building 1 has only one stair that is not enclosed. Should a less intensive rehabilitation project be considered, it may be possible, for example, to utilize the existing central open staircase as one of the means of egress if smoke separation in the adjacent corridors can be made with tight-fitting doors and smoke seals around the historic transoms. If a more substantial rehabilitation is planned, it might be necessary to provide two fully compliant egress stairs.

Two concepts were explored to provide Building 1 with code compliant exit stairs (see Figure 7.1 and 7.2). The recommended solution is the addition of one egress stair on the rear of the building and the retention of the existing stair with appropriate upgrades to the surrounding corridors for smoke control.

**Fire Suppression System**

Building 1 is not currently sprinklered, and it is recommended that an automatic fire suppression and fire alarm system be installed to comply with NPS policy. Installation of a suppression system will dramatically improve the fire and life safety conditions for Building 1's occupants.

The most common and least expensive system available is a wet pipe system. Given Building 1's modest character and the fact that the building does not house irreplaceable collections, more expensive systems (Dry Pipe, Pre-Action, and Firecycle) do not appear to be warranted. If there are any building spaces that are subject to freezing conditions during portions of the year, a dry pipe system may need to be added.

If a new suspended or hard ceiling is installed, the sprinkler lines can be concealed, or they can be painted out if the floor structure is left exposed.

**Fire Alarm System**

Building 1 does not have a fire alarm system, and it is recommended that a fire alarm system be installed to comply with NPS policy. Installation of an alarm will dramatically improve the life safety conditions for Building 1's occupants.

**Lead Paint Removal Recommendations**

Because of Building 1's age, it is reasonable to assume that all of the building's painted components contain lead-based paint. A lead paint survey is recommended as part of a building rehabilitation project to identify which building components contain lead.

The federal government's general policy is to encapsulate the lead paint unless the property is used for residential purposes or child-occupied functions. Therefore, the new building program will dictate the level of lead-based paint abatement/hazard management that is required and the methods that can be considered for abatement.

**Asbestos-Containing Materials (ACM) Recommendations**

Because of Building 1's age, it is possible that some of the building's components contain asbestos. Piping insulation, vinyl tile, plaster, and other materials could potentially contain asbestos that requires abatement. A survey for ACMs is recommended as part of any future rehabilitation project to determine whether any materials contact asbestos.

Appropriate abatement methods will be determined following the identification of any ACM.

**Energy Conservation and Sustainability Recommendations**

Sustainability and energy conservation measures should be part of any planned rehabilitation project. Preserving and rehabilitating an existing building is, in fact, a sustainable building measure that can be augmented with specific green building upgrades.

Although Building 1 would not be required by the NPS to achieve a Leadership in Energy and Environmental Design (LEED) rating, the LEED checklist is a useful point of departure for developing green rehabilitation alternatives that will improve energy efficiency and reduce a building's carbon footprint.

*Energy Conservation*

It is recommended that an energy model, which is a computer model of the building calibrated to actual utility bills, be created for Building 1 to establish an energy baseline. An energy

model can be used to identify prudent and feasible energy upgrades that will not alter Building 1's historic character and contributing features and spaces. Systems and envelope upgrade alternatives should be evaluated to identify the energy conservation upgrades that will be most effective and sensitive to Building 1's historic character. Generic measures should not be adopted or implemented to improve energy performance without an understanding of the potential benefits and disadvantages, including payback and impact on contributing historic features.

*Water Conservation*

Water-conserving plumbing fixtures should be considered if comprehensive plumbing upgrades are undertaken as part of a substantial rehabilitation project. However, retention of some or all of the period fixtures is recommended, if feasible, to maintain Building 1's integrity. This preservation measure would not significantly affect the overall effort to improve water conservation.

**Miscellaneous  
Recommendations**

*Attic*

Overall, the condition of the attic is good. Water that ponds on the concrete floor will be eliminated when the roof repair project is completed. Insulation of the attic roof rafters might be considered, but the costs and technical factors should be evaluated before proceeding.

*Basement Storage Areas*

It is recommended that the basement be cleaned of excess stored materials that are no longer needed.

**Identification of Optional  
Ultimate Treatments Not  
Selected**

Option 1: Preservation

Description: As a treatment, "preservation" focuses on the repair and conservation of existing materials and features. This option is generally considered when a historic property has a high level of integrity and minimal changes for the project use are required.

Rationale: Given the outdated building systems and overall condition of Building 1, preservation as a treatment is not appropriate. Also a contributing factor is the small number of contributing features within Building 1 and the extensive number of changes that have been made outside of the period of significance. Changes to Building 1 to address contemporary needs will require some changes to the building's historic features, so rehabilitation is the more appropriate treatment for

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this building. Similar to the preservation treatment, the rehabilitation treatment requires the retention of character-defining features where they are in repairable condition.

### Option 2: Restoration to the Original 1939 Construction Period

Description: As a treatment, “restoration” focuses on the depiction of a building or property at a specific time period for interpretation reasons. This approach would return the building’s overall exterior and interior appearance to the original date of construction, allowing the building to be interpreted as a barracks, the original use.

In the case of Building 1, the largest number of character-defining features date to the original period of construction. Changes made in 1941 when the building was converted to a hospital were relatively minor and not architecturally distinguishing. Later changes were unsympathetic and obscure the original finishes and appearance of the building.

Rationale: The NPS has not determined that the building itself is directly linked to the interpretation of Fort Tilden. Because the building has been altered and modified over time, return of the building to its original interior appearance would be costly, and without a specific interpretation objective, is unwarranted. Restoration of the building might also limit how the building can be used for its ongoing function as offices and a visitor’s center.

## **CHAPTER 6: Requirements for Treatment**

### **Zoning**

Building 1 is located within a federal reservation, so no municipal or state land use requirements will be imposed.

### **Building Codes**

Building 1 at Fort Tilden is owned and managed by the National Park Service. Codes that the NPS must comply with are established by Director's Order 50B. As such, the NPS requires compliance with the codes noted below.

#### Applicable Building Codes

2006 International Existing Building Code (IEBC)  
2006 International Building Code (IBC)

#### Other Applicable Codes

2006 International Fire Code (IFC)  
2006 International Mechanical Code (IMC).  
2006 International Electrical Code (IEC)  
2006 International Plumbing Code (IPC)  
NFPA 1 (Fire Prevention Code)  
NFPA 101 (Life Safety Code)

### **Life Safety Code Analysis**

The preliminary code analysis that follows below is based on IBC 2006 and assumes that a substantial rehabilitation is planned.

#### Building Occupancy

Business B (Offices)

Building 1 contains one assembly space of approximately 575 SF for short audio visual shows. According to IBC 2006, assembly areas of less than 750 SF that are accessory to another occupancy are not assembly occupancies. Assembly areas carrying an occupant load of less than 50 persons are also not considered an assembly occupancy. (IBC 2006 Section 303.1)

#### Construction Type

III B

IBC Section 602.3 defines construction type III B as having exterior walls of non-combustible materials and the interior

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building elements are of any material permitted by the code.

### Building Occupancy Load

14 – Basement (3915 SF/300 SF per occupant)  
40 – First Floor (3915 SF/100 SF per occupant)  
40 – Second Floor (3915 SF/100 SF per occupant)  
**94 – TOTAL OCCUPANCY LOAD**

### Minimum Number of Exits

Based on Occupant Load of 94 (Table 1018.1), 2 exits are required from every occupied floor.

A more comprehensive code review will be required when a building rehabilitation project is undertaken. IBC Section 1018.2 permits one means of egress for B occupancies with 2 stories or less with 30 occupants per floor and a maximum 50 foot travel distance. Although the calculated occupant load is 40 persons per floor, the actual occupancy may in fact be lower, and a code variance might be sought to avoid having to install a second stair in Building 1.

### Sprinklers

No Sprinklers are currently provided in Building 1. Although it is possible that the code would permit the current occupancy without the building being sprinklered, it is the NPS policy to provide automatic fire suppression in buildings (refer to the Fire Protection section on page 6.3).

### Required Fire Resistance Ratings, per IBC Table 601

Structural Frame: 0 hours  
Bearing Walls – Exterior: 2 hours  
Bearing Walls – Interior: 0 hours  
Nonbearing Exterior Walls: 0 hours (fire sep. >30 feet)  
Nonbearing Interior Walls: 0 hours  
Floor Construction: 0 hours  
Roof Construction: 0 hours

### Description of Existing Building Structure

Building 1 is a reinforced concrete framed structure with a multi-wythe non-bearing brick infill. The roof framing is wood 2x rafters with a wood ridge beam.

### General Building Limitation

Allowable Area:  
Allowable per Story: 19,000 SF (Table 503)  
Calculated Max Allowable per Story: 19,000 SF

Actual Area:  
Basement: Approximately 3,915 SF  
First Floor: Approximately 3,915 SF  
Mezzanine: Approximately 3,915 SF

Allowable Height: 55 feet (Table 503)  
Actual Height: Approximately 43 feet

Allowable Stories: 4 (Table 503)



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Actual Stories: 3

Vertical Exit Enclosures

IBC Section 1019.1 requires that the exit stairs be 1-hour rated when connecting fewer than 4 stories.

Exit Travel Distance

IBC Table 1015.1 indicates that the following exit access travel distances are permitted:

B Occupancy: 200 feet without a sprinkler system

### **Fire Protection**

*Director's Order 58 states:* "The National Park Service hereby adopts, and will enforce as minimum standards, the most current version of the National Fire Protection Association's (NFPA) Fire Prevention Code (NFPA 1), Life Safety Code (NFPA 101), and all other associated structural fire codes and standards.

Chapter 5 of the 2006 NPS Management Policies states:

#### **“5.3.1.2 Fire Detection, Suppression, and Post-fire Rehabilitation and Protection**

The Park Service will take action to prevent or minimize the impact of wildland, prescribed, and structural fires on cultural resources, including the impact of suppression and rehabilitation activities. In the preservation of historic structures and museum and library collections, every attempt will be made to comply with national building and fire codes. When these cannot be met without significantly impairing a structure's integrity and character, management and use of the structure will be modified to minimize potential hazards rather than modifying the structure itself.

Subject to the previous paragraph, when warranted by the significance of a historic structure or a museum or library collection, adequate and appropriate fire detection, warning, and suppression systems will be installed. Pre-fire plans will be developed for historic structures and buildings housing museum or library collections; these plans will be designed to identify the floor plan, utilities, hazards, and areas and objects requiring special protection. This information will be kept current and made available to local and park fire personnel.” (2006 NPS Management Policies)

### **Historic Preservation Compliance Requirements**

Should a rehabilitation project be planned for Building 1, compliance with a number of environmental compliance requirements would be required. The major anticipated compliance requirements are described below.

National Historic Preservation

Building 1 is not currently located within a National Register

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Act (NHPA)

Historic District, nor is the building designated individually in the National Register of Historic Places. However, it is likely that Building 1 is eligible for listing, and therefore, compliance with the National Historic Preservation Act (NHPA), as amended, is probably required.

In accordance with Section 106 of the National Historic Preservation Act, the NPS will consult with the New York State Historic Preservation Office (SHPO) and the Advisory Council on Historic Preservation to receive review and comment on proposed treatments. This consultation and review period generally takes between 30 and 120 calendar days

National Environmental Policy Act (NEPA)

Compliance with the National Environmental Protection Act (NEPA) is also required. Compliance activities would be handled by GATE and regional NPS environmental resources staff.

### **Energy Conservation**

Energy conservation should be design factor in any construction activity proposed for Building 1. Specific Federal energy conservation mandates are not known, but the NPS is committed to reducing consumption where it will not harm historic resources.

*NPS 28 – Cultural Resource Management Guideline*, states the following about energy conservation requirements for historic facilities located within the National Park System:

“3. Energy Conservation and Historic Preservation  
Law and regulation require that federal agencies reduce energy consumption. Following energy surveys, strategies for retrofitting historic structures and other structures containing museum property for energy conservation will be developed. The nature of energy reduction measures will be determined on a case-by-case basis. When energy conservation and historic preservation mandates conflict, means to ensure the preservation of historic material and character will be developed.

Because retrofit measures can cause irreparable damage to the material and character of historic structures, plans for such measures must be reviewed by a historical architect. Revised operating procedures and modifications to existing mechanical systems will be considered before measures involving intervention in historic material or affecting historic character.

Examples of concerns include the installation of storm windows and doors, which may impair a historic structure's character. Blown-in or foam insulation may

cause excessive condensation in walls or be a health hazard and should not be used. (See the Department of the Interior's *Energy Survey Manual* [1979], Ch. M, p. 8.) Any action that will affect the temperature, relative humidity, light, or air quality in a historic structure containing historic furnishings or other museum objects must be considered in light of the effect it will have on both the structure and its contents. When the preservation needs of a historic structure and its contents conflict, means of ensuring that neither are unacceptably compromised must be developed. A curator and a historical architect are the primary professionals charged with developing resolution alternatives in such situations. Such alternatives may take into account the relative portability of the structure's contents. A curator will always review plans for retrofitting projects when museum property is involved.

In reviewing proposed retrofit actions, historical architects and curators will consider whether (1) the evaluation of effect for compliance purposes is adequate; (2) the proposed action is planned and will be conducted in accordance with relevant management policies, guidelines, and standards; and (3) the proposal incorporates all feasible measures to minimize any adverse effects on cultural resources.” (NPS 28, Chapter 4: Stewardship)

**Sustainable Design/LEED Requirements**

Chapter 9 of the 2006 NPS Management Policies requires:

**“9.1.1.6 Sustainable Energy Design**

Any facility development, whether it is a new building, a renovation, or an adaptive reuse of an existing facility, must include improvements in energy efficiency and reduction in greenhouse gas emissions for both the building envelope and the mechanical systems that support the facility. Maximum energy efficiency should be achieved using solar thermal and photovoltaic applications, appropriate insulation and glazing strategies, energy-efficient lighting and appliances, and renewable energy technologies. Energy-efficient construction projects should be used as an educational opportunity for the visiting public.

All projects that include visitor centers or major visitor services facilities must incorporate LEED (Leadership in Energy and Environmental Design) “ (2006 NPS Management Policies)

**Accessibility for Persons**

Compliance with the *Americans with Disabilities Act and*

**with Disabilities**

*Architectural Barriers Act Accessibility Guidelines (July 2004)* is required for Building 1.

Additionally, Chapter 5 in the 2006 NPS Management Policies addresses accessibility. It states:

**5.3.2 Physical Access for Persons with Disabilities**

The National Park Service will provide persons with disabilities the highest feasible level of physical access to historic properties that is reasonable, consistent with the preservation of each property's significant historical features. Access modifications for persons with disabilities will be designed and installed to least affect the features of a property that contribute to its significance. Modifications to some features may be acceptable in providing access once a review of options for the highest level of access has been completed. However, if it is determined that modification of particular features would impair a property's integrity and character in terms of the Advisory Council's regulations at 36 CFR 800.9, such modifications will not be made. To the extent possible, modifications for access will benefit the greatest number of visitors, staff, and the public, and be integrated with or close to the primary path of travel for entrances and from parking areas. In situations where access modifications cannot be made, alternative methods of achieving program access will be adopted.

**Hazardous Materials**

All hazardous materials would likely require abatement as part of a rehabilitation of Building 1. OSHA statutes and regulations would apply to workers involved in any abatement activities, and disposal is generally governed by EPA statutes and regulations.

## **CHAPTER 7: Alternatives for Treatment**

### **Alternative for Treatment**

A number of treatment recommendations were made in Chapter 5 following a preliminary review of other alternatives that are available for some project components. These alternatives are discussed below to provide the NPS with information about the advantages and disadvantages of each option.

### **Egress Alternatives Described**

A comprehensive code analysis is required to determine whether the concepts discussed below meet all applicable code requirements, and this effort is outside the scope of this study. The concept options illustrated in this study are intended to aid the NPS in its future planning for Building 1. Cost implications are also not considered in this study. The potential impacts to the character of the building of the various elements of each option are discussed further in Chapter 8.

#### Egress Option 1

Option 1 would involve the construction of two new egress stairs on the south elevation—one on the east side and one on the west (Figure 7.1). In this scenario, the existing interior stair would function solely as a convenience stair.

#### Egress Option 2

Option 2 proposes that the existing (Figure 7.2) stair serve as one of the two means of egress, and one new stair would be added to the south. Depending on the planned use and occupancy of the building, and assuming that Building 1 is eligible to utilize the IEBC provisions for historic buildings, it may be possible to leave the existing stair open. This would require that the corridors be modified to prevent the spread of smoke with tight-fitting doors and solid elements. A 1 hour rating of the corridors may not be required under this scenario. Additional code research is required to determine if this egress option is a viable alternative to comply with the code for the planned building use.

In addition to the existing stair being enclosed, a new egress

stair would be constructed on the east side of the south elevation

Advantages and Disadvantages of Egress Option 1 and Option 2

A final recommendation for the two egress stair options was not presented in Chapter 5. Rather, the options in this chapter illustrate two potential solutions to the egress issue presented by the cursory code review.

**Option 1**, Figure 7.1, the solution with two new attached egress stairs, has the following advantages and disadvantages:

*Advantages:*

- 1) Provides full code compliance and two means of egress.
- 2) Permits the existing historic stair to be left open and unaltered

*Disadvantages:*

- 1) Higher cost than Option 2.
- 2) Greater visual impact to the exterior with two stair additions, but this is on the rear of the structure.
- 3) Requires accessible ramp installation on primary building façade.
- 4) Requires cutting down windows at each level on both sides of building to create egress stair access.

**Option 2**, Figure 7.2, the solution with one new attached egress stair and the modification of the existing stair corridors with smoke containment measures, has the following advantages and disadvantages:

*Advantages:*

- 1) Reduced visual impact to rear elevation compared to Option 1.
- 2) Reduces the number of historic windows that must be altered to provide access to the new egress stairs.
- 3) Reduced cost compared to Option 1.
- 4) Preserves the original stair in its current configuration and appearance.

*Disadvantages:*

- 1) Probably requires some changes to the corridor doors and transoms to meet requirements for smoke control and smoke seals.

### Accessibility Alternatives



**Described**

Accessibility Option 1

It is generally accepted practice to provide accessibility to a building through the main entrance. Option 1 would place a new wheelchair ramp on one side of the main entrance (Figure 7.1). A switchback ramp would be required to reach the first floor level that is about 55 inches above the sidewalk grade. This option would also require that the steps and landing in front of the main door be rebuilt since the current landing is one riser below the first floor level and because the landing dimensions are not sufficient for the required clearances.

Other options to provide accessibility on the main façade might be worthy of consideration. For example, it might be possible to create an entrance through a window on the front elevation that has close access to the main corridor. This alternative would allow the main entrance steps to remain intact, but would require alterations to contributing features on the main façade.

Accessibility Option 2

Option 2 proposes an accessible ramp on the west side of the south elevation (rear) of the building (Figure 7.2). A switchback ramp would be required to reach the first floor level that is approximately 55 inches above the exterior grade level. Option 2 would also require the construction of a new landing at the entrance door, which is currently one riser above the landing level. This approach could be coordinated with accessible parking spaces in the side parking lot adjacent to Building 1.

Advantages and Disadvantages of Accessibility Option 1 and Option 2

A final recommendation for the accessibility ramp options was not presented in Chapter 5. Rather, the options shown in this chapter illustrate two potential solutions to providing accessibility to the first floor level via a ramp.

Option 1 envisions a permanent ramp on the front of Building 1 and has the following advantages and disadvantages:

*Advantages:*

- 1) Provide entrance accessibility to all visitors through the primary entrance.
- 2) Fully meets intent of the requirements.

*Disadvantages:*

- 1) Alters symmetry of existing façade.
- 2) Requires changes to existing entrance steps and landing.
- 3) Impacts historic character.

Option 2, which envisions a permanent ramp on the west side of the south elevation (rear), has the following advantages and

disadvantages:

*Advantages:*

- 1) Eliminates the need for a new feature on the primary façade.
- 2) Locates ramp close to adjacent parking lot where accessible parking can be easily created.

*Disadvantages:*

- 1) Does not provide a very dignified entrance to building for those visitors who must use ramp.
- 2) May not meet the intent of the requirements.

**Window Treatment  
Alternatives Described**

Based on the condition of the existing historic windows, the recommended treatment is repair and rehabilitation. In order to comply with the Secretary of the Interior's *Standards for Rehabilitation*, the historic windows that are repairable should be preserved. Retention of the historic windows also takes into account the embodied energy associated with the windows, and energy performance can usually be more than adequately improved by introducing high-quality exterior storm windows.

**Option 1 – Window Repair  
(Exterior Storm Windows)**

*Window Repair with Exterior Storm Window*

Advantages:

- 1) Protects historic window sash from weathering.
- 2) Improves energy performance of the window system.
- 3) Maintains visual appearance of window on interior.
- 4) Cost effective to install.
- 5) Can be more convenient to operate.

Disadvantages:

- 1) Requires slight alteration to exterior appearance.

**Option 2 – Window Repair  
(Interior Storm Windows)**

*Window Repair with Interior Storm Window*

Advantages:

- 1) Maintains period exterior appearance of windows.
- 2) Improves energy performance of the window system.
- 3) Maintains visual appearance of window on exterior.

Disadvantages:

- 1) May reduce sight lines when installed within existing frames.

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- 2) May be more expensive.
- 3) Does not protect period sash and requires regular maintenance to maintain windows in good condition.
- 4) Interior storms typically do not include insect screen, making them less functional than exterior storms.

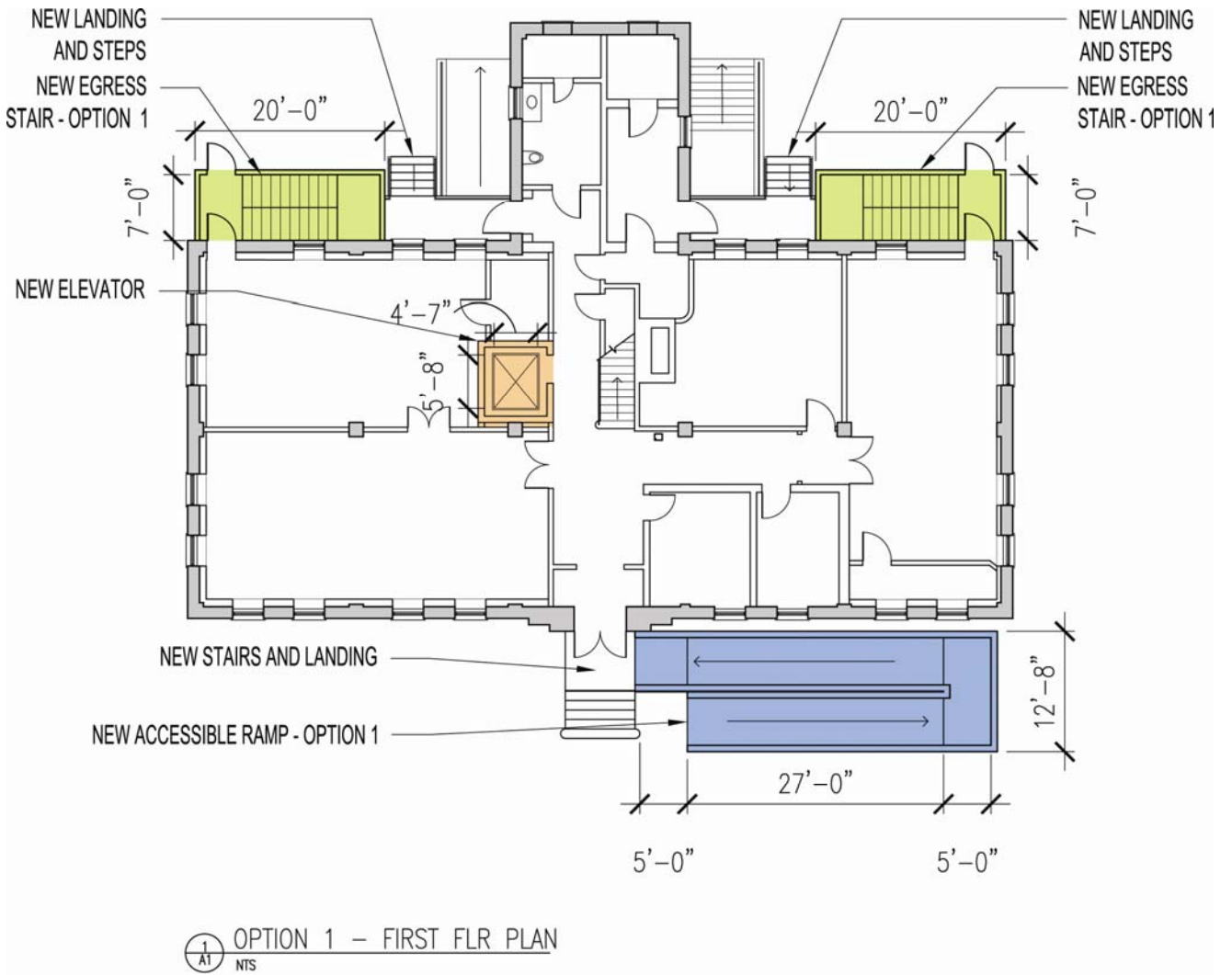
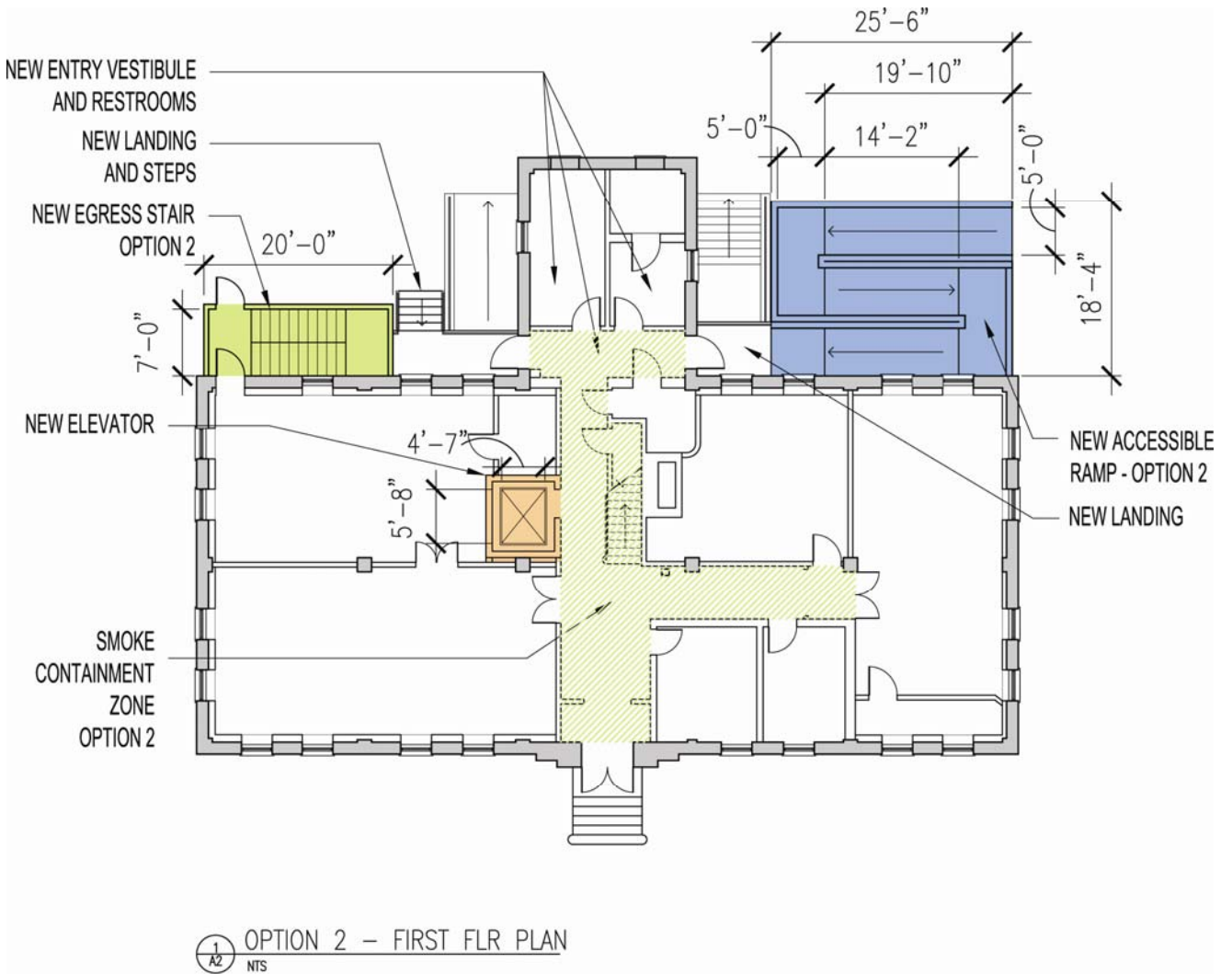


Figure 7.1 — Accessibility and Egress Option 1



**Figure 7.2 — Accessibility and Egress Option 2**

## **CHAPTER 8: Assessment of Effect for Recommended Treatment**

### **Assessment of Effect for Recommended Treatments**

Most of the proposed treatments will not affect Building 1's character-defining features and spaces. The proposed treatments are generally repairs to deteriorated elements. These treatments will not require the removal of historic fabric and are intended to maintain the building's historic appearance.

A current roofing repair project is underway to repair the slate roof, the wood eaves, and the gutter and downspouts. These repairs are being undertaken in a manner that will not have a negative effect on the building's character-defining features.

A number of treatments recommendations were made in Chapter 5 following a preliminary review of other alternatives that are available for some project components. For those treatments with the potential to impact the period features and spaces, recommendations are assessed below to outline their effect on character-defining features.

### **Exterior**

#### **Egress Stair Options 1 and 2**

A final recommendation for the two egress stair options was not presented in Chapter 7. Rather, the options were shown to illustrate two potential solutions to the egress requirements identified by the preliminary code search (refer to Figures 7.1 and 7.2).

#### *Egress Option 1*

#### **Potential Effects:**

- 1) Requires cutting down two windows on rear elevation (each side) to create door openings into the egress stair. Some loss of historic fabric.
- 2) Alters the visual appearance of the exterior.
- 3) Would probably require accessibility ramp to be located



on primary elevation.

Mitigating Measures:

- 1) The stairs are not located on the primary or secondary facades and do not impact the orientation of Building 1 to the parade ground.

Beneficial Effects:

- 1) Provides full code compliance for requires exits.
- 2) Does not require extensive interior changes to integrate new stair element.
- 3) Does not reduce the useable square footage in the building.

*Egress Option 2*

Potential Effects:

- 1) Requires cutting down two windows on rear elevations to create door openings into the egress stair. Some loss of historic fabric.
- 2) Requires modification to non-contributing corridor doors and contributing transoms to create smoke control and smoke seals.

Mitigating Measures:

- 1) Reduces the amount of new stair mass on the exterior.
- 2) Corridor doors are non-contributing elements, so the introduction of new doors will not affect historic character.

Beneficial Effects:

- 1) Reduces the amount of historic fabric that must be removed to create two means of egress.
- 2) Allows the original, contributing stair to be preserved in open condition, and permits the contributing transoms to be retained.

Accessibility Options 1 and 2

A final recommendation for the two accessibility ramp options was not presented in Chapter 7. Rather, a number of options were shown to illustrate potential solutions to providing accessibility to the first floor level via a ramp (refer to Figures 7.1 and 7.2).

*Accessible Ramp Option 1*

Potential Effects:

- 1) Alters the appearance of the front elevation and disrupts the building symmetry.
- 2) Requires alteration to existing front stair, landing, and railings.

Mitigating Measures:

- 1) Could be screened with plantings to limit visual impact.
- 2) Can be detailed to limit the amount of changes to historic fabric.

Beneficial Effects:

- 1) Provides most dignified accessibility to building.

*Accessible Ramp Option 2*

Potential Effects:

- 1) Does not provide accessibility through main building entrance.
- 2) Would require changes to interior to create an accessible route to public function areas.

Mitigating Measures:

- 1) Can be detailed to limit removal of historic fabric.

Beneficial Effects:

- 1) Does not require alterations to Building 1's main elevation facing the parade ground.

Windows

The recommended treatment for the historic windows is repair.

Potential Effects:

- 1) Requires regular maintenance to maintain appearance and function.
- 2) Requires specialty contractor to recondition sash and sash cords/hardware.

Mitigating Measures:

- 1) Windows can be protected with triple-track exterior storm windows.

Beneficial Effects:

- 1) Retention of historic fabric. Historic design and appearance maintained.

**Interior**

Perimeter Walls and Ceilings

Potential Effects:

- 1) The removal of non-contributing furred-out walls at the perimeters and suspended ceilings was recommended in Chapter 5. This change will return the perimeter walls to their original relationships to the window openings.

Mitigating Measures:

- 1) Any new electrical conduits for outlets and lighting would be surface mounted and would be consistent with the historic character of the building, which originally included many exposed features.

Beneficial Effects:

- 1) Return of the spatial character and interior appearance of many rooms in Building 1 to their original condition.

Interior Partitions

Potential Effects:

- 1) Almost all historic partitions will be retained. It is expected that some layers of gypsum board and fiberboard, added to the period partitions, will be removed. This impact will be positive.
- 2) Should an elevator be installed where shown in the concept plans (Figure 7.1), a minor change to several period partitions will be necessary to create the door for the elevator on each floor.

Mitigating Measures:

- 1) Non-period partition layers will be removed, and patching of the historic partitions will be undertaken.

Beneficial Effects:

- 2) The historic appearance of the original partitions will be returned.

Stairs and Stair Railings

The existing main stair from the first to the second floor will be retained. The addition of additional vertical railing balusters is the recommended treatment to bring the railing into conformance with code requirements.

Potential Effects:

- 1) A new feature will be added to the existing pipe railing.

Mitigating Measures:

- 1) The new railing elements will be additive and will be designed to be simple and compatible with the existing pipe railing.

Beneficial Effects:

- 1) The existing stair can be retained and will be brought up to code.

# BUILDING 1, FORT TILDEN - DRAFT HISTORIC STRUCTURES REPORT

## PART 2: TREATMENT AND USE

## CHAPTER 8

### Elevator

A new elevator is proposed to provide accessibility to the second floor and basement (refer to Figure 7.1).

#### Potential Effects:

- 1) Requires alteration to period partitions in order to create the elevator door opening. Installation of an elevator also requires creating opening in the floor structure.

#### Mitigating Measures:

- 1) Can be located so that the elevator does not project above the existing roof line.

#### Beneficial Effects:

- 1) Provides full accessibility to the second floor and basement.

## **APPENDIX A: BIBLIOGRAPHY**

### **Archival Sources**

“Completion Report of Erection of New Barracks – Building No. 1. at Fort Tilden.” New York, May 25, 1939. Prepared by Jaccard, Paul A., Captain, 7<sup>th</sup> C.A.C., Assistant Quartermaster, HDSH, and W.P.A. Officer. Records of the Office of the Chief of Engineers. National Archives, Record Group 77, Entry 391, Box 311 and 312. Refer to Appendix C.

“Quartermaster Corps Form No.117- Fort Tilden Fort Book - Building 1”. U.S. Army War Department. Records of the Office of the Chief of Engineers. Historical Record of Buildings. National Archives, Record Group 77, Entry 393, Box 261. Refer to Appendix C.

GATE Archives. Drawings, photographs, and memoranda related to Building 1 can be found in the GATE archive.

U.S. Army Corp of Engineers, Office of History, Alexandria, Virginia. This collection includes microfilm copies of Building 1 drawings prepared by the Construction Division, Office of the Quartermaster General. Refer to Appendix C.

Denver Service Center, Technical Information Center. DSC holds digital copies of WPA drawings prepared for Building 1. Refer to Appendix C.

### **Reports and Studies**

Selvek, Christina. *Cultural Landscape Report for Fort Tilden, Gateway National Recreation Area, 95% Draft, September 2005*. Boston: U.S. Department of the Interior, National Park Service, Olmsted Center for Landscape Preservation, 2005.

Torres, Louis. *Historic Structures Report, Historical Data Section, Gateway National Recreation Area, New York*, Denver, CO: U.S. Department of the Interior, National Park Service, 1980.

## **BUILDING 1, FORT TILDEN - DRAFT HISTORIC STRUCTURES REPORT**

### RESOURCES

### APPENDIX A

Wrenn, Tony P. "General History of the Jamaica Bay, Breezy Point, and Staten Island Units, Gateway National Recreation Area, New York, NY." U.S. Department of the Interior, North Atlantic Region, National Park Service, 1975.

\_\_\_\_\_, "Project Manual Building 1 Roof Repair Project Jamaica Bay Unit – Fort Tilden, Gateway National Recreation Area." Office of Operational Support, May 2006.

\_\_\_\_\_, *Jacob Riis/Fort Tilden Development Concept Plan-Environmental Assessment*. U.S. Department of the Interior, National Park Service, Denver Service Center, February 1986

#### **National Register Nominations**

Pitcaithley, Dwight and Michael Wurm. Fort Tilden Historic District (Gateway NRA). National Register of Historic Places Inventory – Nomination Form, March 6, 1984.



## **APPENDIX B: RECORD DRAWINGS**

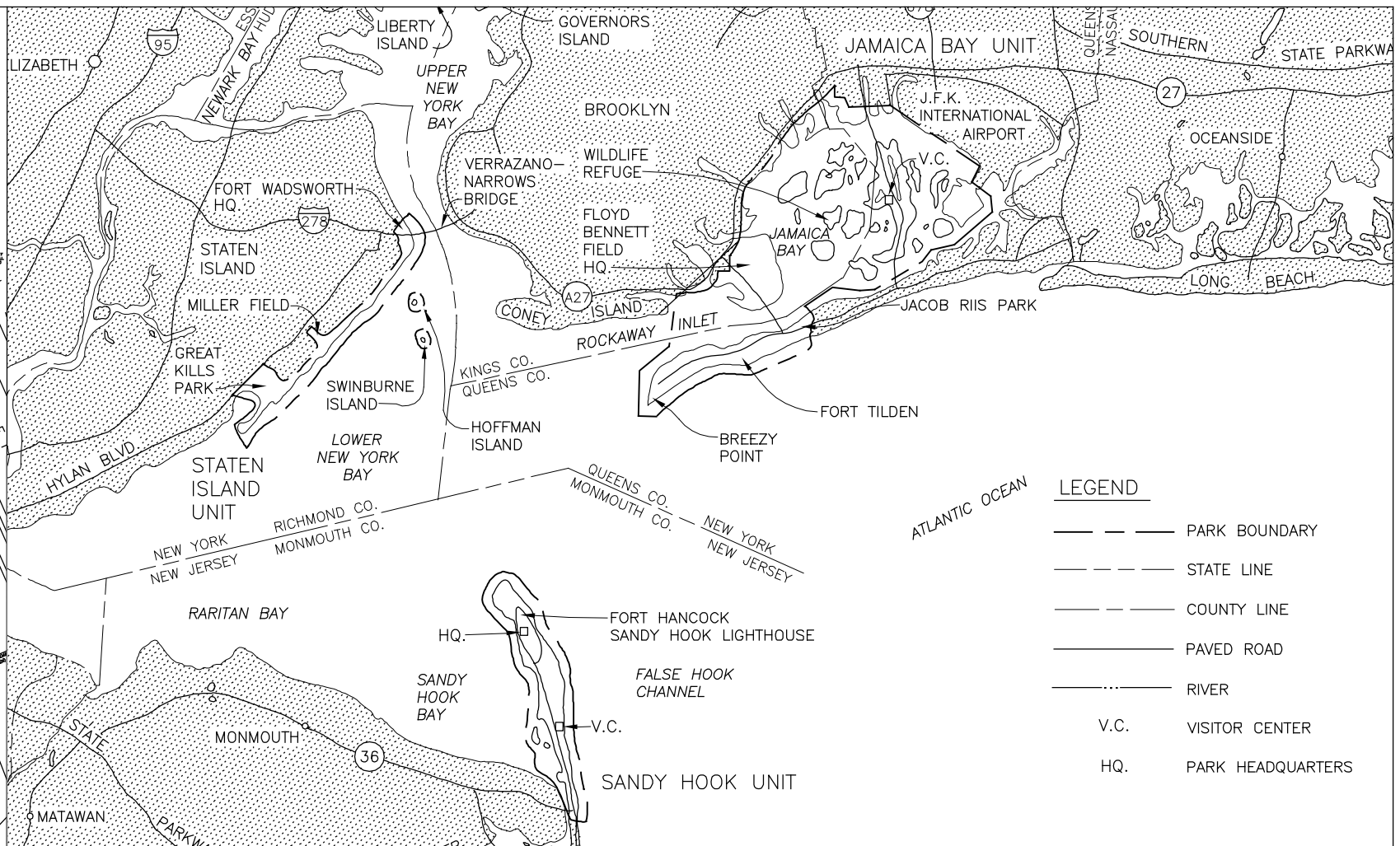
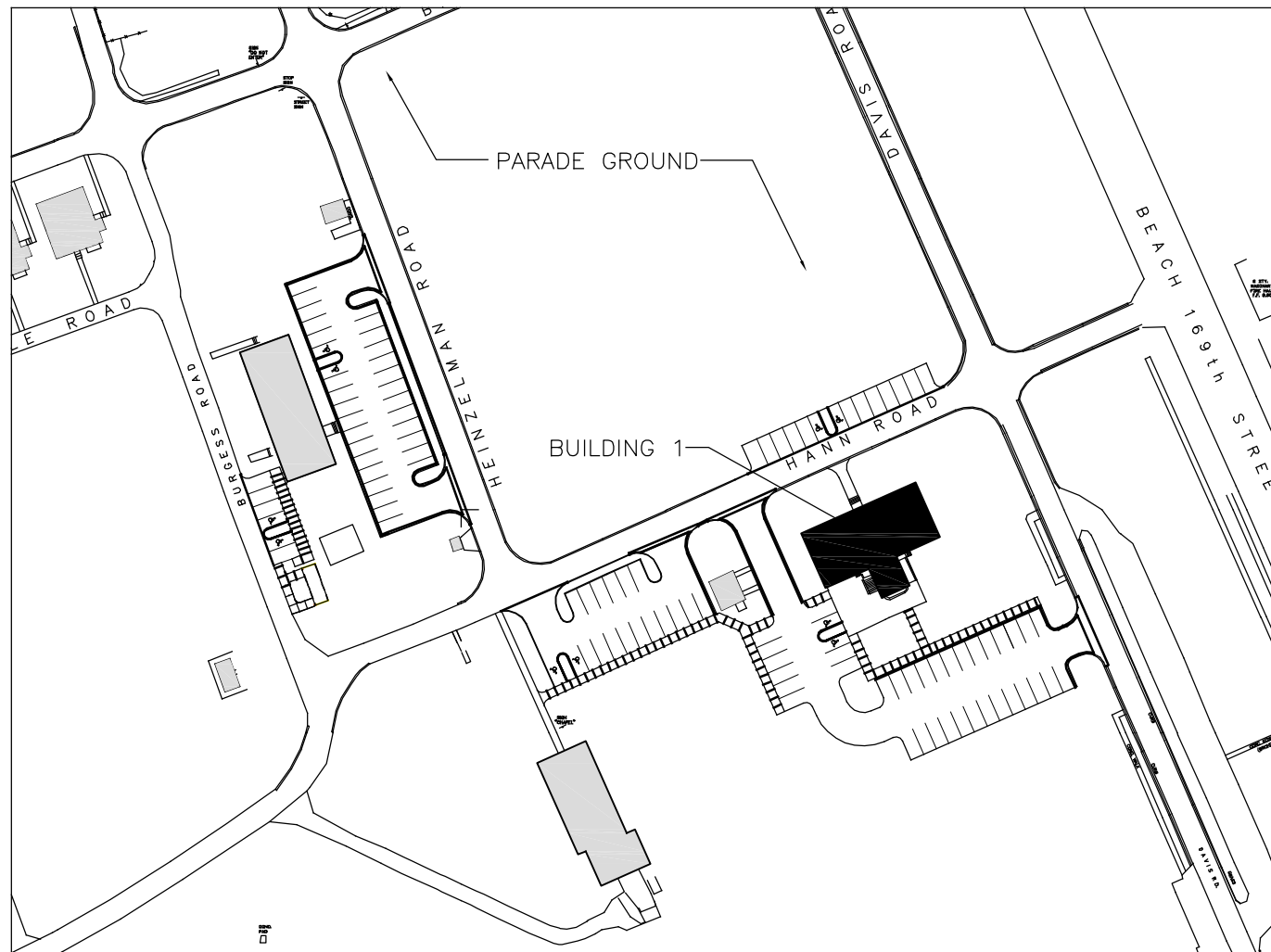
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### **Source**

#### **Record Drawings**

- **T1 – Title Sheet – Record Drawings; Site and Location Plan, NPS/ Quinn Evans | Architects**
- **A1 - Basement Plan – Record Drawings, Quinn Evans | Architects**
- **A2 - First Floor Plan – Record Drawings, Quinn Evans | Architects**
- **A3 - Second Floor Plan – Record Drawings, Quinn Evans | Architects**
- **A4 - Roof Plan – Record Drawings, Quinn Evans | Architects**
- **B1 - North Elevation – Record Drawings, Quinn Evans | Architects**
- **B2 - South Elevation – Record Drawings, Quinn Evans | Architects**
- **B3 - East Elevation – Record Drawings, Quinn Evans | Architects**
- **B4 - West Elevation – Record Drawings, Quinn Evans | Architects**

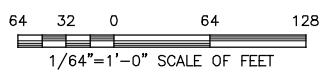
**Note: Drawings included are for reference and are half-size reproductions. They scale at 1/8” equals 1’-0”.**



- LEGEND**
- PARK BOUNDARY
  - STATE LINE
  - COUNTY LINE
  - PAVED ROAD
  - RIVER
  - V.C. VISITOR CENTER
  - HQ. PARK HEADQUARTERS

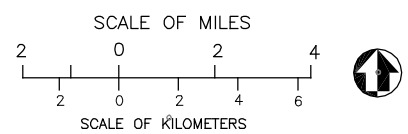
### SITE PLAN

**BUILDING 1 - FORT TILDEN**



### LOCATION PLAN

**GATEWAY N.R.A. UNITS, NEW YORK & NEW JERSEY**



Established in 1917 to defend the eastern channel entrances to New York harbor, Fort Tilden historically encompassed approximately 309 acres and included a Defense (fortification) Area, a Cantonment Area, and a Utility (wharf) area. Temporary structures were slowly replaced by more permanent structures. A significant period of expansion occurred in the late 1930s in conjunction with the Works Progress Administration. During this time period Building 1 was designed and constructed to provide more adequate housing for those men stationed at Fort Tilden.

In 1930, the Office of the Quartermaster General began designing Building 1. The Works Progress Administration (W.P.A.) of the City of New York completed the design for Building 1 in 1938, and was responsible for the building's construction. Construction began on August 10, 1938 and work was completed on 25 May 1939.

Building 1 is significant as one of the extant permanent buildings designed and constructed at Fort Tilden by the Works Progress Administration (WPA) of New York City. This building—and others from the period—helped establish the architectural character of the cantonment. Building 1 is the most prominent structure from this period, and it was sited to overlook Fort Tilden's parade ground. Constructed of brick and cast stone on a concrete frame structure, the building was designed in a Georgian Revival mode.

During World War II, Building 1 was converted into a hospital, and later the building served as the post's Headquarters Building. In 1972, the Gateway National Recreation Area (GATE) was established, and Fort Tilden was transferred from the Army to the National Park Service, which continues to manage the building today.

# BUILDING 1 - FORT TILDEN



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TITLE SHEET - RECORD DRAWINGS  
 SITE AND LOCATION PLAN  
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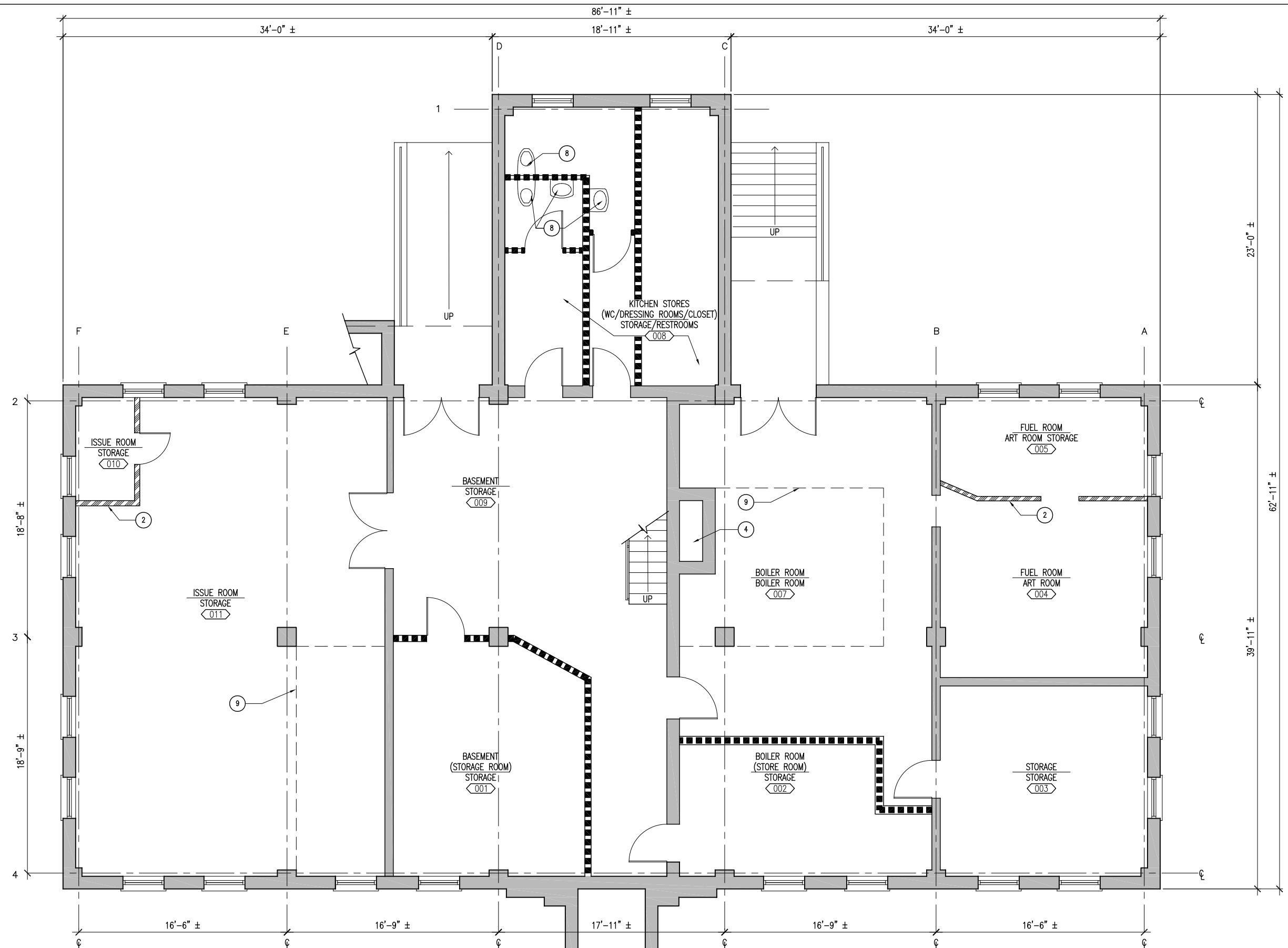
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**BUILDING #1**  
 TITLE  
**FORT TILDEN**  
 LOCATION  
 GATEWAY NATIONAL RECREATION AREA  
 PARK

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 1 OF 9



**GENERAL NOTES**

1. ROOM NAME LEGEND:
- SQUAD ROOM : 1939 - BARRACK USE\*
  - (WARD) : 1940 - HOSPITAL USE
  - OFFICES : 2006 - CURRENT USE
  - (007)

\*In locations where original 1939 rooms have been divided, all spaces originally part of that room have been labeled with the appropriate 1939 room name.

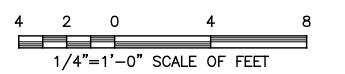
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**KEYNOTES**

- 1 EXTERIOR PERIMETER WALL WITH NON-PERIOD FURR OUT AND CONCEALING PERIOD WALL FINISHES, TYP.
- 2 NON-PERIOD PARTITION, TYP. INSERTED AFTER 1941.
- 3 PERIOD PARTITION WITH NON-PERIOD PANELING CONCEALING PERIOD FINISHES, TYP.
- 4 CHIMNEY
- 5 DRINKING FOUNTAIN
- 6 STEEL SHIP'S LADDER
- 7 COPPER GUTTER
- 8 PERIOD PLUMBING FIXTURE
- 9 METAL CAGE ENCLOSURE
- 10 POSSIBLE LOCATION OF FORMER DOOR OPENING

**LEGEND**

- ORIGINAL WALLS /PARTITIONS
- NON-CONTRIBUTING WALLS/PARTITIONS
- PERIOD WALLS /PARTITIONS (HOSPITAL CONVERSION 1941)



1  
A1  
**BASEMENT PLAN**  
1/4" = 1'-0"



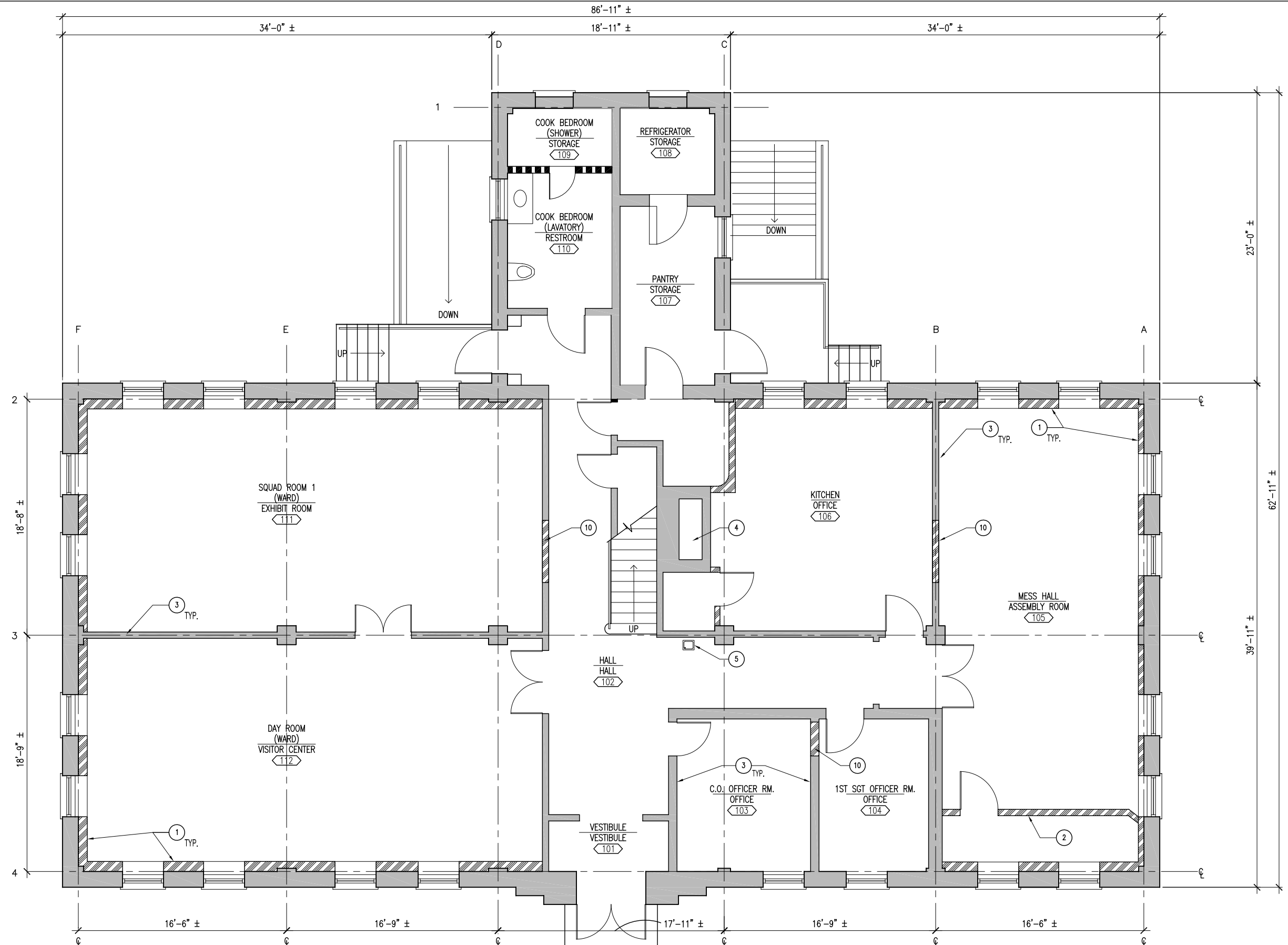
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BASEMENT PLAN - RECORD DRAWINGS  
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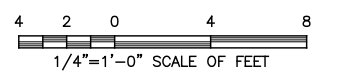
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- NON-CONTRIBUTING WALLS/PARTITIONS
- PERIOD WALLS /PARTITIONS (HOSPITAL CONVERSION 1941)



1 FIRST FLOOR PLAN  
1/4" = 1'-0"



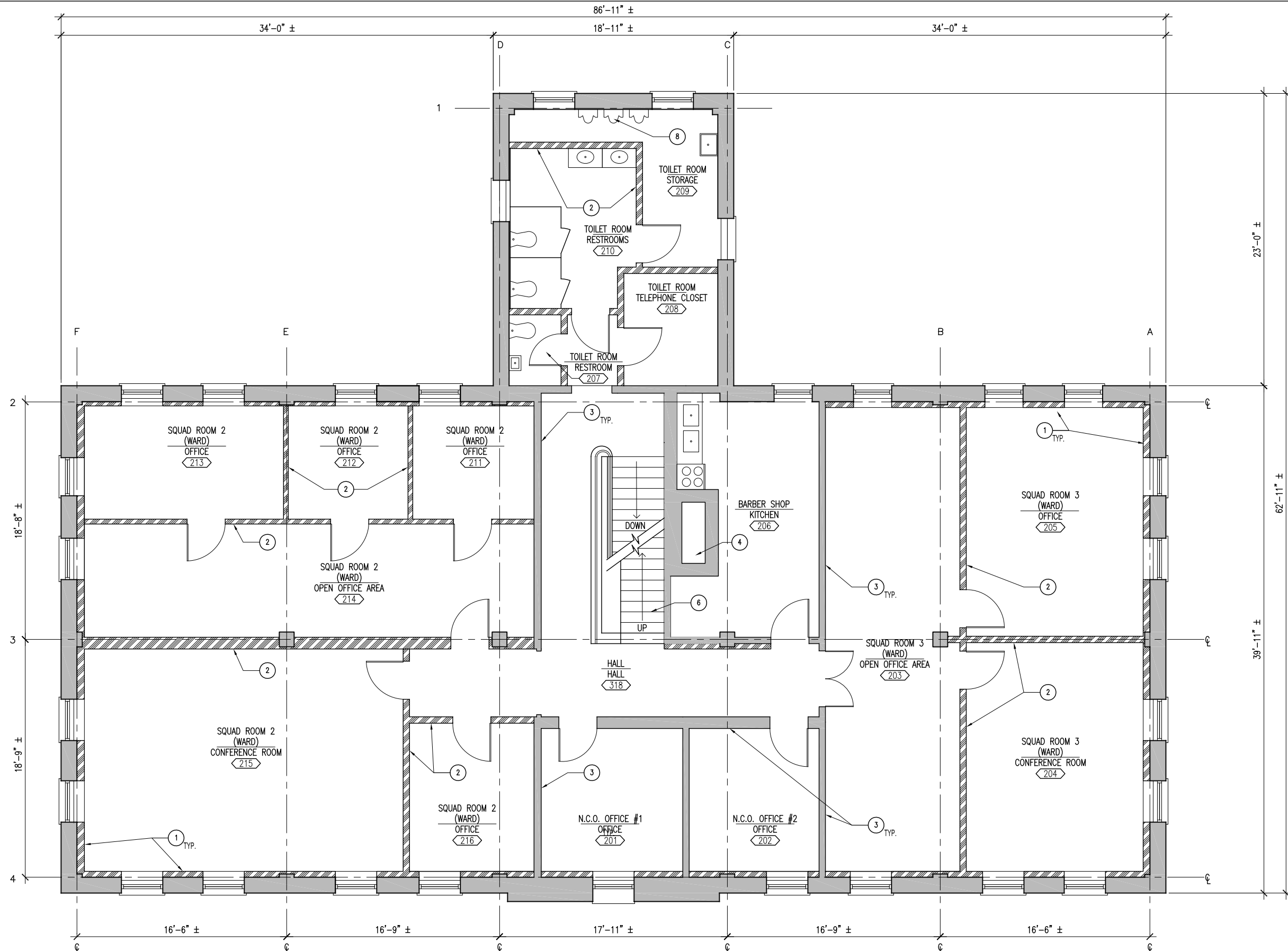
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FIRST FLOOR PLAN - RECORD DRAWINGS  
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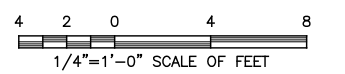
- GENERAL NOTES**
1. ROOM NAME LEGEND:
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  - (WARD) : 1940 - HOSPITAL USE
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  - (007)

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- KEYNOTES**
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- LEGEND**
- ORIGINAL WALLS /PARTITIONS
  - NON-CONTRIBUTING WALLS/PARTITIONS
  - PERIOD WALLS /PARTITIONS (HOSPITAL CONVERSION 1941)



1 SECOND FLOOR PLAN  
1/4" = 1'-0"



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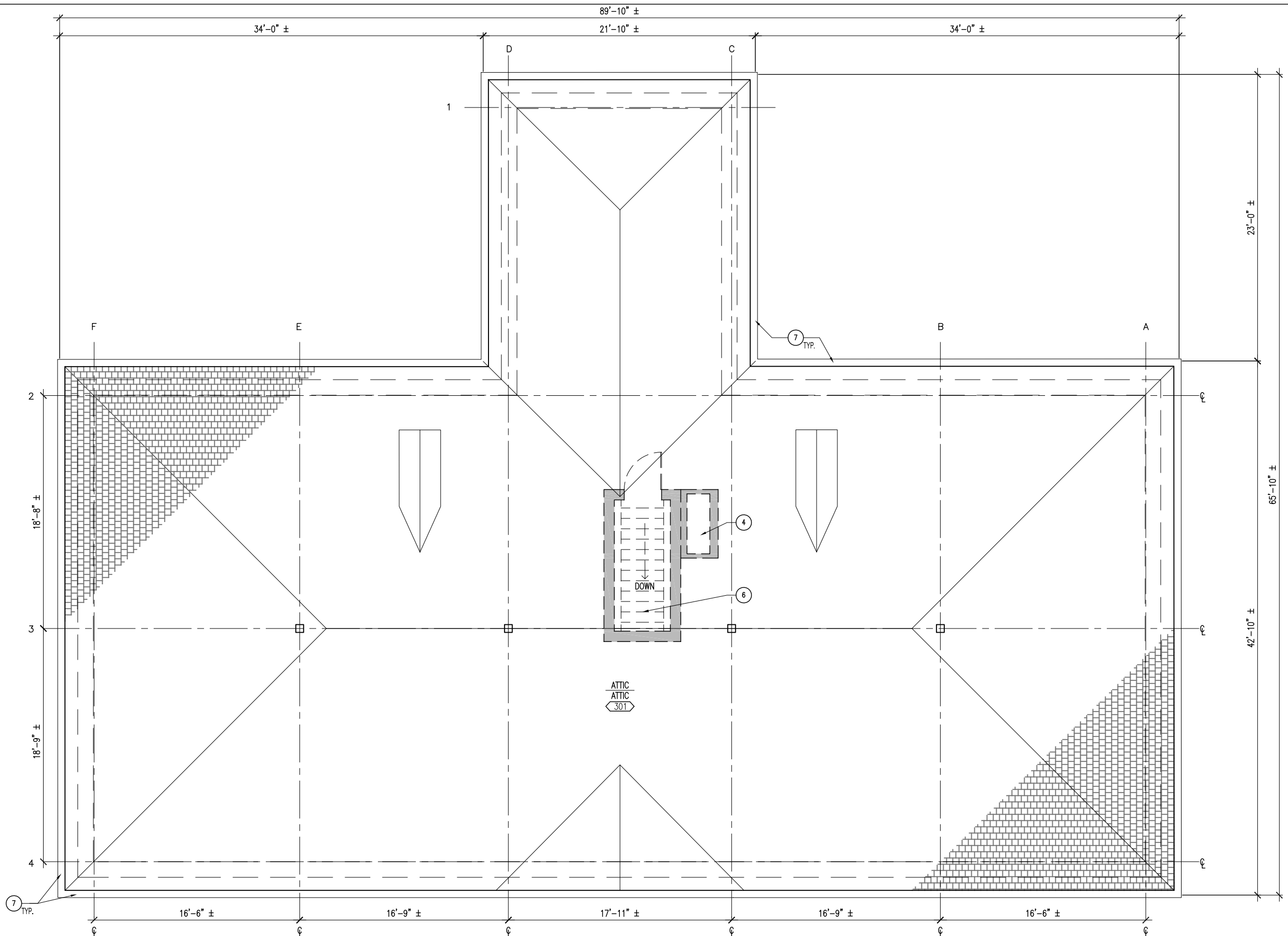
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**BUILDING #1**  
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LOCATION  
GATEWAY NATIONAL RECREATION AREA  
PARK

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**GENERAL NOTES**

**1. ROOM NAME LEGEND:**

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- (WARD) : 1940 - HOSPITAL USE
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- 007

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**KEYNOTES**

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**LEGEND**

- ORIGINAL WALLS /PARTITIONS
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- PERIOD WALLS /PARTITIONS (HOSPITAL CONVERSION 1941)

1 ROOF PLAN  
1/4" = 1'-0"



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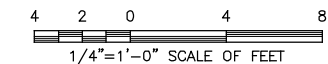
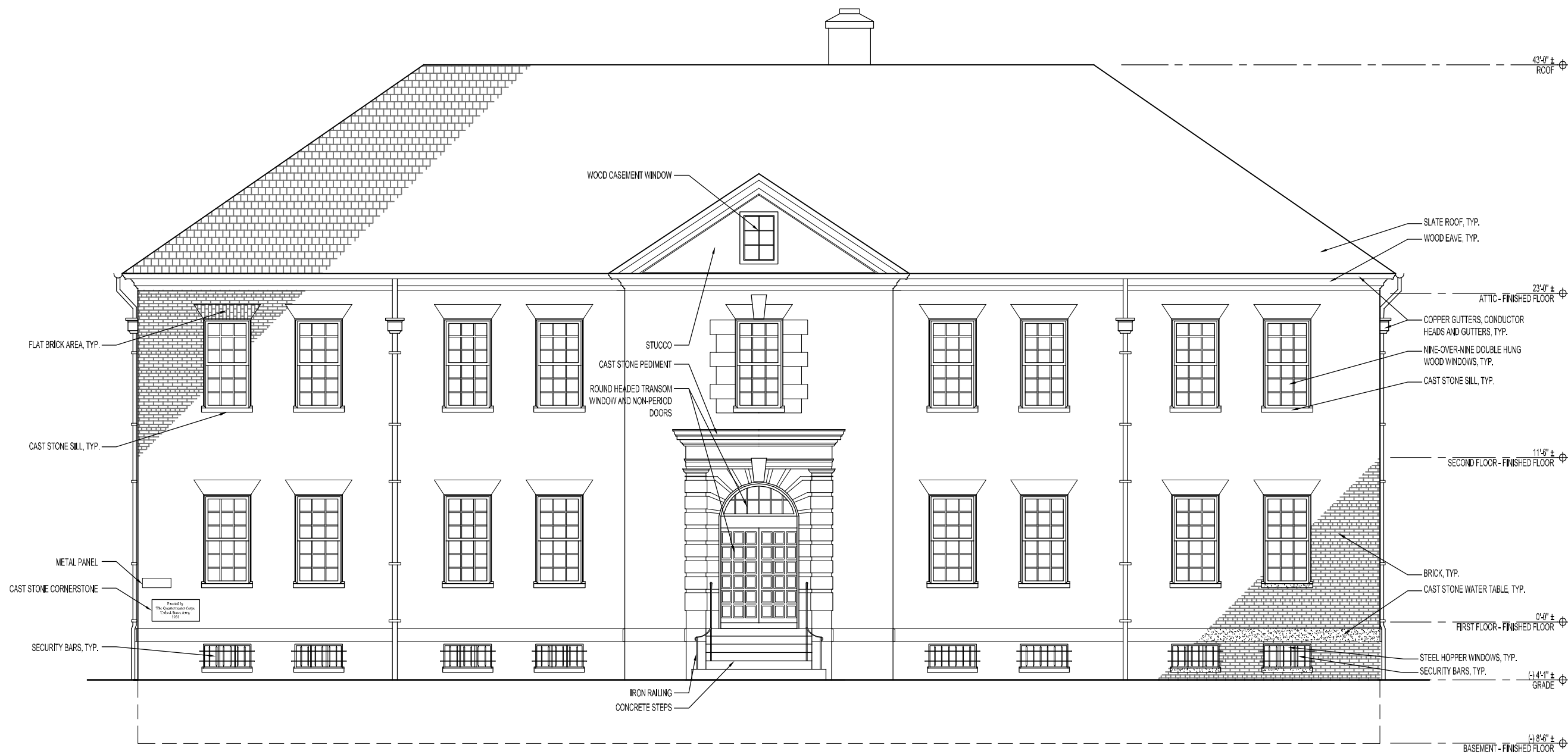
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GENERAL NOTES

1. DORMERS AND CHIMNEY WERE NOT FIELD MEASURED AND ARE BASED ON HISTORIC DRAWINGS AND PHOTOGRAPHS.



1 NORTH ELEVATION  
1/4" = 1'-0"



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NORTH ELEVATION - RECORD DRAWINGS  
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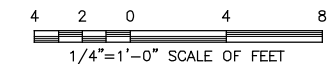
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**BUILDING #1**  
TITLE  
FORT TILDEN  
LOCATION  
GATEWAY NATIONAL RECREATION AREA  
PARK

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DATE	05/25/2007
SHEET	6 OF 9

GENERAL NOTES

1. DORMERS AND CHIMNEY WERE NOT FIELD MEASURED AND ARE BASED ON HISTORIC DRAWINGS AND PHOTOGRAPHS.



1 SOUTH ELEVATION  
B2  
1/4" = 1'-0"



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SOUTH ELEVATION - RECORD DRAWINGS  
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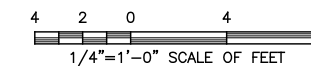
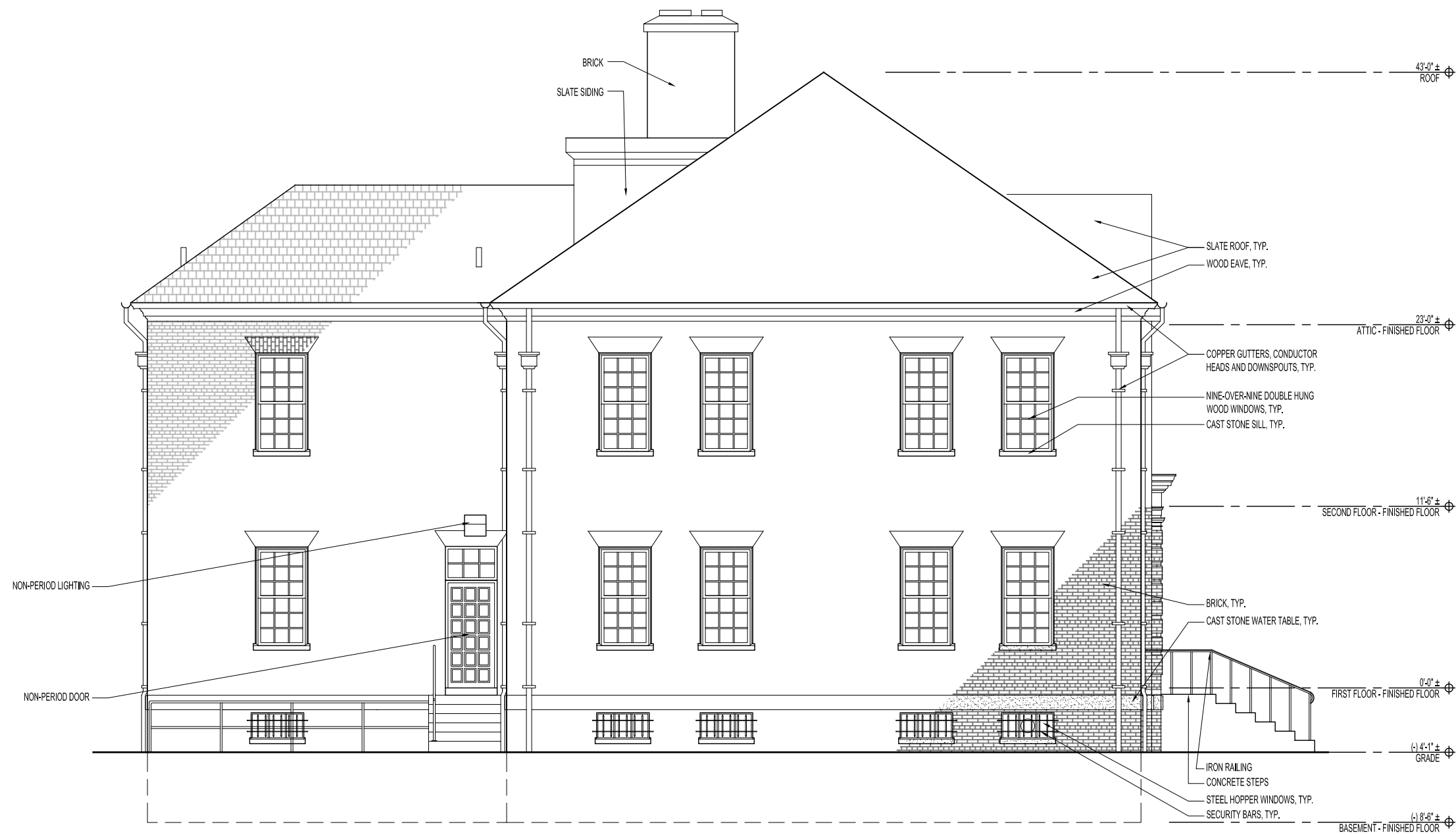
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LOCATION  
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PARK

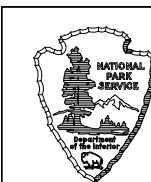
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SHEET	7
OF	9

GENERAL NOTES

1. DORMERS AND CHIMNEY WERE NOT FIELD MEASURED AND ARE BASED ON HISTORIC DRAWINGS AND PHOTOGRAPHS.



1 EAST ELEVATION  
B3 1/4" = 1'-0"



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EAST ELEVATION - RECORD DRAWINGS  
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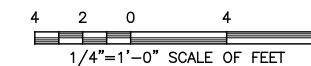
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 LOCATION  
**GATEWAY NATIONAL RECREATION AREA**  
 PARK

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SHEET	8 OF 9

GENERAL NOTES

1. DORMERS AND CHIMNEY WERE NOT FIELD MEASURED AND ARE BASED ON HISTORIC DRAWINGS AND PHOTOGRAPHS.



1 WEST ELEVATION  
B4 1/4" = 1'-0"



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WEST ELEVATION - RECORD DRAWINGS  
 TITLE OF DRAWING

UNITED STATES  
 DEPARTMENT OF THE INTERIOR  
 NATIONAL PARK SERVICE - NORTHEAST REGION  
 BRANCH OF DESIGN AND CONSTRUCTION

**BUILDING #1**  
 TITLE  
**FORT TILDEN**  
 LOCATION  
**GATEWAY NATIONAL RECREATION AREA**  
 PARK

DESIGNED	TJ
DRAWN	KS
CHECKED	BS
DWG. NO.	646
DATE	05/25/2007
SHEET	25100
	9 OF 9



**BUILDING 1, FORT TILDEN - DRAFT HISTORIC STRUCTURES REPORT**

RESOURCES

APPENDIX C

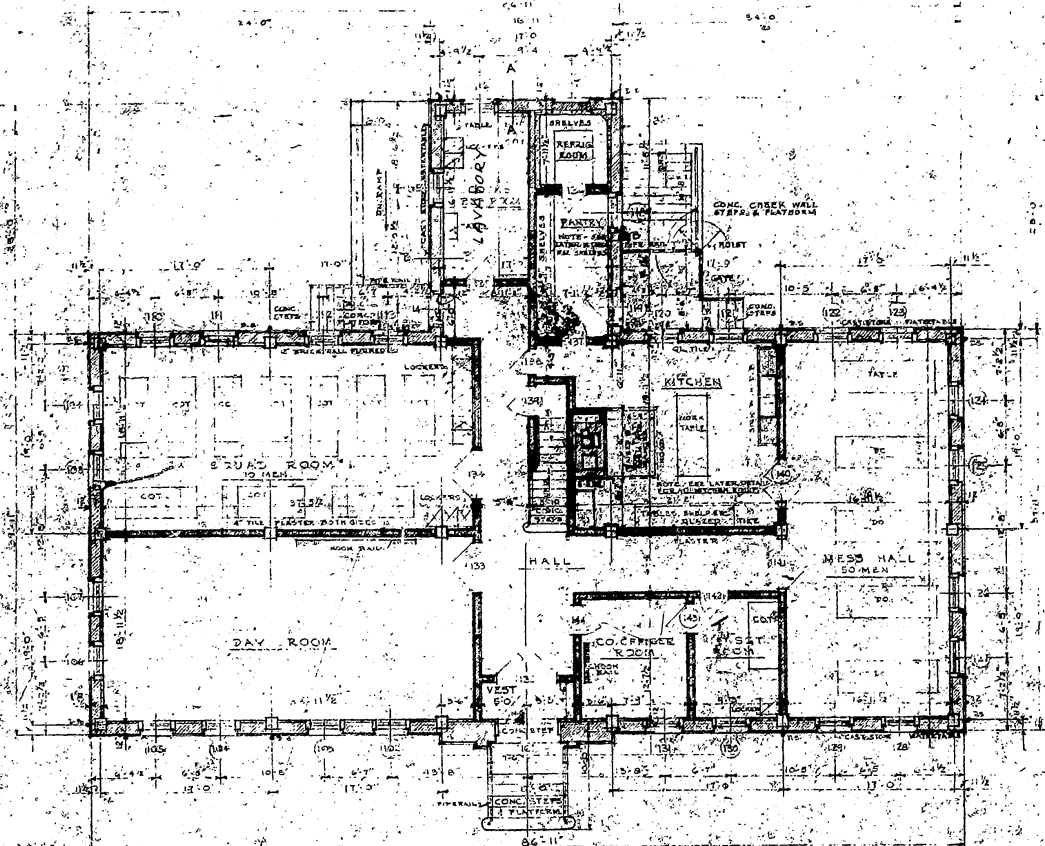
**Historical Record of Buildings,  
War Department (QMC)  
Quartermaster Corp Form No.  
117 for Building 1** including  
enlarged historic image

**National Archives**

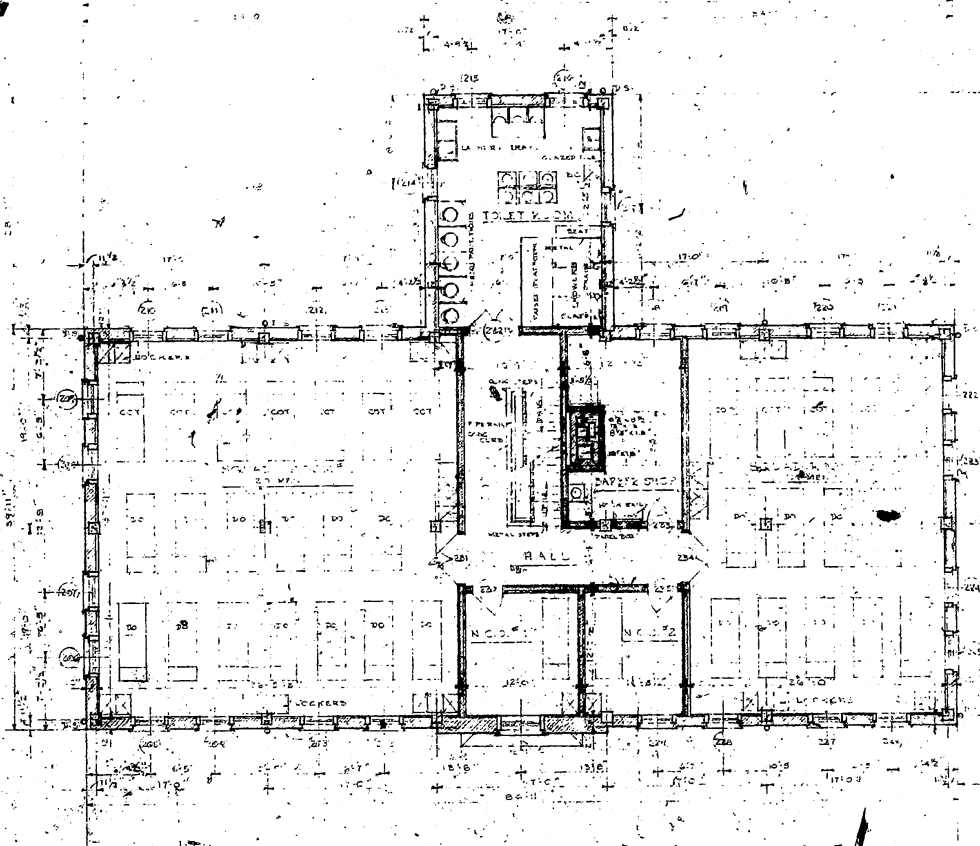
**National Register of Historic  
Places Inventory – Nomination  
Form**, “Fort Tilden Historic  
District (Gateway NRA).” March  
6, 1984.

**Gateway National Recreation Area**

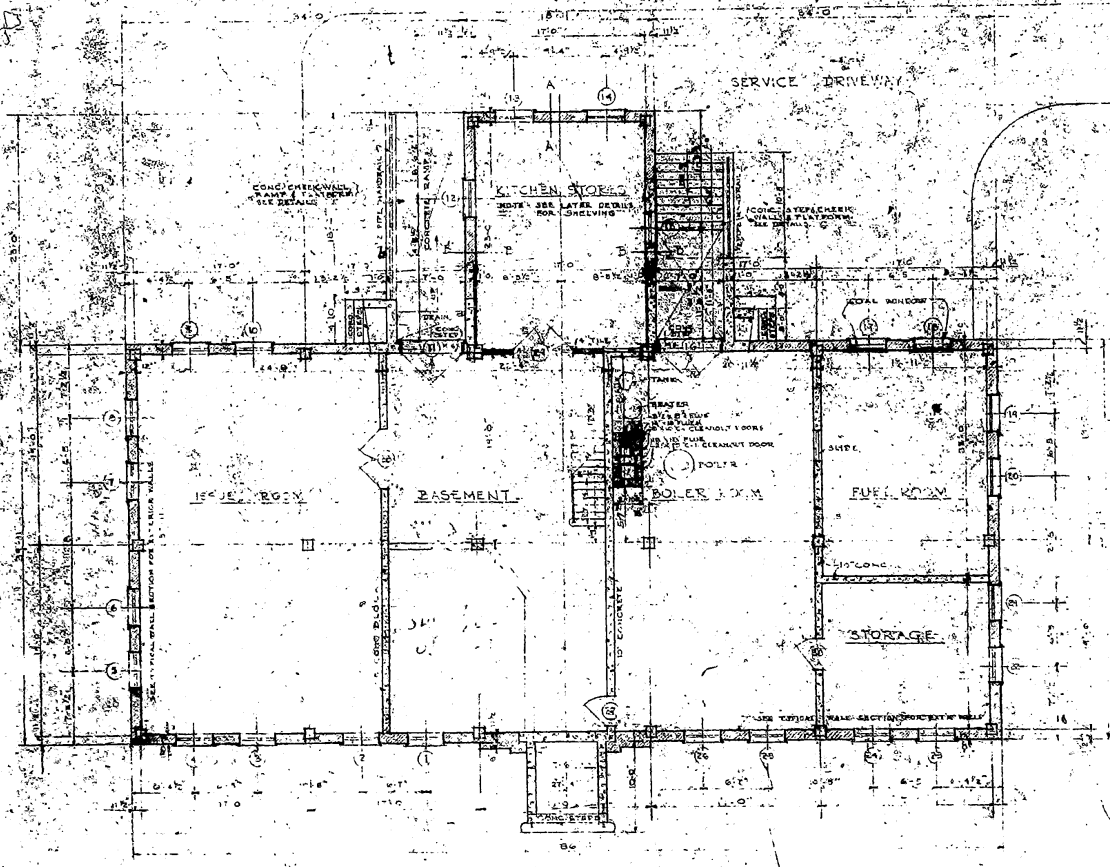




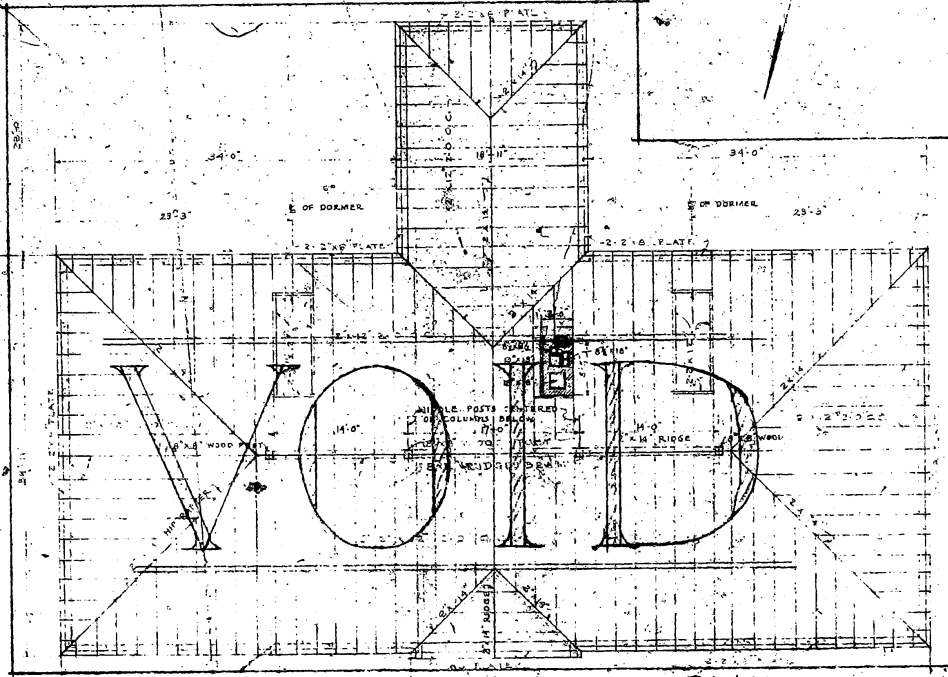
FIRST FLOOR PLAN  
SCALE 1/8"=1'-0"



SECOND FLOOR PLAN  
SCALE 1/8"=1'-0"



BASEMENT PLAN  
SCALE 1/8"=1'-0"



FOR REVISED ROOF FRAMING PLAN  
SEE DRAWING NO. D-47-30

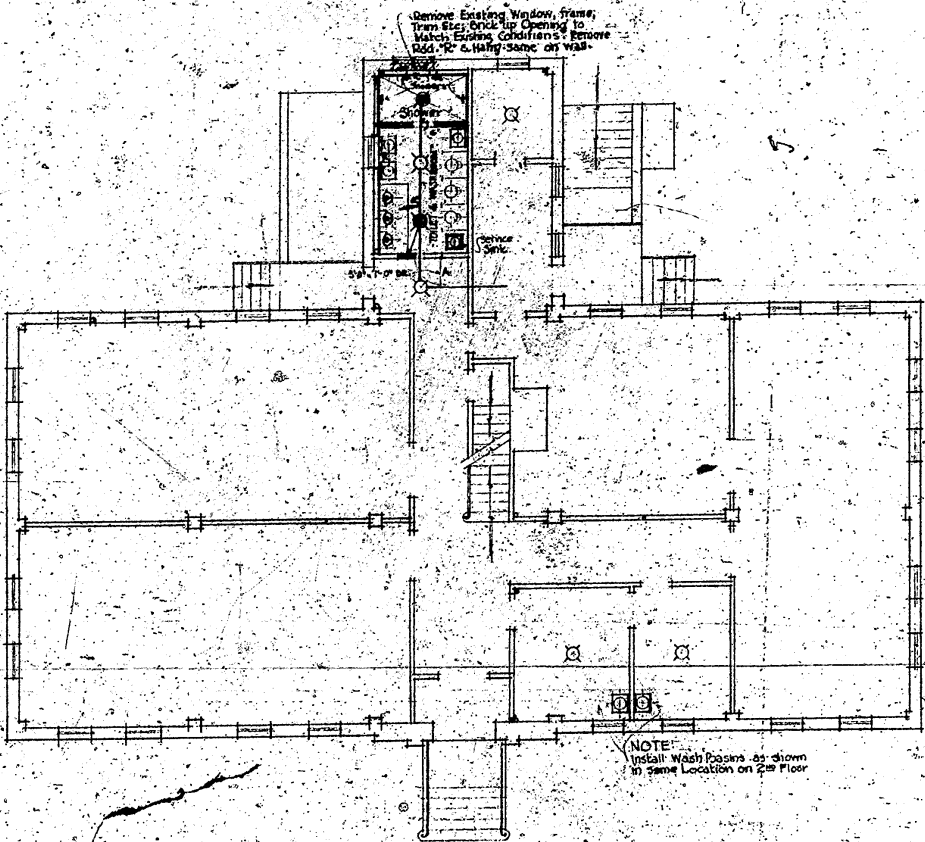


TYPICAL EXTERIOR WALL DETAIL

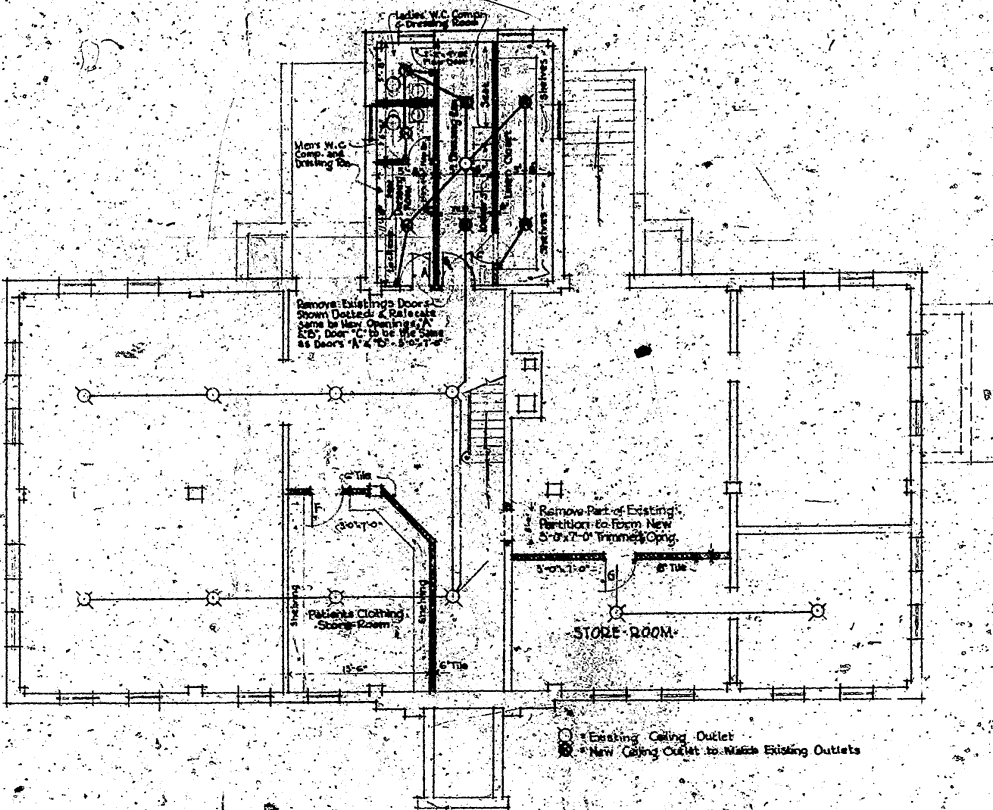
SECOND CORPS AREA FORT TILDEN, NEW YORK	
DETACHMENT BARRACKS PLANS AND TYPICAL WALL SECTION	
HARRY P. MORAN DIRECTOR	MAJ. W. F. PUTNAM COMMANDING OFFICER
APPROVED <i>[Signature]</i>	APPROVED <i>[Signature]</i>
J. JAKUBOWSKY CHIEF PLANNING SECTION MIDDLESEX FIELD OFFICE	APPROVED <i>[Signature]</i>
DESIGNED BY SCALE: AS SHOWN	DRAWN BY SCALE: AS SHOWN
WORKS PROGRESS ADMINISTRATION PROJECT NO. 27-27	

REDUCED SIZE REPRODUCTION

16/62946  
lofs



FIRST FLOOR PLAN

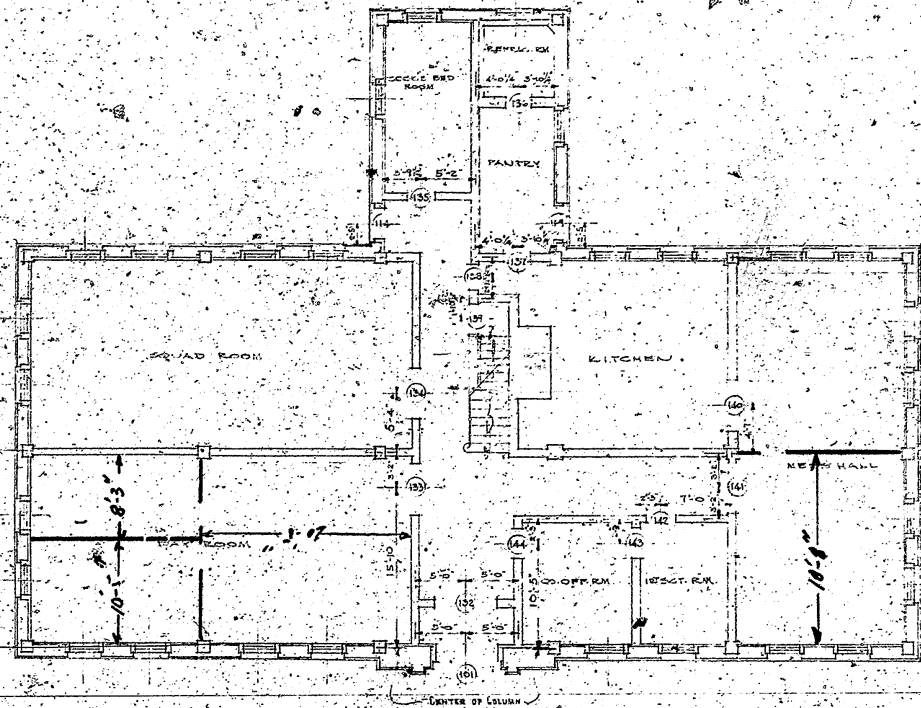


BASEMENT PLAN

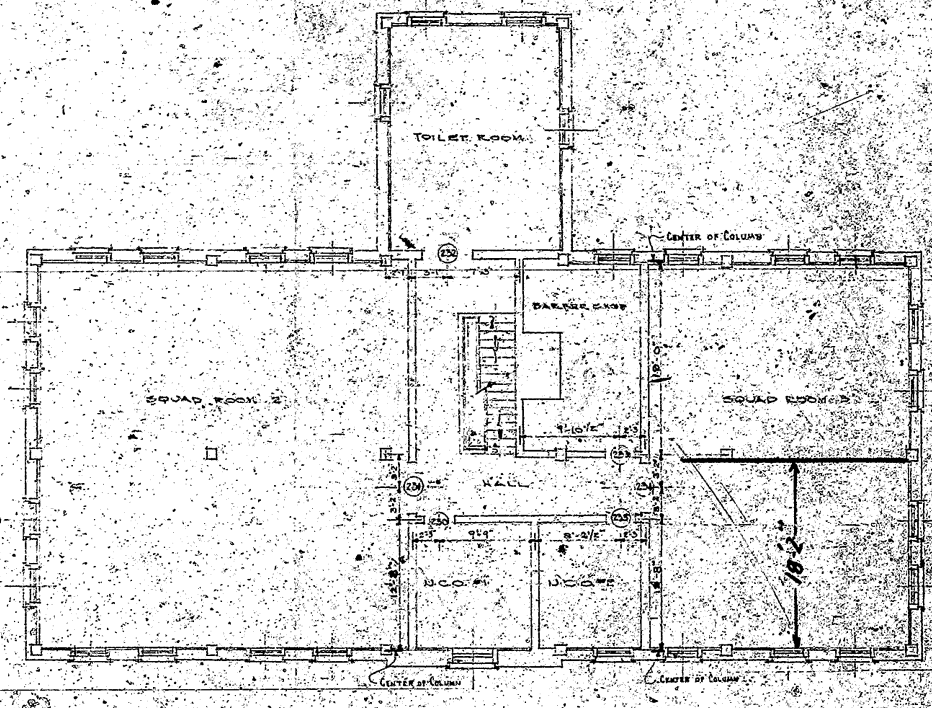
SCALE: 1/8" = 1'-0"

SCALE	1/8" = 1'-0"	WAR. DEPT.
REVISIONS		OFFICE OF THE CONSTRUCTION DIVISION
		NEW YORK
		20 CHURCH ST., NEW YORK
		FOR THE
		PROPOSED
		FOR CONVERSION
		BARRACKS
		DRAWN BY APPROVED
		L. A. B.
		CHECKED BY
		H.S.
		APPROVED BY
		1940

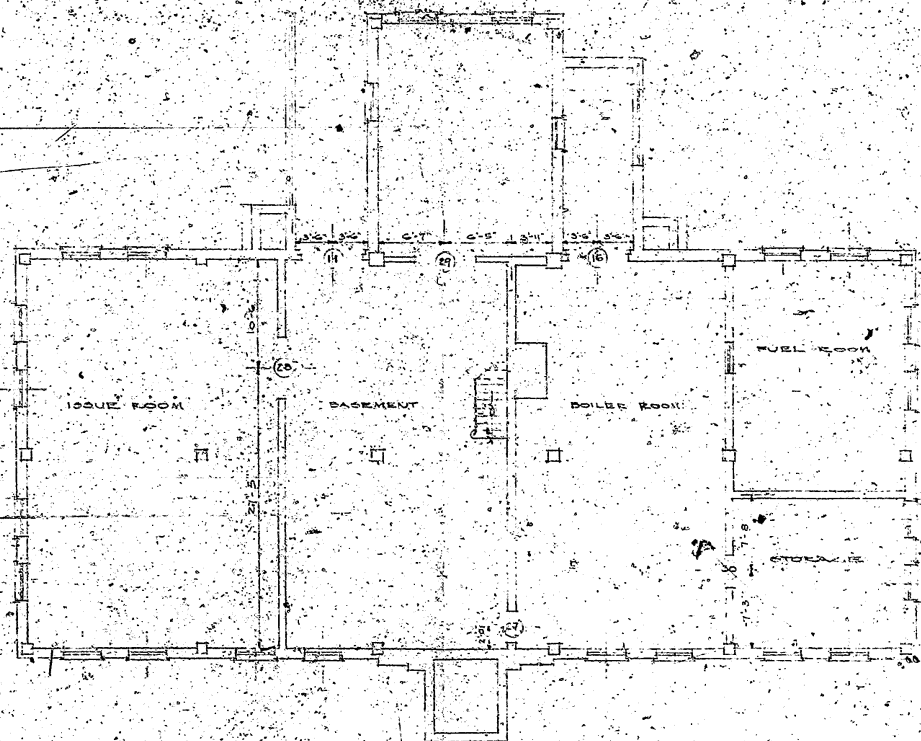
10416/62990



FIRST FLOOR PLAN  
SCALE 1/8"=1'-0"



SECOND FLOOR PLAN  
SCALE 1/8"=1'-0"

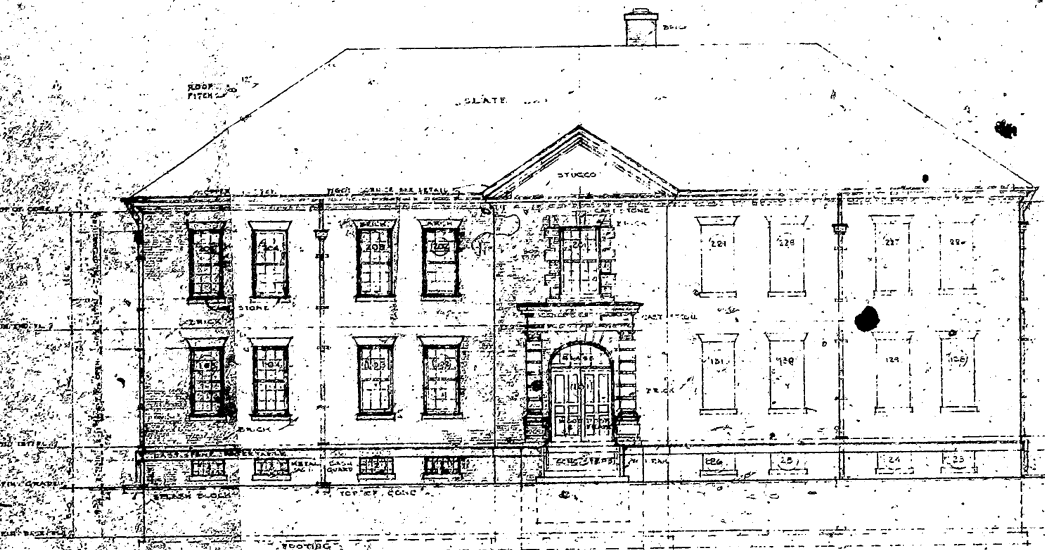


BASEMENT PLAN  
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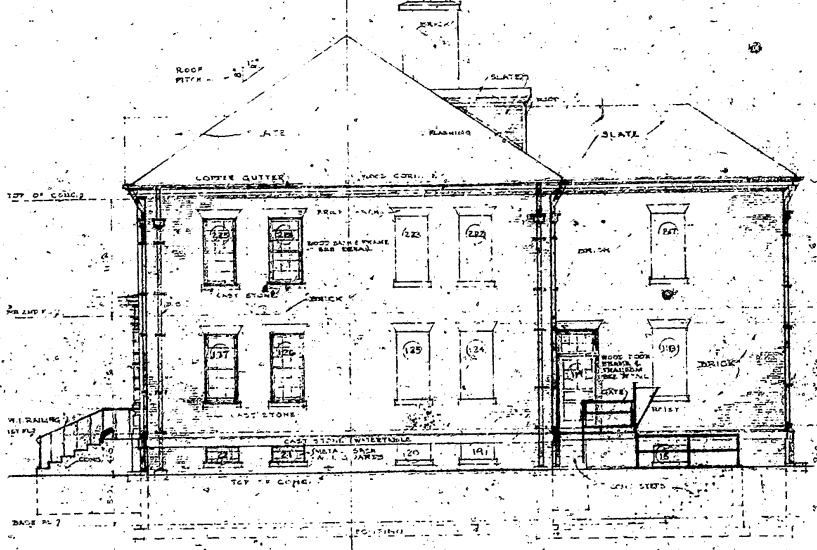
<b>SECOND CORPS AREA, FORT TILDEN, N.Y.</b>	
DETACHMENT BARRACKS PLANS OF DOOR LOCATIONS	
HARRY P. MORAN DIRECTOR MISCELLANEOUS FIELD OFFICE	MAJOR W. P. PUTNAM, JR. COMMANDING OFFICER TOPONS CO.
APPROVED <i>[Signature]</i>	APPROVED <i>[Signature]</i>
DATE 4-17-35	DATE 4-17-35
A. C. BROWNY CHIEF, PLANNING SECTION MISCELLANEOUS FIELD OFFICE	
DESIGNED BY JACOBS	SCALE: NONE
DRAWN BY JACOBS	SCALE: NONE
CHECKED BY JACOBS	SCALE: NONE
APPROVED BY JACOBS	SCALE: NONE
MILITARY PROJECTS ADMINISTRATION GUYTON, MISSOURI OFFICIAL PROJECT NO. 265-97-112	
PREPARED BY JACOBS	DRAWING NO. D-47-35

646/62990  
3015

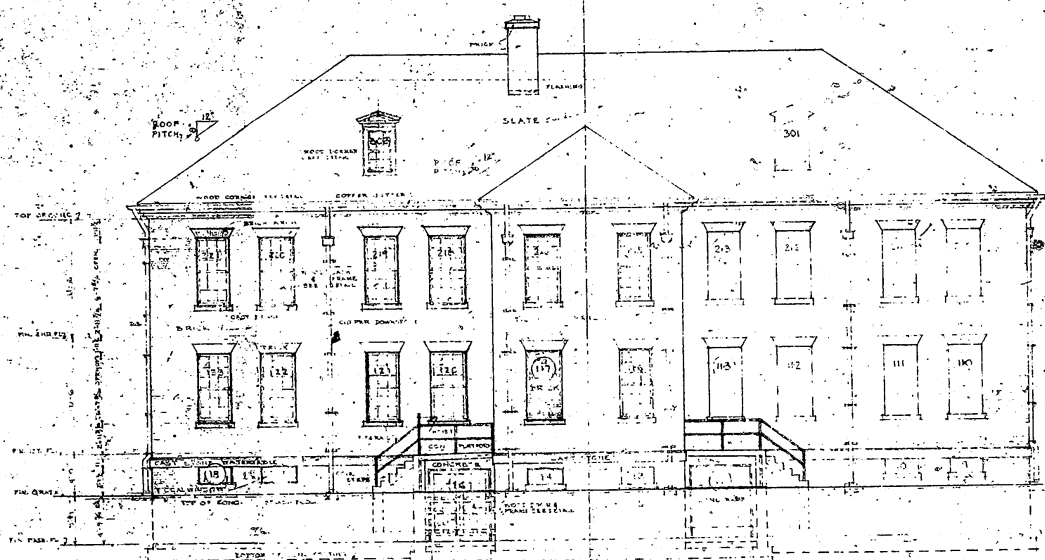




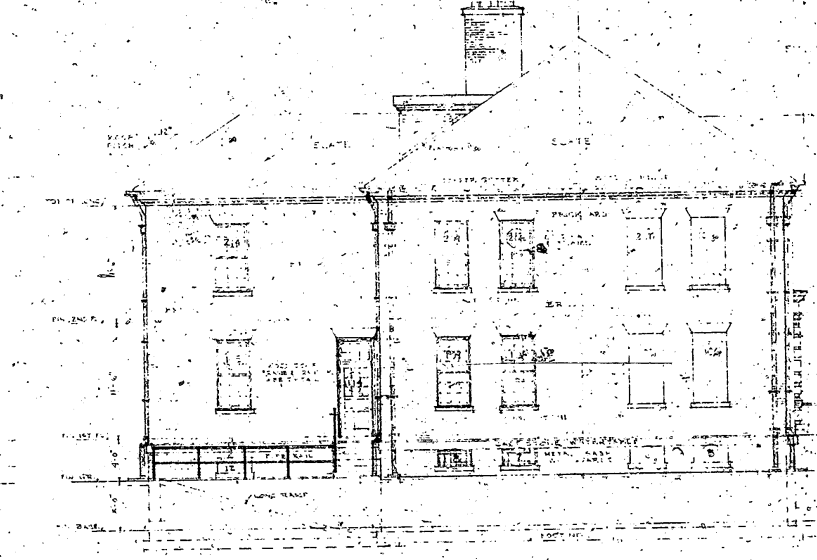
FRONT ELEVATION  
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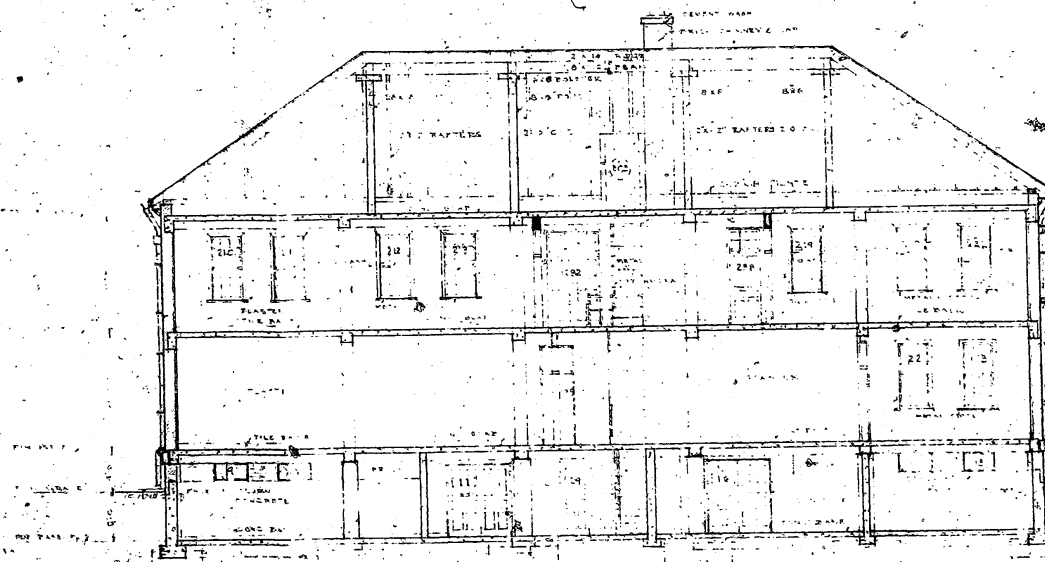
WEST ELEVATION  
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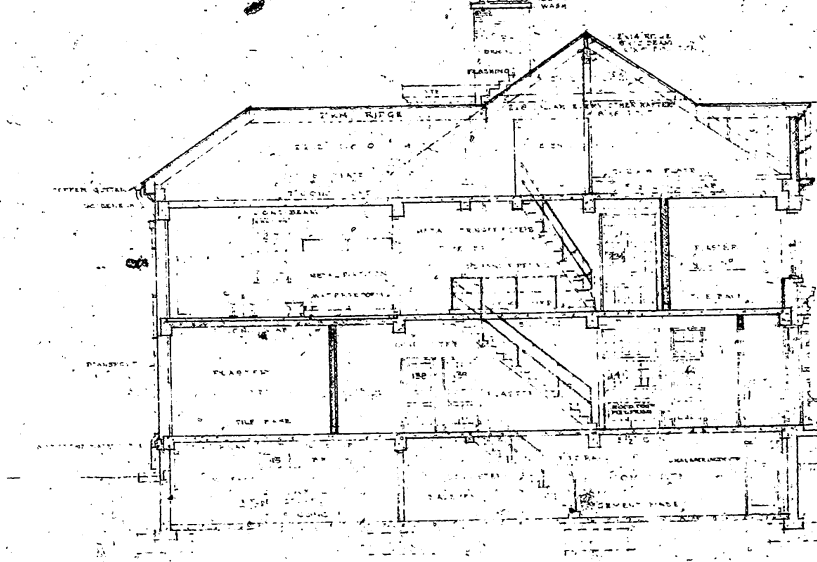
REAR ELEVATION  
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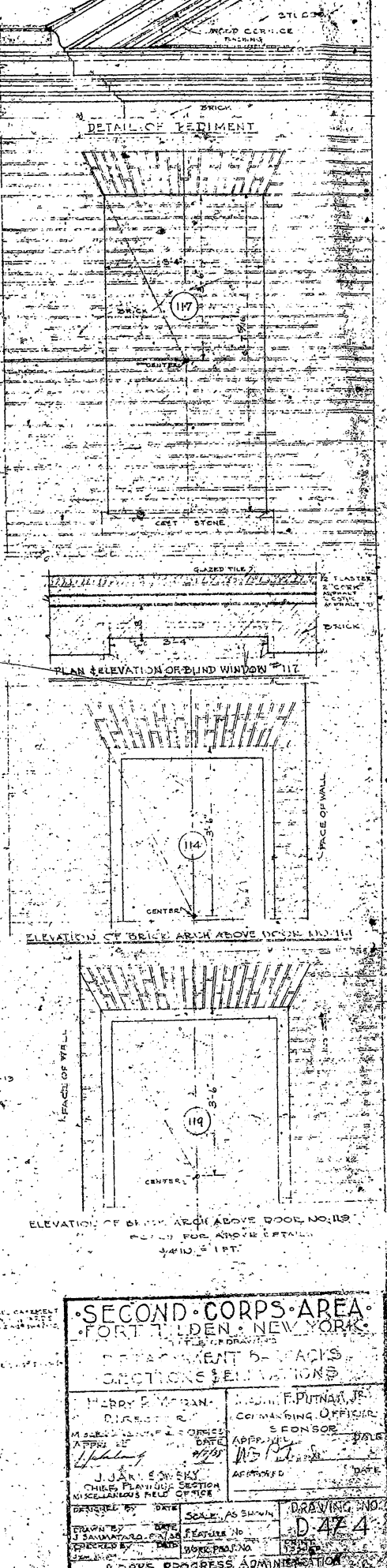
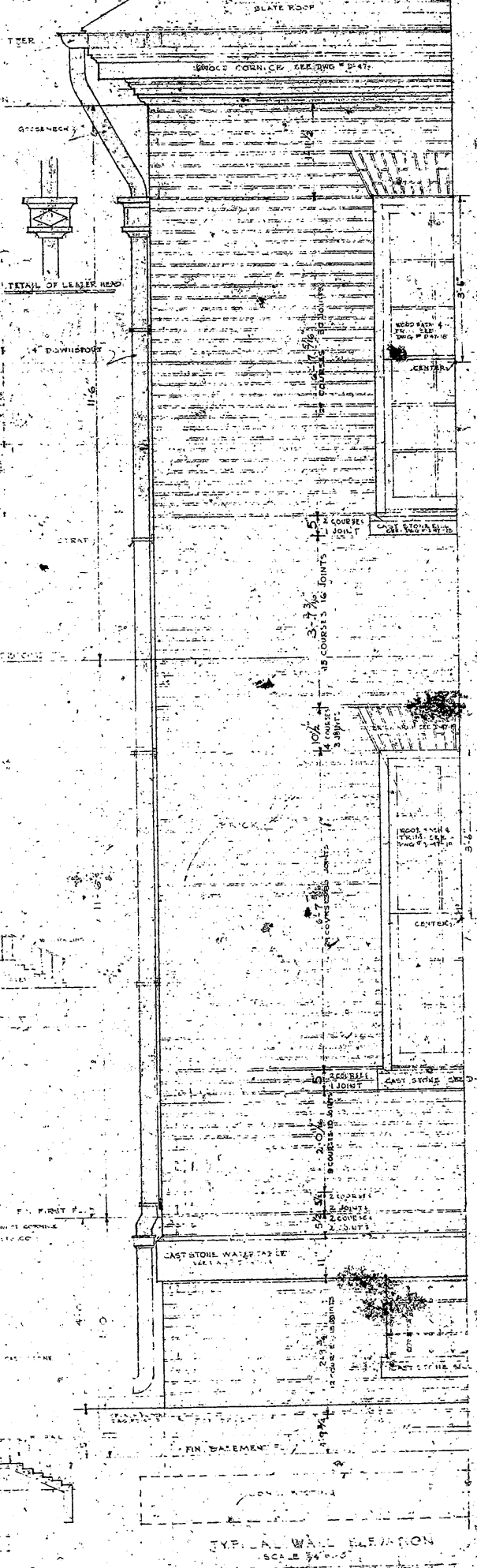
EAST ELEVATION  
SCALE 1/4" = 1'-0"



LONGITUDINAL SECTION  
SCALE 1/8" = 1'-0"



CROSS SECTION  
SCALE 1/8" = 1'-0"



**SECOND CORPS AREA**  
**FORT TILDEN, NEW YORK**  
 DEPARTMENT 5 TRACKS  
 SECTION 5 ELEVATIONS

HARRY E. MORGAN  
 DIRECTOR

WILLIAM F. PUTNAM, JR.  
 COMMANDING OFFICER

APPROVED BY: [Signature] DATE: 1/15/1918

J. J. SWEENEY  
 CHIEF PLANNING SECTION  
 MISCELLANEOUS HEAD OFFICE

APPROVED BY: [Signature] DATE: 1/15/1918

DRAWN BY: [Signature] DATE: 1/15/1918

SCALE: AS SHOWN

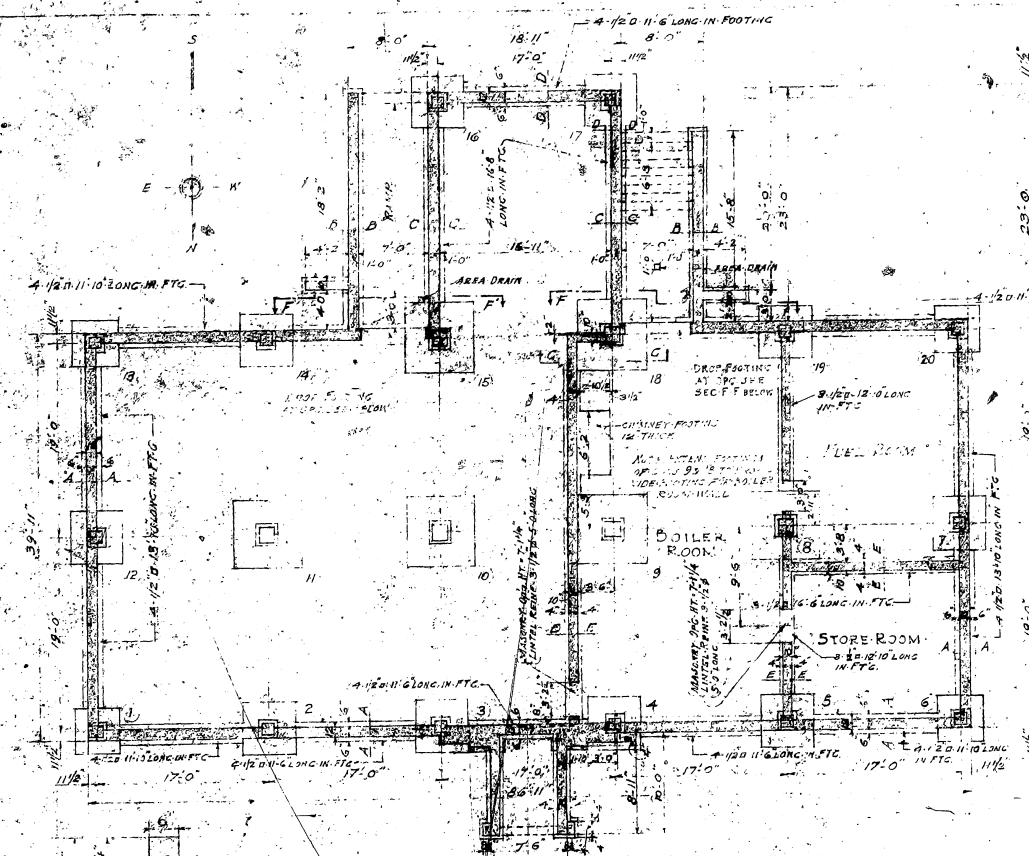
DRAWING NO. D-474

WORKS PROGRESS ADMINISTRATION  
 CITY OF NEW YORK  
 OFFICIAL PROJECT NO. 3127

676/62990  
 405







### COLUMN & FOOTING SCHEDULE

ATTIC SLAB	1-6	7-8	9-11	12-14	15-18
COLUMN NUMBER	1-6	7-8	9-11	12-14	15-18
SIZE	14'x14'	14'x14'	14'x14'	14'x14'	14'x14'
VERTICALS	6-1/2 @ 11" P	6-1/2 @ 11" S	5-7/8 @ 11" S	6-7/8 @ 11" S	6-7/8 @ 11" S
SPIRALS	14' @ 13" PITCH 11" DIA. @ 10" LONG CUT FROM 10'-6"	14' @ 13" PITCH 11" DIA. @ 10" LONG CUT FROM 10'-6"	14' @ 13" PITCH 11" DIA. @ 10" LONG CUT FROM 10'-6"	14' @ 13" PITCH 11" DIA. @ 10" LONG CUT FROM 10'-6"	14' @ 13" PITCH 11" DIA. @ 10" LONG CUT FROM 10'-6"
2ND FLOOR SLAB	SIZE 14'x14'	14'x14'	15'x5'	15'x15'	15'x15'
VERTICALS	6-7/8 @ 13" S	6-7/8 @ 13" S	8-1/2 @ 13" S	10-1/2 @ 13" S	10-1/2 @ 13" S
SPIRALS	14' @ 13" PITCH 11" DIA. @ 10" LONG CUT FROM 10'-6"	14' @ 13" PITCH 11" DIA. @ 10" LONG CUT FROM 10'-6"	12' @ 13" PITCH 11" DIA. @ 10" LONG CUT FROM 10'-6"	12' @ 13" PITCH 11" DIA. @ 10" LONG CUT FROM 10'-6"	12' @ 13" PITCH 11" DIA. @ 10" LONG CUT FROM 10'-6"
1ST FLOOR SLAB	SIZE 14'x14'	14'x14'	15'x18'	18'x18'	18'x18'
VERTICALS	6-7/8 @ 13" S	6-7/8 @ 13" S	8-1/2 @ 13" S	10-1/2 @ 13" S	10-1/2 @ 13" S
SPIRALS	14' @ 13" PITCH 11" DIA. @ 10" LONG CUT FROM 10'-6"	14' @ 13" PITCH 11" DIA. @ 10" LONG CUT FROM 10'-6"	12' @ 13" PITCH 11" DIA. @ 10" LONG CUT FROM 10'-6"	12' @ 13" PITCH 11" DIA. @ 10" LONG CUT FROM 10'-6"	12' @ 13" PITCH 11" DIA. @ 10" LONG CUT FROM 10'-6"
BASEMENT	SIZE 14'x14'	14'x14'	15'x18'	18'x18'	18'x18'
VERTICALS	6-7/8 @ 13" S	6-7/8 @ 13" S	8-1/2 @ 13" S	10-1/2 @ 13" S	10-1/2 @ 13" S
SPIRALS	14' @ 13" PITCH 11" DIA. @ 10" LONG CUT FROM 10'-6"	14' @ 13" PITCH 11" DIA. @ 10" LONG CUT FROM 10'-6"	12' @ 13" PITCH 11" DIA. @ 10" LONG CUT FROM 10'-6"	12' @ 13" PITCH 11" DIA. @ 10" LONG CUT FROM 10'-6"	12' @ 13" PITCH 11" DIA. @ 10" LONG CUT FROM 10'-6"
FOOTINGS	PIERS 6-1 @ MK 800	PIERS 8-1 @ MK 801	PIERS 10-1 @ MK 802	PIERS 12-1 @ MK 802	PIERS 12-1 @ MK 802
FOOTING SLAB	4-6'x4-6'x10"	5-2'x5-2'x11"	5-7'x5-7'x14"	6-9'x6-9'x15"	6-10'x6-10'x15"
REINFORCEMENT EACHWAY	6-#2 @ MK 100	7-#2 @ MK 100	11-#2 @ MK 100	10-#2 @ MK 100	10-#2 @ MK 100

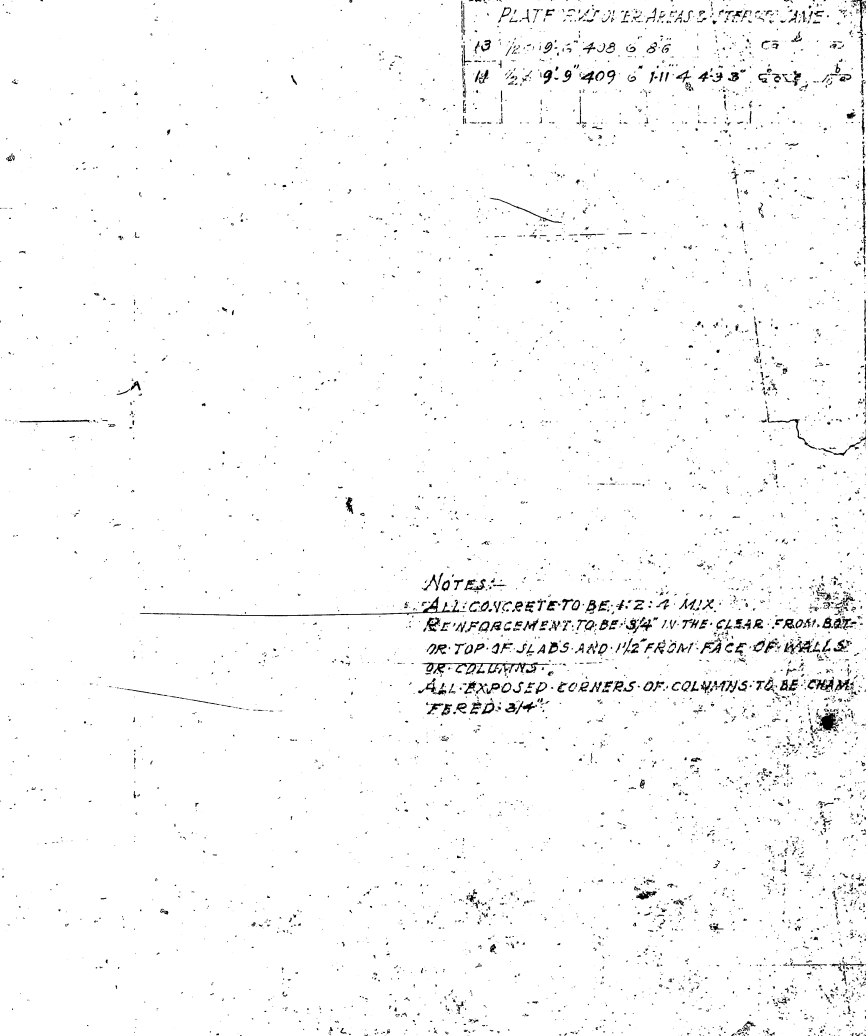
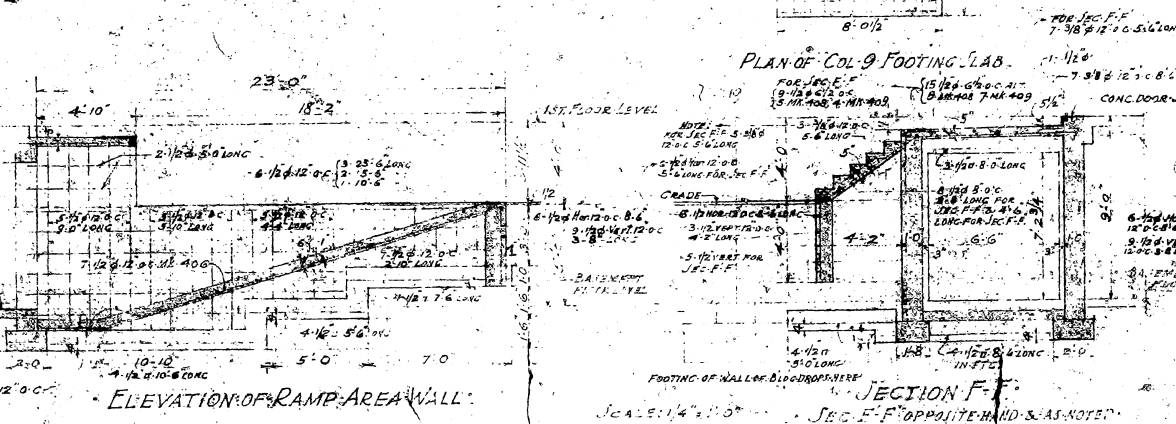
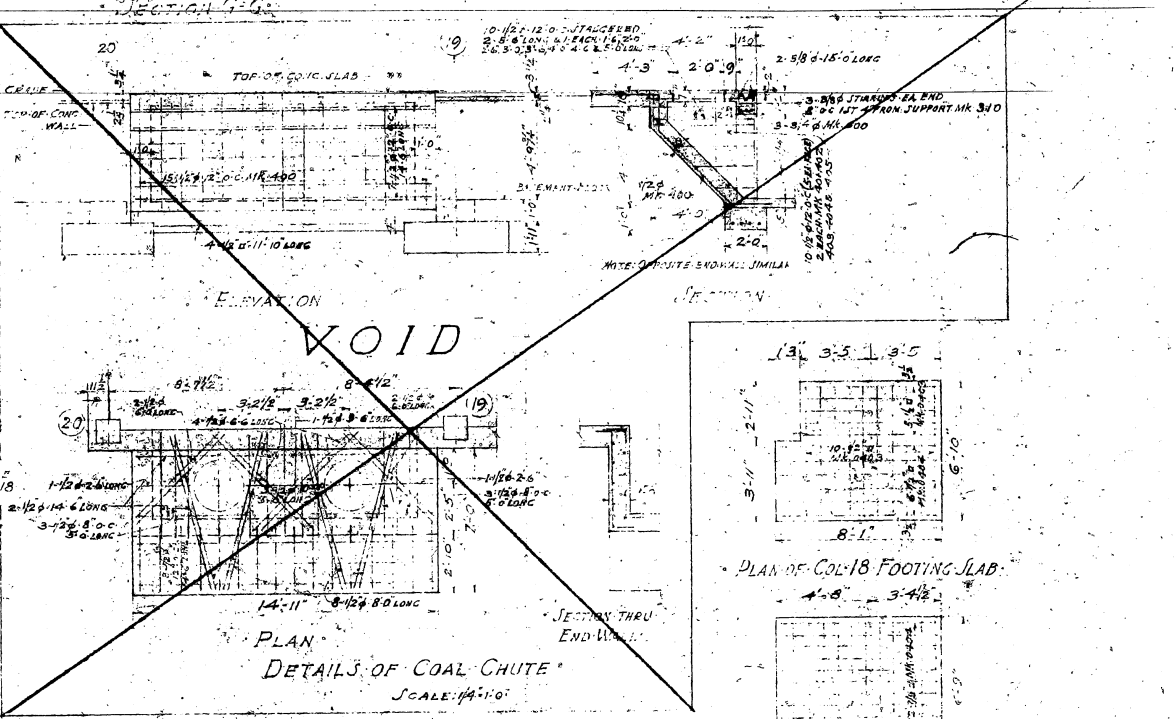
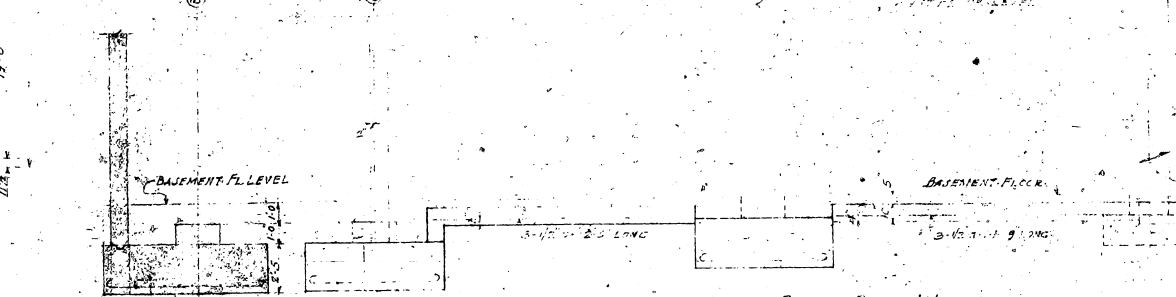
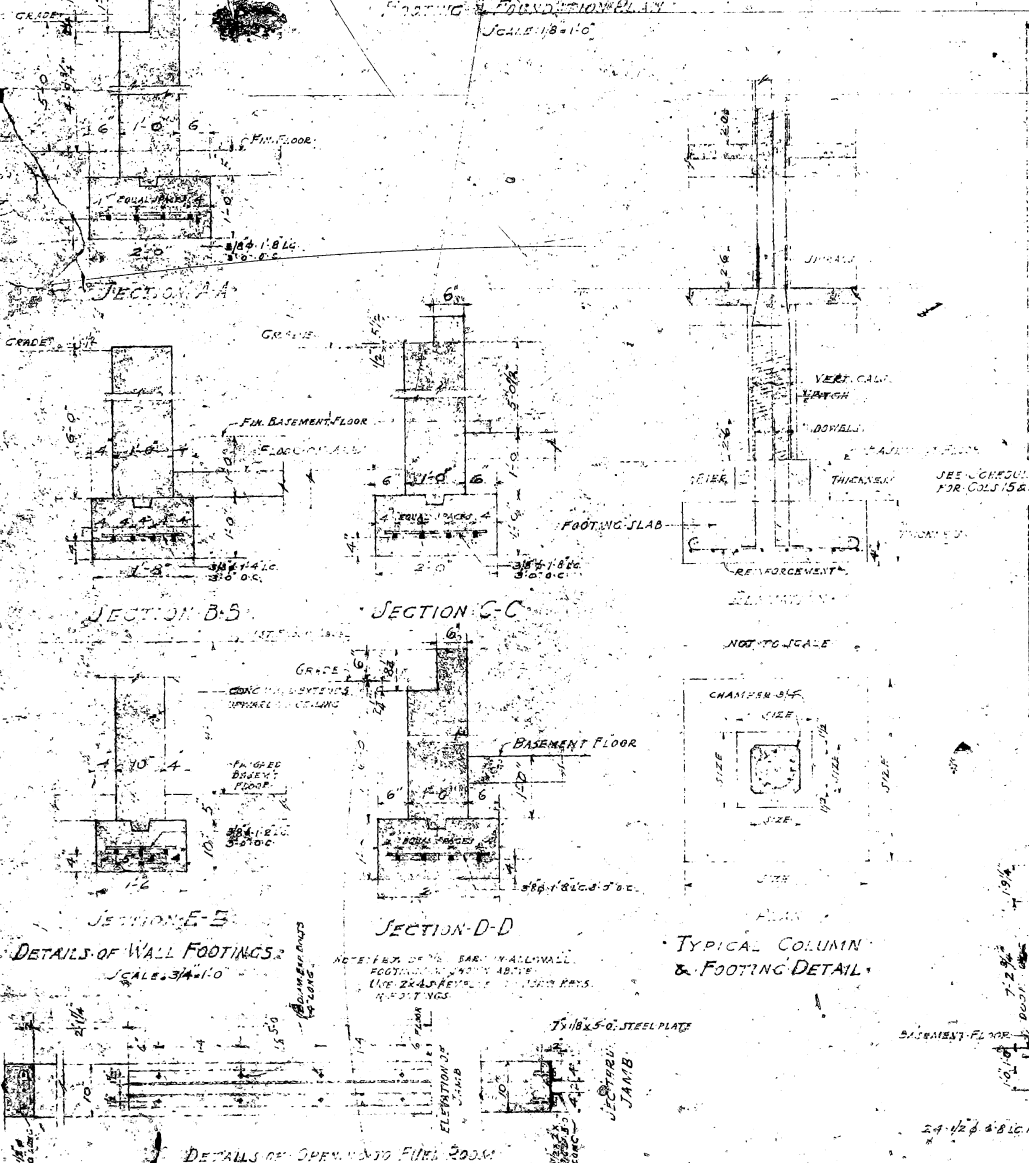
### BENT BAR SCHEDULE

NO.	SIZE	MARK	a	b	c	d	e	h	TYPE
48	1/2"	5-0	0400	6	4	0	0	0	ca
140	1/2"	5-8	0402	6	4	0	0	0	ca
42	1/2"	7-0	0402	6	4	0	0	0	ca
36	1/2"	7-8	0413	6	4	0	0	0	ca
24	1/2"	4-10	8	4	4	0	0	0	ca
80	1/2"	5-4	011	4	5	0	0	0	ca
69	1/2"	5-8	004	4	5	0	0	0	ca
56	1/2"	5-6	011	4	5	0	0	0	ca
44	1/2"	11-6	804	7	4	1	1	2	ca
24	1/2"	2-6	05	8	14	1/2	1	4	ca
18	1/2"	5-0	011	4	5	0	0	0	ca

### BENT BAR SCHEDULE

NO.	SIZE	MARK	a	b	c	d	e	h	TYPE
15	1/2"	12-0	011	4	5	0	0	0	ca
4	1/2"	6-2	4	1	0	0	0	0	ca
4	1/2"	5-3	401	0	1	0	0	0	ca
4	1/2"	5-0	403	0	1	0	0	0	ca
4	1/2"	4-4	404	0	1	0	0	0	ca
3	1/2"	0-0	600	4	1	0	0	0	ca
6	3/8"	3-7	310	6	1	0	0	0	ca
7	1/2"	11-9	407	6	4	3	2	0	ca
13	1/2"	9-5	408	6	8	0	0	0	ca
11	1/2"	9-9	409	6	11	4	3	0	ca

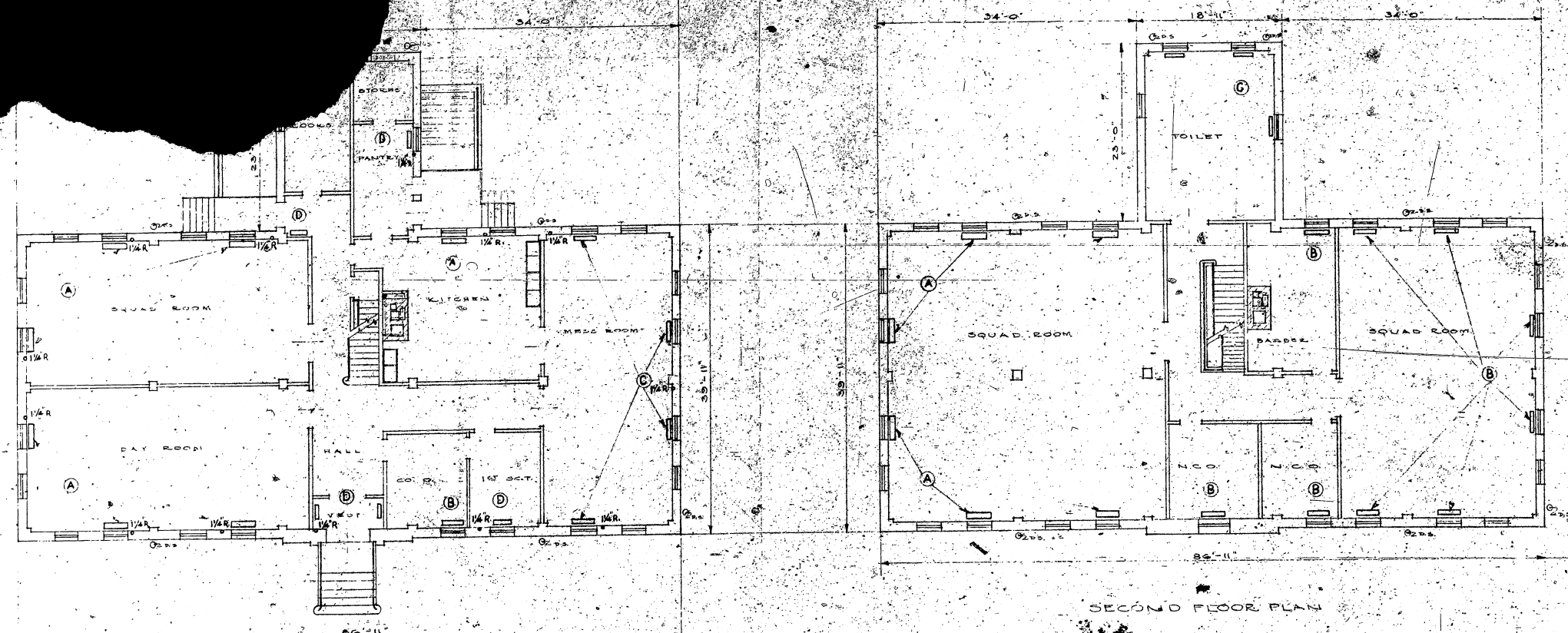
NOTES: (a) EACH SPIRAL TO HAVE THREE (3) 1/2" DIA. @ 12" PITCH OF THE LENGTH AND PITCH OF NOTES GIVEN ABOVE FOR THE SPIRALS.  
 (b) WHEN ASSEMBLING THE SPIRALS AT THE JOINTS, THE SPIRAL SHOULD COVER THE OTHER.  
 (c) SEE DETAILS BELOW FOR FOOTINGS OF COLS. 9 & 18.



NOTES:  
 ALL CONCRETE TO BE 1:2:4 MIX.  
 REINFORCEMENT TO BE 3/4" IN THE CLEAR FROM BOT-  
 TOM OF SLABS AND 1/2" FROM FACE OF WALLS  
 OR COLUMNS.  
 ALL EXPOSED CORNERS OF COLUMNS TO BE CHAM-  
 FERED 3/4"

<b>SECOND CORPS. AREA</b>	
FORT TILDEN, N.Y.	
DETACHMENT BARRACKS	
FOOTINGS & FOUNDATIONS	
HARRY P. MORAN DIRECTOR MISCELLANEOUS FIELD OFFICE	MAJ. W. F. PUTNAM, JR. COMMANDING OFFICER SPONSOR
APPROVED: <i>[Signature]</i> DATE: 7/16	APPROVED: <i>[Signature]</i> DATE: 7/16
DESIGNED BY: J. JAKUBOWSKY CHIEF PLANNING SECTION MISCELLANEOUS FIELD OFFICE	DATE: 7/16
SCALE: 1/4" = 1'-0"	DRAWING NO. D-47-8
WORKS PROGRESS ADMINISTRATION OFFICE OF THE NEW YORK OFFICIAL PROJECT NO. 36597-2-12	

646/6308 596



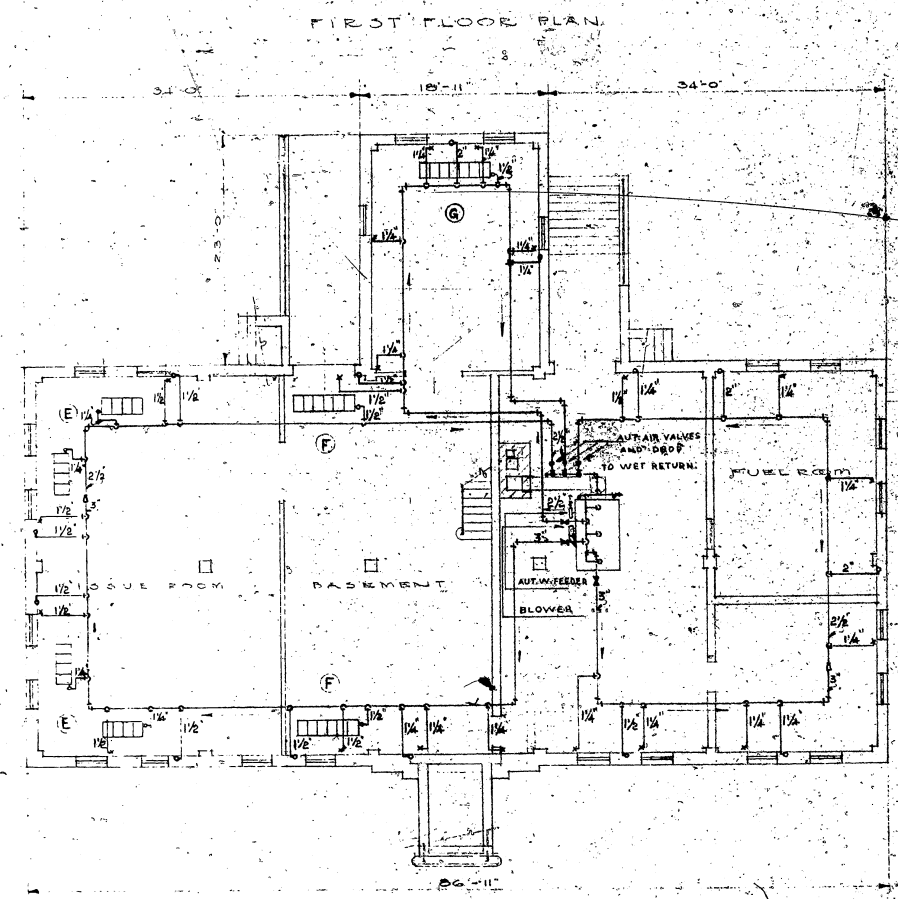
O.F. ZONE

RADIATOR SCHEDULE					
TYPE	QUANTITY	W.H.	SECT.	W.H.	DATE
A	13	13	13	25	54
B	10	13	13	35	54
C	7	12	12	33	54
D	7	8	8	22	54
E	4	WALL	4	36	54
F	2	11	2	54	54
G	11	11	1	63	54

DESCRIPTION OF WORK

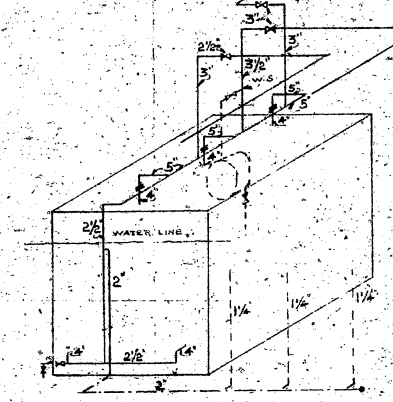
WORK CONSISTS OF A ONE PIPE GRAVITY STEAM HEATING SYSTEM. ALL SUPPLY MAINS SHALL BE PITCHED IN DIRECTION AS INDICATED ON PLAN AND SHALL NOT BE LESS THAN 1" IN 100'. RUNOUTS AND SPRING PIECES TO HAVE AS MUCH PITCH AS POSSIBLE. ALL ENDS OF PIPING TO BE FINISHED AS TO ALLOW FULL SIZE ORIFICE. ALL PIPES TO BE SUBSTANTIALLY SUPPORTED BY HANGERS PLACED NOT OVER 70.0' APART INCLUDING RISERS AND DOWNERS. UNDER FLOORS TO BE INSULATED WITH A PLY AIR CELL ASBESTOS PIPE COVERING. FITTINGS TO BE INSULATED WITH PLASTIC ASBESTOS CEMENT FINISHED FLUSH WITH PIPE COVERING. STEAM BOILER TO BE INSULATED WITH PLASTIC ASBESTOS CEMENT LAD 2" THICK OVER GALVANIZED WIRE MESH.

SECOND FLOOR PLAN

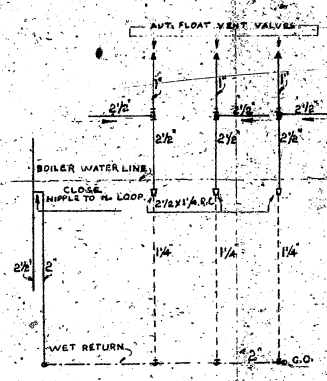


FIRST FLOOR PLAN

BASEMENT PLAN



METHOD OF CONNECTING STEAM BOILER  
NO SCALE



METHOD OF DRIPPING STEAM SUPPLY MAINS  
NO SCALE

FOR ACCURATE DIMENSIONS CHECK WITH WORKING DRAWINGS

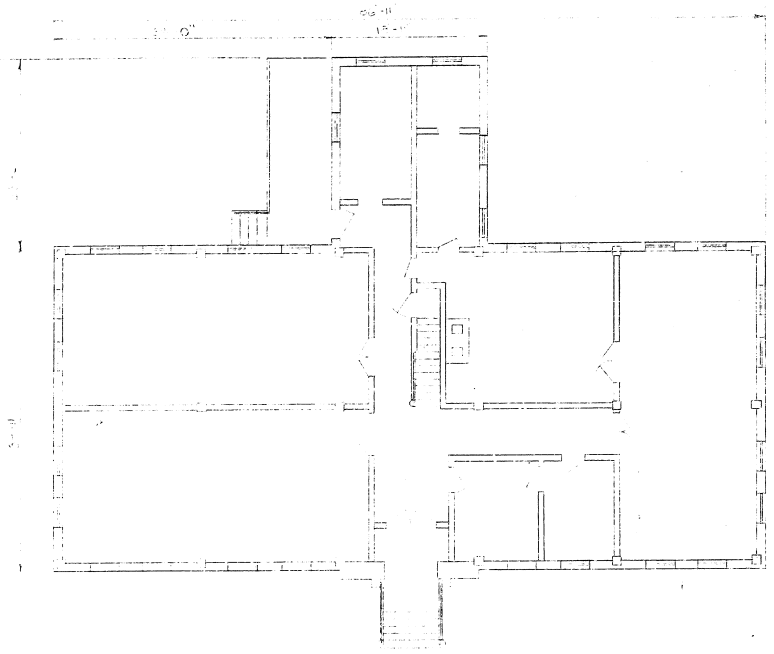
1  
SECOND CORPS AREA  
FORT TILDEN - NEW YORK  
BLDG #B41 BARRACKS  
HEATING LAYOUT

HARRY P. MORAN DIRECTOR MILITARY ENGINEERING OFFICE	MATTHEW J. MORAN, JR. COMMANDING OFFICER BARRACKS
APPROVED DATE 11/14/54	APPROVED DATE 11/14/54
J. JAKUBOWSKI ENGINEERING SECTION PLAC. FIELD OFFICE	APPROVED DATE
DESIGNED BY E. J. MORAN	DRAWING NO. D-41-6

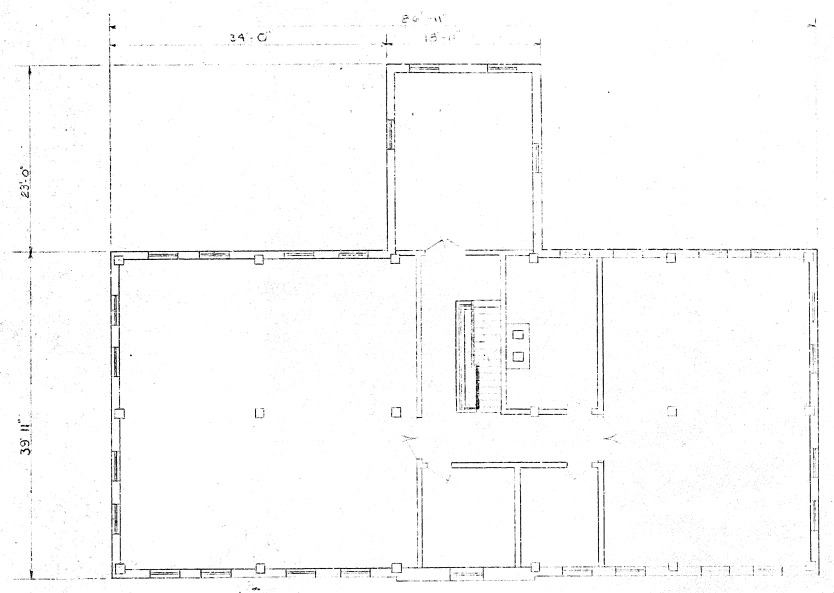
646/63028

606

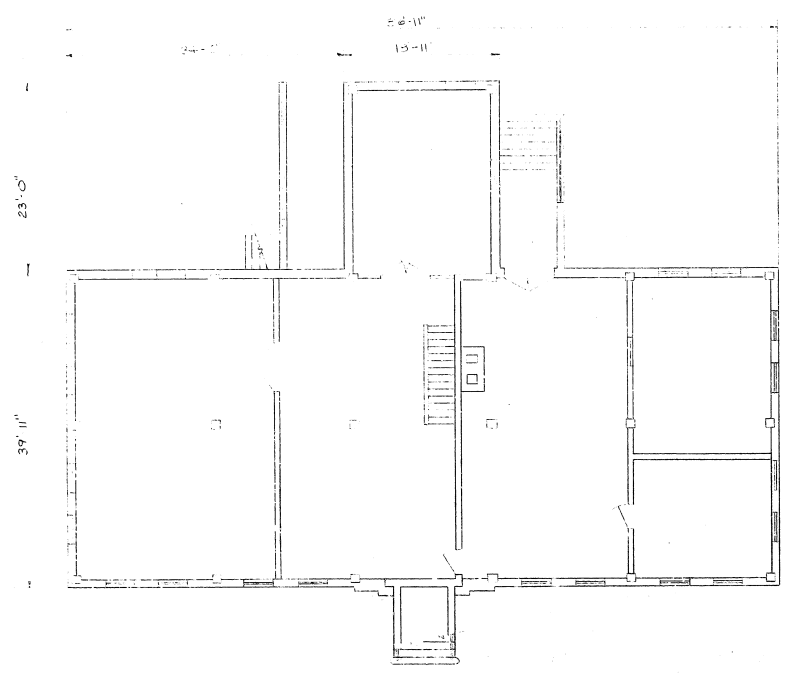




FIRST FLOOR PLAN  
SCALE 1/4" = 1'-0"



SECOND FLOOR PLAN  
SCALE 1/4" = 1'-0"



BASEMENT PLAN  
SCALE 1/8" = 1'-0"

*Bldg 1*

OFFICE OF THE POST ENGINEER FORT TOTTEN N. Y.	
FLOOR PLAN BLDG 1 FT TILDEN N. Y.	
DWG. BY: CSO	DATE: 15-MAR-1962
APPROVED BY:	PROJ. NO.:

REDUCED SIZE REPRODUCTION

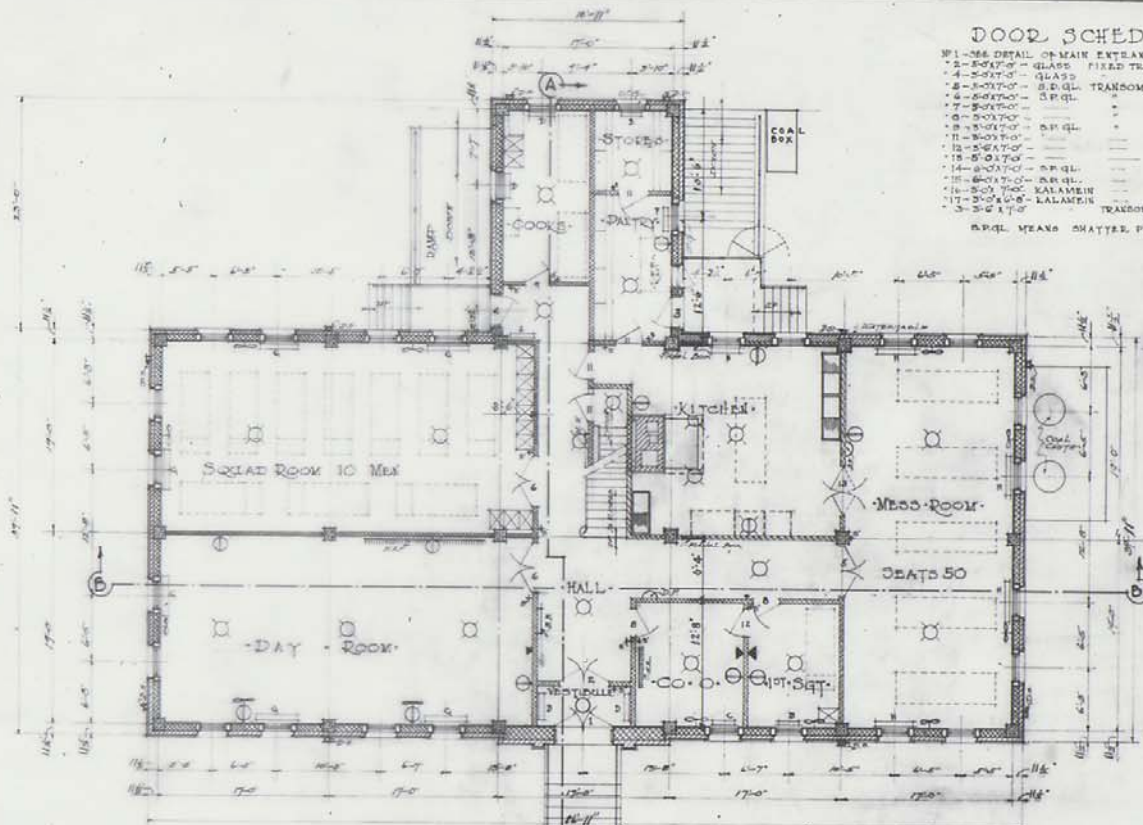
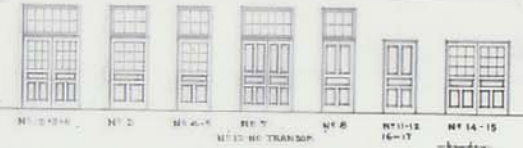
646/63010 1 of 1



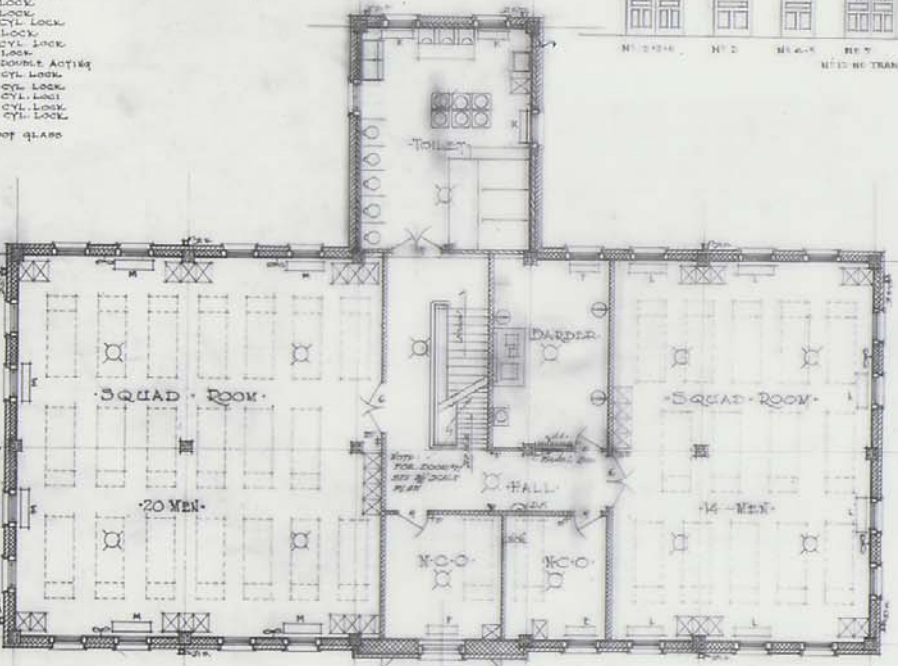
**DOOR SCHEDULE**

1-1/2" x 6" - 1/2" GLASS	FIXED TRANSOM LOCK
2-1/2" x 6" - 1/2" GLASS	TRANSOM CIVIL LOCK
3-1/2" x 6" - 1/2" GLASS	LOCK
4-1/2" x 6" - 1/2" GLASS	CYL. LOCK
5-1/2" x 6" - 1/2" GLASS	LOCK
6-1/2" x 6" - 1/2" GLASS	CYL. LOCK
7-1/2" x 6" - 1/2" GLASS	LOCK
8-1/2" x 6" - 1/2" GLASS	CYL. LOCK
9-1/2" x 6" - 1/2" GLASS	LOCK
10-1/2" x 6" - 1/2" GLASS	CYL. LOCK
11-1/2" x 6" - 1/2" GLASS	LOCK
12-1/2" x 6" - 1/2" GLASS	CYL. LOCK
13-1/2" x 6" - 1/2" GLASS	LOCK
14-1/2" x 6" - 1/2" GLASS	CYL. LOCK
15-1/2" x 6" - 1/2" GLASS	LOCK
16-1/2" x 6" - 1/2" GLASS	CYL. LOCK
17-1/2" x 6" - 1/2" GLASS	LOCK
18-1/2" x 6" - 1/2" GLASS	CYL. LOCK
19-1/2" x 6" - 1/2" GLASS	LOCK
20-1/2" x 6" - 1/2" GLASS	CYL. LOCK
21-1/2" x 6" - 1/2" GLASS	LOCK
22-1/2" x 6" - 1/2" GLASS	CYL. LOCK
23-1/2" x 6" - 1/2" GLASS	LOCK
24-1/2" x 6" - 1/2" GLASS	CYL. LOCK
25-1/2" x 6" - 1/2" GLASS	LOCK
26-1/2" x 6" - 1/2" GLASS	CYL. LOCK
27-1/2" x 6" - 1/2" GLASS	LOCK
28-1/2" x 6" - 1/2" GLASS	CYL. LOCK
29-1/2" x 6" - 1/2" GLASS	LOCK
30-1/2" x 6" - 1/2" GLASS	CYL. LOCK
31-1/2" x 6" - 1/2" GLASS	LOCK
32-1/2" x 6" - 1/2" GLASS	CYL. LOCK
33-1/2" x 6" - 1/2" GLASS	LOCK
34-1/2" x 6" - 1/2" GLASS	CYL. LOCK
35-1/2" x 6" - 1/2" GLASS	LOCK
36-1/2" x 6" - 1/2" GLASS	CYL. LOCK
37-1/2" x 6" - 1/2" GLASS	LOCK
38-1/2" x 6" - 1/2" GLASS	CYL. LOCK
39-1/2" x 6" - 1/2" GLASS	LOCK
40-1/2" x 6" - 1/2" GLASS	CYL. LOCK
41-1/2" x 6" - 1/2" GLASS	LOCK
42-1/2" x 6" - 1/2" GLASS	CYL. LOCK
43-1/2" x 6" - 1/2" GLASS	LOCK
44-1/2" x 6" - 1/2" GLASS	CYL. LOCK
45-1/2" x 6" - 1/2" GLASS	LOCK
46-1/2" x 6" - 1/2" GLASS	CYL. LOCK
47-1/2" x 6" - 1/2" GLASS	LOCK
48-1/2" x 6" - 1/2" GLASS	CYL. LOCK
49-1/2" x 6" - 1/2" GLASS	LOCK
50-1/2" x 6" - 1/2" GLASS	CYL. LOCK
51-1/2" x 6" - 1/2" GLASS	LOCK
52-1/2" x 6" - 1/2" GLASS	CYL. LOCK
53-1/2" x 6" - 1/2" GLASS	LOCK
54-1/2" x 6" - 1/2" GLASS	CYL. LOCK
55-1/2" x 6" - 1/2" GLASS	LOCK
56-1/2" x 6" - 1/2" GLASS	CYL. LOCK
57-1/2" x 6" - 1/2" GLASS	LOCK
58-1/2" x 6" - 1/2" GLASS	CYL. LOCK
59-1/2" x 6" - 1/2" GLASS	LOCK
60-1/2" x 6" - 1/2" GLASS	CYL. LOCK
61-1/2" x 6" - 1/2" GLASS	LOCK
62-1/2" x 6" - 1/2" GLASS	CYL. LOCK
63-1/2" x 6" - 1/2" GLASS	LOCK
64-1/2" x 6" - 1/2" GLASS	CYL. LOCK
65-1/2" x 6" - 1/2" GLASS	LOCK
66-1/2" x 6" - 1/2" GLASS	CYL. LOCK
67-1/2" x 6" - 1/2" GLASS	LOCK
68-1/2" x 6" - 1/2" GLASS	CYL. LOCK
69-1/2" x 6" - 1/2" GLASS	LOCK
70-1/2" x 6" - 1/2" GLASS	CYL. LOCK
71-1/2" x 6" - 1/2" GLASS	LOCK
72-1/2" x 6" - 1/2" GLASS	CYL. LOCK
73-1/2" x 6" - 1/2" GLASS	LOCK
74-1/2" x 6" - 1/2" GLASS	CYL. LOCK
75-1/2" x 6" - 1/2" GLASS	LOCK
76-1/2" x 6" - 1/2" GLASS	CYL. LOCK
77-1/2" x 6" - 1/2" GLASS	LOCK
78-1/2" x 6" - 1/2" GLASS	CYL. LOCK
79-1/2" x 6" - 1/2" GLASS	LOCK
80-1/2" x 6" - 1/2" GLASS	CYL. LOCK
81-1/2" x 6" - 1/2" GLASS	LOCK
82-1/2" x 6" - 1/2" GLASS	CYL. LOCK
83-1/2" x 6" - 1/2" GLASS	LOCK
84-1/2" x 6" - 1/2" GLASS	CYL. LOCK
85-1/2" x 6" - 1/2" GLASS	LOCK
86-1/2" x 6" - 1/2" GLASS	CYL. LOCK
87-1/2" x 6" - 1/2" GLASS	LOCK
88-1/2" x 6" - 1/2" GLASS	CYL. LOCK
89-1/2" x 6" - 1/2" GLASS	LOCK
90-1/2" x 6" - 1/2" GLASS	CYL. LOCK
91-1/2" x 6" - 1/2" GLASS	LOCK
92-1/2" x 6" - 1/2" GLASS	CYL. LOCK
93-1/2" x 6" - 1/2" GLASS	LOCK
94-1/2" x 6" - 1/2" GLASS	CYL. LOCK
95-1/2" x 6" - 1/2" GLASS	LOCK
96-1/2" x 6" - 1/2" GLASS	CYL. LOCK
97-1/2" x 6" - 1/2" GLASS	LOCK
98-1/2" x 6" - 1/2" GLASS	CYL. LOCK
99-1/2" x 6" - 1/2" GLASS	LOCK
100-1/2" x 6" - 1/2" GLASS	CYL. LOCK

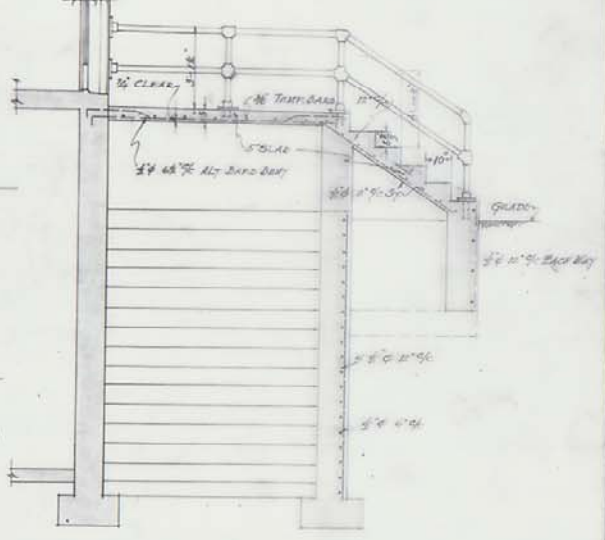
BRQL MEANS BRASS SHATTER PROOF GLASS



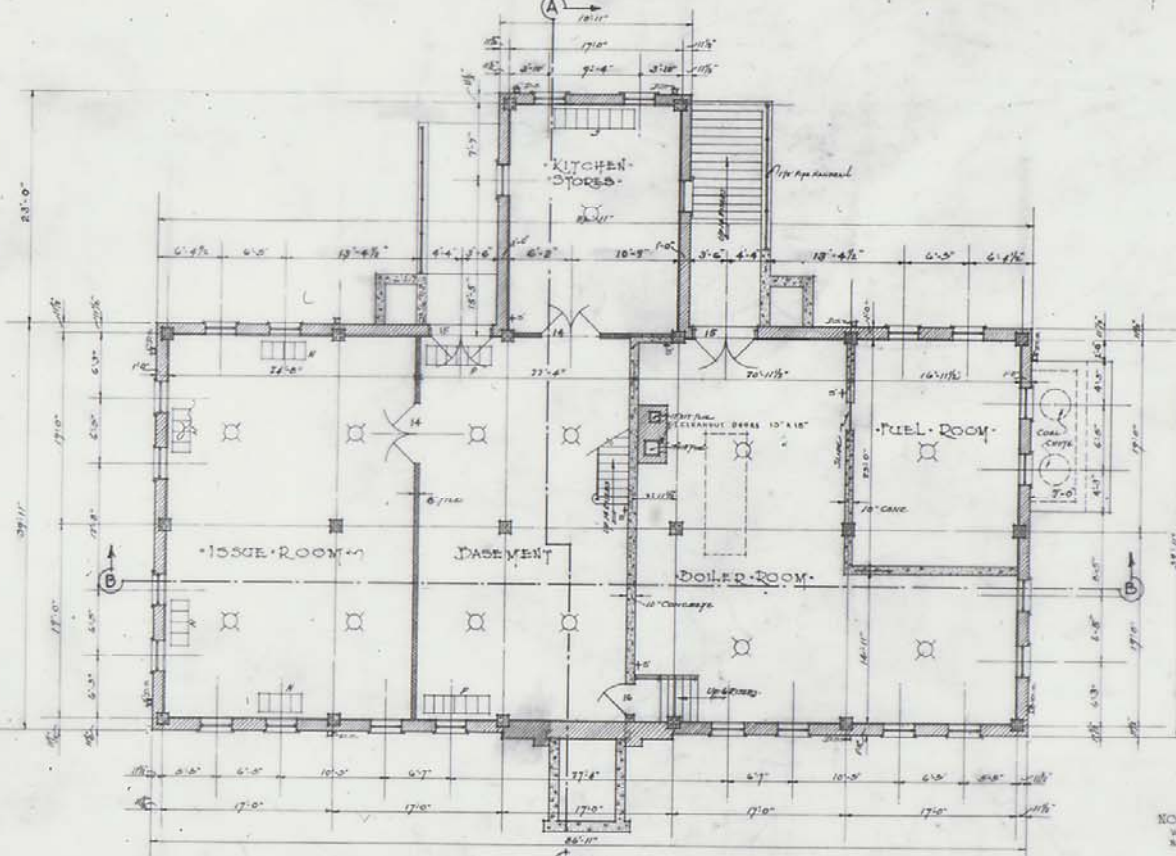
FIRST FLOOR PLAN  
SCALE 1/8" = 1'-0"



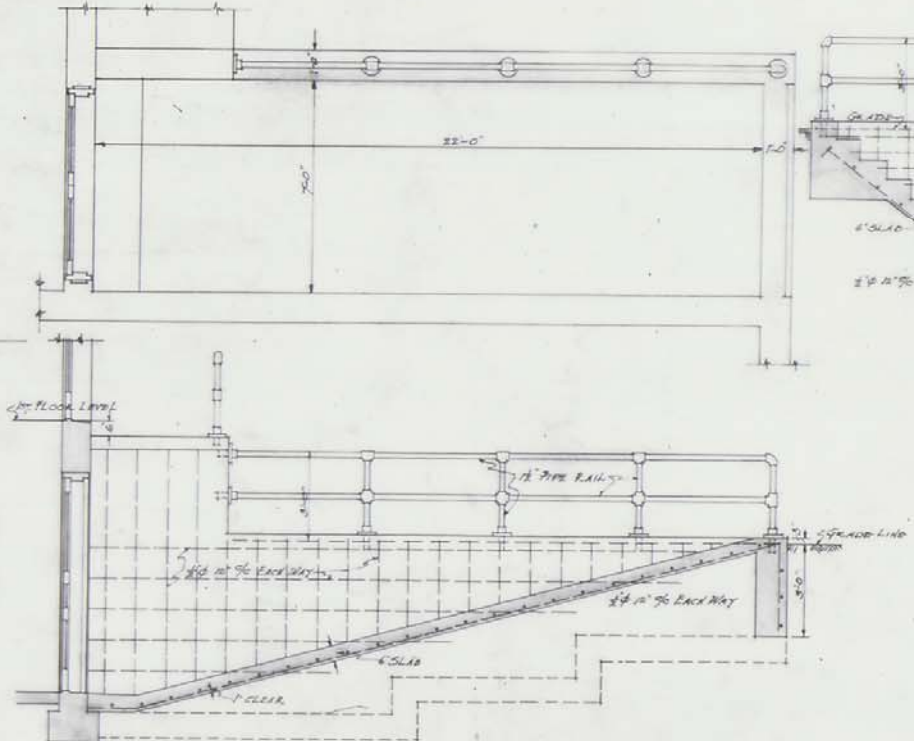
SECOND FLOOR PLAN  
SCALE 1/8" = 1'-0"



SECTION - THREE-BASEMENT - STEPS  
SCALE 3/8" = 1'-0"



BASEMENT PLAN  
SCALE 1/8" = 1'-0"



DETAIL OF RAMP  
SCALE 3/8" = 1'-0"

NOTES:  
WINDOWS EQUAL TO ALL BASEMENT WINDOWS  
DOOR HANDS TO BE PLACED WHERE INDICATED  
OR PLACED AT 4' LENGTHS ABOVE FLOOR RAILS  
TO BE 2" ABOVE FLOOR.  
ALL INTERIOR PARTITIONS TO BE 4" TILE VENEER  
OTHERWISE NOTED.  
PARTITIONS INCLUDING TOILETS & KITCHENS TO BE  
GLAZED OR TOLLY & ALUMINUM TRIM EDGE

**LEGEND**

- DR - MILLIUM BOARD
- DF - DRINKING FOUNTAIN
- RE - ROOM RAIL
- LS - LITTER & WOOD
- WQ - WINDOW QUARD
- LO - LOCKER
- PR - PROCE
- II - DOWN SPORT & SPLASH BLOCK
- TT - TILE
- BR - BRICK
- CC - CONCRETE
- MT - MALT GLAZED TILE
- ST - STORE

SCALE: AS NOTED

CONSTRUCTION SERVICE  
OFFICE OF THE QUARTERMASTER GENERAL

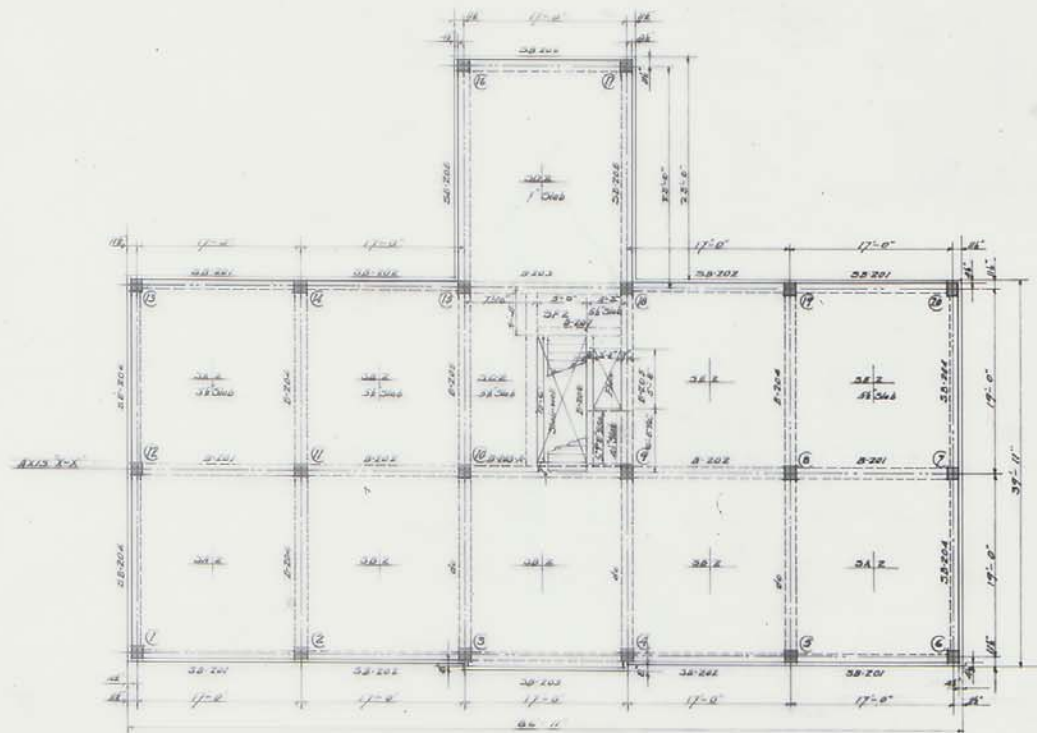
FORT TILDEN, N.Y.  
**DETACHMENT BARRACKS  
PLANS**

2 STORY-BRICK 49 MEN

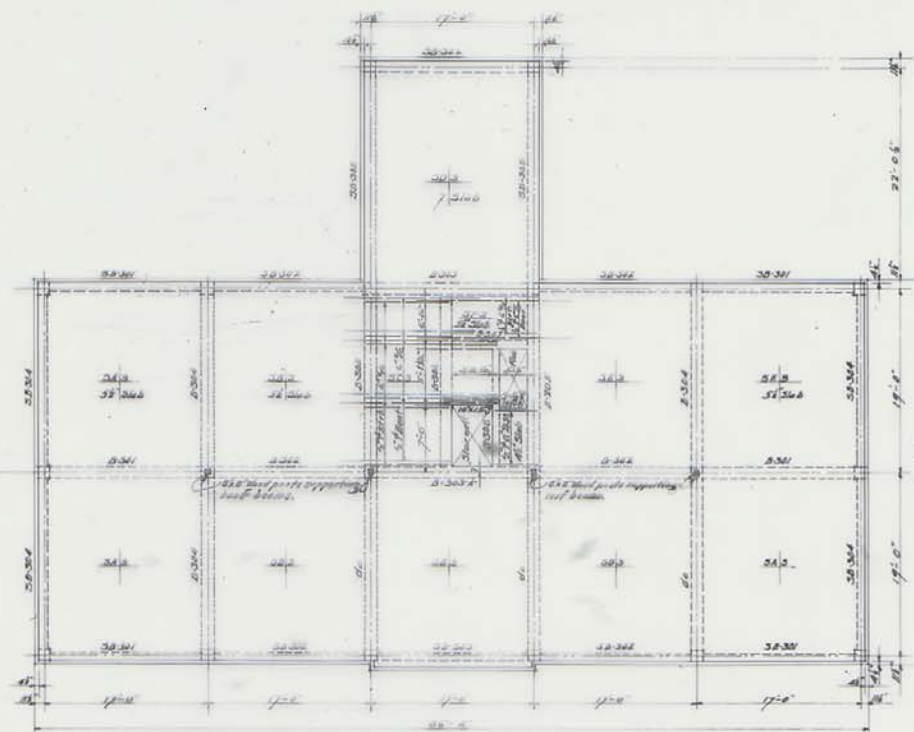
DRAWN BY L.C. WHELAN	CHECKED BY R.S.	APPROVED BY R.D. [Signature]	DATE DEC. 20, 1930
TRACED BY R.S.			PLAN NUMBER 621-850

BRIG. GEN. G.M.C.

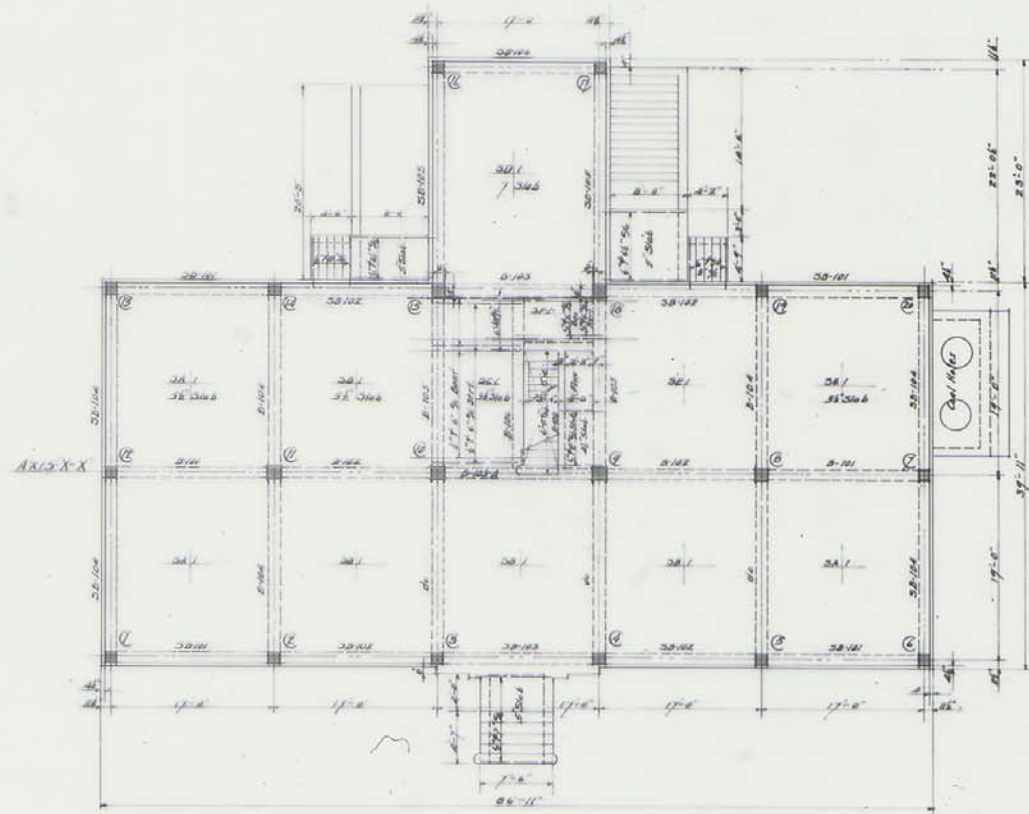




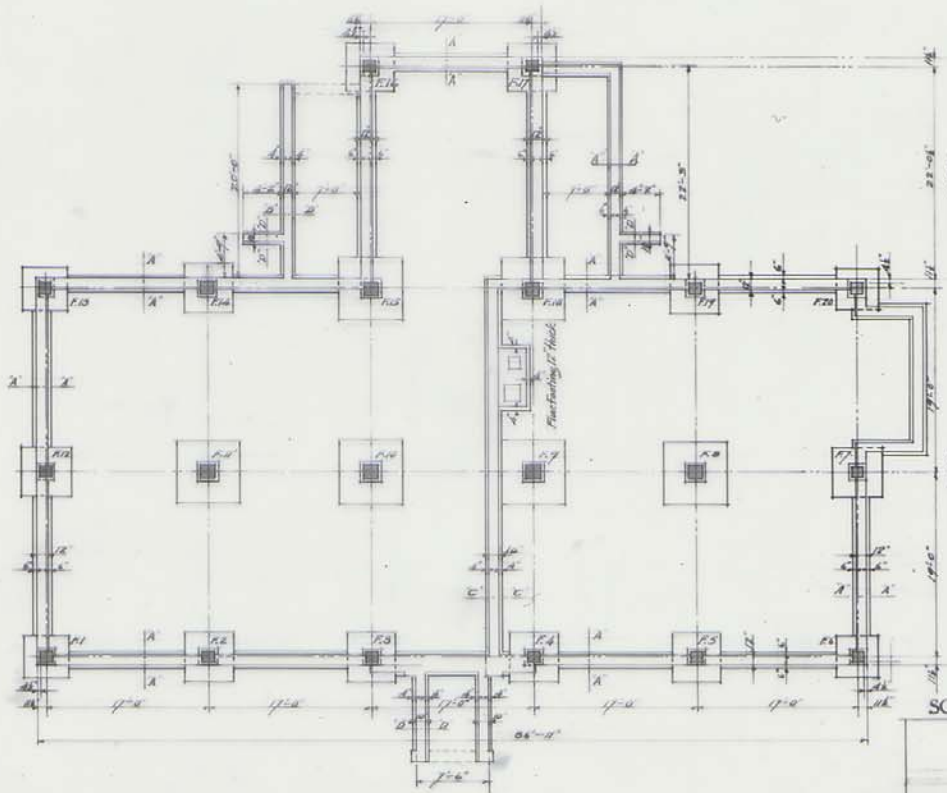
SECOND FLOOR FRAMING PLAN



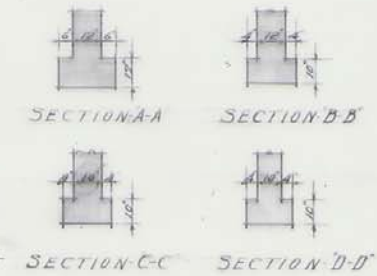
ATTIC FRAMING PLAN



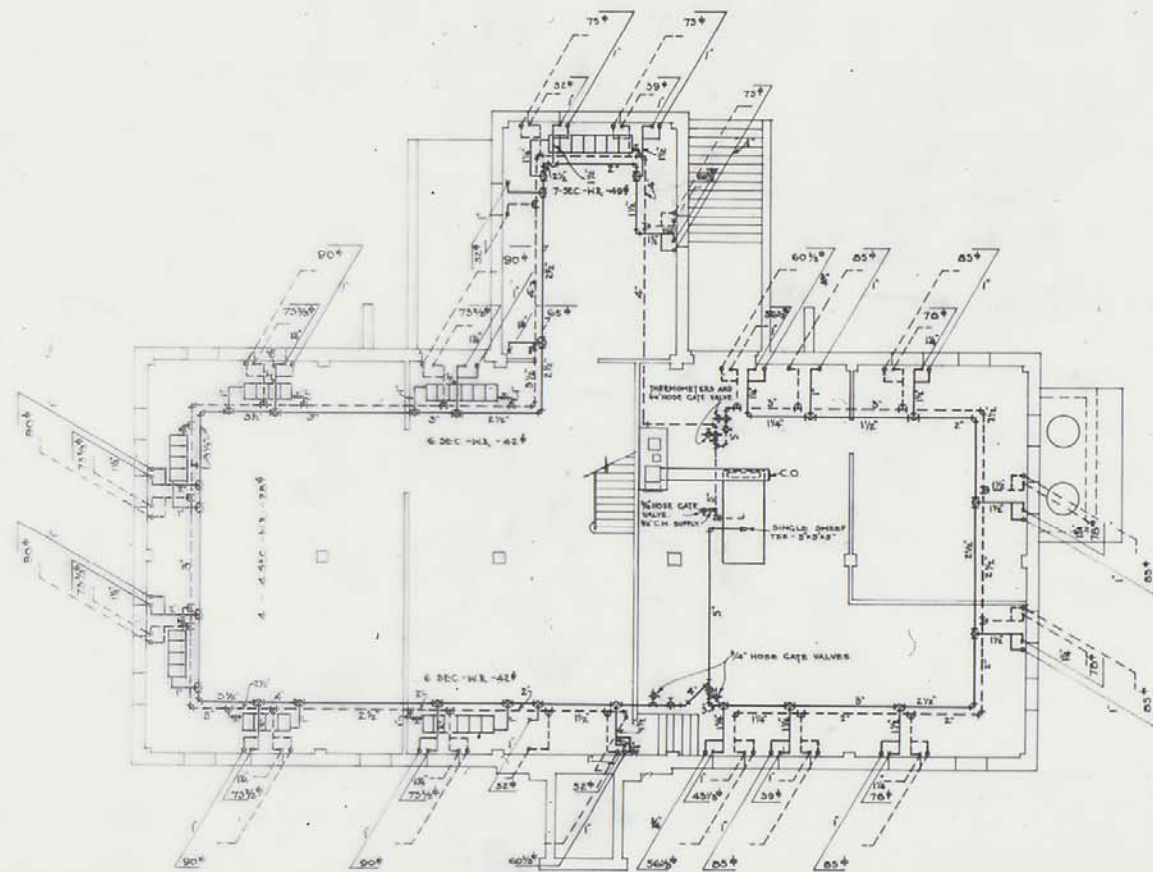
FIRST FLOOR FRAMING PLAN



FOOTING & FOUNDATION PLAN



SCALE: AS NOTED  
 CONSTRUCTION DIVISION  
 OFFICE OF THE QUARTERMASTER GENERAL  
**FORT TILDEN, N.Y.**  
**DETACHMENT BARRACKS**  
**FRAMING PLANS**  
 2 STORY - BRICK 44 MEN  
 DRAWN BY: RMH CHECKED BY: APPROVED BY: [Signature]  
 DATE: DEC. 20, 1930  
 PLAN NUMBER: 621-852  
 TRACED BY: [Signature] BRIG. GEN. G.M.C.



BASEMENT PLAN  
SCALE 1/8" = 1'-0"

-10°F ZONE

RADIATOR SCHEDULE		
SYMBOL	SIZE	CAPACITY
A	27 - 30"	60*
D	27 - 31"	75*
C	" - "	45*
I	" - "	52*
E	" - "	56*
F	" - "	60*
G	" - "	75*
H	" - "	78*
K	27 - 30"	75*
L	" - "	65*
M	" - "	90*
N	4 - 7" SECTIONS	18*
F	6 - 7"	42*
E	7 - 7"	48*

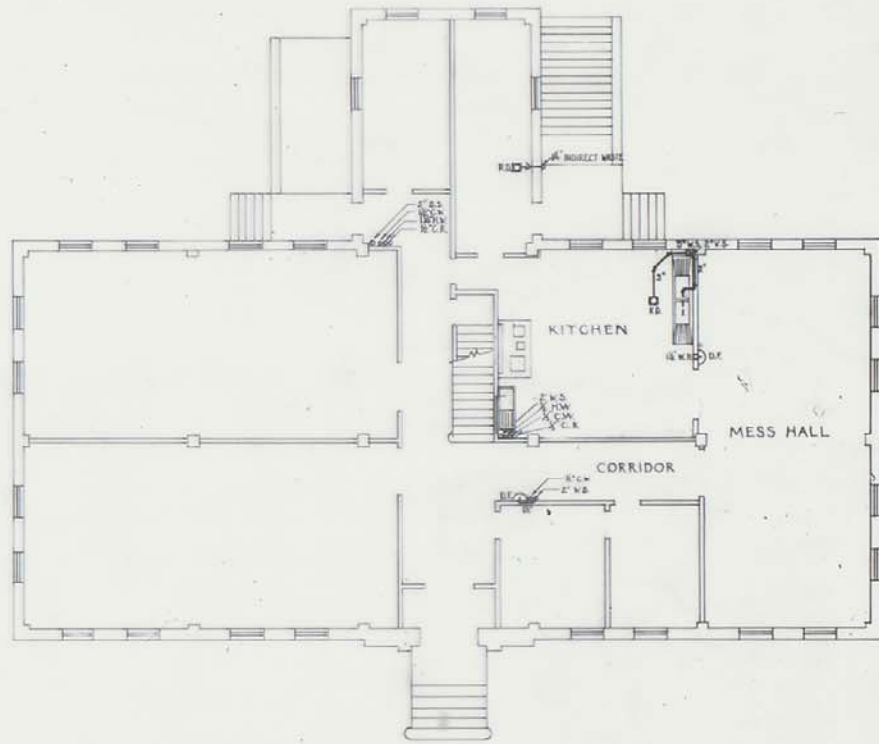
STEEL FIREBOX BOILER  
CAPACITY NOT LESS THAN 4300 SQ. FT. HOT WATER RADIATION.

TOTAL DIRECT CAST IRON RADIATION - 2963 SQ. FT.

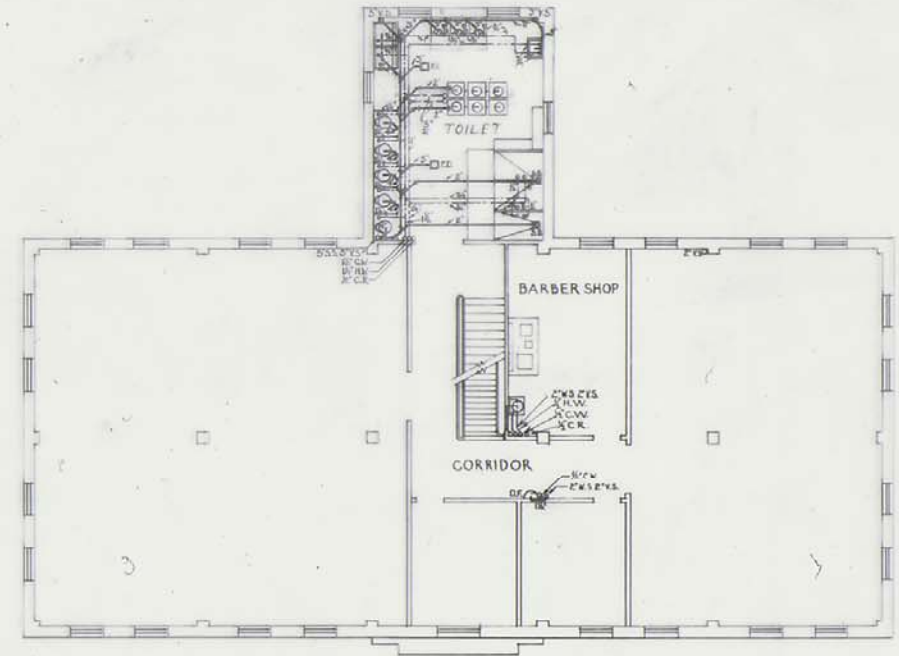
SCALE 1/8" = 1'-0"

CONSTRUCTION DIVISION			
OFFICE OF THE QUARTERMASTER GENERAL			
FORT TILDEN, N.Y.			
DETACHMENT BARRACKS			
HEATING			
2 STORIES - BRICK		49 MEN	
DRAWN BY STEINECKE	CHECKED BY [Signature]	APPROVED BY DIRECTION [Signature]	DATE DEC 20, 1930
TRACED BY STEINECKE	[Signature]	BRIG. GEN. G.M.C.	PLAN NUMBER 621-853

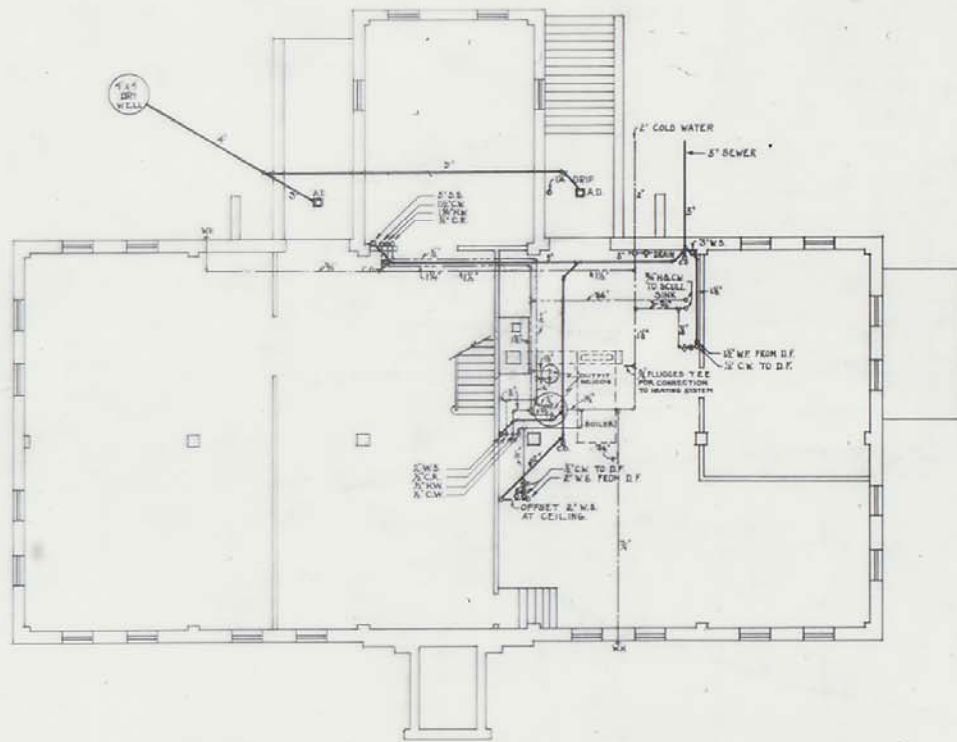




FIRST FLOOR PLAN



SECOND FLOOR PLAN



BASEMENT PLAN

SCALE: 1/8" = 1'-0"

CONSTRUCTION DIVISION  
OFFICE OF THE QUARTERMASTER GENERAL

FORT TILDEN, N.Y.  
DETACHMENT BARRACKS.  
PLUMBING.

2 1/2 STORIES - BRICK		49 MEN
DRAWN BY R. ENGEL	CHECKED BY R. ENGEL	DATE Dec. 20, 1930
APPROVED BY DIRECTOR <i>[Signature]</i>		PLAN NUMBER 621-854
TRACED BY R. ENGEL		BRIG. GEN. G.M.C.



COMPLETION REPORT

OF

ERECTION OF NEW BARRACKS

BUILDING NO. 1.

AT

FORT TILDEN, NEW YORK

BY

W.P.A. OF THE CITY OF NEW YORK

SUBMITTED TO THE QUARTERMASTER GENERAL OF THE ARMY

WASHINGTON, D.C.

BY: *Paul A. Jaccard*

PAUL A. JACCARD,  
Captain, 7th C. A. C.,  
Assistant Quartermaster, HDSH,  
and W. P. A. OFFICER.

Encl #1.



IN DEX

\*\*\*\*\*

	<u>PAGE</u>
I <u>GENERAL STATEMENT OF WORK</u>	#3
II <u>DESCRIPTION OF COMPLETED WORK</u>	3
General description	3
Purpose	3
Land and ownership	3
Maps & Photographs	4
Description of Equipment	4
III <u>CONSTRUCTION DATA</u>	4
General conditions	4
Operations by contractors	4
Supervision	4
IV <u>FINANCIAL DATA</u>	4
Appropriation	4
Financial statement	4
Close of project	4
V <u>SIGNATURE</u>	5

*Plans filed Mrs Carter  
6169-1027X  
" - 1028X*

BUILDING NO. 1

\*\*\*\*\*

I. GENERAL STATEMENT OF THE WORK

1. The work consisted in the furnishing of all materials and equipment, and performing all labor required in the construction of Building No. 1, New Detachment Barracks, in accordance with drawings and specifications prepared by and submitted by the W.P.A. of the City of New York.

II. DESCRIPTION OF COMPLETED WORK

2. Plan. The work comprised in the erection of a new Detachment Barracks at Fort Tilden, New York.

3. Construction. General construction consists of exterior 12" brick walls, 4" face brick, 8" common brick, reinforced concrete footings, foundation walls to 1st floor line, column and stairs, interior 4" T.C. and glazed 4" T.C. partitions, wood ridge construction for roof including dormers, gables and pediments, bangor slate roof over slaters felt and sheathing. copper flashing, gutters and downspouts, necessary mill work for eaves, gables, pediments, dormer windows, double hung windows; door and trim, kalemein door and trim, steel sash for basement windows; misc. iron consisting of coal chutes basement window guards, pipe railings in yard and for concrete stairs in building, pipe ash hoist, clean out doors, and wrought iron front railings; cement plaster coat for all interior partitions and ceilings, cast stone sills, band course, main entrance headstones and pillars; misc. steel consisting of lintels, bolts, anchor straps, etc., wheatherstripping of windows and doors; necessary hardware, sewer and water lines from main sanitary sewer and main water line respectively; painting three (3) coats interior walls, interior and exterior of windows and doors including trim. Basement: Boiler Room - Fuel Room - Open basement Area - Issue Room - Coal Chutes - Kitchen Stores.

1st Floor: Squad Room - Day Room - Mess Hall - Kitchen - Pantry - Barber Shop - Battery Commanders Office and Orderly Room.

2nd Floor: Two (2) Squad Rooms - NCO Rooms - Cook's Room - Latrine.

Heating: Hot water Heating System. Electrical Work: All electrical work and wiring, service and fixtures. Plumbing: All necessary roughing, plumbing fixtures for toilets, kitchen slop and scullery sinks and drains.

3rd Floor: Attic.

4. Utilities: None

5. Size and Unit Cost: The cost of the building is \$102,186.97. This project was financed by the W.P.A. OP-365-97-2-12.

6. Purpose: Prior to the construction of this Barracks, Enlisted Men had to live in old war time contonement building.

II DESCRIPTION OF COMPLETED WORK CONT'D.

7. Land and Ownership: This site is a part of the Fort Tilden, N.Y. Military Reservation, owned and operated by the U.S. War Department.

8. Maps and Photographs. Photographs attached hereto.

9. Description of Equipment: Hired cement mixer was used in the construction of this building.

10. III. CONSTRUCTION DATA.

GENERAL CONDITION:

10. Site. This Building is located in the East End of the Reservation.

11. Soil Data: Beach Sand.

12. Dates. Work started on August 10, 1938 and completed May 25, 1939.

13. Difficulties: There were no difficulties or incidents of unusual character. Work progressed smoothly.

14. Supervision: The entire project was under the supervision of the Commanding Officer and Post Quartermaster, Fort Tilden, New York.

IV. FINANCIAL DATA.

APPROPRIATION.

15. Funds: Funds for this new construction of Building No. 1 Fort Tilden, N.Y. were authorized by the W.P.A.-N.Y.C. under official project No. OP-365-97-2-12. Job No. 47.

16. Financial Statement:

a. Total cost of the work.	\$102,186.97.
b. Purchase of materials.	\$31,794.11
c. Hire of labor	<u>70,392.86</u>
	\$102,186.97

17. Close of Project: Work completed on May 25, 1939.

V. SIGNATURE

*Paul A. Jaccard*

PAUL A. JACCARD,  
Captain, 7th C. A. C.,  
W. P. A. OFFICER.





BUILDING NUMBER 1  
NEW DETACHMENT BAR RACES  
REAR VIEW

Encl. #3.

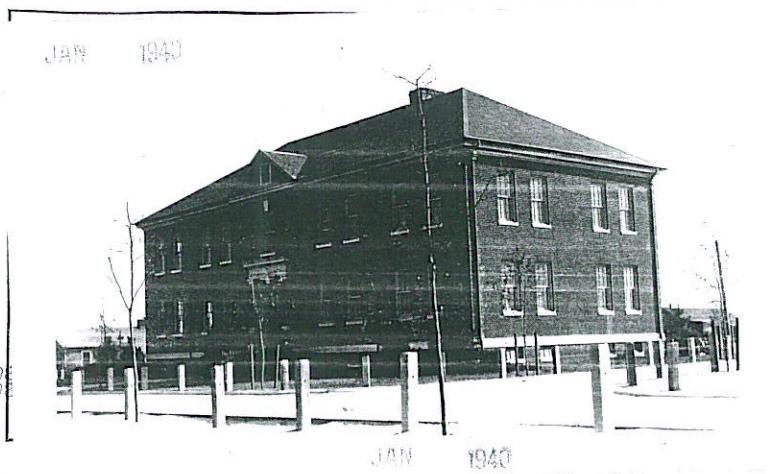




Post Plan No. ....

O.Q.M.G.: Plan No. 621-850 Building No. 1

Place Fort Tilden, New York Capacity 43 Beds  
 Designation of building Barracks Post Hospital Capacity 737 Beds  
 Total cost, \$ 102,436.97 Date completed May 25, 1939  
 Material: Walls Brick Foundation Brick and concrete  
 Roof Slate Floors Concrete  
 Total floor area above basement, square feet 6790.5  
 Size: Main building 86'11" x 29'11" Wings 17' x 23' Basement 86'11" x 29'11"  
 a Individual Heating Plant Height of first floor above ground 17' x 23'  
 (How heated) ground 4 ft.  
 b Steam How lighted Electric  
 (Type of heat) Water connections Yes  
 c Coal Sewer connections Yes  
 (Type of domestic hot water heater) Gas connections Yes  
 Gas connections Yes  
**COOKING RANGES INSTALLED** (Give quantity and size) **REFRIGERATORS INSTALLED** (Give quantity and size) **METERS INSTALLED** (Give quantity and capacity)  
 Coal ..... Gas ..... Gas .....  
 Gas ..... Electric 1 - 380 cu. ft. Electric 2 - 1-50A 240V #13799  
 Electric ..... Ice ..... Oil 1 - 50R 240V #13799  
 Oil ..... Steam .....  
 Steam ..... Water .....



**ADDITIONS AND INSTALLATIONS**

(Below enter chronologically all modifications, additions, introductions of water, sewer, lights, heating, etc.)

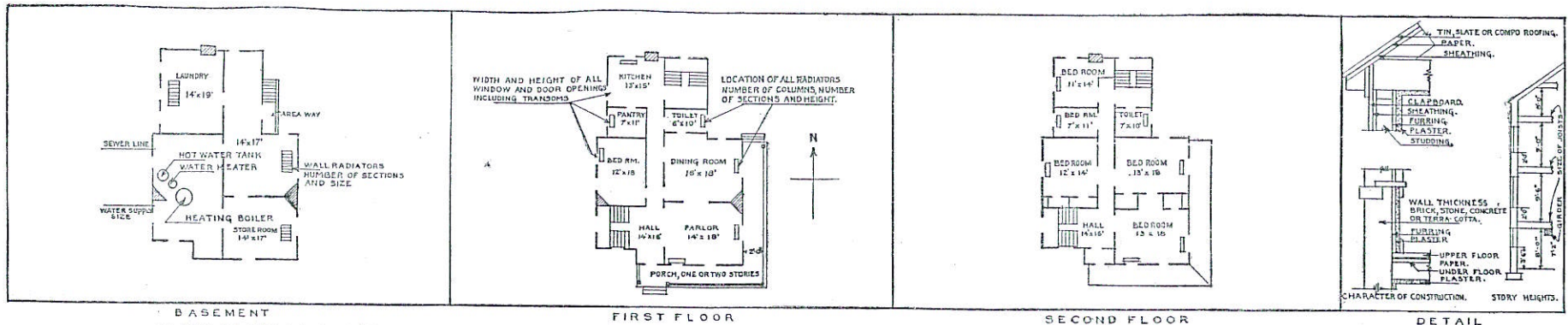
DATE		COST	DATE		COST
F.Y. 1939	Expenditures from completion to June 30, 1939	1199.00	7/7/39	Installed 1 Item #3, #4 and #5 Refrigeration unit & cooler unit & per specification Item 1 & 2 as called for Inv. for Bids. #211 383-39-46.	
			8/16/39	Installed 1 expansion valve & 1 room thermostat. Vou. #DV 2675-9	240.00
			9/27/39	Installed 1 hood, 6' x 22", stainless steel. Installed 2 pipes, stove. Voucher No. DV 361-0	95.00
			12/8/39	Installed 2 #63 Levolver SNS. Vou. #DV 982-0	1.60
				Installed 1 Cong. 4", 110 Volts AC. Vou. #DV 1065-0	9.00

INSTRUCTIONS.—“a” State whether heated from central heating or by individual heating plants, stoves, furnaces, or fireplaces.  
 “b” State whether steam, vapor, hot water, or hot air.  
 “c” State whether gas, coal, oil, or central heating plant.

See reverse side of form.

RECEIVED JAN 9 - 1940





IN SPACE BELOW SKETCH BASEMENT AND FLOOR PLANS OF BUILDINGS, GIVING DATA AS PER PLANS ABOVE

<p style="text-align: center;">REMARKS</p>
--

Designation changed from Barracks to Post Hospital . See 2nd Ind. 3-12-41.

**INSTRUCTIONS**

If plans of building are available, forward copy of same showing information called for above. These plans should be checked against the building and any variations from same in the building as constructed should be noted.

If plans are not available make sketch plans and elevation in spaces above. The plans shown are typical of "quarters." Similar plans may be made for all types of buildings. There are 10 squares to the inch. Each square will represent 1', 2', 4' or 8' etc., as may be necessary to show entire building in the space allowed. Show inside dimensions and designation of each room. Indicate location of water and sewer connections. In space under heading "DETAILS" show character of construction, story heights, etc.



JAN

1940



JAN

1940

IONS

of water, sewer, lights, heating, etc.)

UNITED STATES DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

**NATIONAL REGISTER OF HISTORIC PLACES  
INVENTORY -- NOMINATION FORM**

FOR FEDERAL PROPERTIES

FOR NPS USE ONLY  
RECEIVED MAR 6 1984  
DATE ENTERED

SEE INSTRUCTIONS IN *HOW TO COMPLETE NATIONAL REGISTER FORMS*  
TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

**1 NAME**

HISTORIC

Fort Tilden Historic District (Gateway NRA)

AND/OR COMMON

Fort Tilden

**2 LOCATION**

STREET & NUMBER

Rockaway Beach Boulevard

NOT FOR PUBLICATION

CITY, TOWN

CONGRESSIONAL DISTRICT

New York

VICINITY OF 11

STATE

CODE

COUNTY

CODE

New York

36

Queens

81

**3 CLASSIFICATION**

CATEGORY	OWNERSHIP	STATUS	PRESENT USE
<input checked="" type="checkbox"/> DISTRICT	<input checked="" type="checkbox"/> PUBLIC	<input checked="" type="checkbox"/> OCCUPIED	<input type="checkbox"/> AGRICULTURE
<input type="checkbox"/> BUILDING(S)	<input type="checkbox"/> PRIVATE	<input type="checkbox"/> UNOCCUPIED	<input type="checkbox"/> COMMERCIAL
<input type="checkbox"/> STRUCTURE	<input type="checkbox"/> BOTH	<input type="checkbox"/> WORK IN PROGRESS	<input checked="" type="checkbox"/> PARK
<input type="checkbox"/> SITE	<b>PUBLIC ACQUISITION</b>	<b>ACCESSIBLE</b>	<input type="checkbox"/> EDUCATIONAL
<input type="checkbox"/> OBJECT	<input type="checkbox"/> IN PROCESS	<input checked="" type="checkbox"/> YES: RESTRICTED	<input type="checkbox"/> ENTERTAINMENT
	<input type="checkbox"/> BEING CONSIDERED	<input type="checkbox"/> YES: UNRESTRICTED	<input type="checkbox"/> GOVERNMENT
		<input type="checkbox"/> NO	<input type="checkbox"/> INDUSTRIAL
			<input type="checkbox"/> MILITARY
			<input type="checkbox"/> MUSEUM
			<input type="checkbox"/> PRIVATE RESIDENCE
			<input type="checkbox"/> RELIGIOUS
			<input type="checkbox"/> SCIENTIFIC
			<input type="checkbox"/> TRANSPORTATION
			<input type="checkbox"/> OTHER:

**4 AGENCY**

REGIONAL HEADQUARTERS: (if applicable)

National Park Service, North Atlantic Region

STREET & NUMBER

15 State Street

CITY, TOWN

STATE

Boston,

VICINITY OF

Mass.

**5 LOCATION OF LEGAL DESCRIPTION**

COURTHOUSE,  
REGISTRY OF DEEDS, ETC.

Queens County Courthouse

STREET & NUMBER

45th Avenue

CITY, TOWN

STATE

New York

NY

**6 REPRESENTATION IN EXISTING SURVEYS**

TITLE

None

DATE

FEDERAL STATE COUNTY LOCAL

DEPOSITORY FOR  
SURVEY RECORDS

CITY, TOWN

STATE

# 7 DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE
<input type="checkbox"/> EXCELLENT	<input checked="" type="checkbox"/> DETERIORATED	<input type="checkbox"/> UNALTERED	<input checked="" type="checkbox"/> ORIGINAL SITE
<input type="checkbox"/> GOOD	<input checked="" type="checkbox"/> RUINS	<input checked="" type="checkbox"/> ALTERED	<input type="checkbox"/> MOVED DATE _____
<input type="checkbox"/> FAIR	<input type="checkbox"/> UNEXPOSED		

## DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

### Battery Harris Casemates (HS-406, 410)

Battery Harris originally (1921-24) consisted of two huge circular concrete platforms. The guns were exposed without benefit of any overhead protection. The original platforms remain although covered by earth, to a great extent at Structure 406.

The two guns of Battery Harris were roofed over in 1941-43 by massive concrete casemates approximately 850 feet apart. These two basically identical structures together comprise Battery Harris. Each emplacement was formerly equipped with one 16-inch gun. The two emplacements are roughly rectangular, single-story concrete structures constructed in a dome fashion and covered with earth and sand so that they resemble two oval hills approximately three hundred feet long and sixty feet high. The walls, floors, roofs and interior partitions are all concrete. Each bunker is laid out with two central corridors, one running north-south and one east-west. The guns were positioned in the southern end of the north-south corridor. There is a circular concrete hood which projects over the southern aperture of each emplacement designed to protect the guns from direct hits. There are six rooms leading off the two corridors: two powder rooms; two shell rooms; one tool room; and one latrine. There were steel grill gates installed in all four corridor entrances. These gates are in varying stages of deterioration. There are no mechanical or electrical facilities left in the emplacements. Structure 410, Gun #1, and Structure 406, Gun #2, constituted an important element in the harbor defense of New York City due to the long range and destructive power of the 16-inch gun. Each gun fired 2,100-pound projectiles for a maximum distance of 44,680 yards.

### Battery Harris Magazines (401, 405, 409, 414)

These magazines, dating from 1922 (401 was constructed later during the early 1930s), were constructed to store the shells and powder used by the twin guns of Battery Harris (No. 406, 410). These four buildings are basically identical. Each building is a rectangular, single-story structure with a built-up low gable roof. The roof decks are composed of precast concrete planks and are supported by steel joists. The tile block curtain walls are supported by paired columns, the inner being steel and the outer concrete. The buildings rest on concrete wall footings. The floors are concrete slabs with steel rails for the shell-moving machinery set into them. There are raised concrete docks on either side of each building which run the length of their interiors. There are rolling steel overhead doors in either end of each building. Each magazine also has a steel plate door in one gable end which is reached by a flight of concrete steps. These doors open onto the storage docks.

### Battery Harris Bombproof Magazine (411)

This earth-covered reinforced concrete bunker-like magazine was built for storage of shells and powder for Battery Harris. It was intended to be bomb-proof as contrasted to the other four Battery Harris magazines (401, 405, 409, 414) that are more exposed and not of the bunker class. This structure probably dates back to early 1940s when Battery Harris was casemated in fear of aerial bombardment.

# 8 SIGNIFICANCE

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW			
<input type="checkbox"/> PREHISTORIC	<input type="checkbox"/> ARCHEOLOGY-PREHISTORIC	<input type="checkbox"/> COMMUNITY PLANNING	<input type="checkbox"/> LANDSCAPE ARCHITECTURE	<input type="checkbox"/> RELIGION
<input type="checkbox"/> 1400-1499	<input type="checkbox"/> ARCHEOLOGY-HISTORIC	<input type="checkbox"/> CONSERVATION	<input type="checkbox"/> LAW	<input type="checkbox"/> SCIENCE
<input type="checkbox"/> 1500-1599	<input type="checkbox"/> AGRICULTURE	<input type="checkbox"/> ECONOMICS	<input type="checkbox"/> LITERATURE	<input type="checkbox"/> SCULPTURE
<input type="checkbox"/> 1600-1699	<input type="checkbox"/> ARCHITECTURE	<input type="checkbox"/> EDUCATION	<input checked="" type="checkbox"/> MILITARY	<input type="checkbox"/> SOCIAL/HUMANITARIAN
<input type="checkbox"/> 1700-1799	<input type="checkbox"/> ART	<input type="checkbox"/> ENGINEERING	<input type="checkbox"/> MUSIC	<input type="checkbox"/> THEATER
<input type="checkbox"/> 1800-1899	<input type="checkbox"/> COMMERCE	<input type="checkbox"/> EXPLORATION/SETTLEMENT	<input type="checkbox"/> PHILOSOPHY	<input type="checkbox"/> TRANSPORTATION
<input checked="" type="checkbox"/> 1900-	<input type="checkbox"/> COMMUNICATIONS	<input type="checkbox"/> INDUSTRY	<input type="checkbox"/> POLITICS/GOVERNMENT	<input type="checkbox"/> OTHER (SPECIFY)
		<input type="checkbox"/> INVENTION		

SPECIFIC DATES February 19, 1917

BUILDER/ARCHITECT U. S. Army

## STATEMENT OF SIGNIFICANCE

Fort Tilden is significant because of its role in the defense network for New York Harbor. Although Fort Tilden was not established until 1917, Rockaway Peninsula on which it is situated was recognized as early as 1814 for its strategic location and a blockhouse was erected there during the War of 1812. There is no evidence that the peninsula was fortified in subsequent years. Following its construction, Fort Tilden joined Fort Hancock on Sandy Hook, New Jersey, and Fort Wadsworth on Staten Island, New York, as part of the outer defense system for New York City and the harbor from World War I through the Cold War era.

The twin emplacements of Battery Harris, moreover, illustrate the technical improvements which took place in military weaponry between the two World Wars. Originally constructed as open-topped 16-inch ~~disappearing~~ <sup>parabolic</sup> gun batteries, Battery Harris was updated during World War II. Reinforced concrete casemates were built over the guns to protect them from aerial bombardment.

As well as demonstrating technological developments in military history during the first half of the twentieth century, the site, in conjunction with Fort Hancock, illustrates complex reorganization of traditional coastal defense systems. Fort Tilden was part of the Army's highly specialized system for the protection of New York Harbor from attacks from the sea. Defensive elements such as seacoast artillery, anti-aircraft artillery, submarine mining and observation, lighting and listening posts were coordinated between the two forts. Battery Weed and Fort Tompkins within Fort Wadsworth and Fort Hancock are already on the National Register; it is appropriate that the third member of this triumvirate be listed as well.



# 9 MAJOR BIBLIOGRAPHICAL REFERENCES

Lewis, Emanuel Raymond. Seacoast Fortifications of the United States: An Introductory History. Annapolis:Leeward Publications Inc., 1979

Torres, Louis. "Historic Structure Report, Historical Data Section of Fort Tilden, Gateway National Recreation Area, New York." Denver:National Park Service, 1980.

# 10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY 98 acres

UTM REFERENCES

A	1,8	5,9,5	0,0,0	4,4	9,1	5,9,0	B	1,8	5,9,5	0,0,0	4,4	9,0	0,0,0	
	ZONE	EASTING	NORTHING		ZONE	EASTING		ZONE	EASTING	NORTHING		ZONE	EASTING	NORTHING
C	1,8	5,9,2	7,5,0	4,4	8,9	7,0,0	D	1,8	5,9,2	8,7,0	4,4	9,1	5,9,0	
	ZONE	EASTING	NORTHING		ZONE	EASTING		ZONE	EASTING	NORTHING		ZONE	EASTING	NORTHING

VERBAL BOUNDARY DESCRIPTION

The boundary of Fort Tilden Historic District is shown as the thick black line on the accompanying map.

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE	CODE	COUNTY	CODE
STATE	CODE	COUNTY	CODE

# 11 FORM PREPARED BY

NAME / TITLE

Dwight Pitcaithley, NARO and Michael Wurm, GATE

ORGANIZATION

North Atlantic Region

STREET & NUMBER

15 State Street

CITY OR TOWN

Boston, Mass.

DATE

6/23/82

TELEPHONE

617-223-3778

STATE

Mass.

# 12 CERTIFICATION OF NOMINATION

STATE HISTORIC PRESERVATION OFFICER RECOMMENDATION

YES

NO

NONE

*Albert E. Carrese*  
STATE HISTORIC PRESERVATION OFFICER SIGNATURE

In compliance with Executive Order 11593, I hereby nominate this property to the National Register, certifying that the State Historic Preservation Officer has been allowed 90 days in which to present the nomination to the State Review Board and to evaluate its significance. The evaluated level of significance is  National  State  Local.

FEDERAL REPRESENTATIVE SIGNATURE *Edwin C. Beard*

TITLE *Chey Historic Mon, NPS*

DATE *3/6/84*

FOR NPS USE ONLY	
I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER	
<i>Edwin C. Beard</i>	DATE <i>7/20/84</i>
DIRECTOR, OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION	DATE
ATTEST:	DATE
KEEPER OF THE NATIONAL REGISTER	

UNITED STATES DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

**NATIONAL REGISTER OF HISTORIC PLACES  
INVENTORY -- NOMINATION FORM**

<b>FOR NPS USE ONLY</b>
RECEIVED
DATE ENTERED

CONTINUATION SHEET

ITEM NUMBER 7 PAGE 2

Igloo Magazines (403, 404)

Located to the north of Magazine #405, there are two later magazines constructed circa 1943. These partially sunken concrete structures are of semi-cylindrical type known as Igloo Magazines. These two basically identical magazines are barrel vaulted structures with bulkhead entryways. Constructed of concrete, they have been banked with earth. They both have double wooden doors covered with tarpaper.

Six-inch Gun Batteries (315, 321)

The two 6-inch guns of Battery Construction No. 220 (#315) were moved from an earlier battery to the east and installed here by 1942. The guns are gone but their concrete platforms are still partly visible under heavy brush. They were separated by 210 feet. The concrete bunker was located to the rear and between the two gun platforms. It consists of a ground-level tunnel complex which was covered with sand and earth crowned by a rectangular, single-story observation or fire control station. The lower bunker rooms served as a magazine along with communications and other support functions. Its entrances are blocked with sand and the complex cannot be entered. The fire control booth on top of the bunker has a flat roof and an open hatchway in the northwest corner. Steel rungs are set into the wall of the booth and are the only remaining fixtures. There is a slit window which runs the length of the south side of the booth and for a short distance north of the booth. There are no mechanical or electrical facilities installed in the bunker. Probably finished by 1942, Battery Construction No. 220 has a seven-foot-thick front wall with a six-foot-thick rear wall.

The western battery, Battery Kessler (#321), was originally known as West Battery in 1917. At that time it consisted of two 5-inch guns mounted on circular concrete platforms. By 1942 an earth-covered concrete magazine bunker was constructed to the rear and between the two guns. As normal, the guns were removed around 1948 and the platforms are probably buried. The bunker is still extant, but it is a roughly rectangular single-story structure laid out with a main east-west corridor. To the south of the corridor are two powder rooms, a shell room, and two storerooms. The main corridor can be entered from doorways on both the east and west ends. The entire structure, except for the doors, is concrete. The double steel doors are still installed though somewhat rusted. They are three inches thick. There are no mechanical or electrical facilities still operating in the bunker.

Support Buildings (322, 402)

Designed as support buildings for the batteries, these structures are rectangular (12 x 18 and 12 x 14 respectively), single-story constructions with concrete block walls and flat concrete slab roofs. Both were probably constructed around 1940.

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CONTINUATION SHEET

ITEM NUMBER 7 PAGE 3

Power Plants (407, 408, 412)

Buildings Nos. 407, 408, and 412 were known historically as Power Plants 2, 3 and 1 respectively. The 3 formed part of Battery Harris. Power Plants 1 and 2 each supplied power to one of the big guns and Power Plant 3 was a reserve unit to be placed in operation in the event the other power plants were temporarily out of commission. Built during the early 1920s, all three are of concrete construction.

Fire Control and Plotting Room (413)

The building which contained plotting and switchboard rooms in support of Battery Harris is essentially an earth-covered concrete bunker. There is only one entrance which is equipped with steel gates. The structure was probably completed in 1924.

Mine Casemate and Plotting Room (511)

This structure, built during World War II, formed part of a mine battery consisting of three tactical units which were located at Fort Hancock, Fort Wadsworth, and Fort Tilden. The mine casemate was the command post for the Fort Tilden branch of the submarine defenses.

It is a concrete bunker covered by sand and sod. It has a number of flues extending from the roof which probably served as ventilators. There are two entrances on the north side.

Harbor Entrance Command Post (13)

Harbor Entrance (or Groupment) Command Post is the building in which the operational activities of Fort Tilden were coordinated. It is a one-story concrete bunker covered by sand and earth. The Command Post was constructed during World War II.

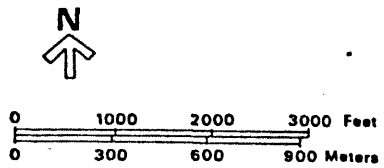
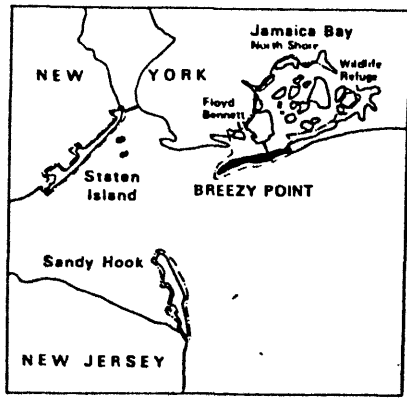
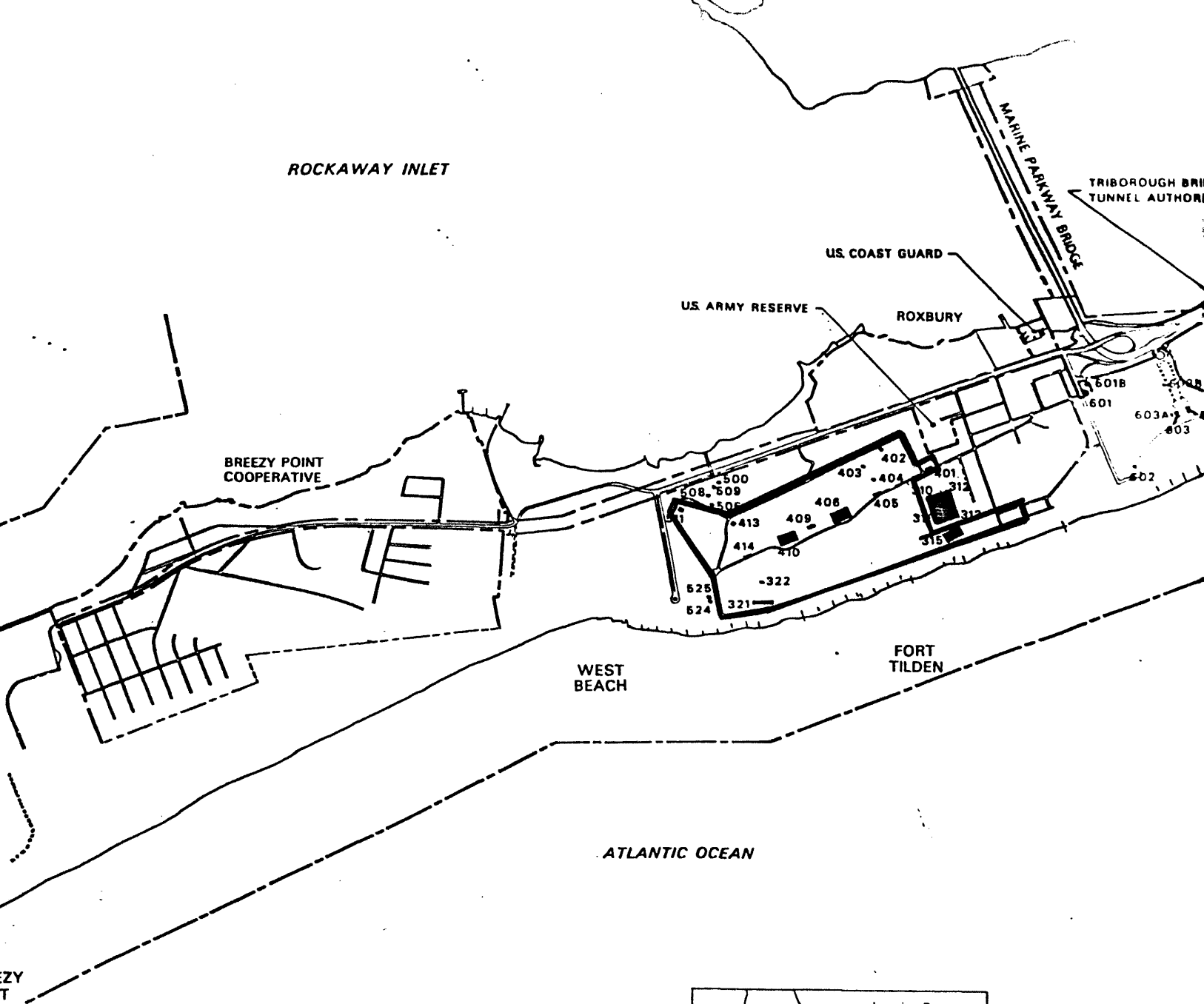
Telephone Pit (323)

This small rectangular, single-story building has a concrete slab hip roof. It is of concrete masonry construction and the floor is of sand.

Management Exclusion:

Within the boundaries of Fort Tilden there are several structures which do not meet National Register criteria. These buildings either do not relate to the harbor protection theme of the fort or, while they are listed on the enclosed site map, no longer exist. The structures include:

HS-316-320 Rifle range support structures  
Pistol range  
HS-324 No above grade remains  
HS-325 No above grade remains  
HS-514 No above grade remains  
HS-14 Utility building



———— FORT TILDEN HISTORIC DISTRICT BOUNDARY