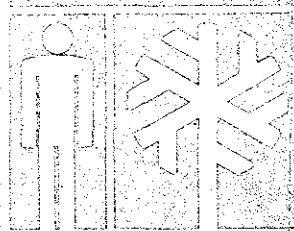


historic structures report
january 1980

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STATUE OF LIBERTY
ELLIS ISLAND / U.S. IMMIGRATION STATION



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Historic Structures Report

ELLIS ISLAND

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Denver Service Center
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P.O. Box 25287
Denver, Colorado 80225

Building Conservation Technology/The Ehrenkrantz Group
19 West 44th Street
New York, New York 10036

The following Historic Structures Report was prepared for the United States Government, National Park Service, Denver Service Center for the purpose of further documenting the development, architectural resources and present condition of the Immigration Station at Ellis Island.

The contents of the report are in response to the contract scope of work and include description of the first Immigration Station, discussion of the competition for the design of the second Immigration Station, its construction and development, and architectural descriptions of each of the existing forty-one structures. Also included is a description of the physical condition of each structure which was used as the basis for the formulation of the stabilization recommendations and cost estimates.

The report was prepared in an effort to aid the National Park Service in determining the architectural significance of the structures which make up the Immigration Station and in developing a plan for future stabilization and use of the resources on Ellis Island.

The report was prepared by Susan Chin, Pamela W. Hawkes, Mary L. Oehrlein and Mary Jane Wells of Building Conservation Technology with the assistance of Daniel Buehler. Section IV, Structural Examination, was prepared by the office of Irwin Cantor, P.C., Structural Engineers.

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I. Documentation

A. BEFORE DEVELOPMENT (- 1890)

Ellis Island is located in the Upper New York Bay approximately one-quarter of a mile to the north of the Statue of Liberty and one-fifth of a mile to the east of the New Jersey shoreline. The island derived its name from the only known eighteenth century owner Samuel Ellis and served as an oyster bed, a picnic ground, a location for executing pirates, and a site for fortification.¹ The island's major significance lies in its most recent use as a port of entry and an immigration station from 1892 to 1924.

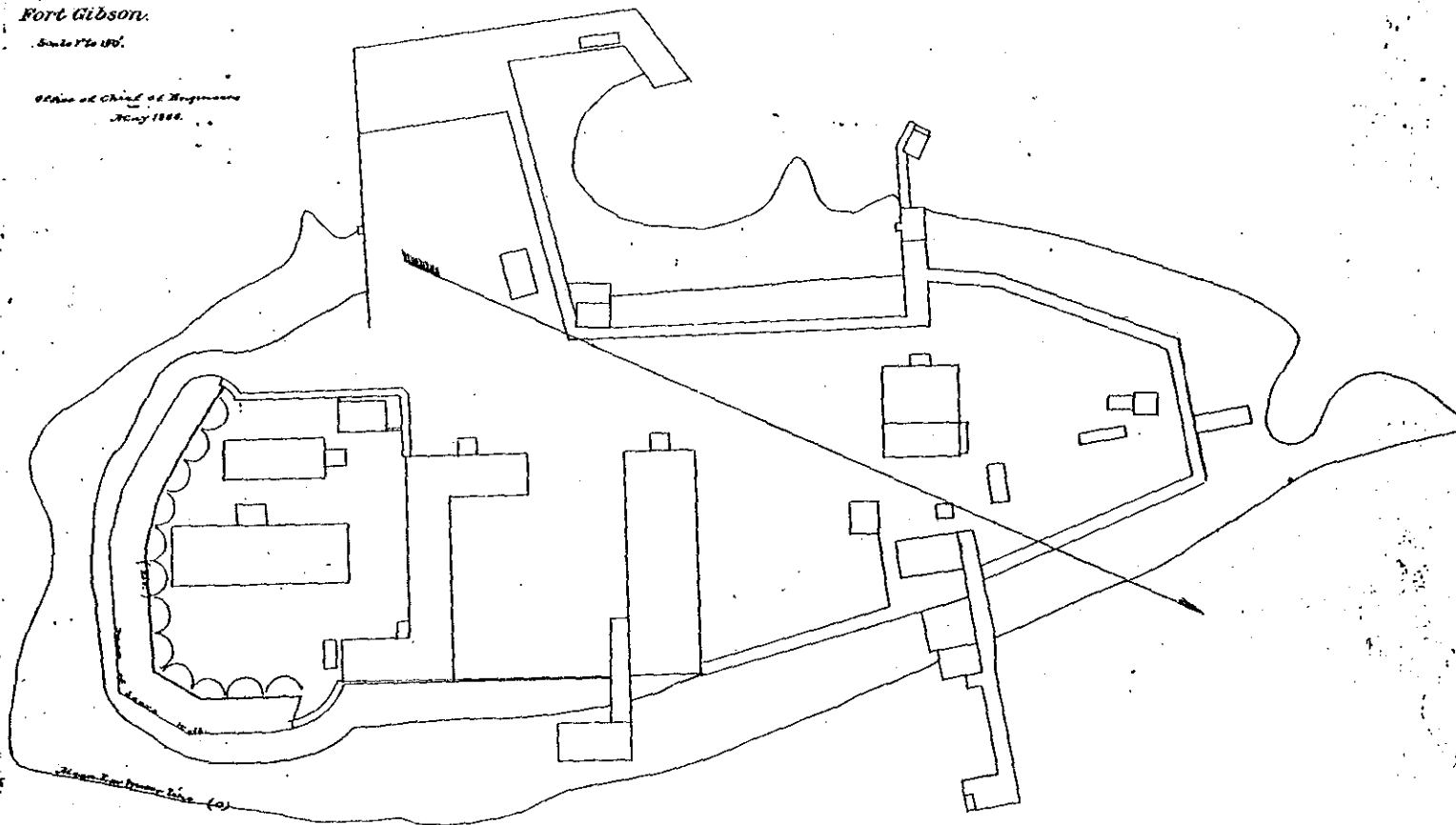
The State of New York first fortified the island in 1794 during the Napoleonic Wars in order to deter a naval attack by Great Britain. In 1808 Lieutenant Colonel Jonathan Williams of the War Department planned New York Harbor defenses and proposed "a casemated Battery" and garrison on Ellis Island named Fort Gibson.² Samuel Ellis' heirs retained ownership of the land, however, until the State of New York condemned the island in 1808 and ceded it to the federal government for \$10,000. Before the outbreak of the War of 1812, the government constructed Fort Gibson, a battery for heavy ordnance. After the war the Fort was abandoned until the Civil War when it served as a supply station and naval arsenal.³ The island continued as an arsenal until 1890.

From 1855 to 1890, Castle Garden at the Battery in Lower Manhattan served as the principal immigration station for the Port of New York. The exigencies created by the growing influx of immigrants were greater than Castle Garden's facilities could meet.⁵ Therefore, on April 11, 1890, Congress voted to remove the arsenal from Ellis Island and relocate the immigration depot to the island. The selection of Ellis Island as the location of the new immigration depot and the decision to remove the arsenal was in part based upon the public's intense fear of an explosion at the magazine. On May 24, 1890, the arsenal was vacated.⁶

Fort Gibson.

Scale 1/16 100.

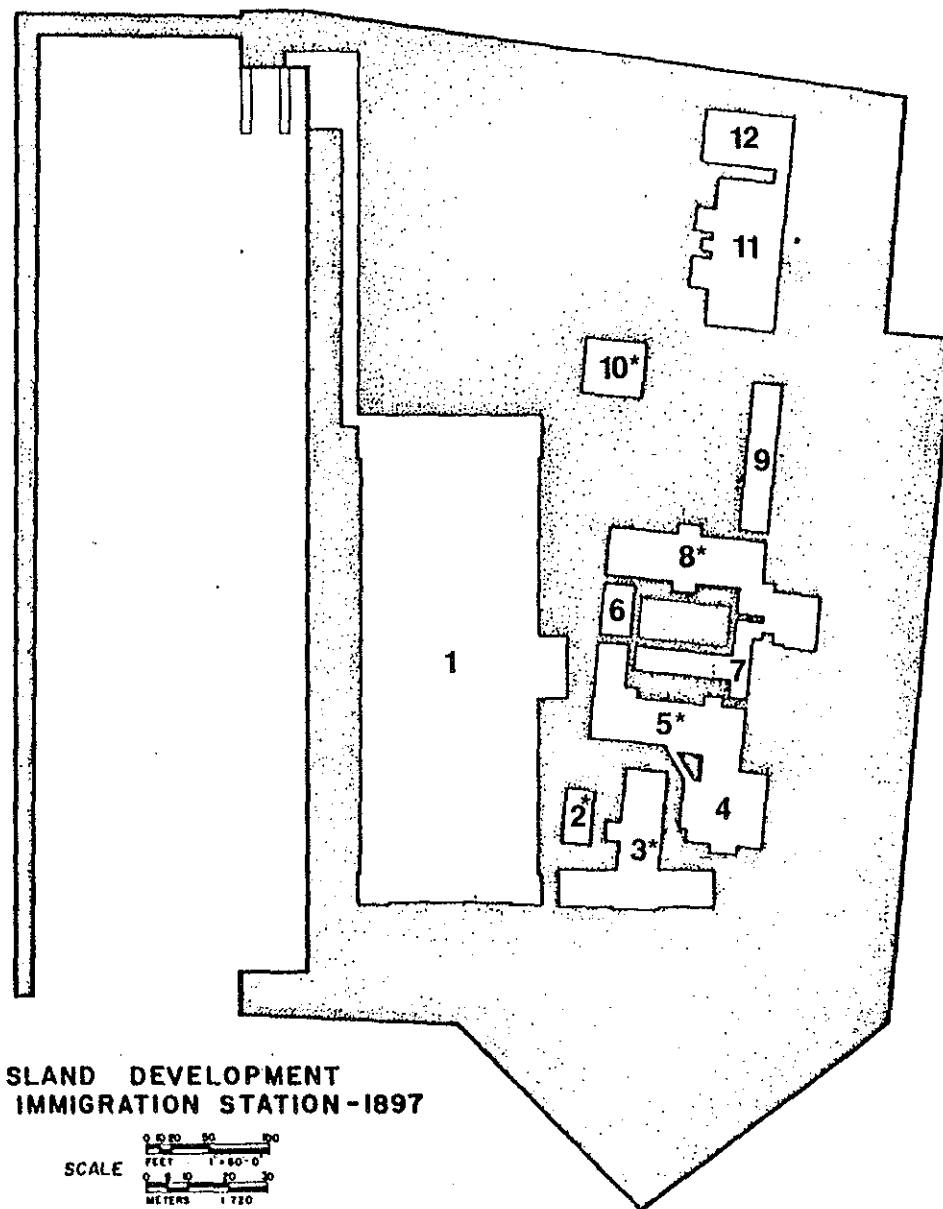
*Office of Chief of Engineers
July 1886.*



Site plan of Fort Gibson, c. 1886. (National Archives, Record Group 77, Washington, D.C.).

1. Main Building, c. 1892
2. Record Storage, c. 1854-1886
3. Restaurant and Kitchen Building, c. 1844
4. Disinfecting House, c. 1897
5. Detention Building, pre-1813
6. Hospital Building D, c. 1893
7. Hospital Building C, c. 1893
8. Insane Hospital, c. 1854-1868
9. Hospital Building B, c. 1893
10. Surgeon's Quarters, pre-1886
11. Boiler House, c. 1891
12. Tank and Coal House, c. 1891

* Indicates structures reused from Naval Arsenal in 1890.



ISLAND DEVELOPMENT
FIRST IMMIGRATION STATION-1897

SCALE
 0 50 100
 FEET 1" = 80'-0"
 0 10 20 30
 METERS 1" = 20'

B. FIRST IMMIGRATION STATION (1890 - 1897)

Congress appropriated \$75,000 for the conversion of Ellis Island into an immigration station and in 1890, five of the extant arsenal structures were recycled for use at the station.⁷ Through comparison of early drawings and maps, these structures have been identified as: the powder magazine keeper's cottage; the powder magazine or shellhouse number one; the barracks or shellhouse number two; the naval magazine or shellhouse number five; and another unnamed magazine.⁸ The gunners quarters served as a temporary construction office during the conversion.⁹ Preparations for the immigration station on the island also entailed expansion of the island by filling; construction of docks and landing facilities; and erection of new structures.¹⁰

In 1890 prior to these changes, the island was teardrop shaped and lay on an east-west axis with the tip of the island pointing westward. Docks were located on the north and south shores of the island; bulkheads and breakwaters marked the western end of the island; and a scarp wall encompassed the eastern end. Within these boundaries, the arsenal structures were sited in a line from east to west. At the far eastern end of the island, shellhouse number five, also known as the naval magazine, and another magazine were situated side-by-side. The S-shaped barracks, shellhouse number two, lay to the west of the magazines, and was oriented on a north-south axis. Running parallel to the barracks, but slightly farther to the west was the powder magazine. The keeper's cottage was the westernmost structure.¹¹

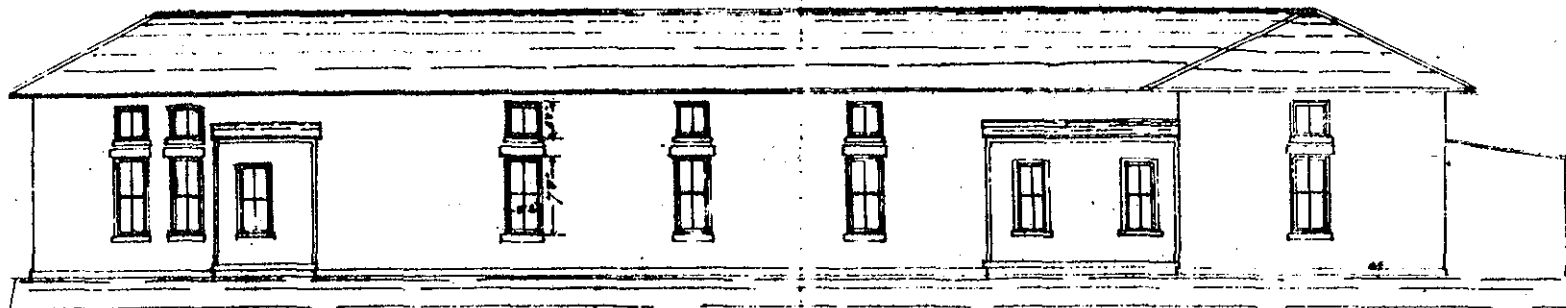
An article in the August 1890 edition of New York World which discussed the conversion of the island into an immigration station, included descriptions of a few of the arsenal structures. According to the World, the powder magazine or shellhouse number one was to be converted into the Insane Hospital. It was described as a brick building to which a wooden wing and ventilating skylight would be added.¹²

The original, brick section of the Insane Hospital was constructed between 1854 and 1868. It was a one story 9 by 3 foot bay, hipped roof structure with a rectangular plan.¹³ Plans dated September 3, 1890 give the dimensions of the structure as 125 by 40 feet and show the ward layout with the female ward located at the north end and the male ward at the south end.¹⁴ A shed-roofed entrance vestibule was attached to the southern end of the building leading directly into the male ward of the Hospital.¹⁵

During the fall of 1890, the wooden wing was added to the northeast corner of the structure.¹⁶ The L-shaped addition was comprised of two rooms: a 46 by 20 foot dining room and a 45 by 22 foot kitchen.¹⁷

The August 1890 World article also mentioned the conversion of the keeper's cottage, located to the southwest of the Insane Hospital, into the doctor's cottage. No physical changes or repairs were required.¹⁸ Drawings of this building do not exist, but maps document the structure's existence from 1843.¹⁹

Another of the arsenal structures which were re-used was the barracks or shellhouse number two erected prior to 1813 as part of Fort Gibson.²⁰ As part of the new immigration station, it served as housing for contract laborers and other detainees and was labeled as the Detention Building. Laid out in an S-shaped plan and standing one-story high, the building was framed in wood and had a hipped roof with king post trusses. Four small shed-roofed structures were attached to the exterior; one on the south; another on the west; and two others situated at the bends in the building. Plans dating from 1890 show two of these used as enclosed entrances and the other two as water closets. According to the 1891 Annual Report of the Supervising Architect, the exterior of the building was sheathed with metal and slate as part of the conversion.²¹ An 1892 east elevation and transverse section of the Detention Building show it as having two-over-two double hung windows with two light clerestories aligned directly above. These appear to have been typical throughout the building.²² The two levels of windows appear to have confused a



— SIDE ELEVATION. —



— SECTION THROUGH A.B. —

— SHELL HOUSE N^o 2. —

— ELLIS ISLAND I.Y.H. —

Scale 1/4" = 1'-0"

N^o 40. U. S. Treasury Dept.

Office of the Supervising Archt.

Drawing by _____, which was
checked by _____

from a part of the contract

of the City of _____

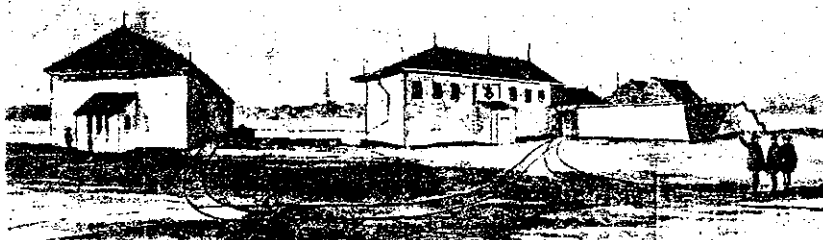
for the _____

for the U. S. _____

for the City of _____

dated _____

East Elevation of Shell House Number 2 which was reused as the Detention Building at the First Immigration Station in 1890, c. April 20, 1892. (NPS, Denver Service Center, Drawing no. 462/43.970:1).

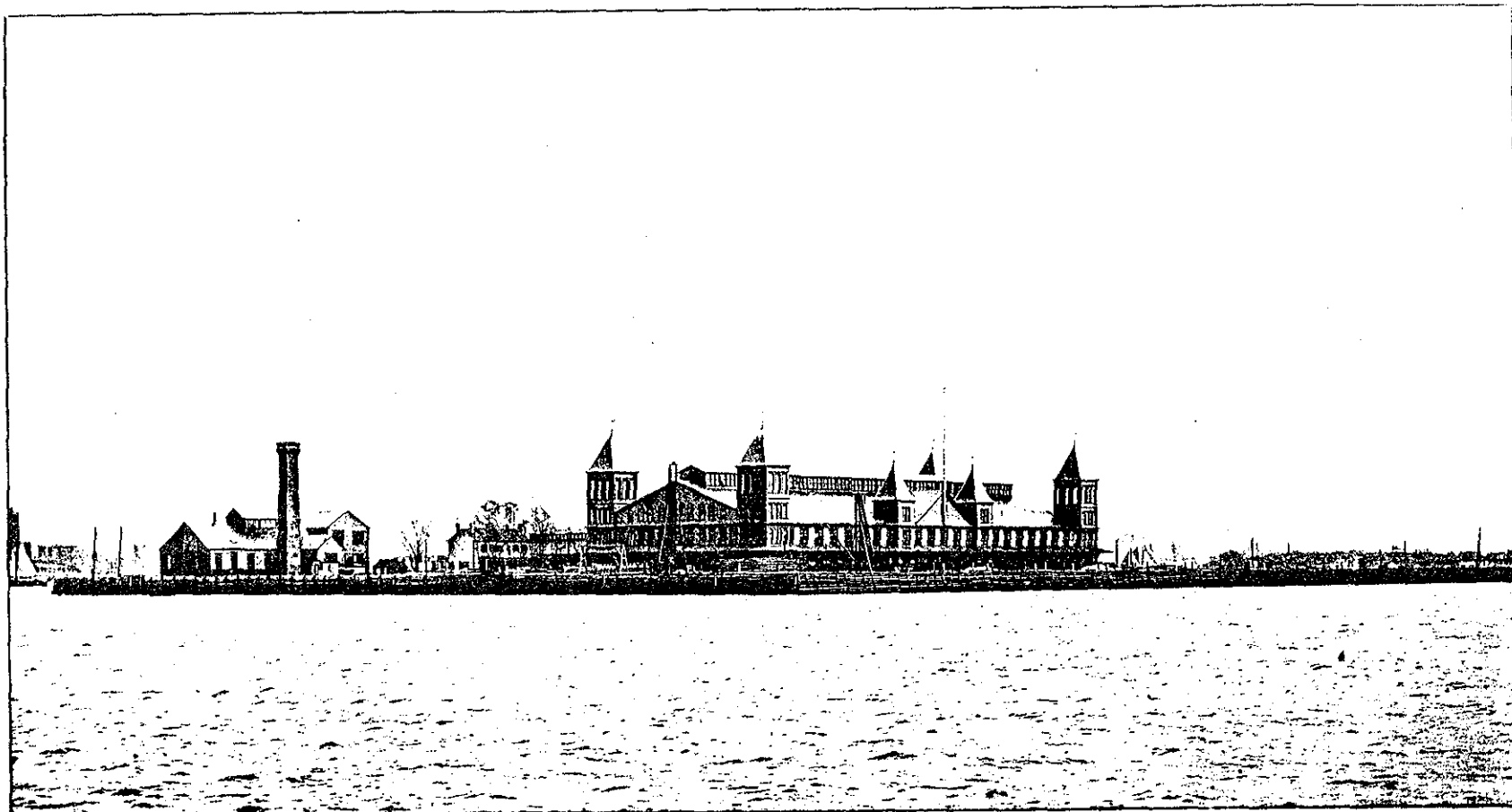


View of the powder magazines at Ellis Island from the south in 1868. Both structures were converted for use at the First Immigration Station in 1890. The building on the left was shellhouse number one which became the Insane Hospital, and the one on the right was shellhouse number two, which served as the Detention Building. (New York Public Library)

medical officer who later wrote an account of the early immigration station, for he mistakenly recalled the building as having two stories instead of one.²³

The other two structures which were remodeled for use at the new immigration station were the naval magazine or shellhouse number five and another naval magazine. According to the 1891 Annual Report of the Supervising Architect, shellhouse number five was altered to provide a kitchen and dining room, and on an 1896 site plan, was referred to as the "Restaurant Building."²⁴ The structure was located at the east end of the island and had a rectangular plan measuring 101.5 feet by 33.5 feet. A structure was shown at the eastern end of the island on a 1760 map, but it seems improbable that that structure was the same as the remodeled one.²⁵ The last converted structure was another naval magazine. It, too, had a rectangular plan and measured 37 feet by 26 feet. According to Victor Safford, a medical officer at the early immigration station, the magazine became a storage vault for immigration records. It had thick stone and mortar walls.²⁶ An 1854 map shows the structure as a proposed naval magazine. Other drawings of the building do not exist.

In addition to the five converted arsenal structures, two new buildings were initially erected on Ellis Island: the Main Building and the Boiler House. A contract let for their construction on November 14, 1890 required the completion of the structures by January 1, 1892.²⁷ The Main Building, designed by J. Bachmeyer, assistant to the Superintendent of Repairs for federally owned buildings in New York, was the principal structure of the First Immigration Station. It served as the receiving depot for steerage passengers transported by ferry from vessels anchored in the harbor.²⁸ Located at the southeast end of the island, the building had a rectangular plan oriented on an east-west axis. Materials authorized for its construction included North Carolina pine (4 by 6 inches) for the framing. . . sills, girders, truss members, braces, etc. and (3 by 12 inches) for floor joists, minor roof rafters, purlins, etc. The interior was to be mainly resinous pine and spruce



J. GOREKOWSKI, PRINT.

VIEW OF ELLIS ISLAND, NEW YORK HARBOR
IMMIGRATION STATION.

First Immigration Station on Ellis Island. The major buildings seen from left to right are: the Boiler House; the Doctor's cottage; the Insane Hospital with its new ventilating skylight; and the Main Building. (Library of Congress, Prints and Photographs Division, Washington, D.C.).

with no plastering or solid iron work while the exterior was to be sheathed with galvanized iron.²⁹

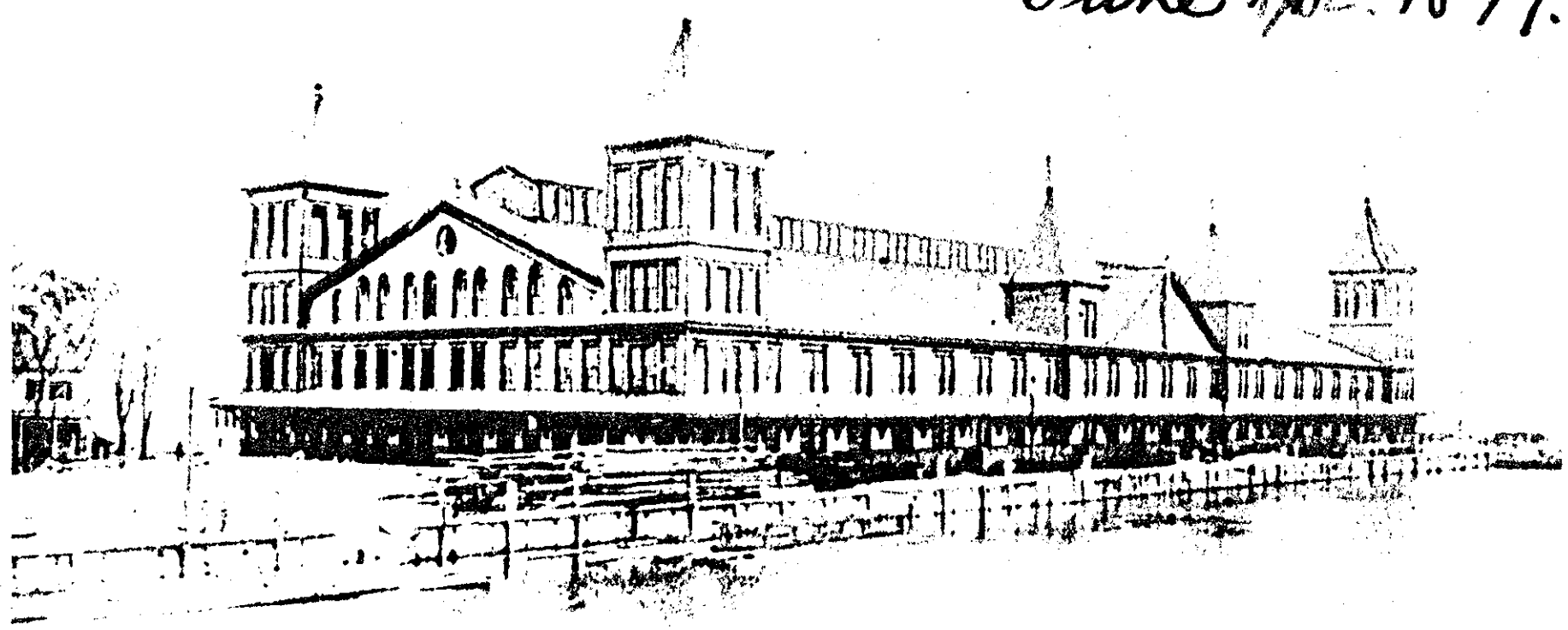
An article which appeared in the October 24, 1891 issue of Harper's Weekly described the almost completed building: "It looks like a latter-day water place hotel, presenting to the view a great many-windowed expanse of buffed-painted wooden walls, of blue slate roofing, and of light and picturesque towers. It is 400 feet long, two stories high, and 150 feet wide. . ."30

There seems to be some discrepancy concerning the exterior sheathing material. This and other descriptions of the period describe wooden walls as opposed to the approved galvanized iron sheathing. Neither the original drawings nor prints and photographs of the period provide an answer as to which material was actually used.

The original drawings, early prints and photographs of the Main Building, however, do agree as to the massing and general detailing of the exterior facades. The most dominant features of the building were its high slate-covered gable roof with a gable-roofed monitor along the entire length of its peak and the four-story towers with slate covered pyramidal roofs which stood at each of the four corners. The north and south walls of the monitor were a continuous string of four-over-four light pivot sash windows separated into groups of three by comparatively narrow framing members. The towers had two exposed facades at the first and second floor levels, three at the third floor where they began to rise out of the roof, and four at the fourth level, where they became freestanding towers. The first floor openings consisted of six-panel double doors flanked by single four-over-four light double hung sash windows. The second and third floor openings consisted of four four-over-four light double hung sash windows grouped under a single window cornice, and the fourth floor openings consisted of three four-over-four light double hung sash windows grouped under a single window cornice on each of the four facades. The pyramidal roofs had flared eaves and decorative finials.

June 4th - 1897.

11



First Immigration Station on Ellis Island, Main Building. (Wilton Tifft, Thomas Dunne and Mila Macek, Ellis Island (New York: W. W. Norton and Company, Inc., 1971), p. 21.)

The south or main facade of the building was interrupted by a central cross-gable flanked by two smaller three story towers. The main entrance to the building was located at the first floor level of this cross-gable which was five bays wide with double six-panel doors in the three center bays and paired four-over-four light double hung sash windows in the remaining bays. The two towers flanking the entrance were one bay wide and were capped by slate covered pyramidal roofs with finials and flared eaves. The remaining length of the building contained eight bays to either side of the entrance which were articulated by alternating six-panel double doors and paired four-over-four light double hung sash windows, ending with a single window next to the end towers. These openings emanated from the center entrance in an AA-BB-AA-B-C rhythm.

The first floor openings were protected by a pent roof which was located at the second floor line and continued around three sides of the building. This roof, which was supported by large wooden brackets, appears from early photographs to have had a fairly substantial overhang of approximately six to eight feet. Above this roof at the second floor level, the facade was pierced by paired four-over-four light double hung sash windows; five in the central cross-gable, one each in the smaller towers and seven to each side. The fenestration terminated at the corner towers with a single four-over-four light double hung sash window. Each of the openings was trimmed with an individual cornice.

At the third floor level, the small towers had paired four-over-four light double hung sash windows and the cross-gable had a twenty-five light round window at its center point.

The east and west elevations between the towers were twelve bays wide and on the first floor were articulated by single six-panel doors in the four center and two end bays and single four-over-four light double hung sash windows in the remaining six bays. There were single four-over-four light double hung sash windows with individual cornices in each of the twelve second floor bays. The third floor levels, which

was the end of the main roof gable, had eight round head arched windows with semi-circular fanlights above four-over-four light double hung sash windows. A twenty-five light round window was centered above these at the peak of the gable end.³¹

In the October 24, 1891 issue of Harper's Weekly, an article further described the Main Building:

It is devised to permit of the handling of at least 10,000 immigrants in a day, and the first story, which is 13 feet in height, is sufficiently capacious for storage and handling of the baggage of 12,000 newcomers. . . . There they will enter the new station, and ascend to the second story by means of a double staircase. The medical inspectors will watch them as they climb the stairs, and whenever they see an invalid, a cripple, or one blind of eye, or otherwise unfitted for an immigrant's future, they will stop such a person and send him or her to one side into the physician's detention room. The others will continue on and into the great second-story room, to be separated into ten lines and to march through that number of aisles between the desks of the so-called 'pedigree clerks,' who will cross examine them as the law requires. Beyond the aisles and the desks of the questioning inspectors they will find two great pens or enclosures. . . . Into one will go those whose destination is New York city and its suburbs; into the other will be put the greater number who are about to begin another journey to distant States and Territories.

On this second floor, conveniently arranged are spaces for the railroad ticket-sellers, the clerks of the information bureau, for the telegraph and broker's counters, and the lunch stand. Colonel John B. Weber, the commissioner of Emigration, will have his office in one corner on that floor and General O'Beirne, the Assistant Commissioner, will occupy a similar office in another corner. . . . The customs men will have their headquarters on the first floor, which is otherwise to be used for the baggage that these officials are to examine.³²

Another description of the Main Building was given in a 1925 account by Victor Safford, a medical officer:

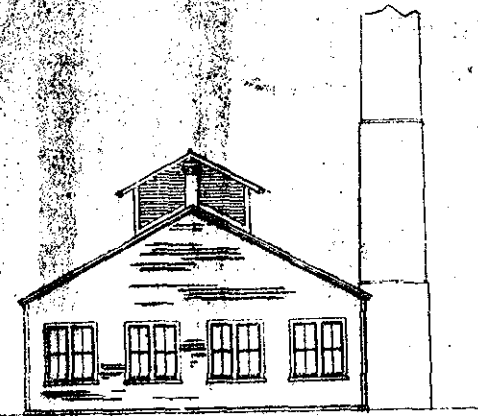
The building was built largely of Georgia pine and the interior was finished in natural wood. The second story to a great part of its extent was open to the roof. The various offices were partitioned off by wooden partitions but otherwise the extensive space on the second floor was unbroken except for the open iron

grill work partitions which served to provide the various enclosures used in connection with the examination and distribution processes to which the arriving passengers were subjected. The floor was of Georgia pine and effort was made to keep it looking like the wooden deck of a ship. Abundant light and sunshine were let into the second story by numerous tall windows running to the eaves.³³

During the construction of the Main Building, the Boiler House or Powerhouse was also being erected. Situated at the west end of the island, it was utilized for the production of steam heating and electricity for lighting and the storage of water for fires and the flushing system.³⁴ An 1896 site plan shows the Boiler House had a rectangular plan oriented on an east-west axis. The building was a one story gable roofed wooden structure nine bays long by six bays wide with a brick smoke stack attached to the center of the south side. The gabled roof terminated in a cross-gable at the west end of the building where the two westernmost bays stood two stories high. A three bay gabled monitor was situated at the center of the roof. The Boiler House was framed with North Carolina pine and the exterior walls were sheathed with galvanized iron.³⁵ Drawings also showed that the north and south elevations contained two-over-two light double hung windows and four-panel doors with double light transoms above. Doors were located in the fourth, sixth and seventh bays on the north side and in the second and eighth bays on the south side. Windows were located in each of the remaining bays. The four-sided smoke stack which stood beside the center bay on the south side of the buildings was double the height of the Boiler House and was divided into three sections which stepped in as it increased in height. The stack was capped by corbelled brick banding. By October 31, 1891, the contractor Sheridan and Byrne had nearly completed the Boiler House and Main Building. A few weeks later on November 19, 1891, two contracts were awarded; one for the construction of the Tank and Coal House, the other for erection of Hospitals C and D and building E. A third contract was let on November 24, 1891 for the construction of Hospital B.³⁶ During the construction of these buildings, the immigration station, which now consisted of seven buildings, was opened on January 1,



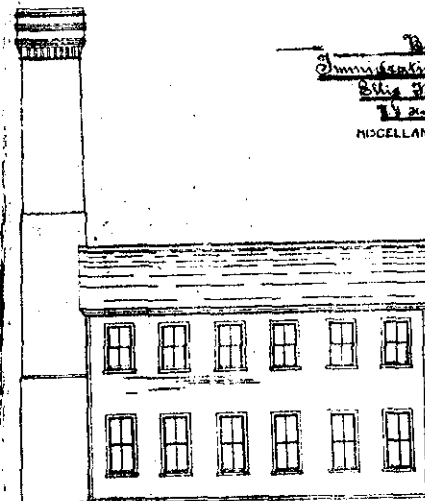
North West Elevation



East Elevation



South East Elevation



West Elevation

Boiler House
Immigrations - Bureau
Ellis Island
Miscellaneous, No. 329.

U. S. Army Department
Office of the Quartermaster General
Treasury Department
462/43.970
sheet 7 of 40
RETURN TO ROOM 411
Date 10/10/01

Elevations of the Boiler House, c. 1891. (NPS, Denver Service Center, Drawing no. 462/43.970:7).

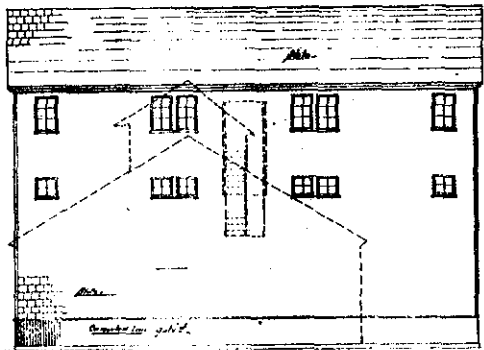
1892.³⁷

Attached to the west side of the Boiler House, the Tank and Coal House was oriented on a north-south axis. It had a rectangular plan that measured 75 by 40 feet and was divided into seven bays on the east and west and five bays on the north and south. The building stood four sections high and was framed in wood with slate siding and a slate covered gable roof. Its walls were set on brick and concrete footings with wooden pilings below. Lower sections of the walls were covered with corrugated galvanized iron. There were no windows on the first floor which was a two story space. The only opening on the ground level was a central doorway on the north elevation which had a pair of two panel sliding doors. Aligned above these, another pair of sliding doors opened at the third story level. At the fourth story level, bays of alternating six light casement windows and blank wall area created a pattern of A-B-AA-B-A. The south elevation fenestration was similar to the north, but instead of sliding doors at the third floor level, it had four square, four light casement windows. Circular louvred openings were centrally located in the gable of both the north and south elevations.

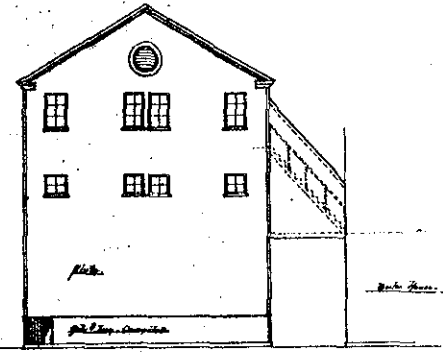
On the east and west facades, casement windows alternated with blank wall area in a pattern: A-B-AA-B-AA-B-A. At the third story level, the casements were square with four lights and at the level above, the casements had six lights. At the center of the east facade was a slate covered stairway leading from the fourth story level of the Tank and Coal House to the first floor level of the Boiler House.

While the Tank and Coal House was under construction, the hospitals were also being erected. They were situated at the northeast end of the island behind the Main Building and according to a description of the hospital and Main Building by a medical officer, they were

. . . new wooden structures. The hospital consisted of a group of one and two story buildings with sheltered verandas, arranged on the quadrangular plan. In some part of the central court, protected from the wind, rain or sun, as the need might be, a convalescent patient could almost always find comfort out-of-doors in winter or summer.³⁸



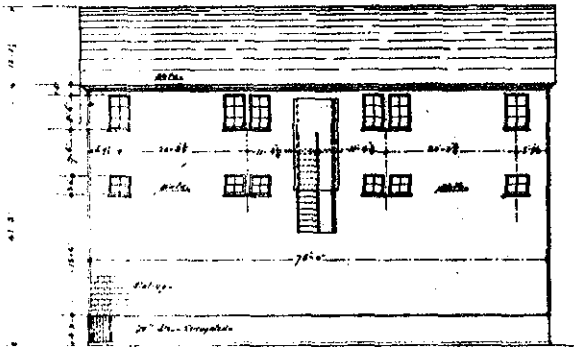
Side Elevation N-W



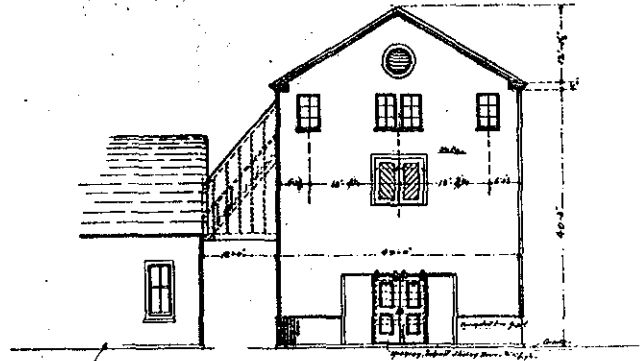
Side Elevation S-E

— U.S. IMMIGRATION DEPOT. —
 — ELLIS-ISLAND N.Y. HARBOR. —
 — Scale 1/8" = 1'-0" —
 — TANK AND COAL HOUSE. —

17



Front Elevation S-W



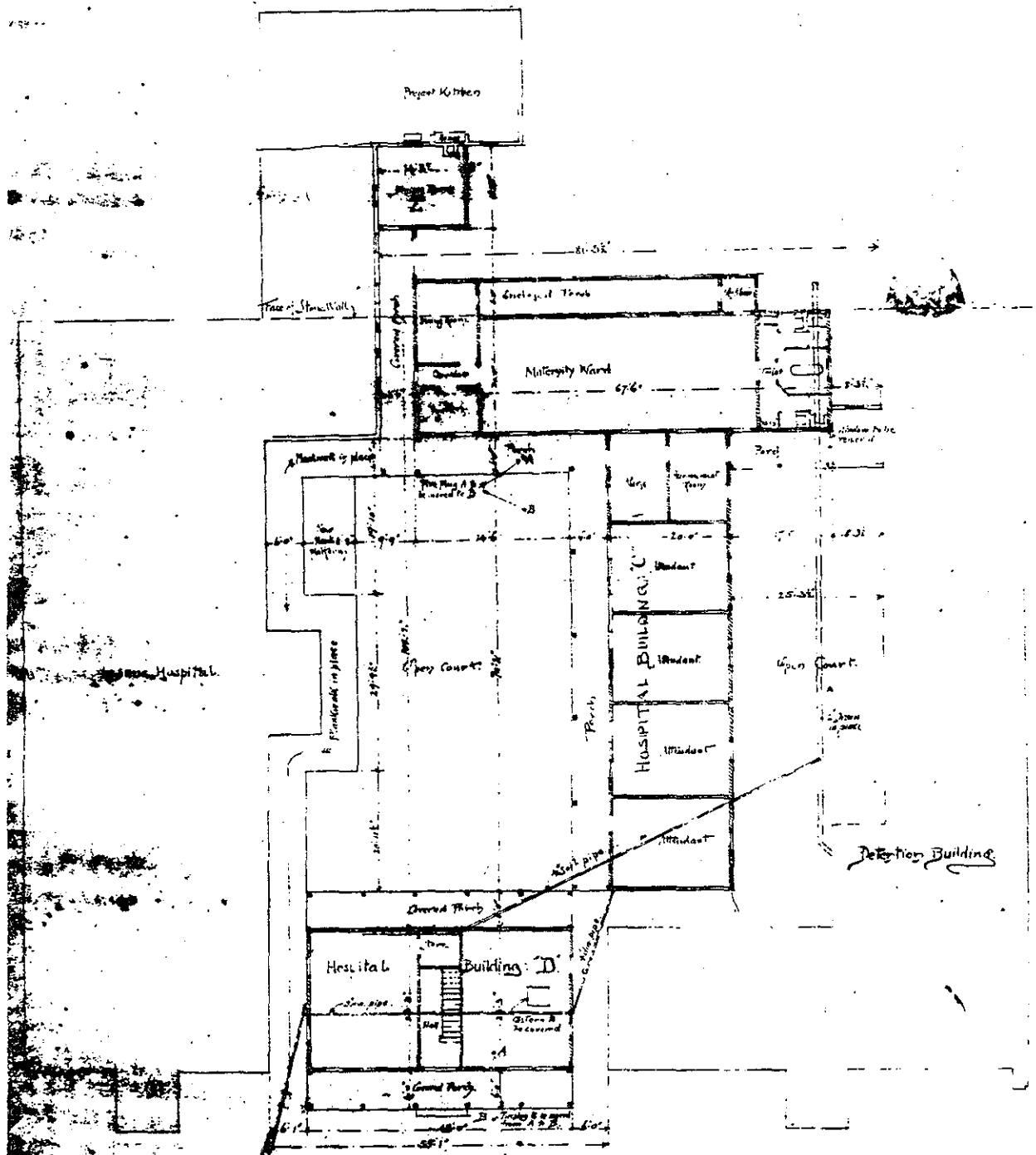
Front Elevation N-E

Handwritten notes:
 Drawing the Tank and Coal House
 for the U.S. Immigration Depot
 at Ellis Island, N.Y. Harbor
 designed by the U.S. Army
 Engineer Office, New York
 Nov. 1891

Misc. Drawing No 465

462/43 410
 sheet 24 of 42

RETURN TO ROOM 411



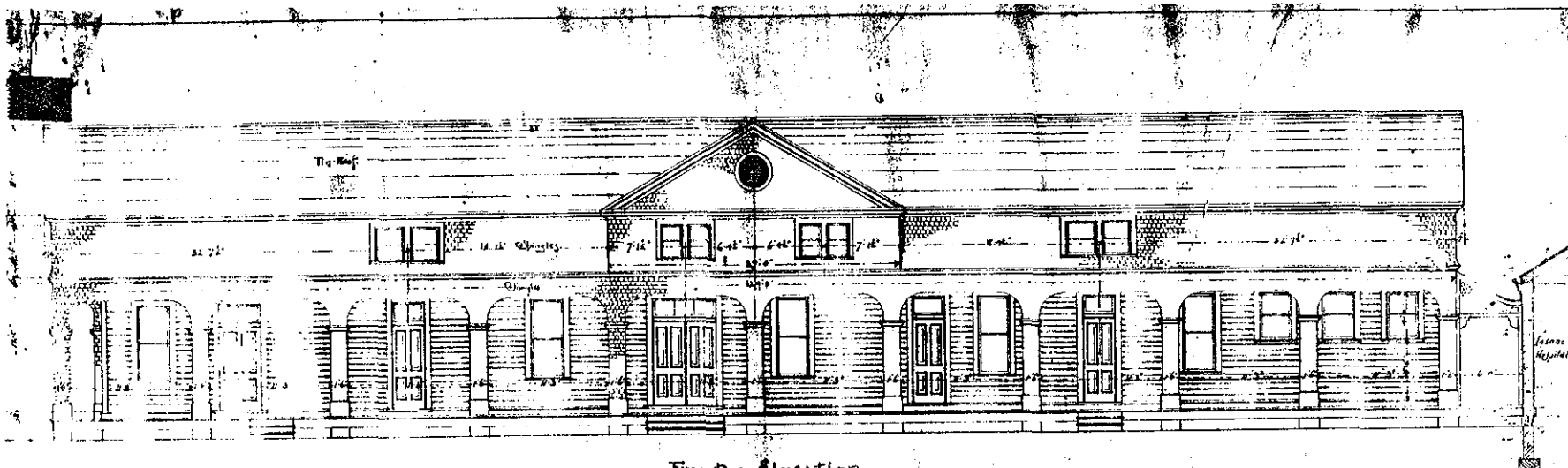
PLAN SHOWING LOCATION OF
 HOSPITAL BUILDINGS C & D
 also Addition "E"
 Scale 1/4" = 1'-0"

U.S. IMMIGRATION DEPOT, ELLIS ISLAND,
 NEW YORK HARBOR.

M. S. ...
 Consulting Architect
 Treasury Department

462/43.970
 sheet 33 of 42

Plan of hospital quadrangle, c. October 10, 1891. (NPS, Denver Service Center, Drawing no. 462/43.970:33).

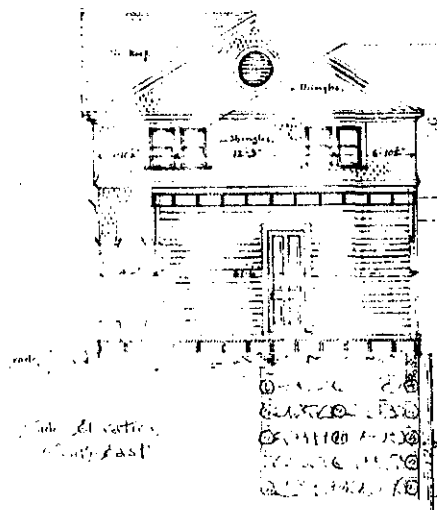


Front Elevation
South West

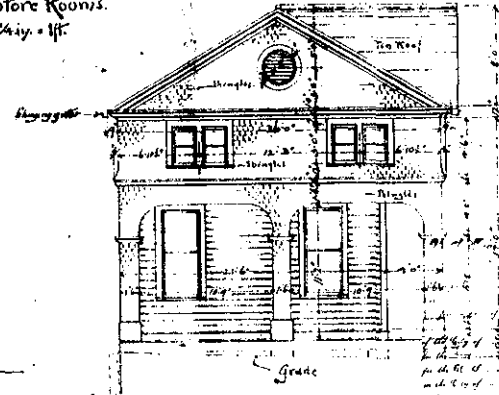
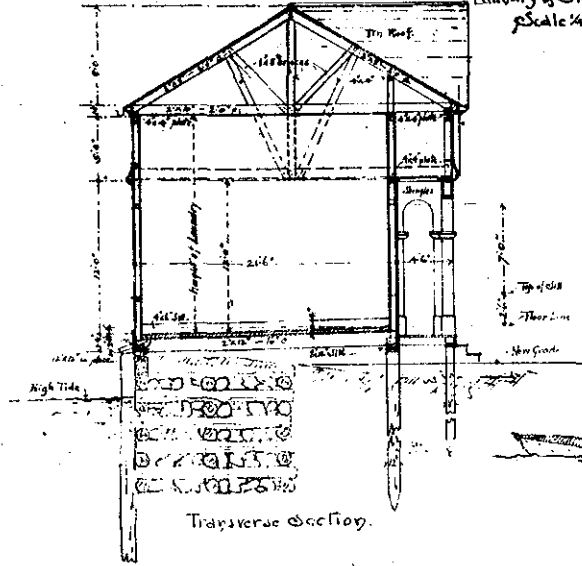
U.S. IMMIGRATION DEPOT.
ELLIS ISLAND, N.Y. HARBOR.

Hospital Building 'B'
Bed Rooms, Disinfecting, Operating Bath,
Laundry & Store Rooms.
Scale 1/4" = 1 ft.

20



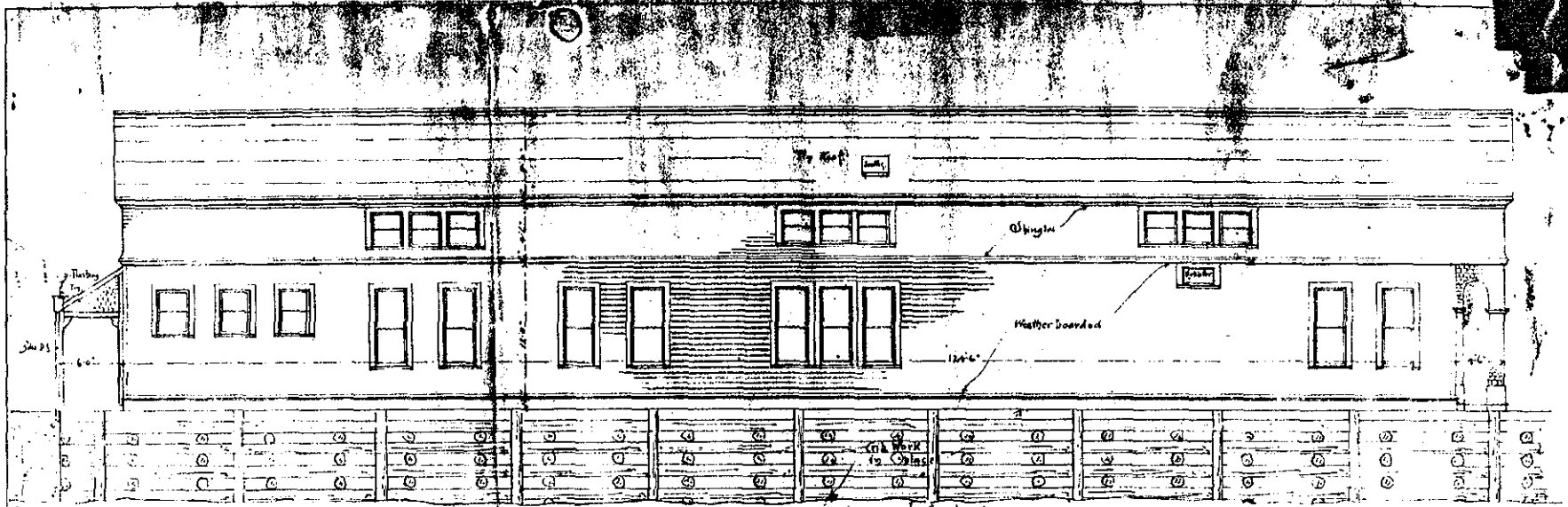
MISCELLANEOUS DRAWING No 470



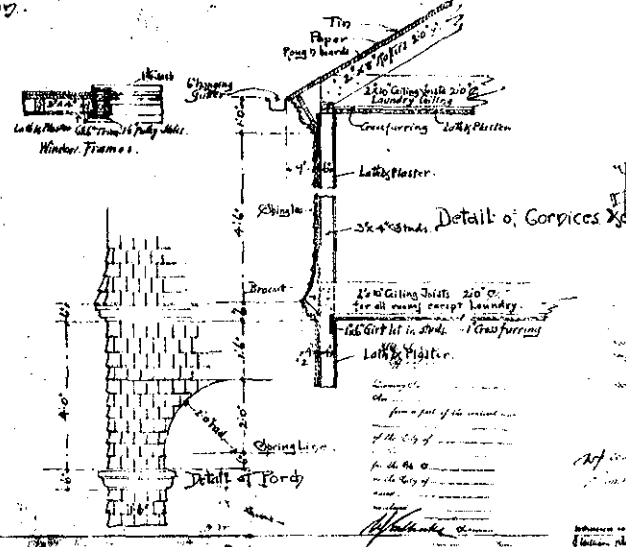
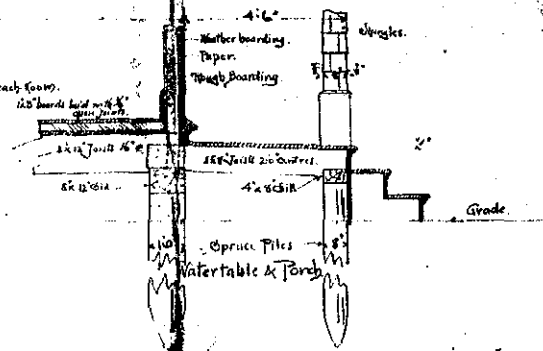
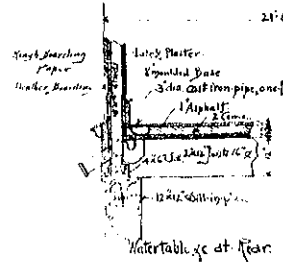
Side Elevation
North West

1162 1163 1170
sheet 2 of 2
JAN 10 ROOM 411

South front elevation; east and west side elevations; and transverse sections of Hospital Building 'B,' c. October 1891. (NPS, Denver Service Center, Drawing no. 462/43.970:31).



North East Elevation.



U.S. IMMIGRATION DEPOT.
ELLIS ISLAND. N.Y. HARBOR.

Hospital Building: 'B'
For Mortuary, Desinfecting, Operating, Bath,
Laundry & Store Rooms.
Scale 1/4\"/>

MISCELLANEOUS DRAWING N° 471

462 43 970
 SHEET 24 OF 124
 Wm. Russell
 ARCHT. TO ROOM 41

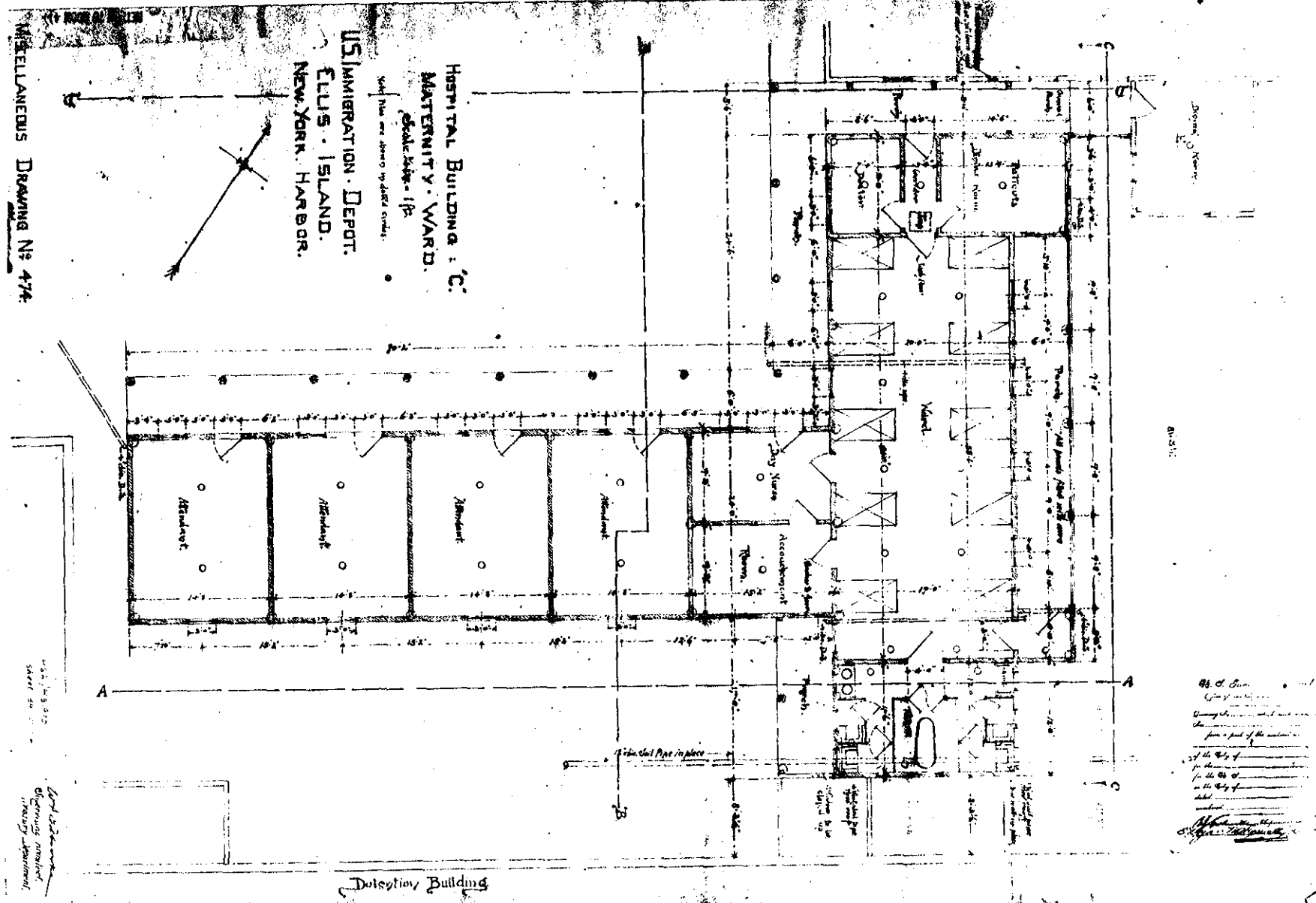
North rear elevation of Hospital 'B,' also known as the 'Annex to the Hospital,' c. October 3, 1891.
(NPS, Denver Service Center, Drawing no. 462/43.970:32).

first floor rear facade. Three evenly spaced groups of nine clerestories were located above the string course.⁴¹ The interior was divided into six rooms: "Post Mortem, Disinfecting, Operating, Bath, Laundry and Store Room," each running the depth of the building with no interconnections.⁴²

The east side of the hospital quadrangle consisted of Hospital Building C, which housed the Maternity Ward. The only existing drawings of the building are plans dating from October 8 and 10, 1891 and an 1896 site plan. As seen from those drawings, Hospital C had a T-shaped plan lying on a north-south axis and contained a patients' dining room, doctor's room, a maternity ward, toilets, a day nurse's room, an accouchement or delivery room, and four attendants' rooms.⁴³ On the exterior, covered porches surrounded three sides of the building excluding the east. The north section of the west porch connected Hospital C to the Insane Hospital dining room addition, Building E. On the north side, the porch was enclosed and housed an entrance vestibule.⁴⁴

The smallest hospital building was Hospital D or the Medical Office at the south side of the quadrangle.⁴⁵ It had a rectangular plan which measured 43 feet in length by 24 feet 3 inches in width and was oriented on an east-west axis. An 1891 plan shows a simple first floor plan with a central hall, stairway, and storeroom flanked by two large rooms on either side.⁴⁶ The structure was divided into five bays on the north and south sides and four bays on the east and west sides.⁴⁷ As seen in the 1891 elevation drawing, the building was a two storied wooden structure with a hipped gable roof and a single shed-roofed dormer located on each north and south slope. The roof was sheathed in tin with galvanized iron cresting at the ridge. Wooden louvred vents were set in the gable ends on the east and west.⁴⁸ The two shed-roofed dormers with double six light pivoting sash windows were centered on the south front and north rear slopes of the roof. Above the north dormer was located a scuttle and flagstaff which was supported by a roof rafter below.⁴⁹

The most prominent feature of the building was the two story



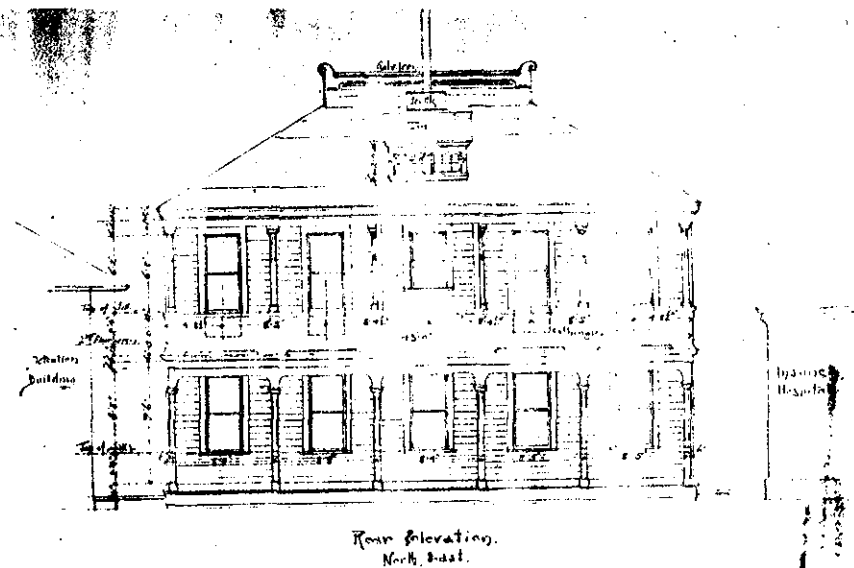
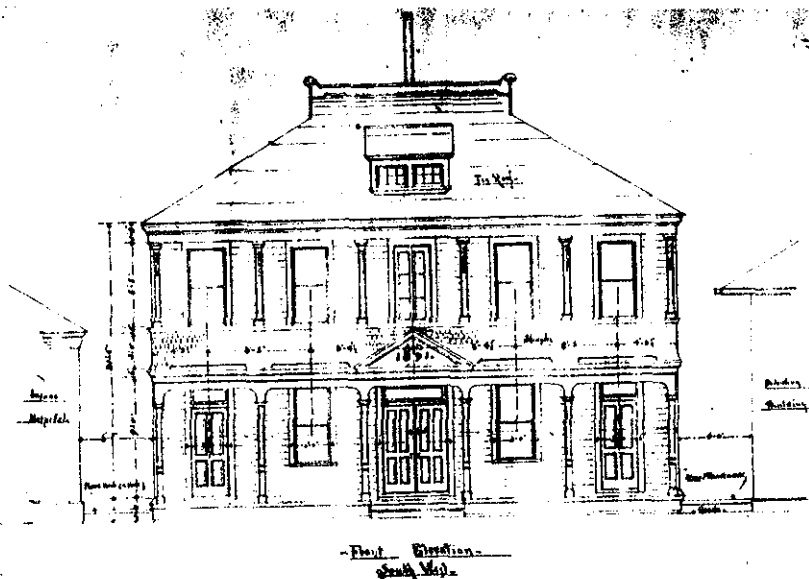
Plan of Hospital Building 'C,' c. October 8, 1891. (NPS, Denver Service Center, Drawing no. 462/43.970:34).

porches which ran the length of the north and south facades. The porches were supported by six evenly spaced columns on both the first and second levels. The second level railing was a low shingled wall which flared at the base and had narrow horizontal vents centered in each bay at its base. A gabled pediment which accentuated the main entrance of the south elevation was applied to the center bay of the second floor railing/wall.

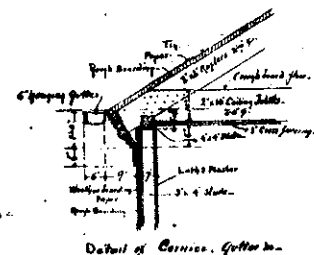
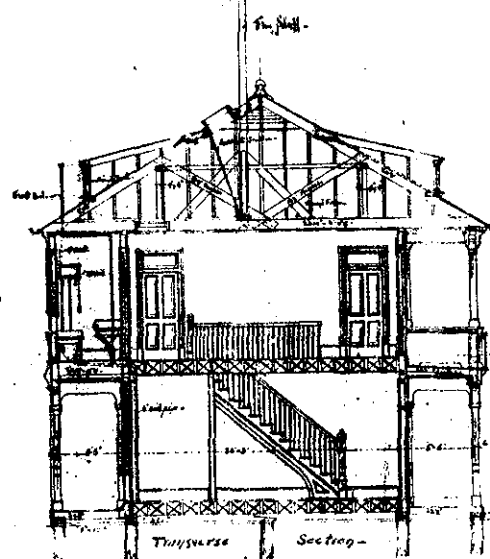
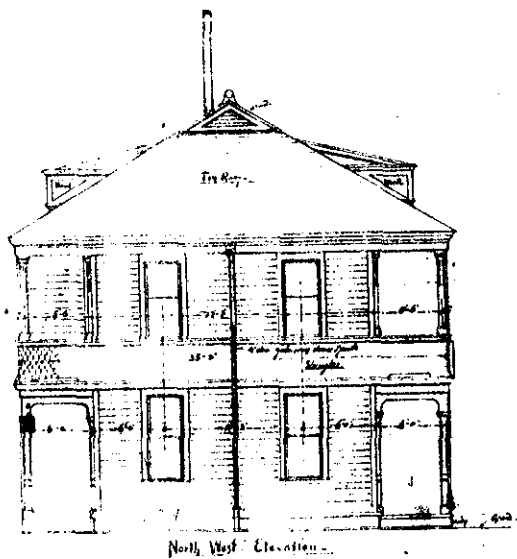
The main entrance consisted of four panel double doors with a single light transom above. To either side was a one-over-one light double hung sash window and in the end bays, single four panel doors with single light transoms. On the second floor above the main entrance, double three light French doors opened onto the porch in the center bay. The remaining bays were filled with one-over-one double hung sash windows.

On the north facade first floor, each bay was filled with a single one-over-one double hung sash window. The center bay of the second floor porch was enclosed to house a toilet and had a single shortened one-over-one light double hung sash window. The two bays to either side also had single one-over-one light double sash windows but the drawings seem to indicate they were lengthened to reach the porch floor level and thereby provide access onto the porch.

The walls of the building were covered with weatherboard except for a band on the east and west sides where the shingling of the porch railing was continued around the corners. The side walls (east and west) of Hospital D were only two bays wide each with a one-over-one light double hung sash window. The north and south porches made up the outer bays of these elevations.⁵⁰ The hospital buildings were completed after the installation of heating and ventilating apparatus in fiscal year 1893.⁵¹ The Annual Report of the Commissioner General of Immigration Fiscal Year 1897 describes further physical improvements made to the island. They consisted of: reparation of the hastily-built wooden buildings; enlargement of the island by two-and-three-fourth acres which made the island fourteen acres; completion of a



25



Chas. C. Henry
 City of New York
 Drawing of the cornice
 from a part of the
 of the City of
 for the City of
 in the City of
 dated
 1891

HOSPITAL BUILDING 'D.'
 DISPENSARY & EXECUTIVE
 BUILDING.
 Scale 1/4" & 3/4" inch = 1 foot.
 U.S. IMMIGRATION DEPOT.
 ELLIS ISLAND, NEW YORK HARBOR.

Note: Southeast Elevation same as North East only in reverse.
 462 / 43 970
 Sheet 26 of 49
 Treasury Department
 RETURN TO BUREAU 411

Elevations and transverse section of Hospital Building 'D,' c. October 7, 1891. (NPS, Denver Service Center, Drawing no. 462/43.970:36).

detention pen and southwest pier; and completion of telegraph and telephone cables to New York City via Governor's Island which lay to the east of Ellis Island.⁵² Finally on June 13, 1897, five years after opening, the First Immigration Station and its improvements were completed.⁵³ Two days later on June 15, 1897, just after midnight, a fire broke out in the restaurant and kitchen and within minutes had spread to the Main Building.⁵⁴ According to newspaper articles, after 45 minutes the eaves of the Main Building began falling to the ground setting the wooden piers and docks ablaze and after one-and-one-half hours the Main Building structure was ". . . but a mass of charred and smoking embers, and the flames were seeking their fury on the adjoining buildings."⁵⁵ The articles also reported that two-and-one-half hours after the fire was sighted, approximately one-third of the island was covered with flames. The debris which was "a tangle of charcoal, battered and rusted iron, and ashes" smoldered until dawn with only three buildings and walls of the record office and kitchen left standing.⁵⁶ The surviving buildings were: the engine house, the electric light and steam plant, and the surgeon's quarters.⁵⁷ All immigrants were evacuated to New York and no lives were lost. All of the immigration records including those of Castle Garden from 1855 to 1890, however, were lost to the fire.⁵⁸ Commissioner Joseph H. Senner commented to the New York Tribune after the fire, "Ever since I have been in office. . . the fear of something like this fire has haunted me, and now it has come and no lives were lost, I am glad of it. . ."⁵⁹

¹Thomas Monroe Pitkin, Keepers of the Gate: A History of Ellis Island (New York, N.Y.: New York University Press, 1975), p. 1.

²Harlan Unrau, Historic Structures Report, Ellis Island: Historical Data (U.S. National Park Service, Denver Service Center, Colorado, 1978), Chapter 1, p. 1.

³Wilton Tifft, Thomas Dunne and Mila Macek, Ellis Island (New York: W. W. Norton and Company, Inc., 1971), p. 14.

⁴Unrau, Chapter 1, p. 1.

⁵Julian Ralph, "Landing the Immigrant," Harper's Weekly, 24 October 1891, p. 821.

⁶Congressional Record, 51st Congress, 1st session, passim; World, 20 and 21 February 1890; Tribune, 11 March 1890, as cited in Pitkin, pp. 12-13.

⁷Unrau, Chapter 1, p. 2.

⁸In this report the drawings and maps referred to date from 1813, 1819, 1844, 1854, 1863, 1868, 1886, 1887, 1890 and 1896. From National Park Service, Denver Service Center and National Archives, Washington, D.C.

⁹Unrau, Chapter 2, Note 3.

¹⁰Ibid., Note 11.

¹¹Locations of the structures were drawn from an 1886 map.

¹²Unrau, Chapter 2, Note 6.

¹³"Ellis' Island," 1854 and "Ellis Island, New York Harbor - The United States Navy Power Magazines," Harper's Weekly, 4 March 1868 as cited in Thomas M. Pitkin, A Report on Ellis Island as an Immigrant Depot, 1890-1954 (New York: unpublished, June 1966), figures 4 and 5. This report was obtained through the National Park Service.

¹⁴U.S. Treasury Department, Office of the Supervising Architect, "Shell House No. 1, Ellis Island, New York Harbor," 3 September 1890. National Park Service Denver Service Center, drawing no. 462/43.970:5, 19.

¹⁵As observed from sketch in Harper's Weekly, 4 March 1868 and from plan dating 1890.

- ¹⁶Unrau, Chapter 2, Note 7.
- ¹⁷"Floor Plan of Insane Hospital, c. 1890," National Park Service, Denver Service Center, Drawing no. 462/43.970, sheet 19 of 42.
- ¹⁸Unrau, Chapter 2, Note 6.
- ¹⁹"Plan of Bedlows and Ellis's Islands in the Harbour of New York," 7 August 1843, National Archives, Record Group 77, Drawing 38, Sheet 3.
- ²⁰A map dating from 1813 shows the S-shaped structure. Joseph Mangin, "Plan of Defilement of Ellis's Island," June 1813, National Archives, Record Group 77, Drawing 36, Sheet 20-1 (Sheet 1).
- ²¹Unrau, Chapter 2, Note 12.
- ²²U.S. Treasury Department, Office of the Supervising Architect, "Shell House No. 2, Ellis Island, N.Y.H. - Side Elevation, Section Through A.B.," 20 April 1892, National Park Service, Denver Service Center, Drawing No. 462/43.970:1.
- ²³Unrau, Chapter 2, Note 27.
- ²⁴Ibid., Note 12.
- ²⁵"Ellis' Island", 1854, as cited in Thomas M. Pitkin, A Report on Ellis Island as an Immigrant Depot, 1890-1854, Figure 4. 1760 map, National Archives, Record Group 77, Drawer 142, Sheet 90.
- ²⁶Unrau, Chapter 2, Note 27.
- ²⁷Ibid., Note 10.
- ²⁸Ibid., Note 7.
- ²⁹Ibid., Note 10.
- ³⁰Julian Ralph, "Landing the Immigrant," Harper's Weekly, 24 October 1891, pp. 821-822.
- ³¹This description was based upon 1890 drawings. U.S. Department of the Treasury, Office of the Supervising Architect, "Front Elevation, Immigration Depot, Ellis Island, N.Y.H. No. 337" and "No. 338, Elevation and Section, Immigration Depot, Ellis Island, N.Y.H.," National Park Service, Denver Service Center, Drawing no. 462/43.970:13, 14.
- ³²Julian Ralph, p. 821.
- ³³Unrau, Chapter 2, Note 27.

³⁴Ibid., Note 32.

³⁵Ibid., Note 10.

³⁶Ibid., Note 19.

³⁷Ibid., Note 24.

³⁸Ibid., Note 27.

³⁹U.S. Department of the Treasury, Office of Supervising Architect, "Plan Showing Location of Hospital Building C and D also addition E, U.S. Immigration Depot, Ellis Island, New York Harbor, Miscellaneous Drawing No. 472," National Park Service, Denver Service Center, Drawing No. 462/43.970:33.

⁴⁰U.S. Department of the Treasury, Office of Supervising Architect, "Hospital Building B, Post Mortem, Disinfecting, Operating, Bath, Laundry and Store Rooms, U.S. Immigration Depot, Ellis Island, New York Harbor, Miscellaneous Drawing No. 470," National Park Service, Denver Service Center, Drawing No. 462/43.970:31, 32.

⁴¹Ibid.

⁴²Ibid., Drawing No. 462/43.970:32.

⁴³U.S. Department of the Treasury, Office of Supervising Architect, "Hospital Building C, Maternity Ward, U.S. Immigration Depot, Ellis Island, New York Harbor, Miscellaneous Drawing No. 474," National Park Service, Denver Service Center, Drawing No. 462/43.970:34.

⁴⁴U.S. Department of the Treasury, Office of Supervising Architect, "Plan Showing Location of Hospital Building C and D also addition E, U.S. Immigration Depot, Ellis Island, New York Harbor, Miscellaneous Drawing No. 472," National Park Service, Denver Service Center, Drawing No. 462/43.970:33.

⁴⁵Ibid.

⁴⁶Ibid.

⁴⁷U.S. Department of the Treasury, Office of Supervising Architect, "Hospital Building D, Dispensary and Executive Building, U.S. Immigration Depot, Ellis Island, New York Harbor, Miscellaneous Drawing No. 478," National Park Service, Denver Service Center, Drawing No. 462/43.970:36.

⁴⁸Ibid.

⁴⁹Ibid.

⁵⁰Ibid.

⁵¹Unrau, Chapter 2, Note 38.

⁵²Ibid., Note 30. According to Harlan Unrau's Historic Structures Report, Ellis Island, a disinfection building was completed in 1897 and cost \$40,000. It served as a facility for washing immigrants and fumigating their clothes. The (building) structure was only shown on an 1896 site plan as being attached to the Detention Building. No other drawings or written descriptions of this building exist.

⁵³Ibid., Note 31.

⁵⁴Ibid., Note 33

⁵⁵Ibid.

⁵⁶Ibid.

⁵⁷Ibid.

⁵⁸Ibid., Note 34.

⁵⁹Ibid.

C. SECOND IMMIGRATION STATION: MAIN BUILDING (1897 - Present)

1. Competition for Design and Architectural Program

Despite the immeasurable loss of the immigration records, the destruction of the wooden Immigration Station was welcomed by many who felt that the old buildings were nothing but "architectural rubbish heaps" and "monuments of ugliness."¹ The same writers noted, however, that "the sanguine view that anything, no matter what, must result in improvement, was received but dubiously by those of us that have no fondness for certain types of government architecture."² The poor reputation earned by federal architecture at the end of the nineteenth century was largely the result of outdated practices. Until that time, all federal buildings had been designed by the office of the Supervising Architect of the Treasury. As the country grew and the bureaucracy expanded, the volume of work proved, in the words of architect John M. Carrere, "too big for any one man,"³ and the designs were frequently reduced to stock solutions insensitive to site or program.

As a remedy, Congress passed in 1893 the Tarsney Act, "authorizing the Secretary of the Treasury to obtain plans and specifications for public buildings. . . by competition among architects under such conditions as the Secretary of the Treasury may prescribe."⁴ Regulations for the Act were not approved until July 3, 1897, two-and-a-half weeks after the destruction of the original Immigration Station. The first two buildings to be placed under competition were the U.S. Courthouse and Post Office in Norfolk, Virginia, and the U.S. Immigration Station at Ellis Island.⁵

When news of the competition became public, the Office of the Secretary of the Treasury was flooded with letters by architects from Boston to Duluth to wished to be considered for the test.⁶ Appealing to an impartial authority, Secretary Gage requested George B. Post, President of the American Institute of Architects, to send him a list of five architects to compete for the design and later five more architects

qualified to serve as judges.⁷ The judges selected were: Thomas P. Chandler, FAIA, of Philadelphia; R. S. Peabody, FAIA, of Boston; and Supervising Architect John Knox Taylor. The architects invited to submit designs were: McKim, Meade and White; Carrere and Hastings; Bruce Price; Boring and Tilton; Alfred E. Barlow; and John L. Smithmeyer.⁸

The choice of competitors appears logically to have been based upon their experience in projects of similar scale and nature. The firm of McKim, Meade and White was among the most successful in the country at the end of the nineteenth century. In 1888-95, they had designed the Boston Public Library, termed "the first outstanding example of Beaux Arts Academicism in the United States."⁹ The project was "the first large metropolitan library in the world with both major research resources and home borrowing,"¹⁰ and McKim, Meade and White incorporated both the careful analysis of program and plan and the reliance on classical details which they had learned at the French Ecole de Beaux Arts. The firm's contributions to the 1893 World's Columbian Exposition in Chicago--the Agricultural Building, the New York State Building, and the Court of Honor--were equally important, influencing the character of American urban architecture for the next two decades.

Carrere and Hastings, another New York firm, were also designers of a well known library--in this case, the New York Public Library, planned in 1897 and completed in 1911. In the words of Talbot F. Hamlin, "its plan was studied to combine simplicity and efficiency of administration with great richness and beauty of interior effect, and the exterior was devised to grow inevitably from the interior arrangement and to express frankly the functions and positions of the main interior elements."¹¹ The firm had also designed many large hotel and office buildings by 1897, including the Ponce de Leon and Alcazar Hotels in St. Augustine, Florida and the Life Building in New York City.

Bruce Price is best known for his early shingle style cottages at Tuxedo Park and Mount Desert, and for eclectic hostelries such as the Chateau Frontenac in Quebec and the West End Hotel in Bar Harbor.

Nevertheless, he, too, had spent a year studying in Paris, and his work of the 1890's reflected a familiarity with classical detail and proportions. In the American Surety Building (1898) in New York, "an early palazzo skyscraper,"¹² Price established "a new standard of clarity of composition, lavishness of classic detail, and careful refinement."¹³

William A. Boring and Edward L. Tilton were younger than the other competitors, but already had a number of large commissions to their credit by 1897. Boring had designed the Los Angeles Times Building and the Santa Monica Hotel, "at that time the largest hostelry in Southern California,"¹⁴ during his practice on the West Coast between 1883 and 1886. After he met Tilton at the Ecole de Beaux Arts and formed a partnership in 1891, the two designed the Colorado Springs Hotel in Glenwood Springs, Colorado (1892), and a casino in Bell-Haven, Connecticut (1892). Their competition designs for the Milwaukee Library and Museum (1894), the Baltimore Courthouse (1894) and the Carnegie Library in Pittsburgh (1892) demonstrate a familiarity with large-scale planning and classical detail as strong as the more experienced firms.

John L. Smithmeyer of Washington, D.C., was part of the architectural team responsible for the third large library project of the period, the Library of Congress in Washington. Born in Vienna, Smithmeyer had served as Superintendent of Public Buildings erected in the south after the Civil War, but left the government in 1873 to collaborate with Paul C. Pelz on the Library design. They also designed such buildings as the Army and Navy hospital at Hot Springs, Arkansas and the Hotel Chamberlain at Old Point Comfort, Virginia, before dissolving the partnership in 1886. At that time, they had become embroiled in a long court battle with the government over compensation for the Library design, eventually settled in favor of the architects.¹⁵ In June 1897, Smithmeyer was named an Inspector of Public Buildings by Secretary Gage and authorized to "investigate and report. . . the character of the buildings and improvements required, to put Ellis Island in proper condition."¹⁶ Smithmeyer resigned his post effective September 23, 1897 upon being named one of the competitors.¹⁷ Although his report concerning Ellis Island has

been lost, his recommendations and cost estimates determined the program requirements and the Congressional appropriations for the new immigration buildings.¹⁸

The last architect in the competition, Alfred E. Barlow, may have been important at the time of the competition, but has become rather obscure in the intervening decades. Practicing in New York from about 1881-1930,¹⁹ he designed the Berkley Lyceum (c. 1887), numerous country and city residences and later the Hotel Gramaton in Bronxville (1907). In July of 1897, he requested that the Secretary of the Treasury send him a program of the forthcoming competition. Acting Secretary Spaulding instructed him to "advise this Department how long you have been actively engaged in the practice of architecture and. . . kindly refer the Department to some of the important buildings designed by you and erected under your supervision."²⁰

As a contemporary journalist stated, the basic planning problems of the Immigration Station were that "Every unit of the incoming multitudes must receive so much individual attention as to make sure whether or not it calls for detention and if not, to make sure that it is guided unmistakably in the direction of its destination."²¹ Added to this was the need to "keep immigrants free from all outside influence until discharged, while affording conveniences to relatives or friends to communicate with them, at the same time providing all facilities required by the officials of the Immigration Bureau, Quarantine Station and Customs House for the proper discharge of their duties."²²

The design parameters were defined quite clearly by the "Programme" published September 9, 1897 (see Appendix B) and a supplementary letter from the Supervising Architect on October 1st. The Programme called for two buildings, "a main building with annexes and a hospital building," both structures to be built of fireproof materials, . . . brick with stone trimmings, . . . plain but substantial and durable." Total cost of the buildings including design fees was to be no more than \$570,000.

The Programme further stated that "the demands for convenient

administration being peculiar, the tentative plans suggest an arrangement of the various offices, etc. in relation to each other" and included seven sketches for the competition architects. Although these plans could not be located, the October 1st letter makes clear the functional scheme of the proposed station:

The Main Building and annexes are to contain accommodations for the reception, registration, examination of, and sleeping quarters for immigrants. The main building will be devoted to the examination of immigrants on the second floor, and on the first floor are to be the necessary provisions for getting their baggage checked (should they be railroad passengers) and forwarded to the various points, and, if local passengers, for the purposes and business of the Transfer Companies.

Passengers on being transferred from the boat will enter first the space between the main building II and annexes III and VI.

On entering the building, near the centre of the front, passengers pass up stairs which are to be located near that point, but not shown on sketch plans II or IIa.

The large space 7 on the second floor plan IIa is to be in future divided by wire screens into the various compartments necessary but these screens are not to be shown on the competitive plans. Immigrants then proceed through the various screened divisions of the hall where they are examined as to their fitness to land. Those admitted and destined to New York pass down stairs, which are to be located nearly opposite the passage between rooms marked three and four on plan II. These two flights of stairs from first to second floor of main building, which were not shown on the sketch plans, are to be shown on the competitive plans. There should also be shown on the second floor plan of main building a water closet of not less than six fixtures between the stairs at the front and the passage to annex adjacent to room #1. Immigrants going by railroad, having passed down the stairs last referred to, pass through connection to annex #6. Those who upon examination do not appear to be entitled to land are conducted to annex #4.

Sketch plan IIb suggests the utilization of the attic space for use in case of the overcrowding of the detention dormitory.

Rooms 1, plan IIa, are for the use of the Board of Special Inquiry; the large room being intended for witnesses and other intending to testify before the Board. Rooms marked 2, plan IIa, are for the general executive officers of the Medical Bureau.

SKETCH PLAN III, EXECUTIVE BUILDING

On the upper floor will be the main Executive Offices, as noted on the sketch plan. On the lower floor will be the Offices of the Company transferring immigrants from the ships to Ellis Island, the Secretary of the Board of Special Inquiry, the Missionaries, retiring room for registry clerks - giving them a place to hang their clothes - and an office for the Matrons. The space marked 12 on the first floor and 14 on the second floor on sketch plan III is to be used as a record room in both stories, either with stairs communicating or by making the room two stories high with galleries.

SKETCH PLAN IV, INFORMATION

Space 1 on first floor plan is the general Information Bureau where all people desiring information regarding immigrants or matters concerning the Immigration Bureau receive instructions, and where immigrants are discharged to their friends. In space 2 are kept all the immigrants (women, minors and others) whom the Inspection Officers are satisfied should be landed when their friends arrive, or who have told stories which require verification; they having been conducted from the second floor of the main building down stairs into this space.

Parties coming to the Information Bureau and desiring to go to the Board of Special Inquiry are admitted by stairs to the waiting room of the Board of Special Inquiry, space 2 on second floor. Space 2 on second floor is also for those immigrants who on inspection do not appear to be qualified to land and are held for the Board of Special Inquiry. Space 1, second floor, is for those immigrants who on examination by the Board of Special Inquiry have been excluded.

SKETCH PLAN VI, RAILROAD ANNEX

The space at the Westerly end, No. 1, is the general office of the Agent representing the Immigration Clearing House. The lower floor is to be subdivided by screens into waiting rooms for the various railroads where the immigrants are placed after examination, having bought their tickets, had their baggage checked and waiting for the proper time to be transferred to their destination.

SKETCH PLAN V, DETENTION

Both first and second stories are to be used as dormitories where the immigrants detained on the island both temporarily and those excluded are given accommodations for sleeping at night.

There have been no general toilet facilities or water closets

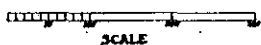
specifically called for by the programme, but such rooms of adequate size must be provided on the plans submitted.²³

After examining the plans of the first Immigration Center and reading accounts of the operations therein, it is clear that the system of examining the immigrants--the primary functional determinant for the new structure--remained largely the same as it had been. As described in Section IA, arriving immigrants traveled up a stairway to the second floor where examination and processing took place. After registration was complete they were divided into local New York or western-bound groups and sent to waiting rooms in the west end. Baggage, storage and customs offices were on the ground floor, and medical and immigration officials located around the sides of the second floor.

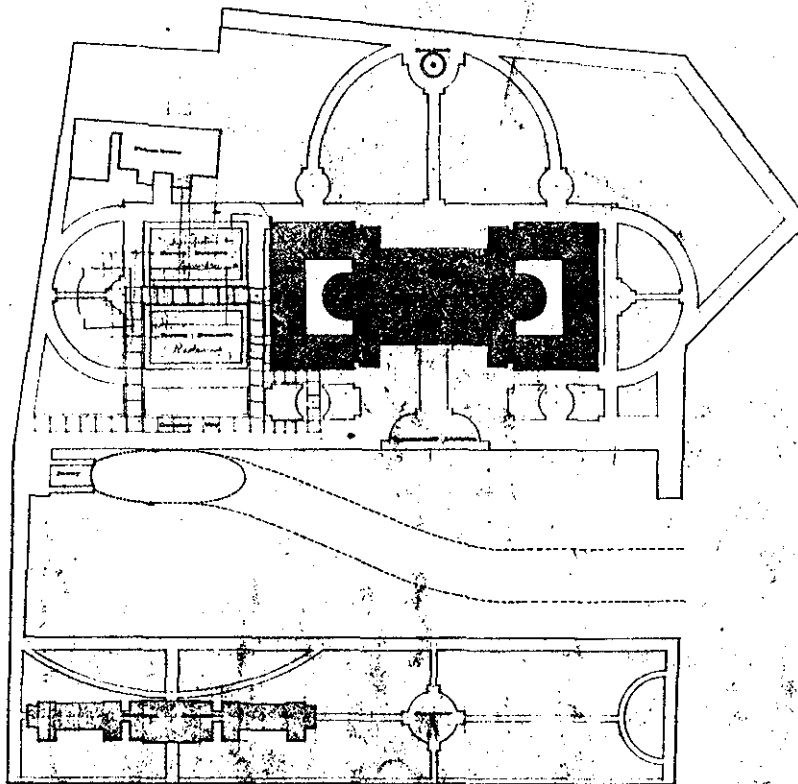
The completed designs due on December 1, 1897 were to include: a site plan; floor plans; two elevations each of the Main Buildings; annex and Hospital; a cross section of the Main Building; and a birdseye view of the Main Building. Six days later, the judges named Boring and Tilton winners of the competition.²⁴

The victory of this firm over such accomplished designers as McKim, Meade and White and Carrere and Hastings is rather surprising. The reasons are difficult to understand, given both the disappearance of the other competition drawings,²⁵ and the diplomatically vague remarks made by the judges.²⁶ The spending limit was acknowledged to be extremely low for a project of that nature, and one of the strong points of the winning design was that "it /could/ be built of simple materials and probably more cheaply than any of the designs offered of a similar size."²⁷

BLOCK PLAN
U.S. IMMIGRANT-STATION
ELLIS ISLAND



Drawing BT-110
Boring and Tilton
ARCHITECTS



Approved under Act of March 3rd 1875.

John A. King
Secretary of the Treasury
James K. Taylor
Postmaster General
James K. Taylor
Secretary of the Interior

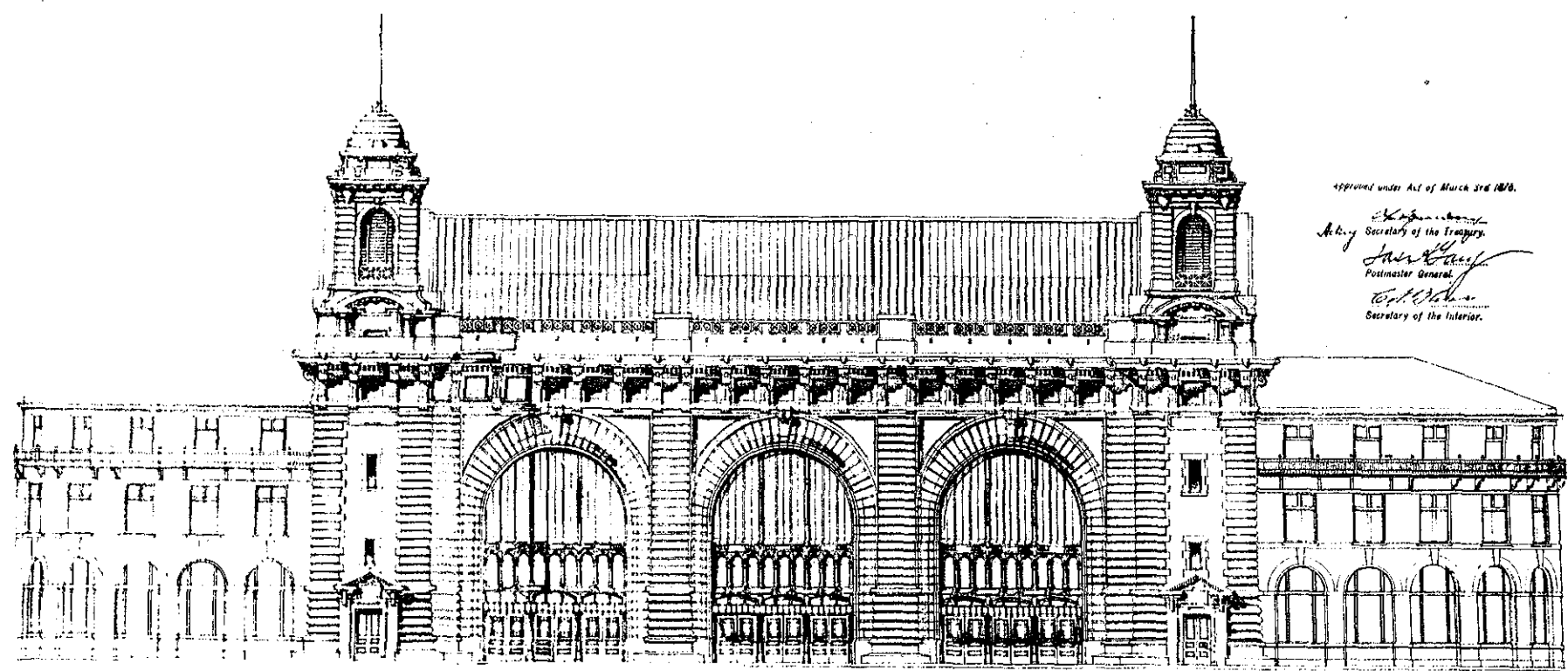
9

James K. Taylor
Supervising Architect
TREASURY DEPARTMENT

100 100 100
Sheet 1 of 28

39

Approved under Act of March 3rd 1876.
John P. Wolf
Acting Secretary of the Treasury.
John K. Wolf
Postmaster General.
W. P. ...
Secretary of the Interior.

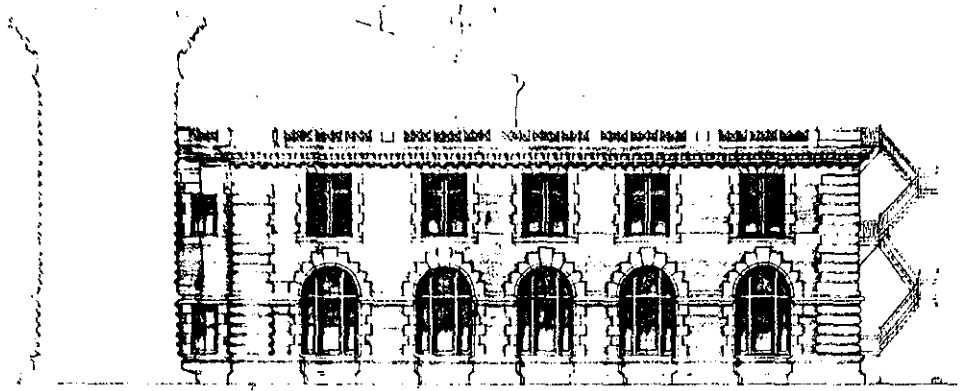


MAIN BUILDING
FRONT ELEVATION
U.S. IMMIGRANT STATION
ELLIS ISLAND
SCALE 1/8" = 1 FOOT

MAIN BUILDING
Drawing D1114
Boring and Tilton
1892
In with 11/10/11 112

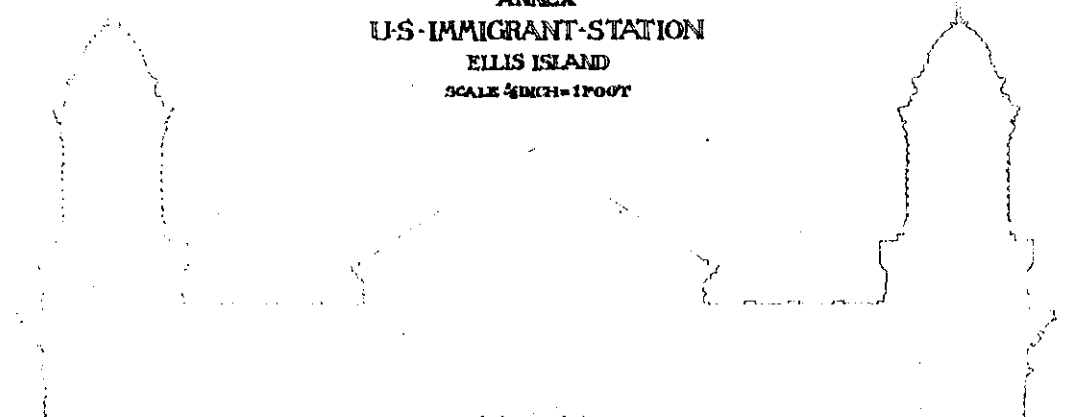
James Knox Taylor
1892

Competition Drawings by Boring and Tilton: Front Elevation. (American Museum of Immigration, Statue of Liberty National Monument).



FRONT-ELEVATION

ANNEX
U-S-IMMIGRANT-STATION
ELLIS ISLAND
SCALE 1/4"=1'-0"



END-ELEVATION



MAIN BUILDING
Drawing BT-No 5
Boring and Tilton
ARCHITECTS

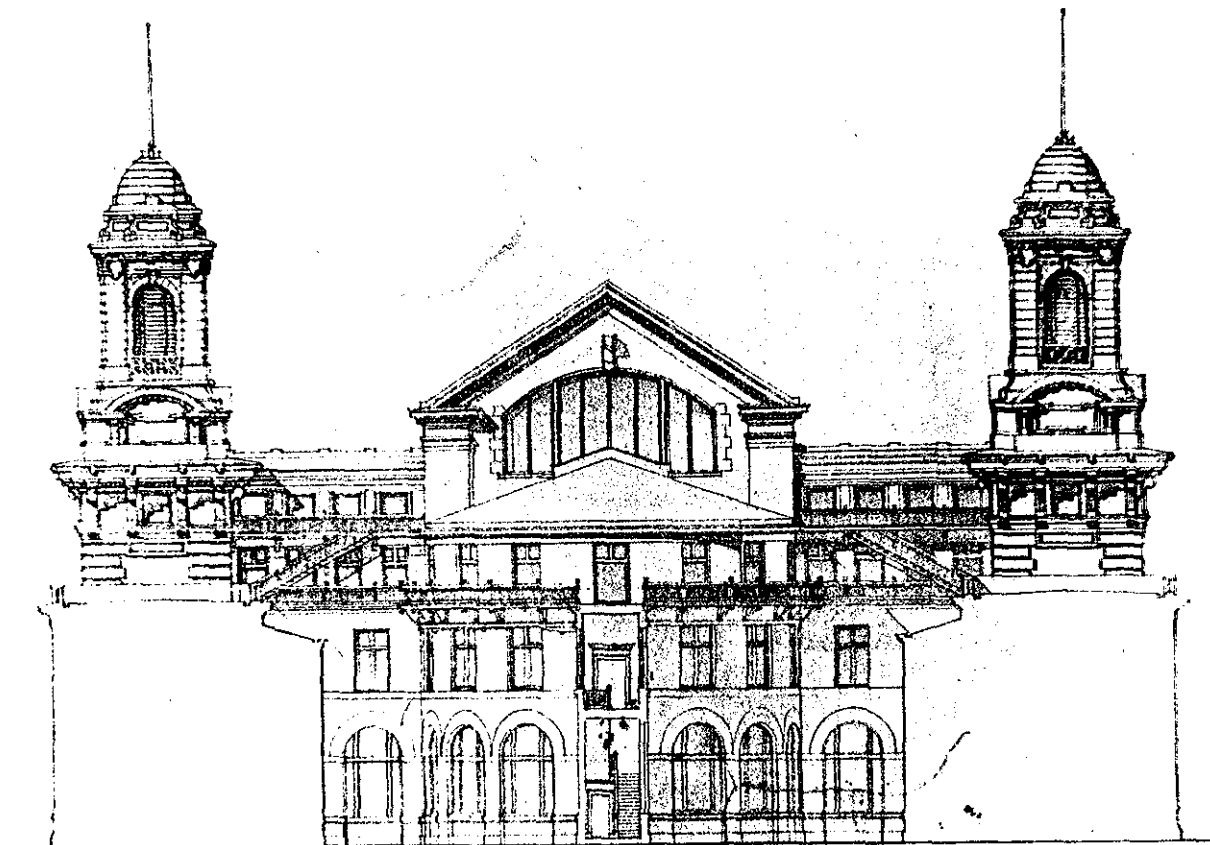
SEE PLAN TO ROOM 411

Approved: *[Signature]*
Secretary of the Treasury
[Signature]
Postmaster General
[Signature]
Superintendent of the Interior

[Signature]
JAMES HENRY TAYLOR
ASSISTING ARCHITECT
TREASURY DEPARTMENT

40

T 7



END ELEVATION

MAIN BUILDING
 U.S. IMMIGRANT STATION
 ELLIS ISLAND
 SCALE 1/8 INCH = 1 FOOT

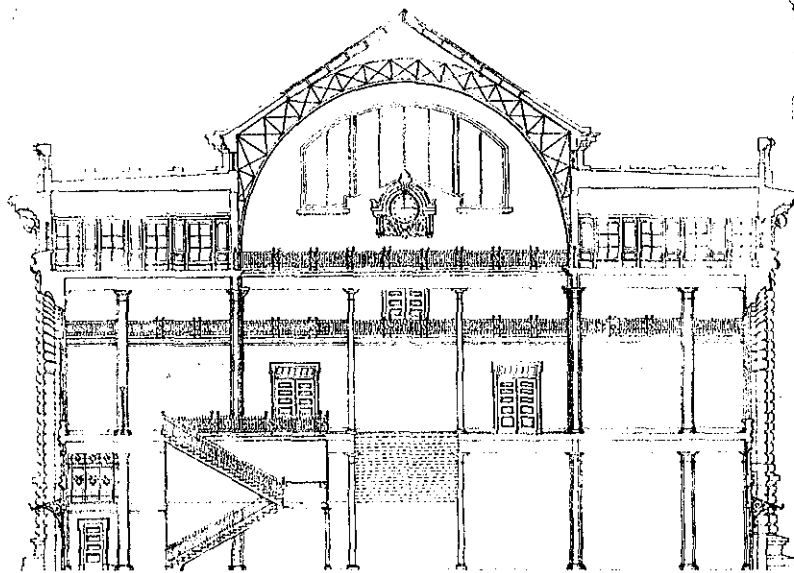
MAIN BUILDING
 Drawing B7-119 6
 Boring and Tilton
 Architects
 100 Broadway
 New York City

March 11, 1900

1900
 Boring and Tilton
 Architects
 100 Broadway
 New York City

James Henry Douglas
 Architect
 100 Broadway
 New York City

Competition Drawings by Boring and Tilton: End Elevation. (American Museum of Immigration, Statue of Liberty National Monument).



TRANSVERSE SECTION
 OF THE MAIN BUILDING
 ELLIS ISLAND
 SCALE 1/8" = 1'-0"

MAIN BUILDING
 Drawing BT-#7
 APR 11 1907
 10-11-07

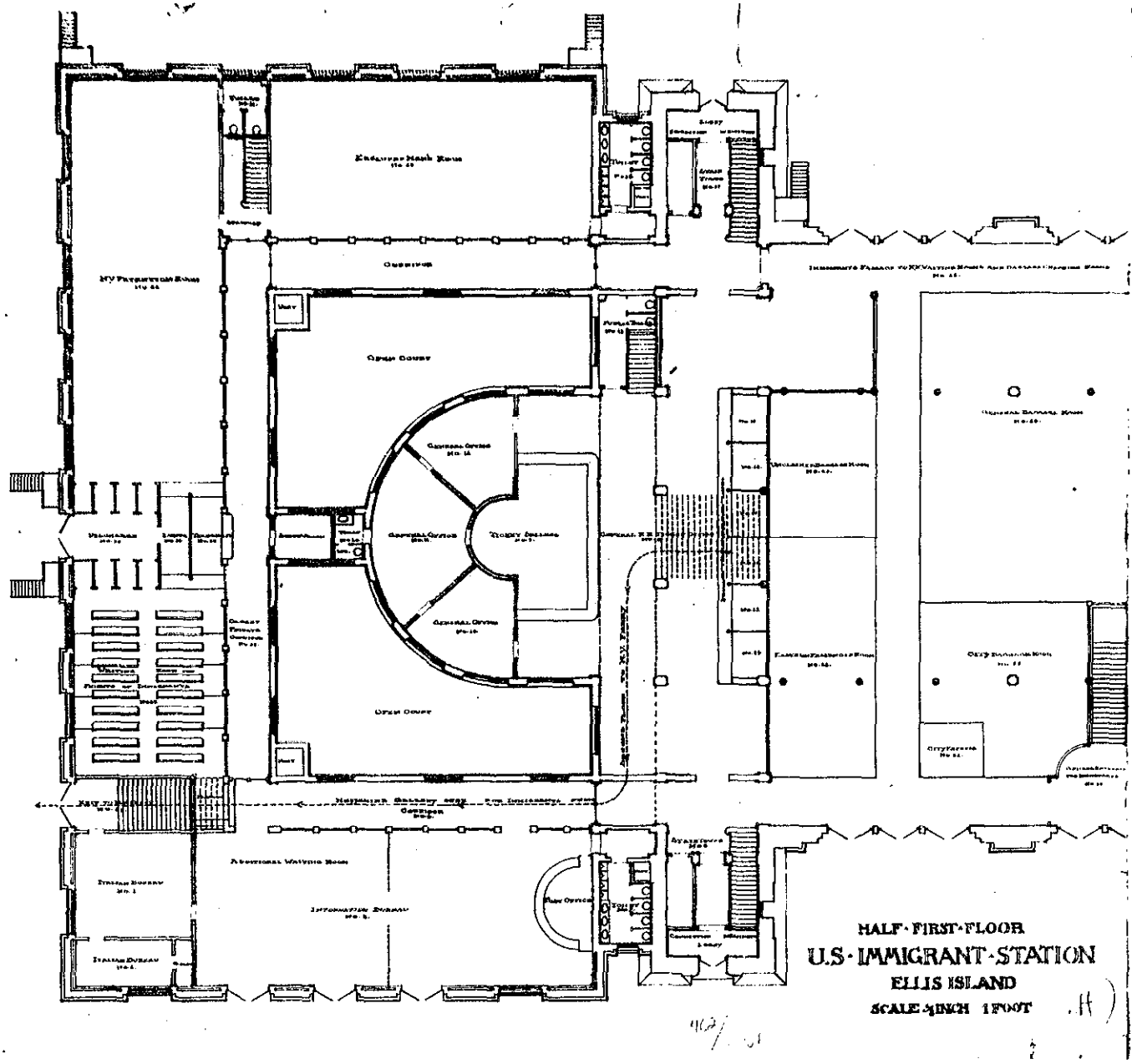
Approved under Act of March 3, 1879
 Secretary of the Treasury
 Postmaster General
 Secretary of the Interior

(13)

James Knox Taylor
 Secretary of the Interior

Competition Drawings by Boring and Tilton: Transverse Section. (American Museum of Immigration, Statue of Liberty National Monument).

43



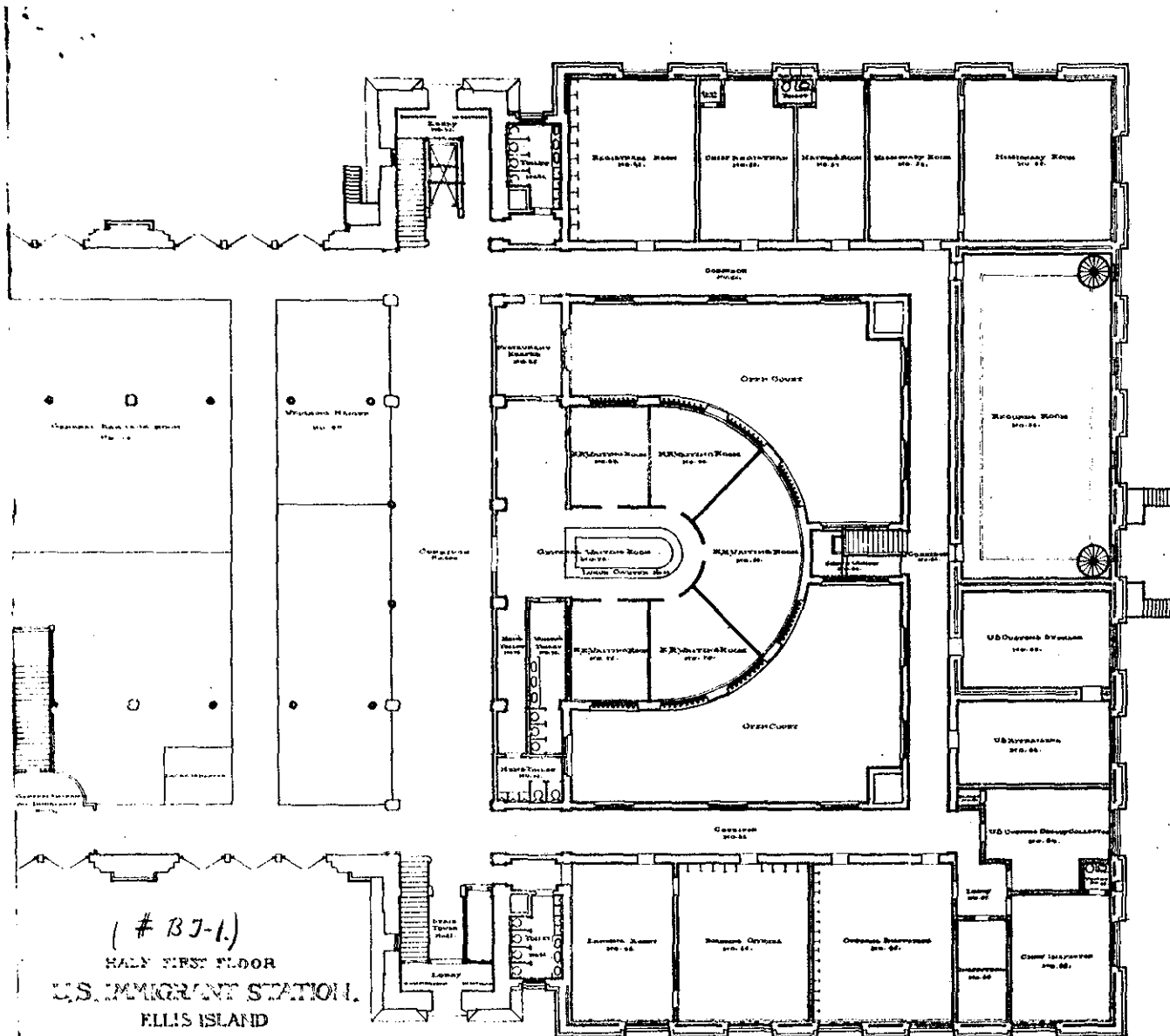
MAIN BUILDING
 (Drawing BT-718 1)
 Boring and Tilton
 ARCHITECTS

RETURN TO ROOM 411

HALF-FIRST-FLOOR
 U.S. IMMIGRANT-STATION
 ELLIS ISLAND
 SCALE 1/4" = 1' 0" .H)

Competition Drawings by Boring and Tilton: West Half, First Floor Plan. (NPS, Denver Service Center).

77

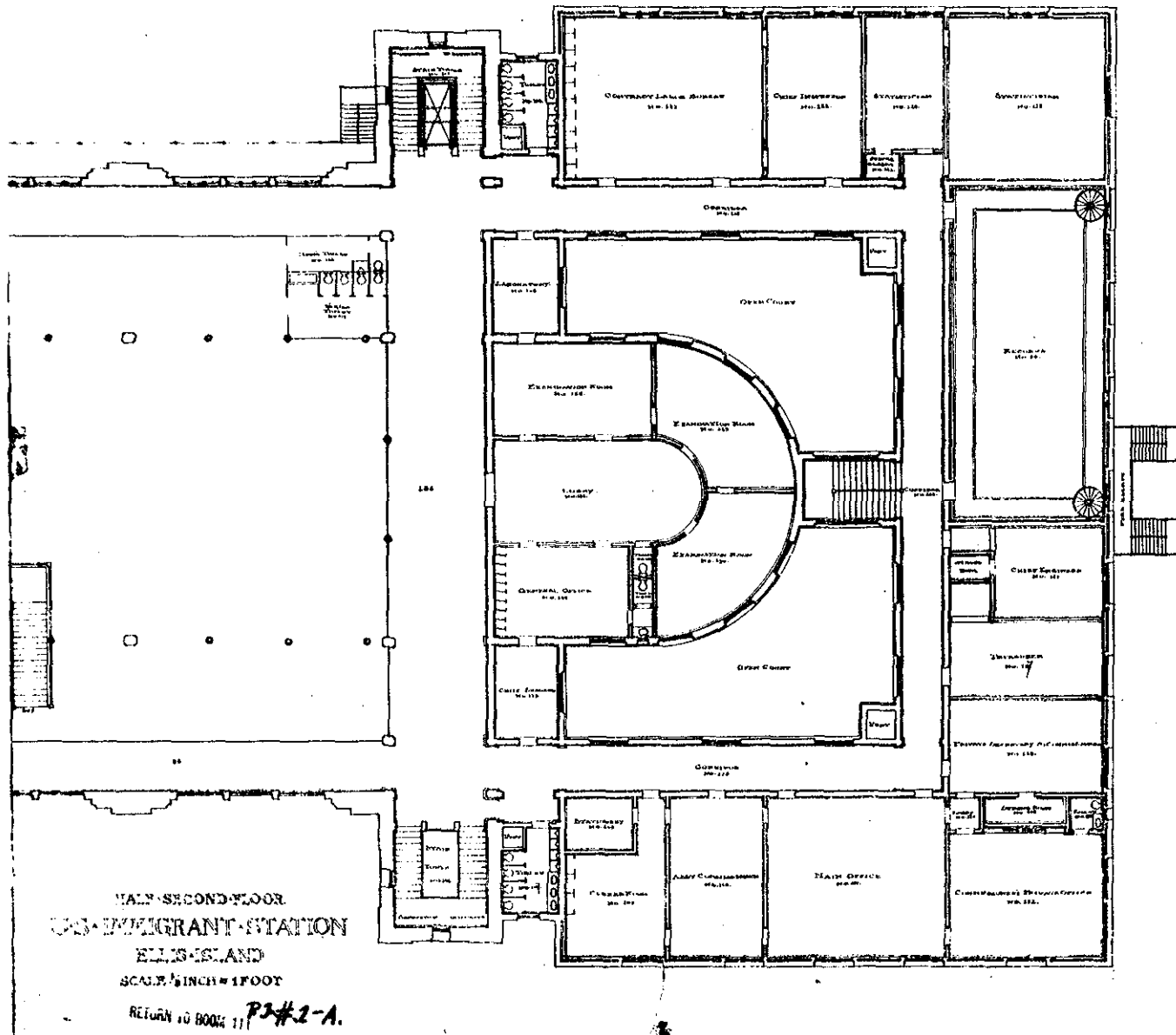


(# B7-1.)
 HALF FIRST FLOOR
 U.S. IMMIGRANT STATION,
 ELLIS ISLAND
 SCALE 1/8" = 1'-0"
 RETURN TO ROOM 411

Approved under Act of March 3rd 1907
William D. Bayne
 Acting Secretary of the Treasury
John C. Kelly
 Postmaster General
William D. Bayne
 Secretary of the Interior

5
James Henry Taylor
 Supervising Architect
 Treasury Department

Competition Drawings by Boring and Tilton: East Half, First Floor Plan. (NPS, Denver Service Center).



Approved under Act of March 3-1875.

John G. Thompson
 Acting Secretary of the Treasury.

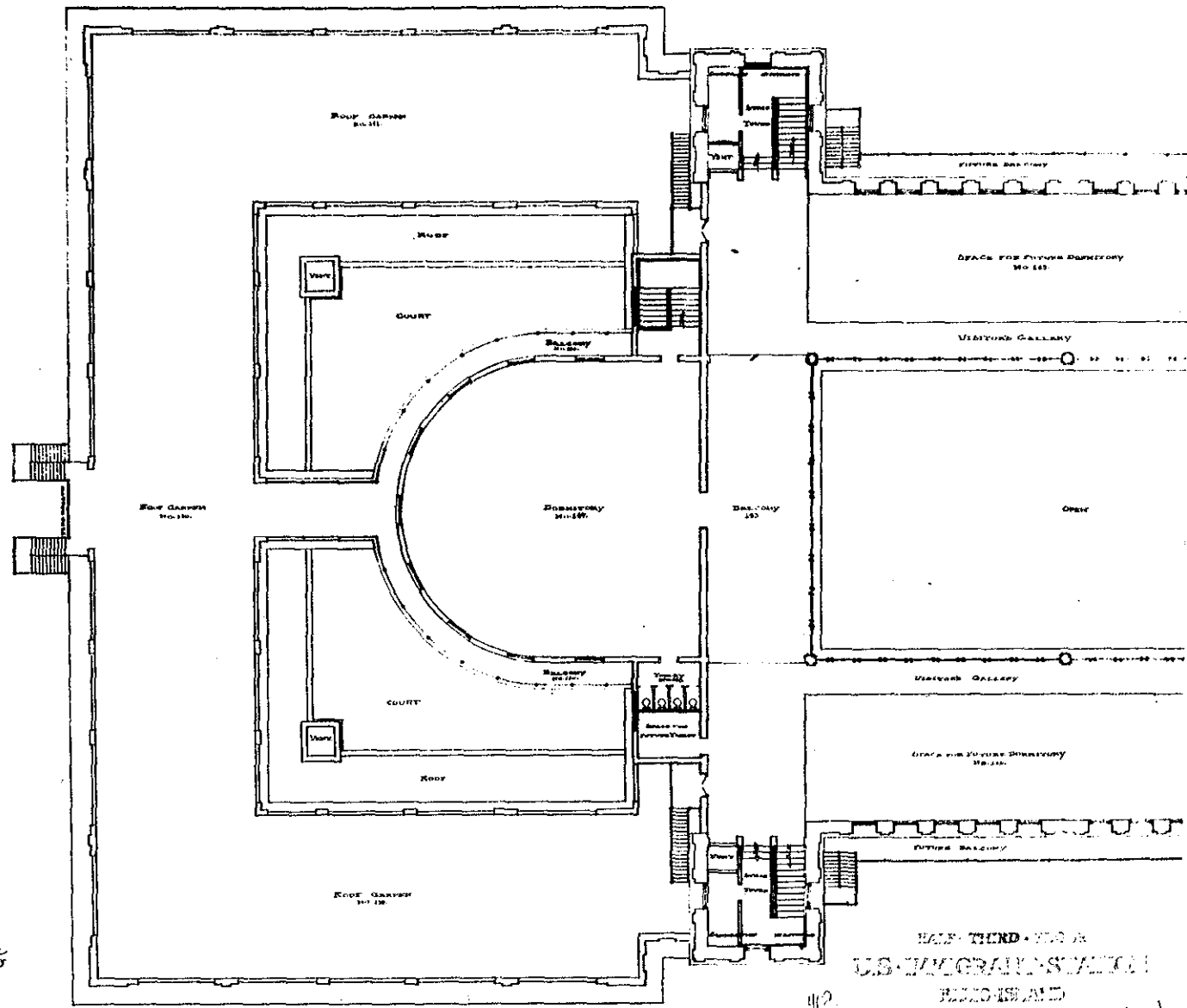
John G. Thompson
 Postmaster General.

W. H. B. ...
 Secretary of the Interior.

James Henry Taylor
 Consulting Architect
 1234 Broadway

HALF-SECOND-FLOOR
 U.S. IMMIGRANT STATION
 ELLIS ISLAND
 SCALE 1/8" = 1 FOOT
 RETURN TO BOOK 111 *PS#2-A.*

Competition Drawings by Boring and Tilton: East Half, Second Floor Plan. (NPS, Denver Service Center).

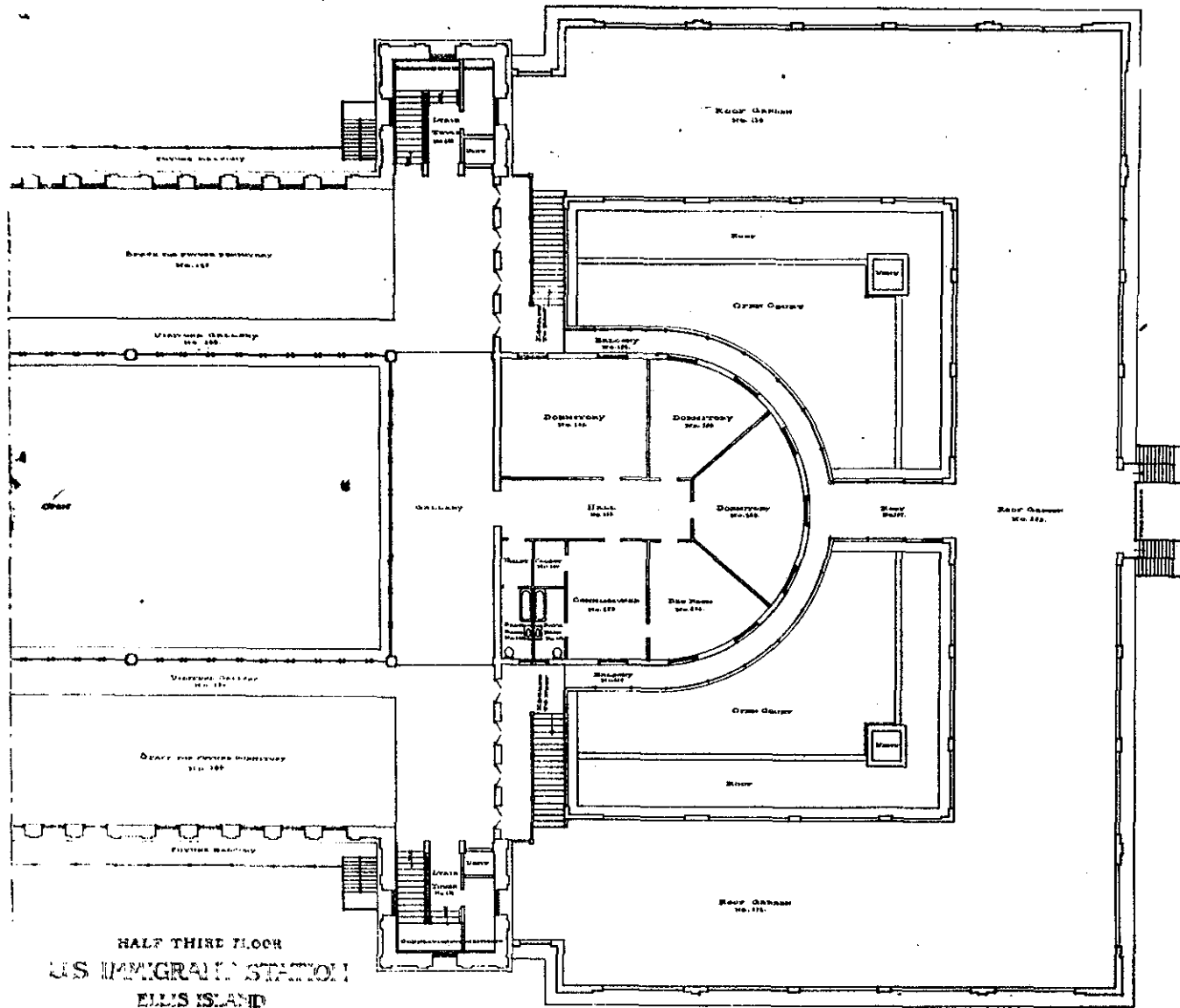


MAIN BUILDING
 Drawing BT-100-3
 Boring and Tilton
 ARCHITECTS

SECTION FROM 111

HALF THIRD FLOOR
 U.S. INTEGRAL SCALE
 REPRODUCED
 SCALE: 1/8" = 1'-0" (9)

Competition Drawings by Boring and Tilton: West Half, Third Floor Plan. (NPS, Denver Service Center).



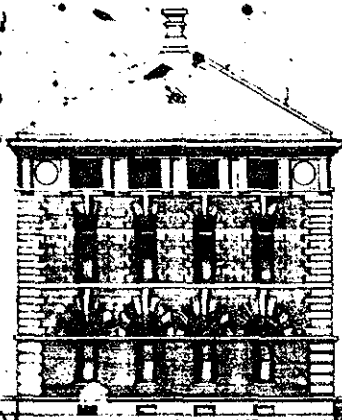
HALF THIRD FLOOR
 U.S. IMMIGRATION STATION
 ELLIS ISLAND
 SCALE 1/4" = 1'-0"

Approved under Act of March 3rd 1878.

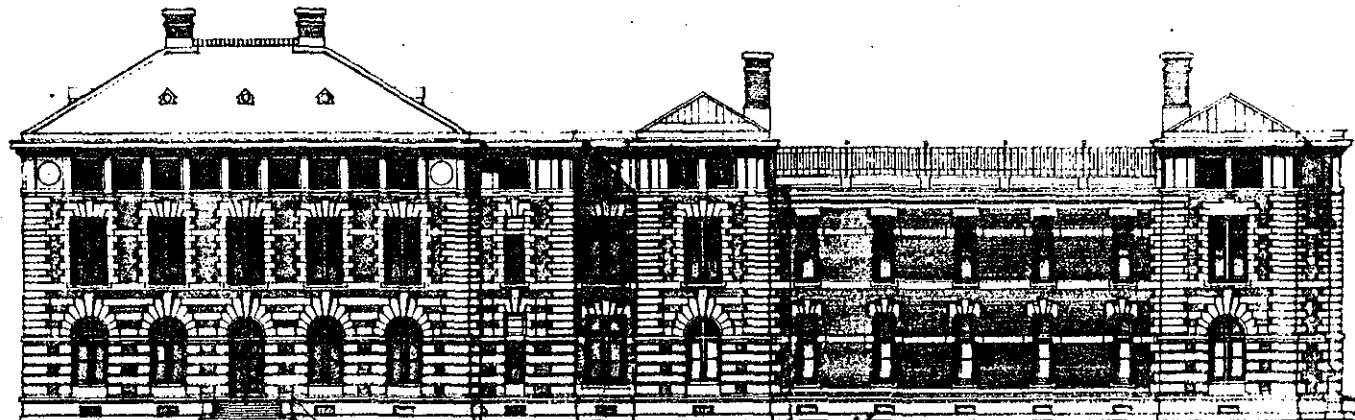
Acting Secretary of the Treasury
 Postmaster General
 Secretary of the Interior

James Knox Taylor
 Supervising Architect
 Treasury Department

Competition Drawings by Boring and Tilton: East Half, Third Floor Plan. (NPS, Denver Service Center).

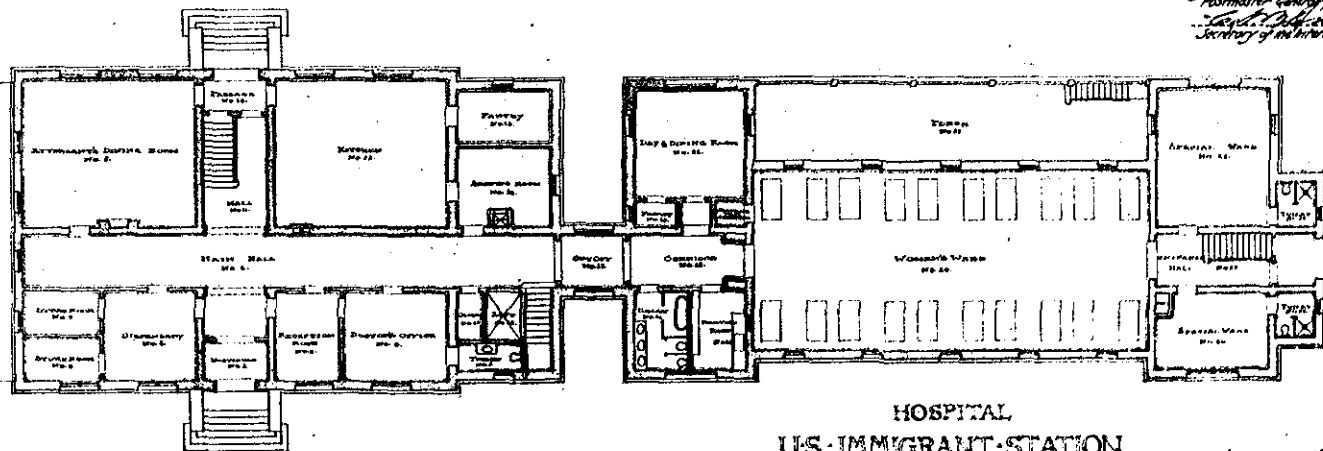


END ELEVATION



FRONT ELEVATION

Approved under Act of March 3rd, 1878
Acting Secretary of the Interior
James K. Hays
Postmaster General
Charles D. Walcott
Secretary of the Interior



FIRST FLOOR PLAN

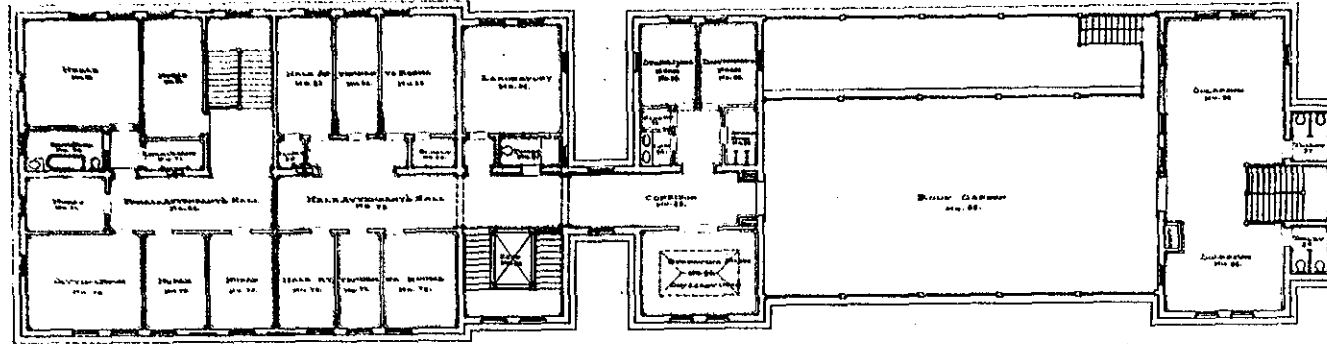
HOSPITAL
U.S. IMMIGRANT STATION
ELLIS ISLAND
SCALE 1/8 INCH = 1 FOOT

James Knox Taylor
Superior Architect
TREASURY DEPARTMENT

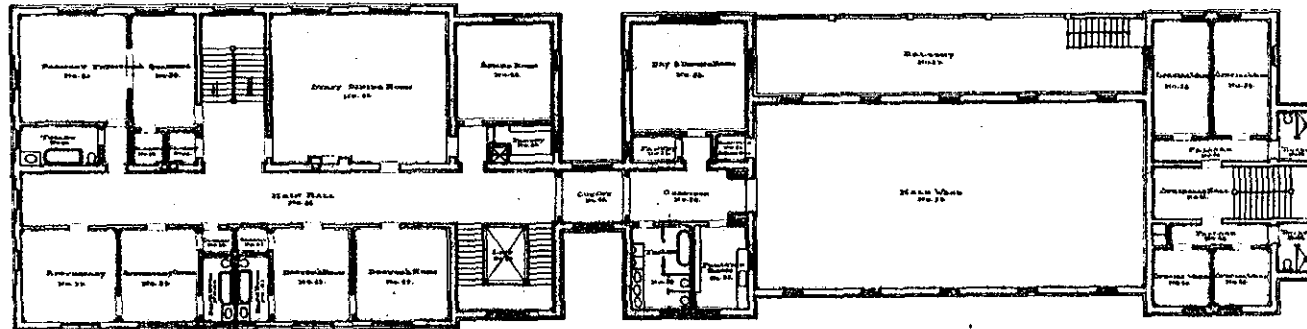
HOSPITAL
Drawing, BF-191
Boring and Tilton
ARCHITECTS

RETURN TO ROOM 411

Competition Drawings by Boring and Tilton: North Elevation and First Floor Plan of Hospital. (NPS, Denver Service Center).



THIRD FLOOR PLAN



SECOND FLOOR PLAN
HOSPITAL

U.S. IMMIGRANT STATION
ELLIS ISLAND
SCALE 1/4 INCH = 1 FOOT

Approved under Act of March 3rd 1876.

Askey
Secretary of the Treasury
James H. Smith
Postmaster General
W. M. Wood
Secretary of the Interior.

James Henry Taylor
Scherwinck Architect
TREASURY DEPARTMENT

HOSPITAL
Drawing, BT-1102
Boring and Tilton
ARCHITECTS

RETURN TO ROOM 411

462/42,944 sheet 2 of 2

There also had been problems with the competition drawing format and many of the architects had complicated the judging by sending in additional alternative schemes. Boring and Tilton's proposal was praised because it "strictly /followed/ the requirements as to size of drawings and /was/ not accompanied by an alternative."²⁸

Boring and Tilton's proposal was true to the program, too, as one can see by comparing their plans with the Government's requirements. The arrangement echoed that of the 1892 station, both being essentially large rectangles with the waiting room in the center. The proposed building was also nearly the same size, measuring 395 by 166 feet as opposed to 400 by 150 feet, but a more lucid definition of the varied functions allowed for more economical use of the space. The architects likened the crowds of immigrants to a "current" which must be channelled into the appropriate areas as quickly and effortlessly as possible.²⁹ The principal tide flowed up the stairs, across the Great Hall and down the west stairway to the railroad waiting rooms. Those requiring further examination by health or contract labor officials were shunted to adjacent rooms in the east annex, and detained immigrants were kept on the second floor of the west annex. All visitors were held in the first floor of the west annex, and Special Inquiry rooms located just above allowed separate access to both the detained immigrants and visitors wishing to give testimony. The majority of the east wing was devoted to offices of the various departments, allowing privacy from the activity of the main hall, yet ensuring that "from the main office ready control /could/ be had of the entire building."³⁰

Contemporary critics called the design "away and above any submitted by the other competitors"³¹ and "a model of completeness."³² Boring and Tilton noted that "the building is located on the same axial lines as the sketch plan furnished by the Government, but the change of form of the annexes makes the building much narrower."³³ Apparently, most of the other competitors adopted the Government's pattern, employing "the rectangle, with four outlying rectangles at the angles," which thus

created "four junctions threatening so many points of engorgement."³⁴

Boring and Tilton's propensity for rational planning was even more clearly demonstrated by their designs for the hospital building across the ferry slip. A doctor involved in the design of the Johns Hopkins Hospitals twenty years earlier had remarked that "light, air and space are essential to life"--and of course even more essential to health care.³⁵ Before the advent of modern mechanical and electrical systems, these therapeutic conditions could only be provided by the exterior environment, by sunlight, shade and prevailing breezes. The basic problem in hospital design was thus optimizing the interactions of building and environment while still providing adequate staff facilities. Boring and Tilton described their design as follows:

The general plan of the building is so arranged that there will be no dark corners. That the air will pass free about every side of the building. The ward lies in a direct line with the main corridor upon which open all the rooms. It is, however, cut off from the main building by an open air passage which, while it isolates the ward, puts it in communication with the main building.

The building should be raised above the level of the ground in order that proper heating and ventilating apparatus may be installed underneath for winter and that a freepassage of air may surround the building in summer.

The top of the ward is arranged for a roof garden with an inclosed solarium on one side. Ample balconies are provided with windows going directly to the floor. The operating room is placed in a quiet part of the building on the third floor and a lift large enough to take a stretcher operated by electricity will carry patients to this from the different floors.³⁶

Functional requirements provided the inspiration for the exterior treatment of the Main Building as well as its plan. The Great Hall, principal interior feature, was defined on the north and south elevations by three two-story arches and on the east and west by clerestory lunettes. These windows served not only to light the interior spaces but also to symbolize their function. Contemporary critics, while

conceding that the immigration station posed "a problem quite without precedent," remarked that "the central feature is the same as that of a railway station, the requirement of 'landing,' collecting and distributing great and sudden crowds."³⁷ During the nineteenth century, the arched window became the symbol of railway stations,³⁸ reflecting the wide-span truss construction within, while recalling the classical forms of Roman baths. The motif was first used in France, in the Gare Montparnasse of 1855 and the Gare du Nord of 1863, and was employed in the United States by Shepley, Rutan and Coolidge for Boston's Union Station and McKim, Meade and White for Pennsylvania Station.

The central section was buttressed by four towers which isolated vertical circulation and mechanical systems. These elements recalled not only nineteenth railroad stations at the gateways of American cities, but medieval and Renaissance cathedrals in the heart of most European cities. Flanking towers were also prominent at the World's Columbia Exposition in Chicago in 1893. The Electricity Building by Van Brunt and Howe employed no less than twelve towers similar in form to those at Ellis Island to frame massive arches at each arm of a cross-shaped plan and flanking wings.

Three-story semi-circular sections on the east and west ends allowed easy access to dormitories, examining rooms and ticket offices on the interior and provided a visual transition from the four-story central section to the two-story wings. The annexes themselves echoed the principal motifs of the central section, yet were clearly subordinate, the arched first floor windows and balconied roofline only half as high.

The towers and central arches were tied horizontally by a heavy modillion cornice, while each unit was framed vertically with limestone quoins of "unusual breadth and massiveness."³⁹ Rounded quoins and mouldings weighting the bases of these piers were carried across the facades of the wings and, with the flat stone quoins enclosing the windows, suggest a Florentine Renaissance palazzo. Sculptural embellishment was limited to eagles atop the piers between the central arches,

masks on the arch keystones, and mouldings and lintels on the tower doors and belfries.

"At least as far as the proportions are concerned," noted Charles de Kay of the New York Times, "the architects seem to have had /the buildings of the World's Columbian Exposition/ in mind."⁴⁰ As noted earlier, the use of towers recalled the Electricity Building at the Fair, and de Kay pointed out that "the cornice is at the same level fixed for the buildings about the water court."⁴¹ Such allusions to "The Dream City" is understandable after reading statements that "the artistic effect produced by the noble proportions of the Art Palace mirrored in the placid surface of the lagoon made a picture the beauty of which cannot be described in words."⁴² The immigration station in New York Harbor offered a rare opportunity to reproduce these monumental effects, and was conceived of as both an architectural ensemble grouped around the ferry slip and a sculptural unit with the island as its pedestal.

The axial placement of the Main Building and future dependencies and of the hospital buildings across the ferry slip reflected both the immediate influence of the Fair and the more fundamental teachings of the Ecole de Beaux Arts which Boring and Tilton, as well as the designers of the World's Columbian Exposition, had assimilated. In the hospital, the motifs of the Main Building wings were laid over the forms generated by the functional plan, creating an image visually united with the building opposite yet "as plain as a charity hospital should be."⁴³

The simplicity of the Hospital Building and the minimal use of ornament on the Main Building were in part the result of the program and the limited budget. Equally important, however, was the fact that "nine tenths and more of this building see it from a distance only, so that the effectiveness of a 'distant prospect' is more important than that of a nearer view."⁴⁴ With this in mind, the architects created the strongest effect from the juxtaposition of the few limestone elements and the flat brick walls. Architectural Record remarked that "the employment of color in these towers and indeed throughout the central mass is exemplary. . . from the monochromatic masonry of the base up to the

equal striping of the belvederes. The contrast is even carried into the cornice, in which the red brick is introduced into the uprights with excellent effect."⁴⁵ The contrasting colors made it easy to pick out the architectural elements from afar, especially the huge arched windows which symbolized for the arriving immigrants America's "lavish hospitality and world-wide welcome."⁴⁶

2. Construction

a. Planning

It was clear from the beginning of the construction document phase that the government officials did not plan to follow Boring and Tilton's competition design to the letter. The judges had made their decision on the basis of the team's "ability to grasp /their/ subject rather than the selection of a final plan," and commented that "the work of the designer convinces us that with further study in conjunction with the authorities, he will produce a very successful final result."⁴⁷ Thus, it is not surprising to note a number of differences between the original designs and the Immigration Station as built between 1898 and 1900.

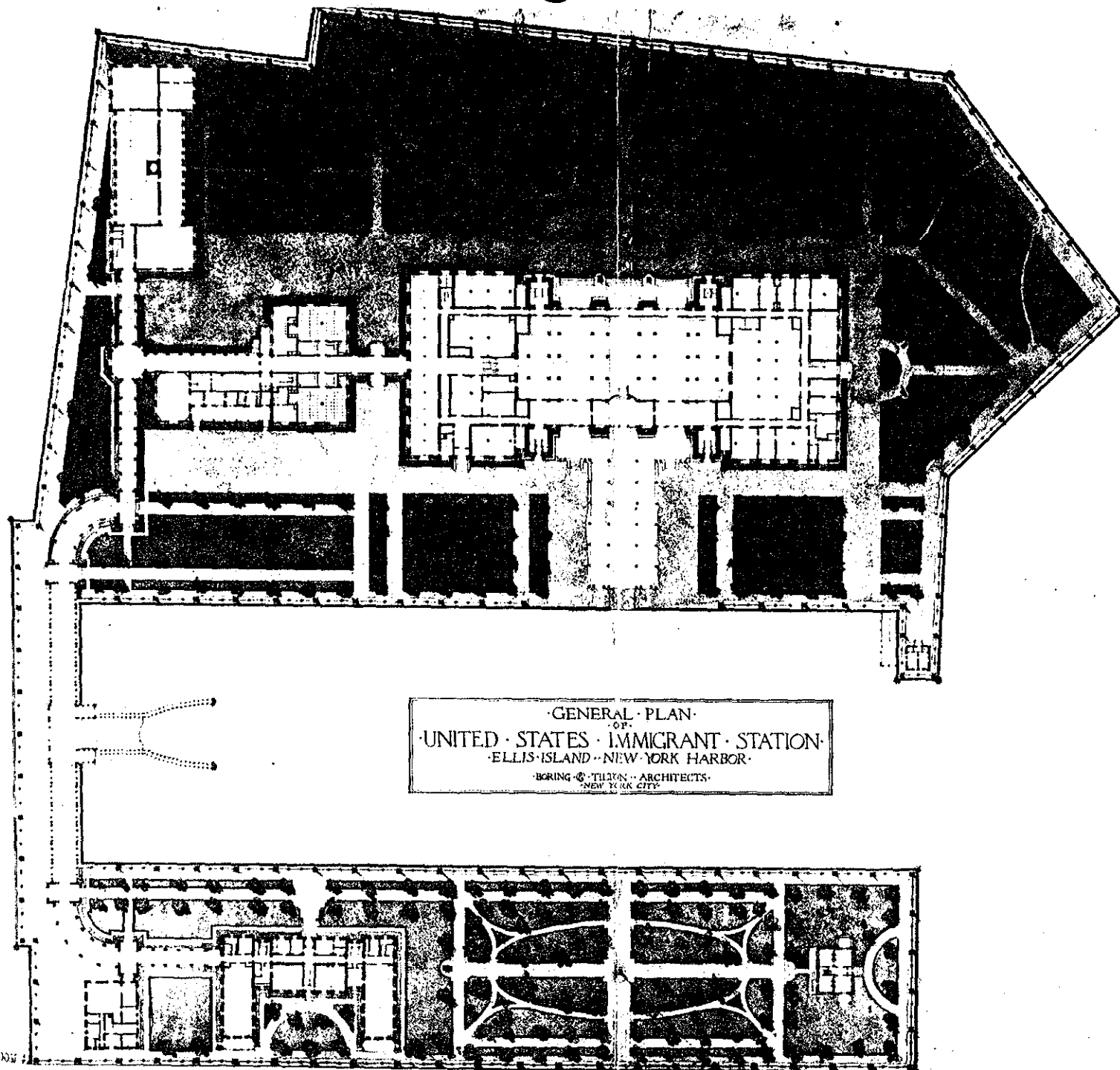
One of the most substantial changes occurred in the east and west ends of the Main Building. Where the original design had shown open courts to the first floor level, the building now has a roof at the second floor line on the west side and a slightly lower roof with small clerestory windows on the east. As a result, the Baggage and Registry Room spaces were pushed out and offices originally confined to the semi-circular apses were enlarged. Above the first floor, the semi-circular, conical-roofed wings were re-drawn as flat-roofed rectangles, creating more office space though eliminating the radial circulation patterns and contrasting exterior masses which had enlivened the competition design.

To provide more light in the Registry Room, three lunette windows were added of the north and south sides of the roof. As the critic for Architectural Record pointed out, "the low gables that surmount them served to relieve and animate the skyline without disturbing it."⁴⁸

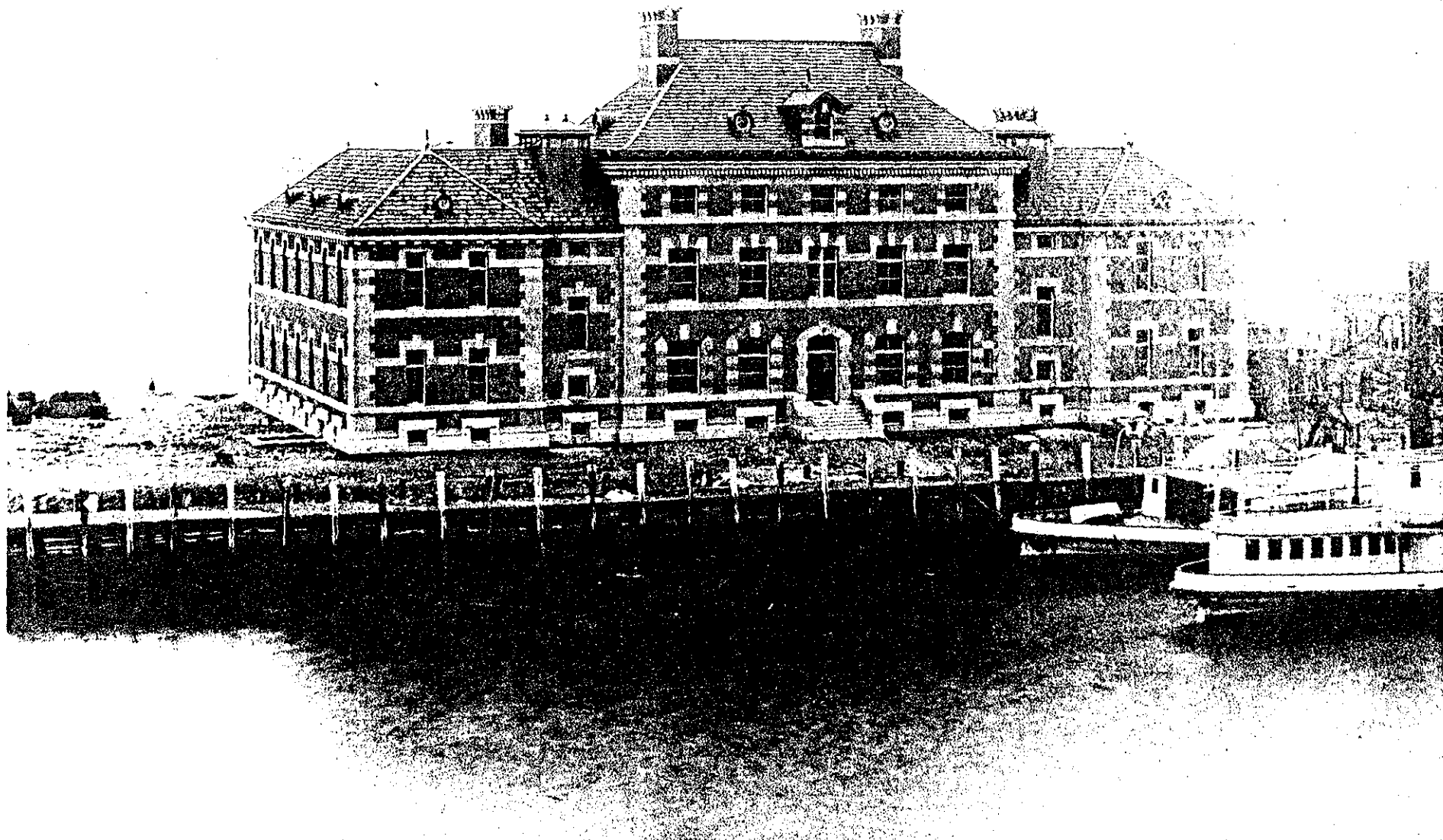
A number of less noticeable changes were made in the decorative details, possibly in response to economic measures or product availability. On the towers, quoining on the lower windows was pared to lintels and sill blocks, windows at the roof level were reduced to

circles trimmed with brick and four stone quoins, and overlapping terra cotta discs were substituted for the iron grillwork of the upper belvederes. On the wings, flattened quoining above the basement and the removal of mouldings along the springing line of the arched windows eliminated the visual ties with the central section in the interest of reducing the amount of costly limestone. The last change apparent on the Main Building was the omission of the large, two story fire stairs shown on the east and west ends of the annexes and the incorporation of balconies and fire exits in the central arches.

Major changes occurred in the plan and elevations of the hospital building. The ward building on the west end of the complex was cut away and hip-roofed ward wings stretching to the south were added to either side of the administration section. Although this deleted the solariums and some exposure to light and air, it added more space and resolved the awkward massing which Boring and Tilton had developed in trying to allow for future expansion. The exterior treatment was greatly simplified. Segmental arched windows on the first floor and flat-headed ones on the third had similar Gibbs-like surrounds, while the windows on the second floor had string courses at transom height and flat, quoined lintels above. The resulting appearance was far more solid and dignified, lacking the fussiness of the competition design.



Site plan c. 1898. (NPS, Denver Service Center).



Hospital #1 after completion. (Avery Architectural Library, Columbia University, New York, New York).

b. Technology

1. Structural System

All of the new buildings at Ellis Island were built of masonry and steel frames, a construction method which was still relatively new at the time. Cast iron columns, beams, trusses and wall units were widely used in the 1850's and 60's for department stores, theaters and warehouses, since the great strength of the material allowed for longer spans and larger window openings than possible in masonry construction, while the low combustibility offered greater fire resistance than wood. It was soon discovered, however, that all-iron buildings buckled and melted under the intense heat of surrounding fires, and such structures were prohibited. Fireproof tile cladding for metal frames was developed in the 1870's and first applied to large-scale construction a decade later in buildings such as George B. Post's Produce Exchange (1884) and William LeBaron Jenney's Home Insurance Building (1884-85). Greater economy, large window-to-wall ratios, more open interior spaces and fire-resistance were all essential to the complex program of the Immigration Station.

The Main Building is constructed as a riveted steel frame with exterior bearing masonry walls. The foundations are footings bearing on either natural soil or timber piles. The steel columns rest upon base plates and/or steel grillages. Floors and flat roofs are structural clay tile flat arches with concrete fill carried on steel framing. At the center of the building is the Registry Hall, which is framed in steel and enclosed at the clerestory level by non load-bearing masonry. The Registry Hall roof is supported by ten fabricated steel Fink trusses carried on columns and bridged at five points by transverse trussed girders which terminate in the masonry gable walls. The four stair towers are load-bearing masonry in their entirety.

Fireproofing of the structural steel is by brick masonry at the columns and structural clay tile or suspended plaster at the beams and lintels.

Steel Columns

The built-up fabricated steel columns, which in part support the steel floor and roof framing, are made up eight 3 inch angles riveted and braced as shown in the following sketch. The columns rest on a concrete-covered ribbed cast-iron baseplate, measuring 26 by 26 inches and approximately 8 inches thick. The baseplate rests on a grillage of steel I beams made up of four 7 inch I's, 6½ inches on center atop and perpendicular to 6 inch I's, 12 inches on center. The lower layer of I beams is encased in concrete to a depth of 12 inches below the bottom flange. The columns, which are continuous through the height of the building, are solidly filled and encased with brick masonry.

Floor and Roof Framing

The interior floors are supported by steel beams and girders and consist of structural clay tile flat arches spanning between the supporting beams. The beams are restrained at one-third span intervals by 3/4 inch steel tie rods. On the finished tile and concrete floors, the structural clay arch is covered with cinder concrete fill of varying thickness with the finish flooring above. In those areas with wood floors, 2 by 4 inch wood sleepers are set in approximately 4 inches of cinder concrete fill above the structural clay tile arches. Oak tongue-in-groove flooring was then laid on top of the sleepers.

The framing system for the flat roofed areas of the building is similar to that used on the floor. Flat structural tile arches span the distance between the supporting I beams. The area above the arches is filled with cinder concrete, coated with waterproofing materials and finished with a smooth cement coating. Built-up asphalt and gravel roofing forms the final finish.

Exterior Walls

The exterior walls of the building are load-bearing masonry consisting of granite base and red brick walls with limestone trim. The red brick bed masonry consists of four courses which rest upon a massive rubble concrete foundation made of crushed stone, sand and cement. The foundation is coated with a 1 inch thick layer of cement and is supported approximately nine feet below grade by 4 by 12 inch timber cribbing framed in two directions, which is in turn supported by 10 to 12 inch diameter wood piles.

The upper walls of red brick and limestone have segmental arched openings surrounded by limestone blocks imbedded in the masonry and flat arched openings with limestone heads also imbedded in the masonry, but supported by multiple steel angle lintels. Cornices are of limestone and are tied into the walls with iron anchors. The steel floor and roof framing is imbedded approximately nine inches into the masonry and bears upon the exterior walls, which are in total approximately 18 to 20 inches thick. The interior of the masonry walls are clad with 1/2 inch structural clay tile upon which was applied 1/2 to 1 inch of plaster.

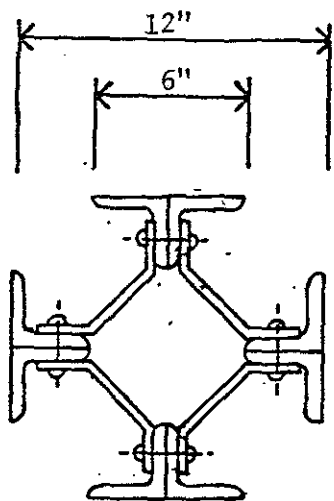
Stair Towers

The brick and limestone towers are also load-bearing masonry with the same type of foundation. The stair landings are supported by steel beams framed into the masonry walls with vary from 2 feet 8 inches to 2 feet 0 inches thick. The stairs themselves are steel with slate treads and landings. The towers are topped by brick domes which are supported by corbelled brick pendentives. The domes were originally covered with decorative copper (see Appendix A).

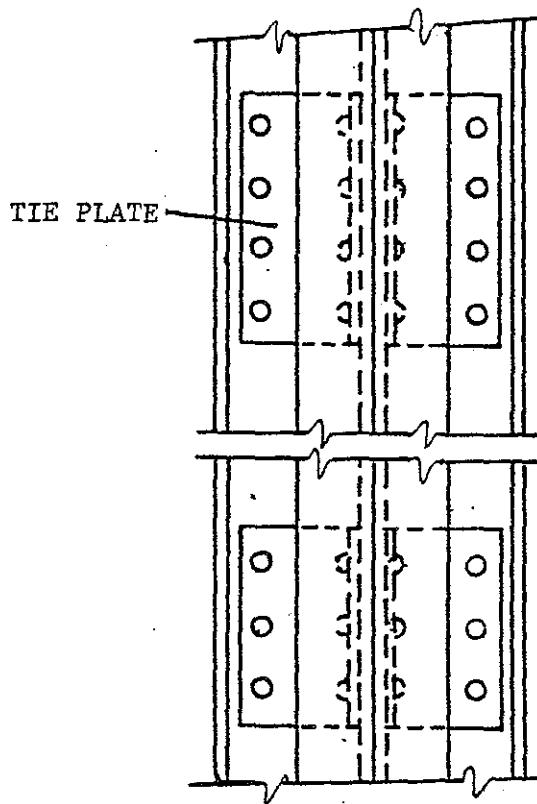
As mentioned previously, the pitched roof area over the Registry Hall is framed with ten fabricated steel Fink trusses which in turn are supported by the steel columns and transverse trussed girders which frame into the masonry. Atop the Fink trusses is a system of purlins, angles and T-shaped sub-purlins which support and hold in place the three inch thick structural clay tile deck. The structural clay tile is coated with cement and felt roofing paper. Flat red clay roofing tiles laid over one inch thick wood nailers form the finished roof surface.⁴⁹



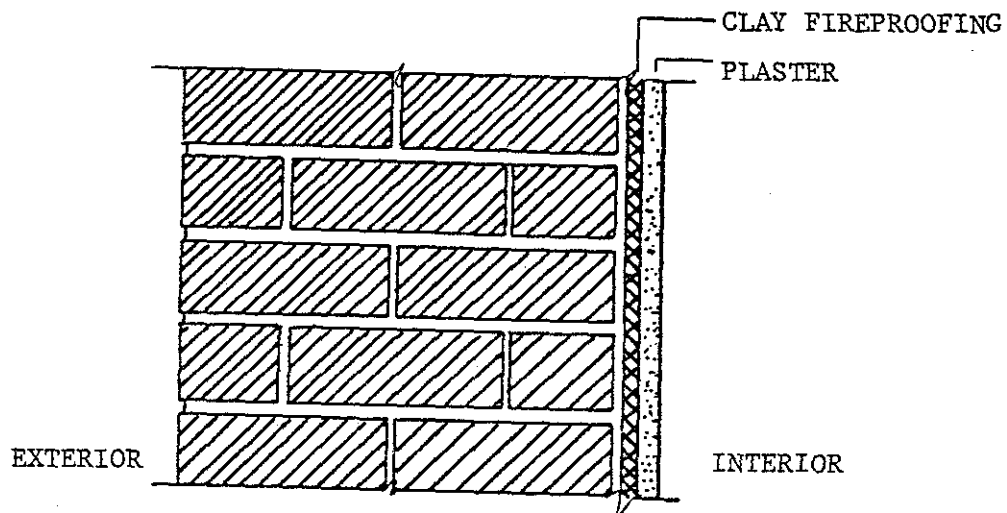
Structural clay tile fireproofing.



CROSS SECTION THROUGH
COLUMNS

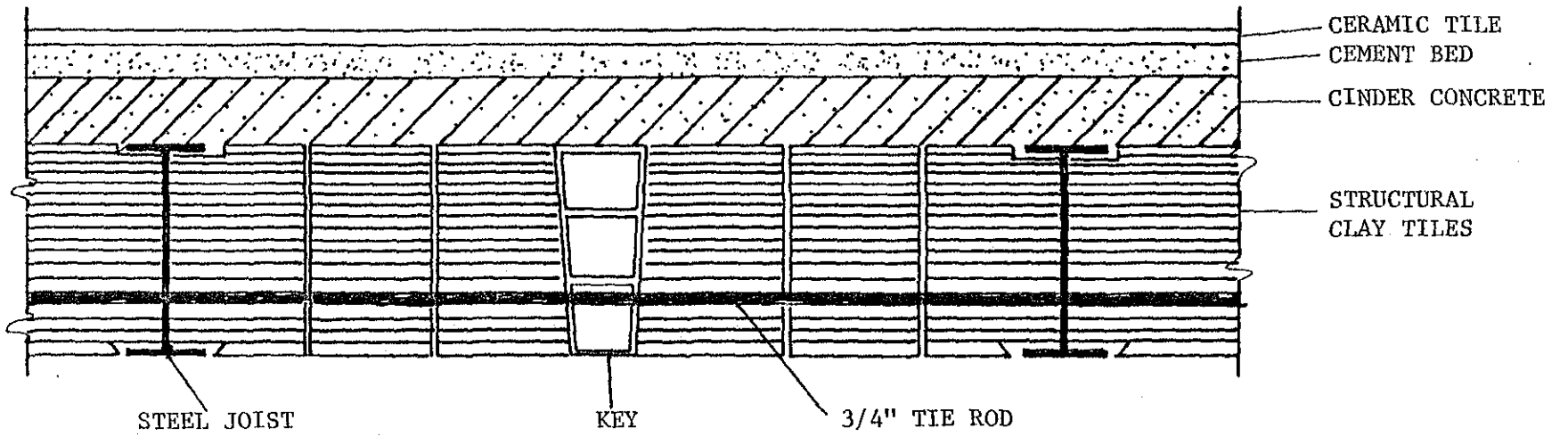


ELEVATION OF COLUMNS

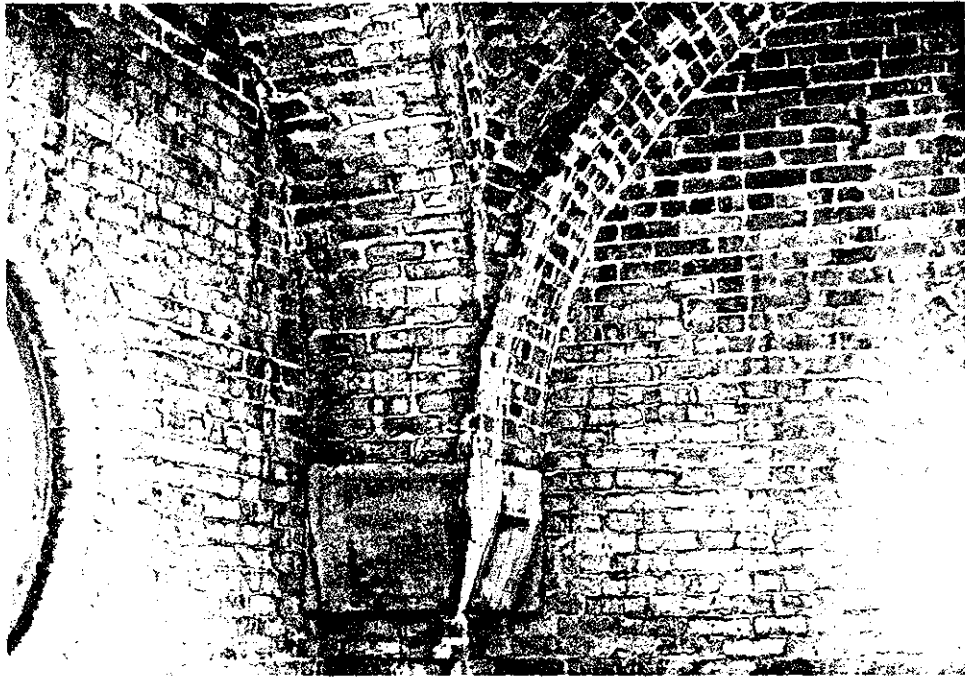


SECTION THROUGH EXTERIOR
WALL

65



FLOOR SECTION



Corbelled brick pendentives supporting tower domes.



2. Mechanical Systems

The Main Building was originally heated by a combined system of steam radiation and tempered air ventilation designed in 1899 by William J. Baldwin, Consulting Mechanical Engineer from New York City.⁵⁰ Steam was produced in the Powerhouse on Island 1 by three high-pressure (approximately 125 psig) water tube boilers fabricated by Babcock and Wilcox. The steam was primarily used to power back-pressure-type steam turbines driving direct current generators as well as for boiler accessories such as feed pumps. The exhaust steam was used for heating purposes and operated at low pressure (2 psig). The boilers were of the sinuous header, straight tube, single drum type and were originally intended for coal firing but were later converted to oil.

Steam was transferred from the Powerhouse to the Main Building through twelve-inch supply mains via the passageway along the east side of the Bakery and Carpentry Shop and through the basement of the Kitchen and Laundry Building to the basement of the Main Building. The steam was then distributed through a system of eight, four and one or one-and-one-half-inch supply lines to the sectional cast-iron radiators located under each of the windows on the upper floors. The radiators originally had a bronzed and varnished finish.

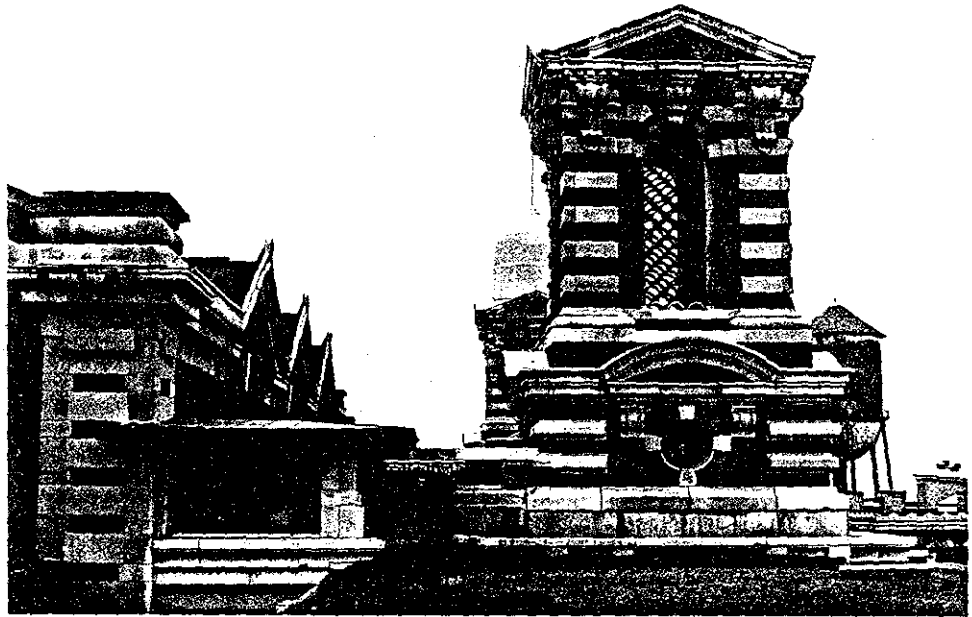
In addition to the steam radiation heat, a ventilation system supplied tempered air to most of the spaces within the building. Fresh air was drawn in at the roof level through four vents adjacent to the stair towers and pulled through cold air ducts to the basement by six ninety-inch electric motor-powered propeller fans located at the base of the ducts in the basement. The fresh air was then propelled through steam heating coils located within large floor-to-ceiling brick-enclosed ducts. The warmed air then flowed back up through the building via galvanized metal ducts and into the rooms through wall registers. The register boxes were covered with decorative cast-iron grills, most of which are still in place. The temperature and flow of air was controlled

by rheostats mounted on the fresh air fan motors, by electric thermometers located in the hot air ducts, dampers located on the cold air side of the heating coils and thermostats located within the occupied spaces.

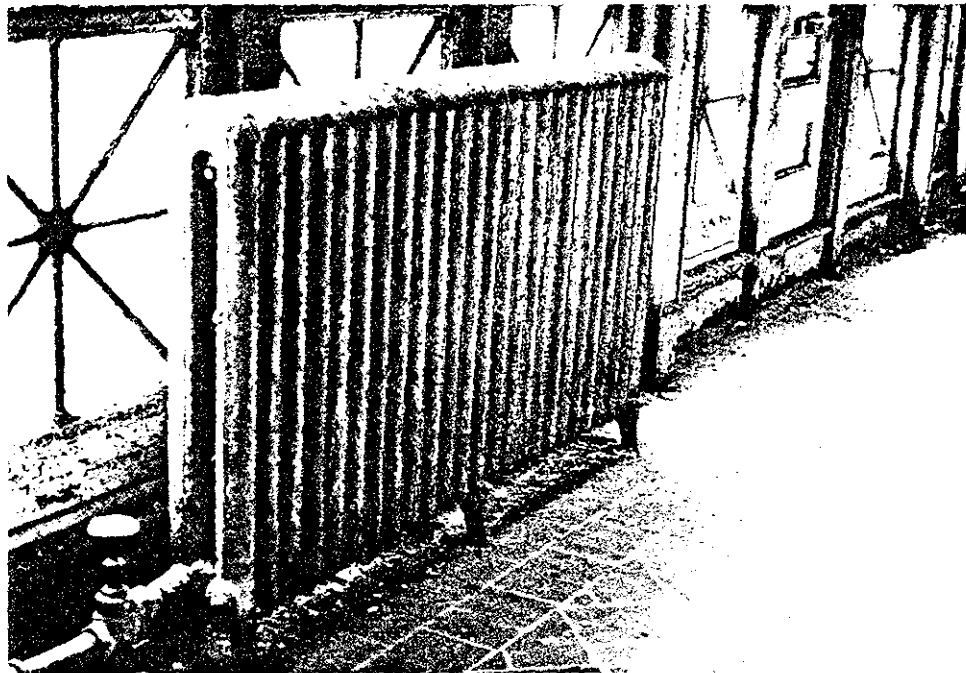
Air was drawn out of the building at the roof level via metal ducts and vent shafts located directly adjacent to the fresh air supply by large electric motor powered exhaust fans located just below roof level.

The steam radiation system was altered and expanded with the additions of the Railroad Ticket Office and the third floors of the east and west wings. In addition, there was continual maintenance including replacement of piping, traps, nipples, etc., so that little of the existing piping is original. The existing radiators, however, are those installed when the building was constructed.

The ventilation system was upgraded in 1908 to provide air change within the rooms every five minutes. The normal rate was three to five air changes per hour.⁵¹ Only a small portion of the brick-walled duct system remains in the east end of the basement. All other walls, the fans, motors, heating coils and dampers have been removed. Many of the metal ducts can be located in the ceiling of the basement but have been blocked on the upper floors. The main supply and exhaust shafts still exist, but they, too, have been blocked off; three at the basement ceiling and all at the upper floor levels. The large exhaust fans are extant but are severely corroded and inoperable.



Roof ventilators.



Original sectional cast iron steam radiator.

3. Electrical System

Installation of the electrical system for the Main Building was completed November 30, 1900 by the New York Electric Equipment Company, and included all "electrical wiring for light, power, telephones, call bells and other signals."⁵²

Like the heating and ventilating system, the electrical system of the Main Building has undergone numerous and frequent repairs and alterations. The original functioning of the system, therefore, has been pieced together from the remaining parts.

The electrical system operated on direct current produced by steam turbine generators located in the Powerhouse. The power was fed from the generator room of the Powerhouse and from there distributed to the various buildings on the island. The original capacity of the generating plant consisted of two 100kw and three 75kw units for a total capacity of 425kw, at a nominal rating of 240 volts DC.

In the early 1900's, the generating plant was upgraded by the replacement of the three 75kw units with two 125kw and one 300kw units, for a total capacity of 750kw at 240 volts DC. At the same time, a new switchboard was installed to handle the existing and the additional capacity.

Sometime later, additional motor generators were installed with DC motors driving AC generators. Switchgear was installed to distribute the AC power to selected locations on the island. Total plant capacity was not increased, however, since the new motor-generator sets were merely conversion devices operating from the steam turbine produced DC power.

Power distribution was accomplished via copper conductors installed in galvanized or black enamel steel conduits. Power for the Main Building was run through conduits from the Powerhouse through the ceiling of the passageway adjacent to the east side of the Bakery and Carpentry

Shop to the northwest corner of the Kitchen and Laundry. From this point, the feeders drop down into the basement of the Kitchen and Laundry Building and into the basement of the Main Building.

The basement of the Main Building contained a main distribution panel at the west end and two subdistribution panels, one at the east and west ends of the building. Power was distributed to the lighting panels on the upper floors via chases in the walls. The main and subdistribution panels contained fused, knife-blade switches as did the original oak-cabinetted lighting panels on the upper floors. The lighting panels now contain a combination of fused snap switches and circuit breakers.⁵³

The entire Main Building was rewired in 1913; in 1924 new light fixtures were installed in the balcony dormitories; in 1932 alterations and additions were made to the lighting system for the new Record Room and new fixtures were installed on the second and third floors. New glass steel diffuser type fixtures were installed in 1936 in the ceiling of the Record Room and new corridor fixtures installed on the second floor. The three chandeliers in the Registry Hall were rewired in 1937 and chain supports were added to 158 ceiling fixtures previously hung by electric wire a year later. At the same time, a fixture in the Treasurer's Office was replaced with three new fixtures. The specifications read:

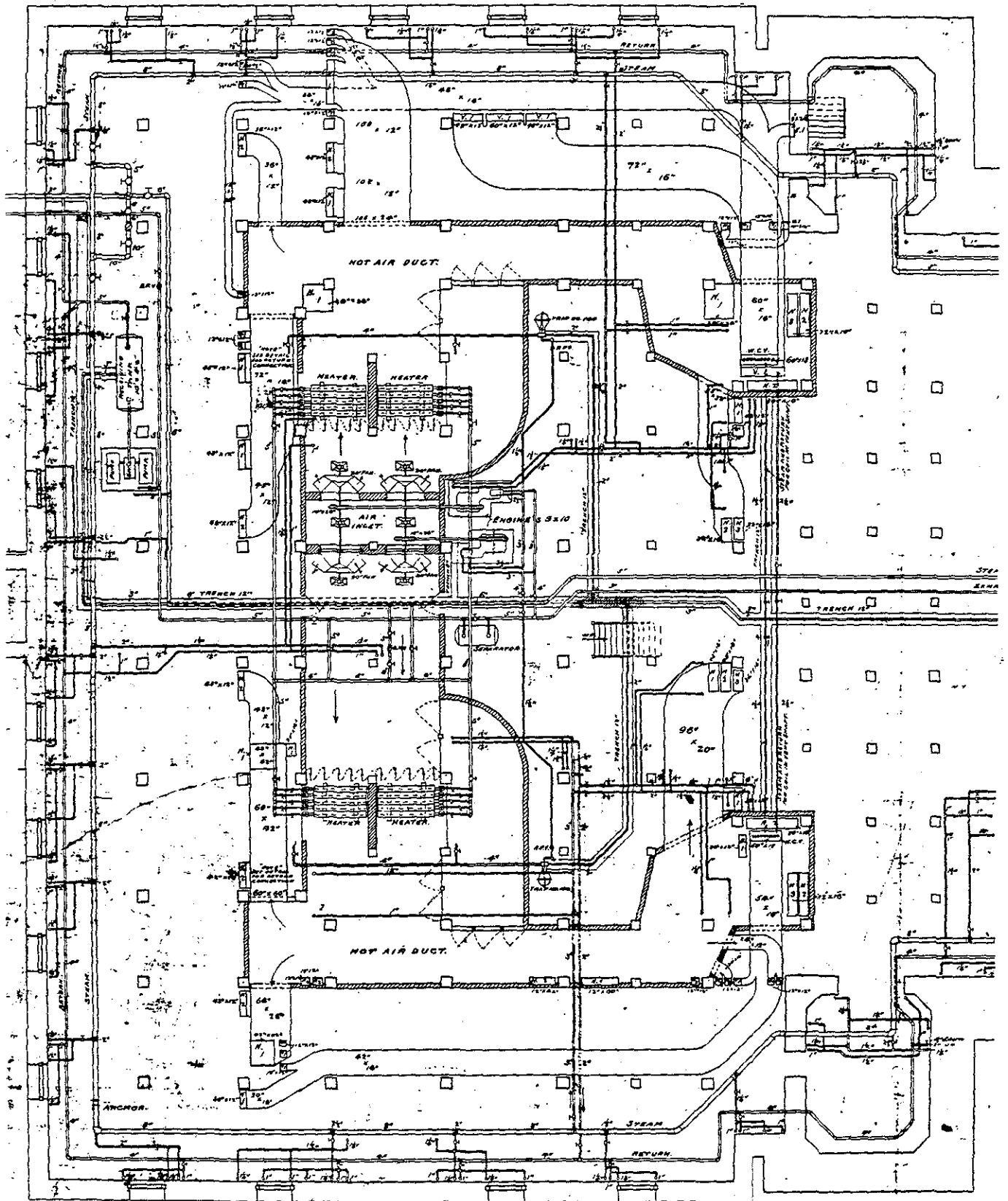
The fixture shall duplicate in every way the ceiling fixtures in the Treasurers General Office. . . are chair suspended fixtures with celestialite globes #5920, 16 inch diameter with 8 inch fitter, intend for use with 300 w lamps. Each fixture to have a 3 ampere 250 volt pull chain canopy switch installed which shall be provided with a linen cord to hand to 6'-6" above the floor.⁵⁴

In 1938 as well, new fixtures were installed on the first floor southeast corner of the Main Building. Fixtures were to be RLM type with blue daylight globes.

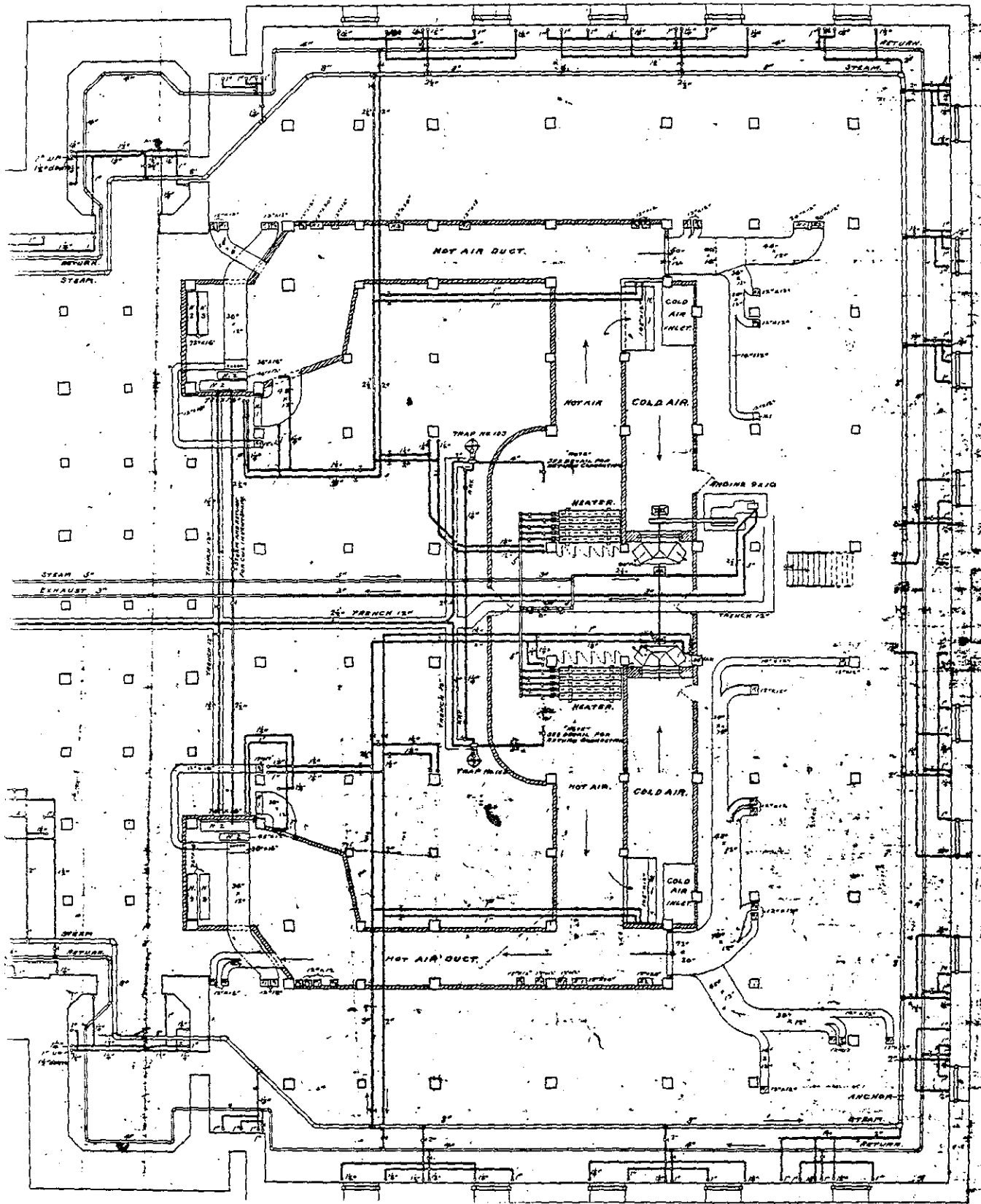
In light of these numerous changes and the fact that no drawings or descriptions of the original features are available, it is somewhat

difficult to determine their configuration. There are presently numerous DC ceiling mounted pendant fixtures in the building with 230 watt incandescent lamps and translucent glass diffusers, metal shades, or wire covers. Some of these may be original. Costs are given in the original electrical proposal (Appendix H, Unrau) for ceiling mounted fixtures, wall and floor receptacles and desk outlet circuit connections. This would seem to indicate that lighting consisted mainly of ceiling mounted fixtures with some supplemental desk and floor lamps. Early photographs (c. 1900) show desk mounted pendant fixtures with two part glass shades in the Registry Hall. Drawings of the Registry Hall chandeliers dated 1917 indicate that the existing fixtures are original.

In addition to the interior lighting fixtures, scroll shaped wrought iron fixtures were mounted over the exterior entrance doors of the building. Installation date is unknown.



Partial Basement Plan - East, Heating and Ventilating, Basement Plan, William J. Baldwin, M.E., September 1, 1899. NPS Drawing No. 41.962:11.



Partial Basement Plan - West, Heating and Ventilating, Basement Plan, William J. Baldwin, M.E., September 1, 1899. NPS Drawing No. 41.962:11.

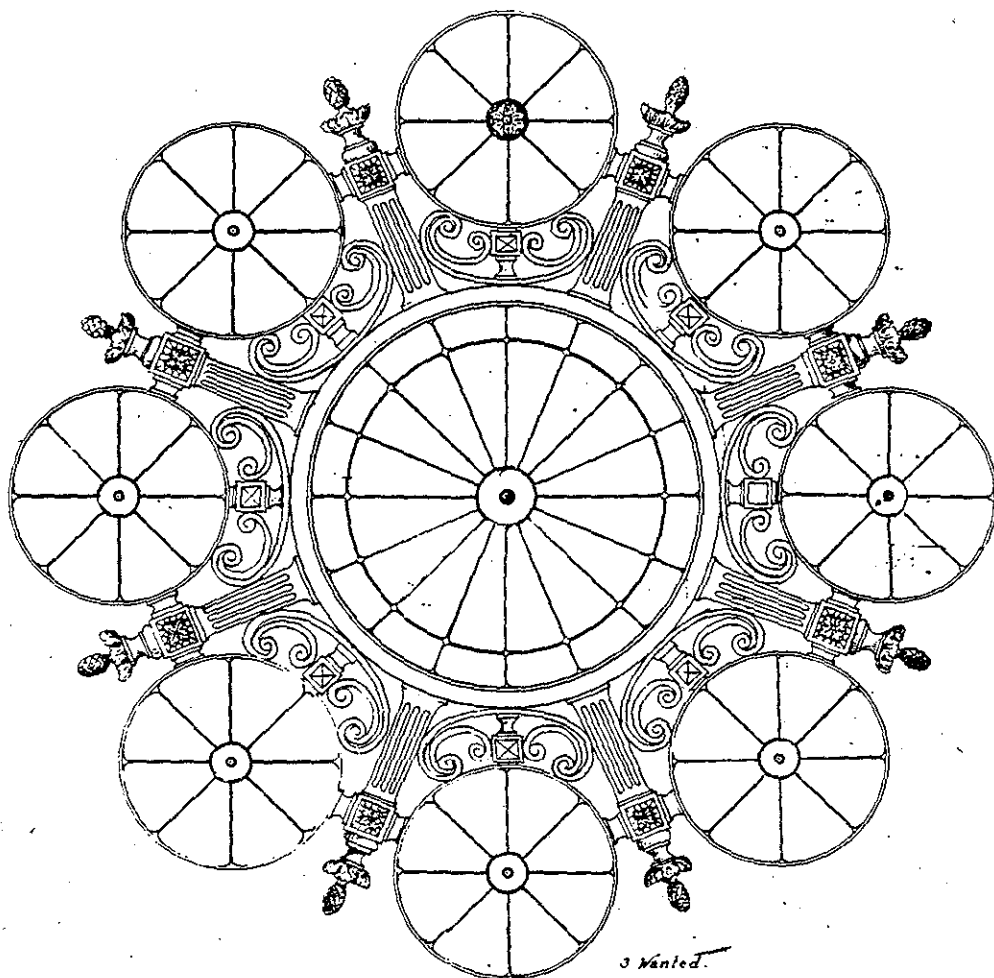
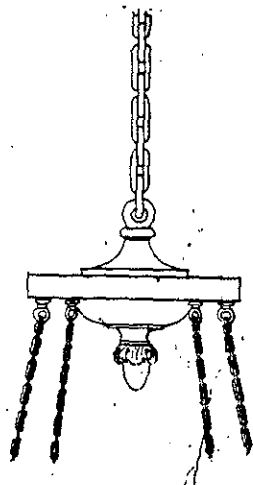
4. Elevators

A freight elevator was installed in the stairwell of the Northeast Tower in April, 1901. Supplied and installed by the Otis Elevator Company, it was designed to lift a maximum load of 2500 pounds at a rate of 125 feet per minute. The original specifications have been lost,⁵⁵ but it appears to have been powered by a worm-gear electric traction machine.⁵⁶ Nelson S. Thompson, author of Mechanical Equipment of Federal Buildings, noted in 1912 that

The worm-gear traction type of elevator possesses many points of superiority over the /single or double-screw/ drum machines, among the most important being the feature of the design which prevents the over-running of the car or counterweight beyond a predetermined limit of travel; the absence of side leading of cables; the use of ball bearing shackles on all rope hitches, preventing torsional strain on cables; and the use of oil or spring buffers under both the car and counterweights.⁵⁷

The car was described by the Elevator Inspector as being "built with the lower portion of bronzed grill work, 1-1/2" strips, 5/8" mesh, the upper portion of 3/8" flat strips on edge except where they cross, and on 2-1/8" centers."⁵⁸

When the third floor was added to the Special Inquiry section on the west wing, funds were included for the installation of a passenger elevator in the Southwest Tower. According to the Commissioner of Immigration, "Witnesses, applicants for interviews, visitors and employees are constantly passing up and down. When the board rooms are established on the third floor, it will involve a climb of eight flights of steps, much confusion and considerable hardship."⁵⁹ Little has been recorded about the construction of this elevator, other than the fact that a twenty horsepower electric motor powered the lift and work was completed in December of 1910.⁶⁰ In 1934, however, a new motor was installed, reportedly a "compound-wound, 220 volts, direct current, two speed type" and capable of lifting an average load of 2500 pounds at a speed of 250 feet per minute.⁶¹



482/11/967
Sheet 4 of 4
Lighting Fixtures
Fred Schaeffer
and Associates
By D. D. 222

3 Wanted.

D. D. 222

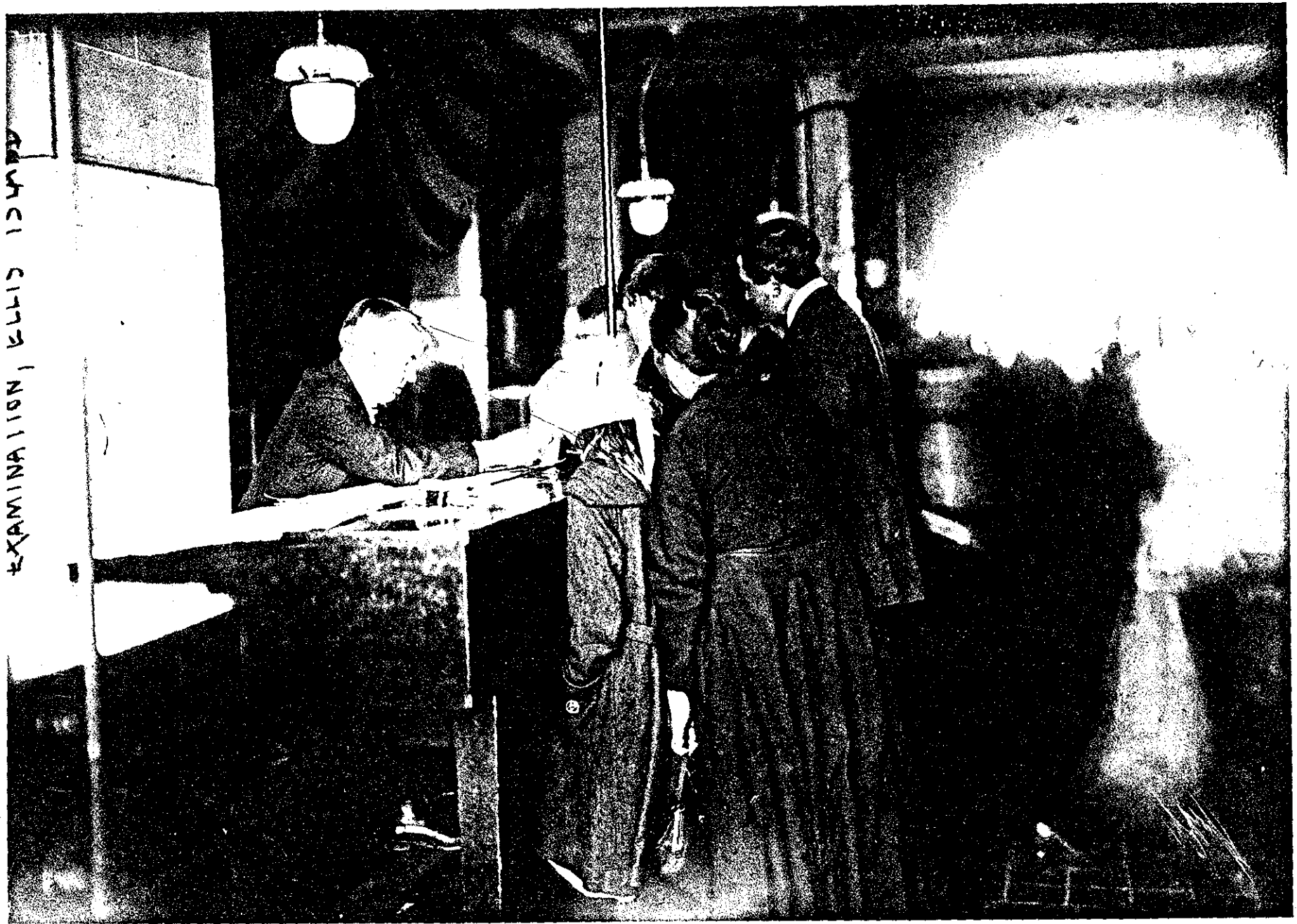
U.S. DEPARTMENT OF AGRICULTURE
BUREAU OF PLANT INDUSTRY
WASHINGTON, D.C.

DETAIL OF LIGHTING FIXTURES
SCALE 3"=1"

ALFRED MOORE & CO.
DESIGNED BY ALFRED MOORE & CO.
NEW YORK, N.Y.

Registry Room Chandeliers, 1917. (NPS, Denver Service Center).

EXAMINATION, ELLIS ISLAND



Early photograph of the Registry Hall taken sometime after 1918, showing desk mounted light fixtures. (Library of Congress, Prints and Photographs Division, Washington, D.C.).

By 1931, there apparently were two additional elevators in the Main Building. These are noted as a "Self-service car, East End" and a "One-Story Freight Car--basement to first floor, East End."⁶² It is not clear exactly where these were located.

5. Interior Finishes

Sanitation and maintenance were the two primary considerations in selecting interior finishes for the public spaces of the Immigration Station. The New York Tribune published the following description shortly after the building opened:

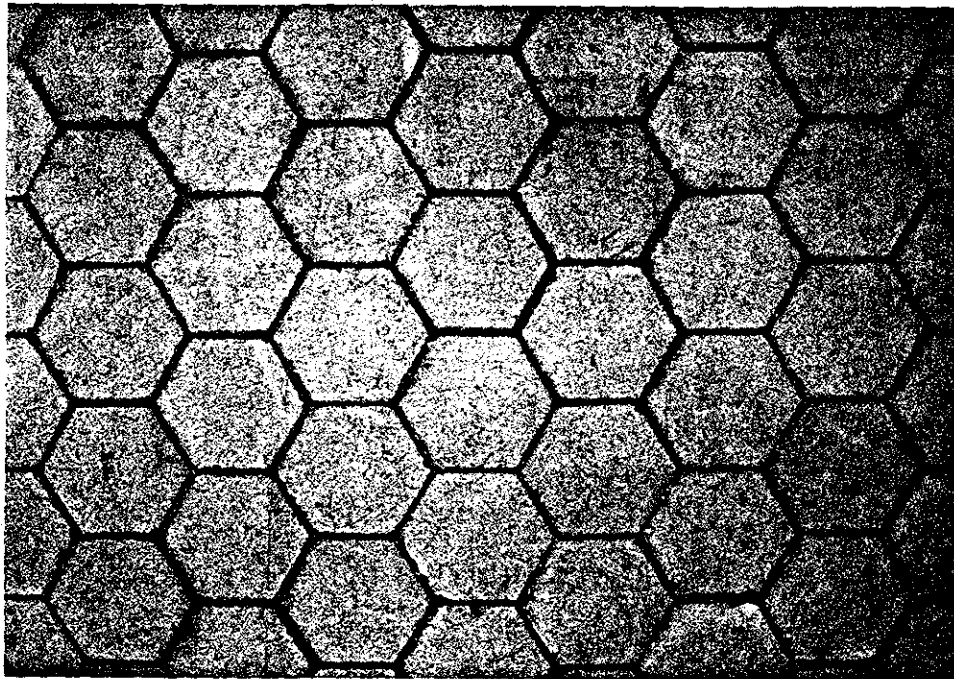
The floors are of asphalt, with raised edges around the walls, so that they can be thoroughly cleansed with water. The walls for seven feet above the floors are of Keene Cement.⁶³ Above this, they are of white, hard-surfaced plaster. There are no corners where a hose may not be turned. The white walls and the dark green trimmings are refreshing in their suggestions of cleanliness.⁶⁴

In the less-travelled sections of the building, more conventional finishes were used. Marble floors, partitions and wainscoting were used in private bathrooms⁶⁵ and slate was used for partitions and wainscoting in more public washrooms,⁶⁶ with nickel-plated faucets, legs and flush pipes in all.⁶⁷ The tower stairs also had black slate treads and landings. Hardwood flooring was used in Special Inquiry rooms and private offices.⁶⁸

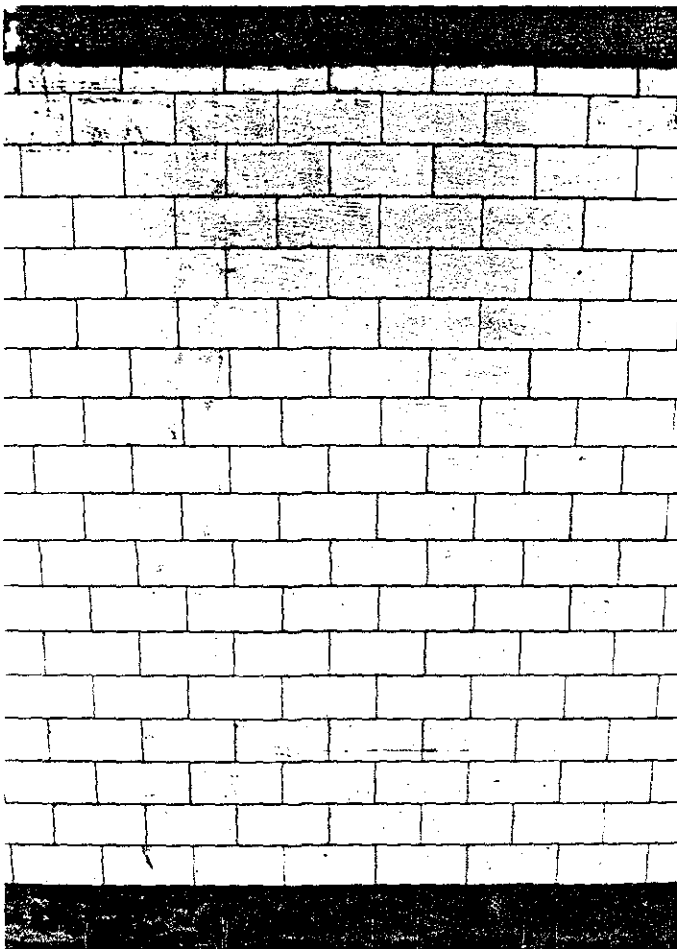
The initially bright finishes of the public spaces soon became worn as a consequence of the stringent sanitary procedures and the constant stress of immigrant feet. A visitor to the Station in 1905 marvelled at the fact that the building was "cleaned from roof to cellar every two hours" by flooding the floors and walls with "hot water and carbolic /acid/ from a hose,"⁶⁹ but Commissioner Watchorn declared in 1907 that "the use of cement floors and dado have proven entirely unsatisfactory, both as regards durability, cleanliness and wholesale appearance."⁷⁰ Therefore, beginning in 1904, appropriations were made for "reporcilating dadoes." Two-inch hexagonal vitreous white tiles for flooring and six-by-three inch white enameled tile were installed in the upper story dormitory space in 1908, the new story of the west wing in 1911, the southeast end of the first floor in 1911, the enlarged Information Room

in 1911, the New York Room in 1913, and the first floor rooms of the Medical Division in 1916.⁷¹ In the first floor Baggage Room, two inch hexagonal, buff-colored "Grueby" tiles were used. A writer commented in 1907 that

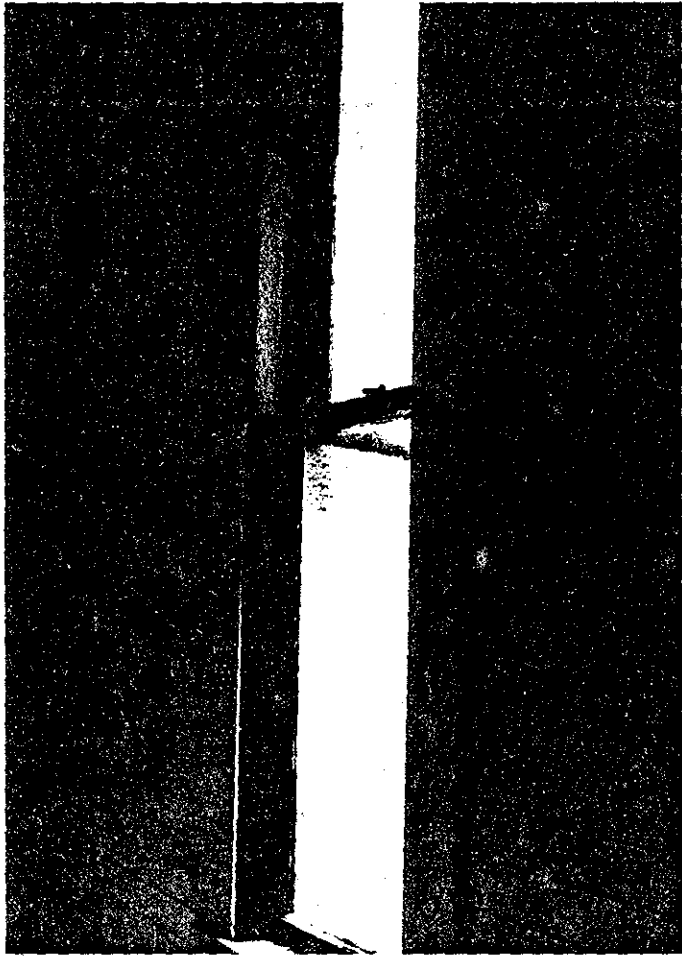
Ellis Island is undergoing a most radical and striking transformation. If you had ever stood in one of the great, gloomy, ill-smelling barracks where hundreds of immigrants used to be housed together, you would appreciate the significance of the wonderful immaculate white-tiled rooms which are taking their places.⁷²



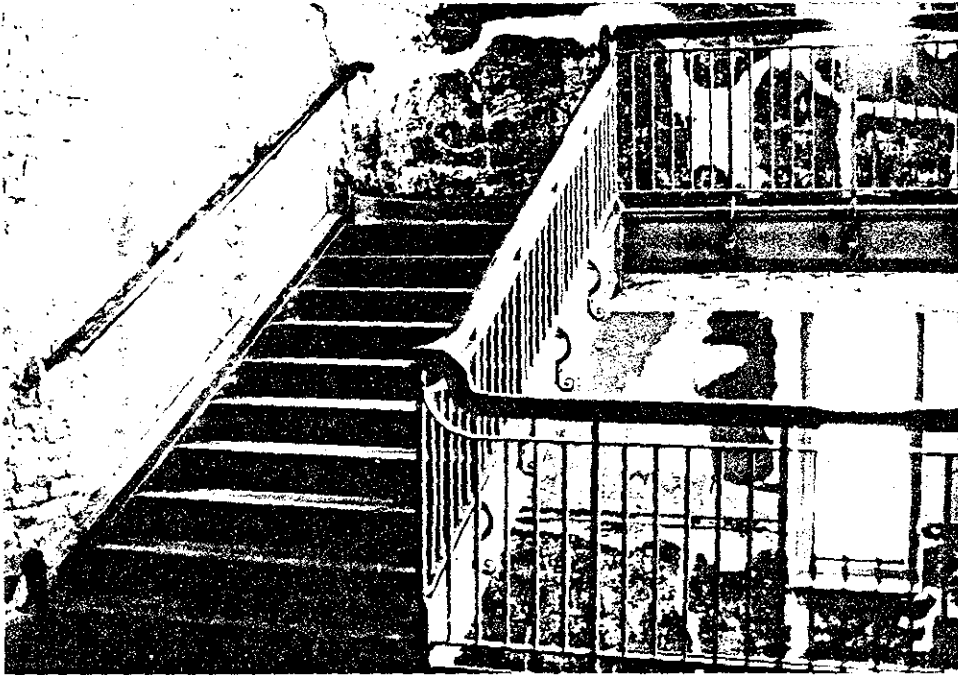
Two inch buff-glazed hexagonal tile, first floor Baggage Room.



Six by three inch white enameled tile wainscoting.



White enameled frame covers
in second floor bathroom.



Stairwell, with
slate treads and
landing and steel
balustrade.



First floor bathroom.



Detail of toilet stalls.



Detail of wash basins.

6. Guastavino Vaults

On July 30, 1916, German saboteurs set off a series of explosions at Black Tom Wharf, located on the Jersey shore a mile from Ellis Island. Flaming barges drifted to the Island, where tugboats pulled them away from the breakwater just before they exploded. All buildings on the Island sustained damaged, ranging from windows and doors ripped off their hinges to cracked walls and ceilings.

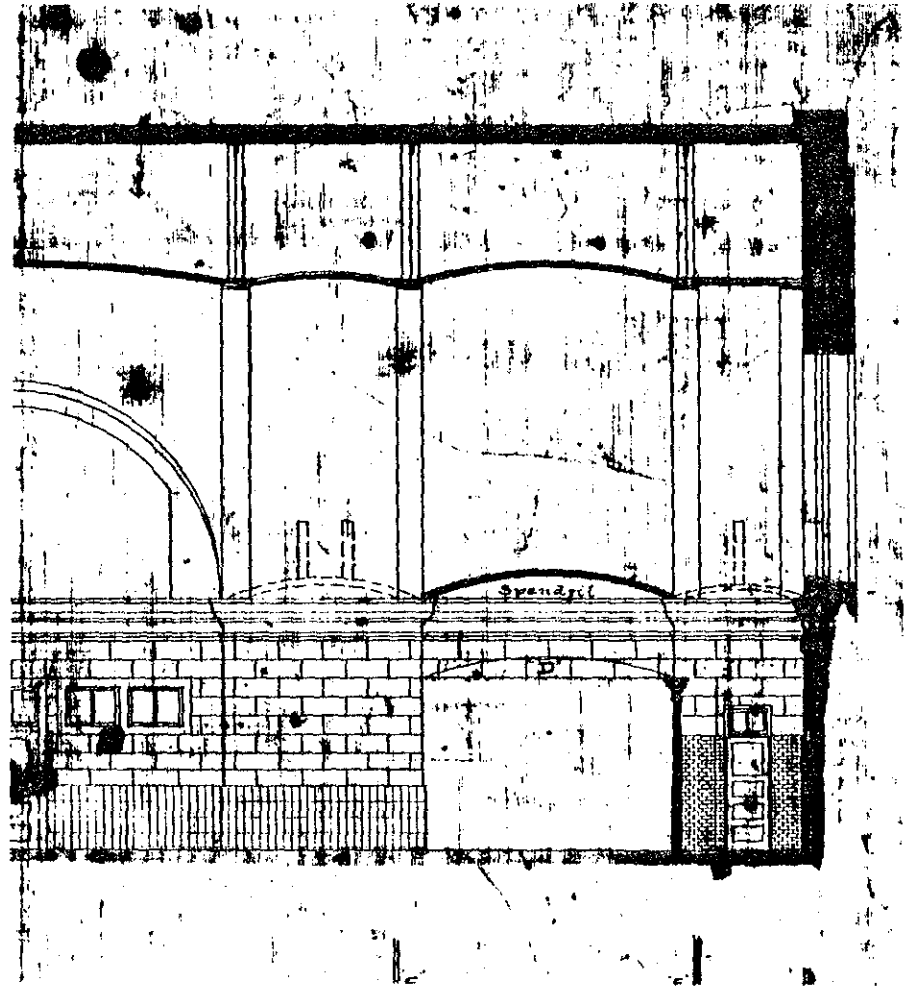
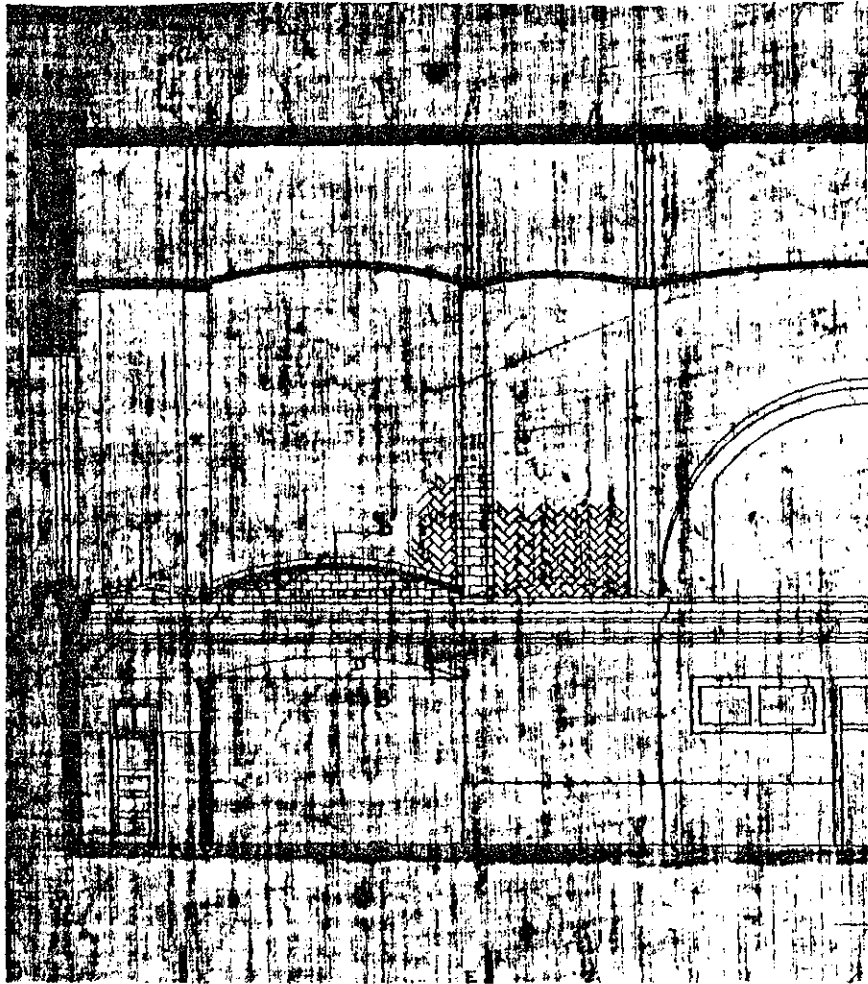
An explosion only five years earlier had also caused extensive damage to the Main Building. Newspaper accounts related that it looked "as if it had been bombarded," that nearly all windows were blown in and "many cracks in the /northern/ wall testify to the strain put upon them."⁷³ When the 1916 explosion made it necessary to replace the registry room ceiling, administration officials therefore specified the light, strong, fireproof and economical Guastavino tile system.

Raphael Guastavino, and his son of the same name, developed this system of thin masonry vaulting from traditional construction in their native Barcelona. They brought the technique to the United States in the 1880's, where it soon became popular for spanning the large spaces of Beaux Arts monuments such as the Boston Public Library (1888-95), the Cathedral of St. John the Divine (1892-1911) and Mt. Sinai Hospital (1904) in New York. The vaults consisted of "broad thin terra cotta tiles that are laid 'flat' with the curve of the vault, usually in two or more layers," the layers being laid at right angles to one another.⁷⁴ Plaster of paris was usually employed for the first, or soffit course, since its rapid setting put the system almost immediately into compression. The subsequent layers were laid in portland cement, so thickly bedded that the mortar comprised nearly fifty percent of the total volume. The resulting vault acted as a continuous, thin shell which, through the slight curvature of the tiles, was nearly self-supporting. It needed far fewer supports than conventional masonry vaulting, and usually could be erected without expensive and time-consuming falsework.⁷⁵

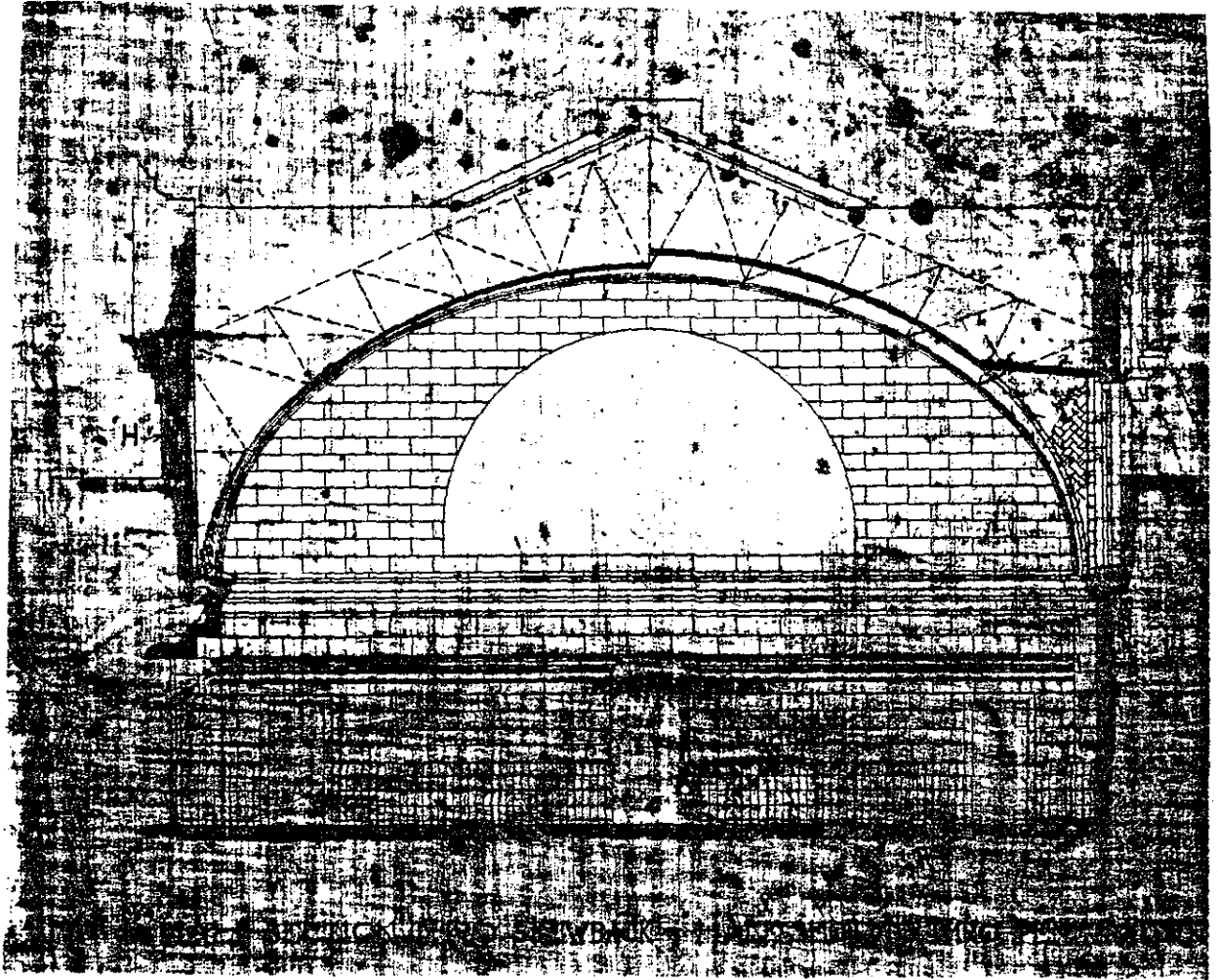
According to specifications prepared in 1917, the Registry Room was to be "constructed of the reinforced timbrel tile vault from the spring line of the existing trusses forming a continuous barrel vault with penetrations at windows."⁷⁶ Three layers of buff-glazed one inch thick tile were laid up with plaster of paris and portland cement mortars in a herringbone pattern. The vault was divided by ribs covered with lateral coursing where the ten existing steel trusses were located. Similar ribs ran perpendicular to the haunches of the vaults at the spring line in order to provide additional stiffening.

At the same time, changes were made in surrounding finishes of the Registry Room. The original asphalt floor, "badly worn" after use by "great masses of filthy people,"⁷⁷ was replaced with red quarry tile whose herringbone pattern matched the vaulting above. The side walls at balcony level were to be covered with a four foot wainscot of "six by twelve inch round edge Guastavino flazed tile with a sanitary base, cove corners and bull nose edges at all projections," according to the specifications.⁷⁸ The wall is now covered with white enameled tiles, and it is not clear whether this reflects a change in the specifications, or whether the existing tile dado referred to in the specifications was left in place.

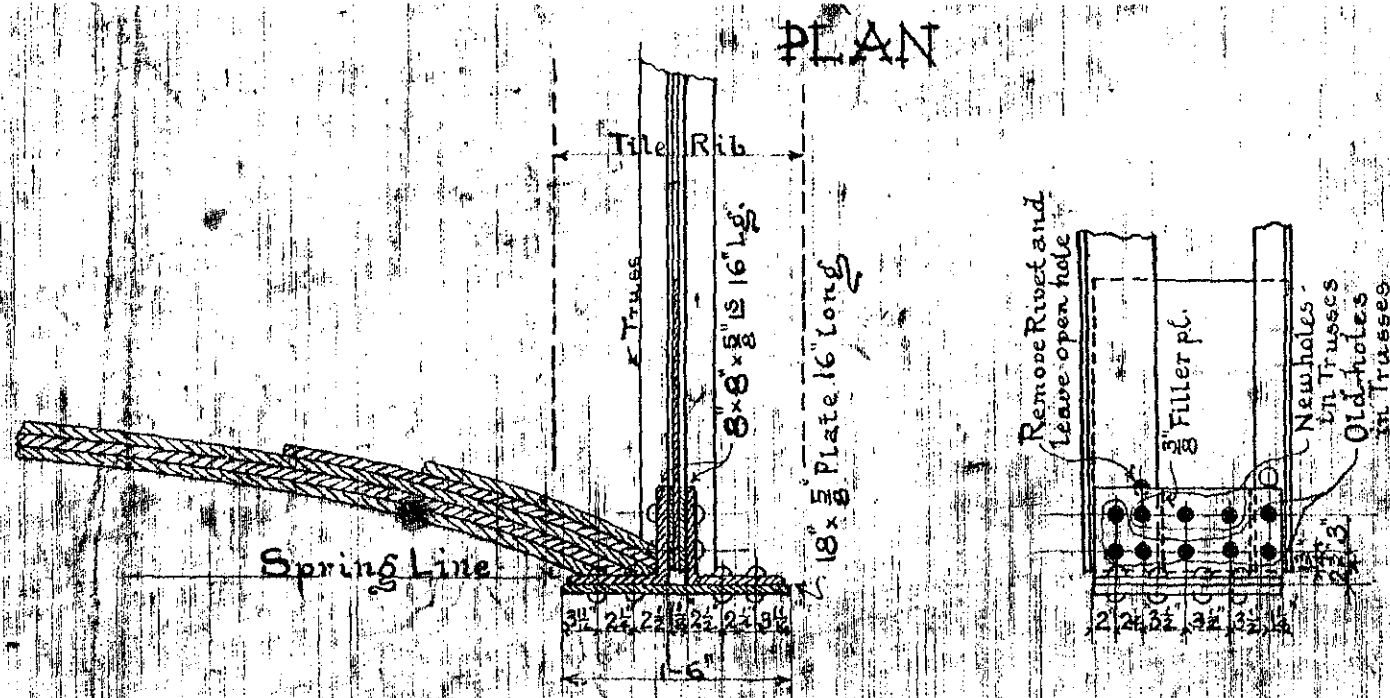
From the top of the tile dado to the spring line of the arch, the wall was to be covered with "Artificial Caen Stone" or "Artificial Lime-stone." The brick and terra cotta surfaces were coated with a dampproof material and then two plaster coats consisting of sand, hydrated lime, and Keene's cement in varying proportions, with goat and cattle hair added for tensile strength. The finish coat was to consist of "'Monarque Brand'. . . artificial caen stone, with an alternate for. . . artificial limestone,"⁷⁹ scored with three-sixteenths-inch joints in one-by-two foot sections. The surface was roughened with emery paper to produce a stone-like texture, and joints were filled with Keene's cement, "evenly trimmed, leaving clean, unbroken arrises."⁸⁰



Longitudinal Section, Guastavino Vaulting. (NPS, Denver Service Center).



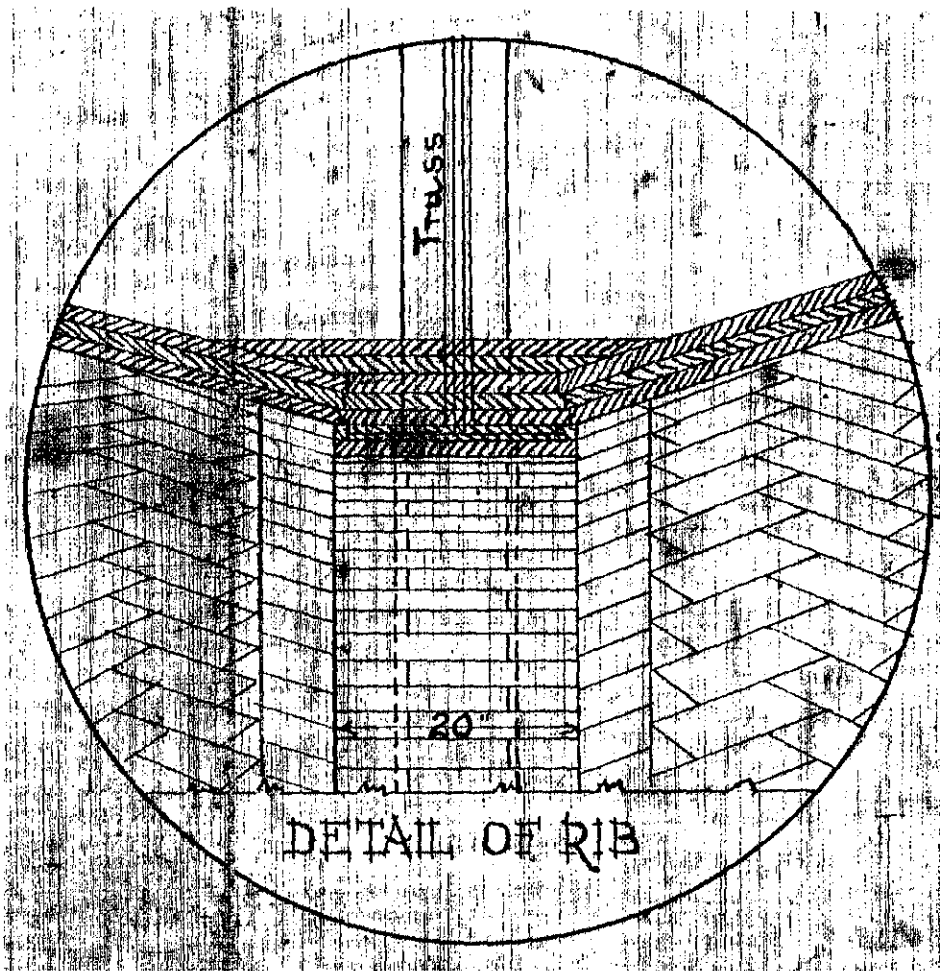
Transverse Section, Guastavino Vaulting (NPS, Denver Service Center).



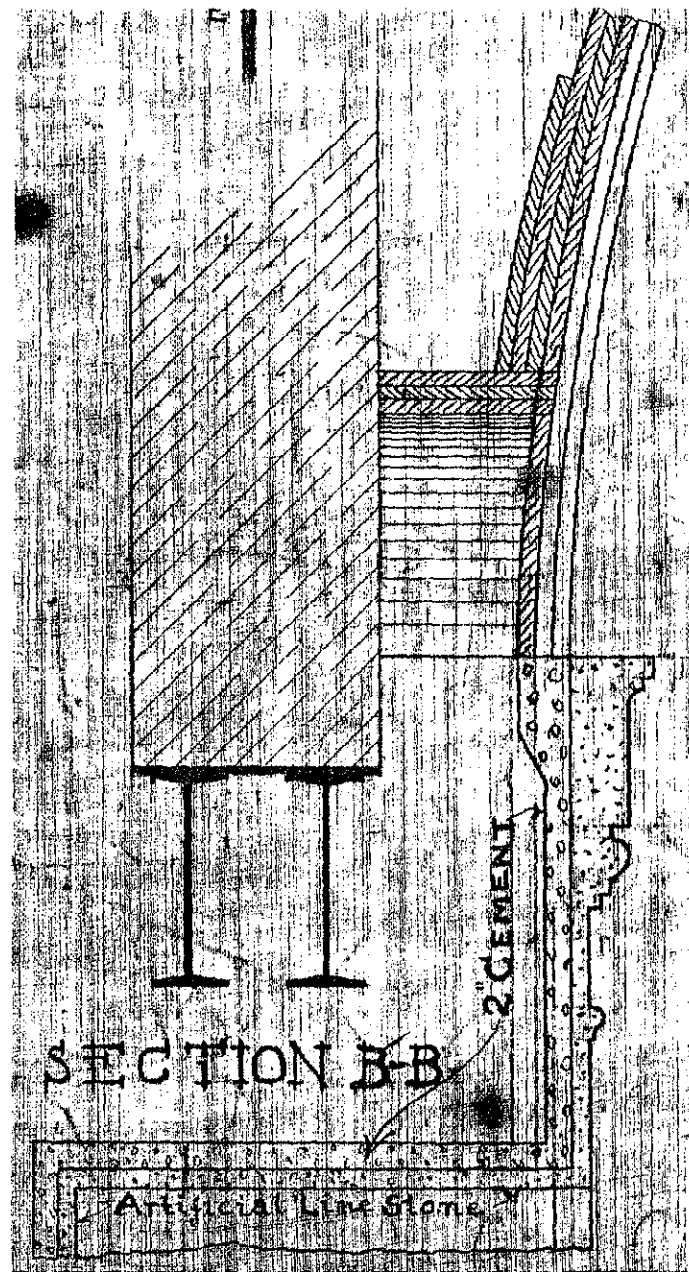
DETAILS AT TRUSSES



Details at Trusses, Guastavino Vaulting. (NPS, Denver Service Center).



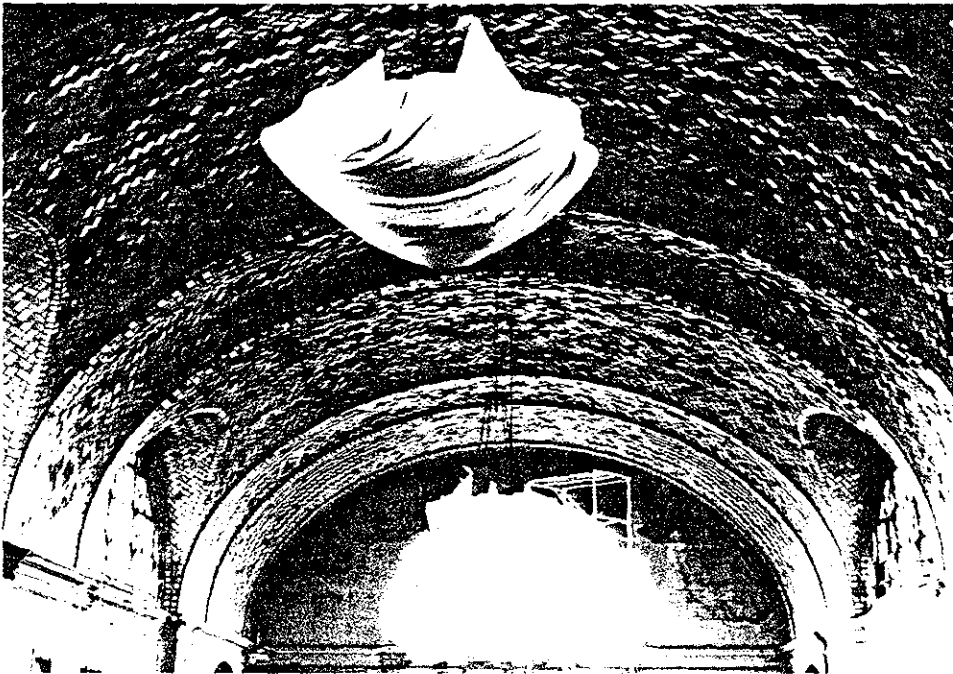
Detail of Rib. (NPS, Denver Service Center).



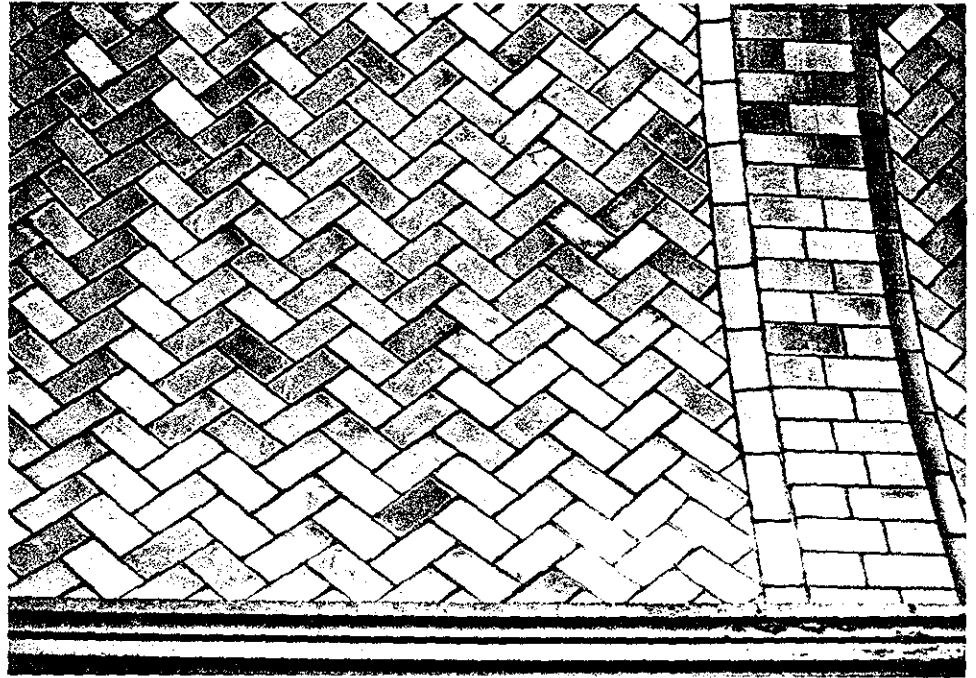
Section of Rib. (NPS, Denver Service Center).



Guastavino Vaults in
Registry Room.



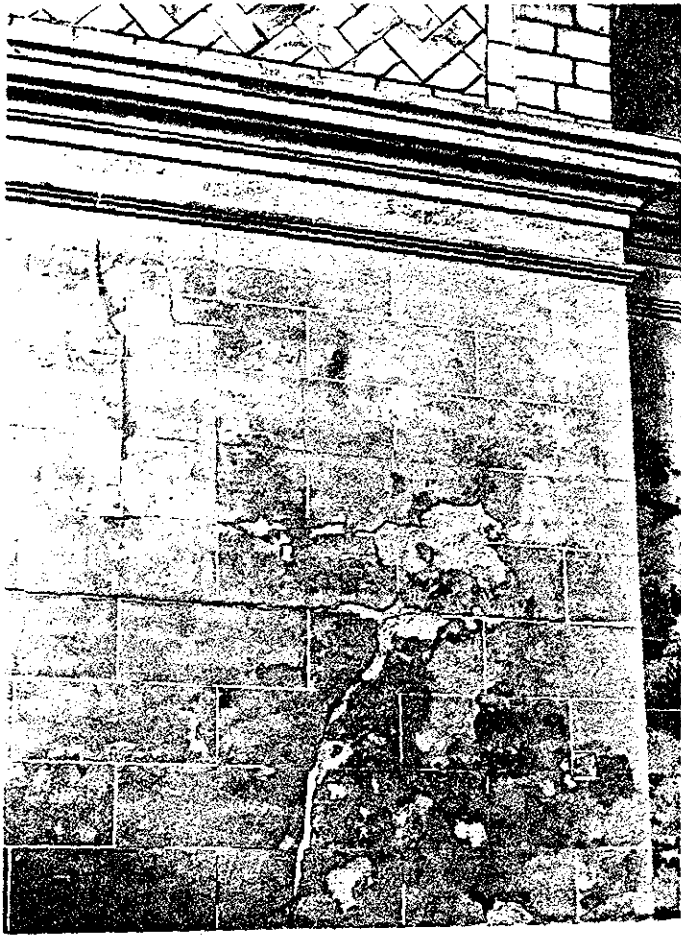
Guastavino Vaults
in Registry Room,
end view.



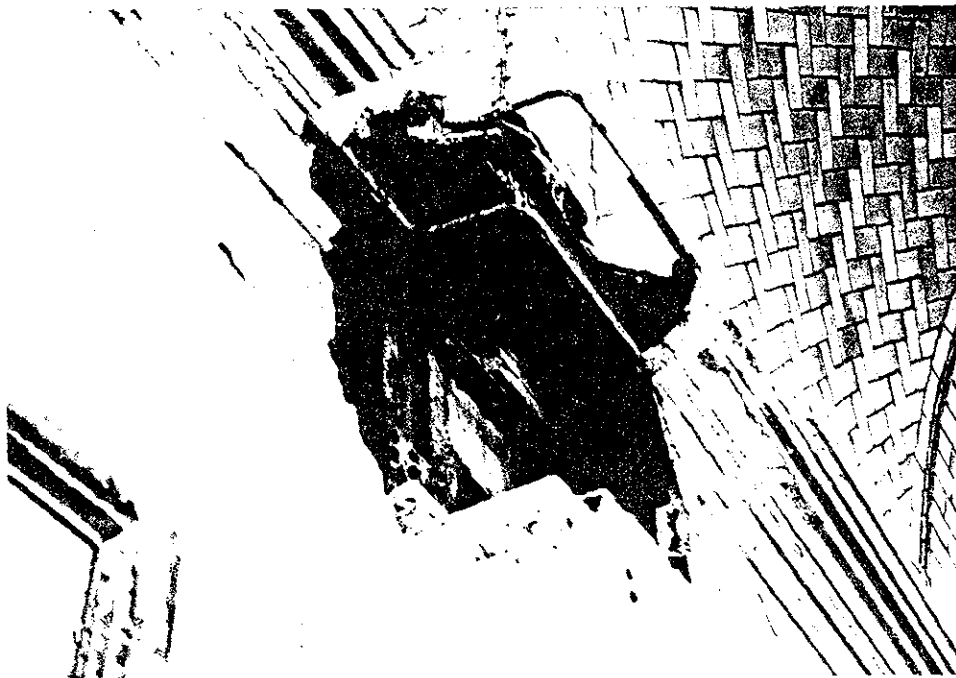
Detail of Guastavino Vaults, showing herringbone tiles and lateral coursing at ribs.



Quarry tile flooring in Registry Room matches pattern of ceiling vaults.



"Artificial Caen Stone" on
Registry Room walls.



Hole showing
structure at
springing point
of rib.

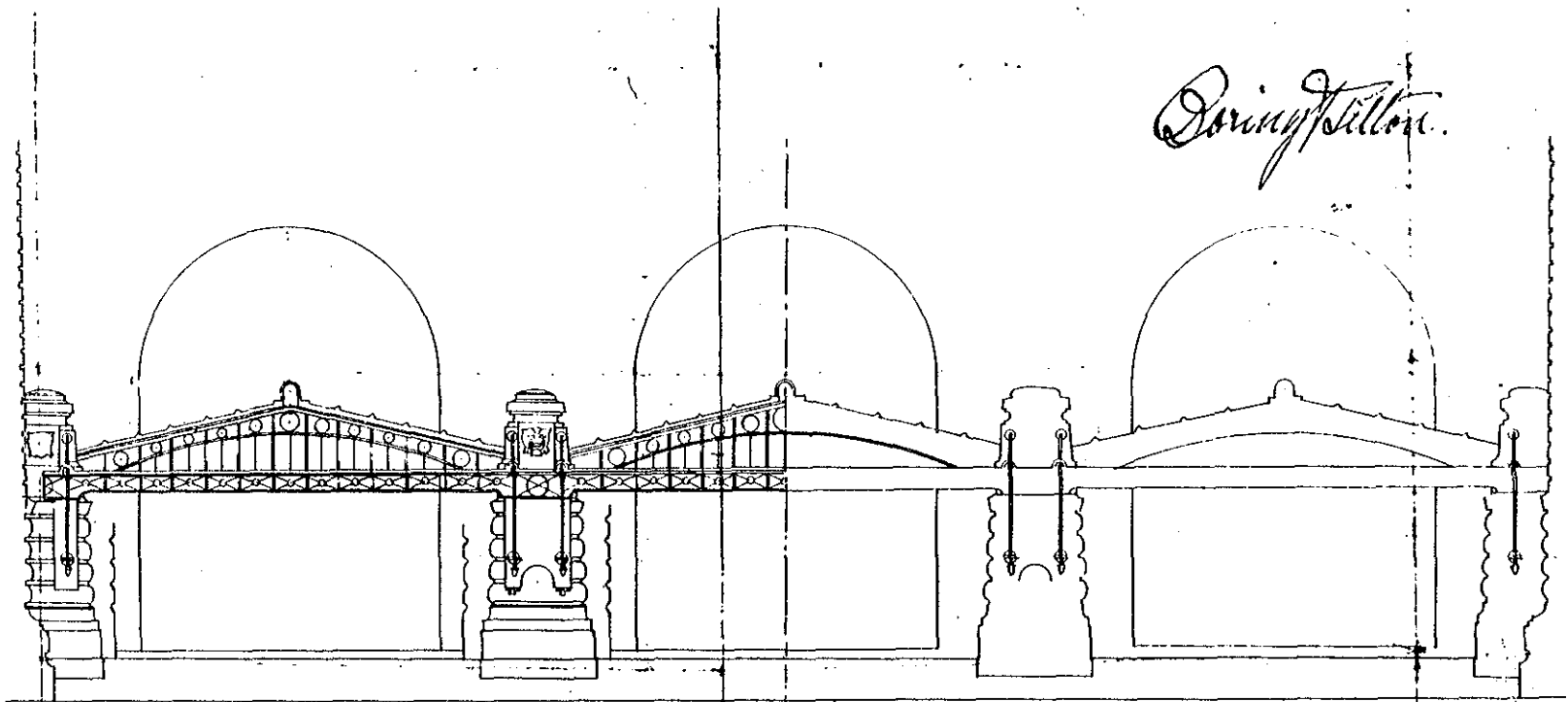
3. Development

a. Covered Walkway

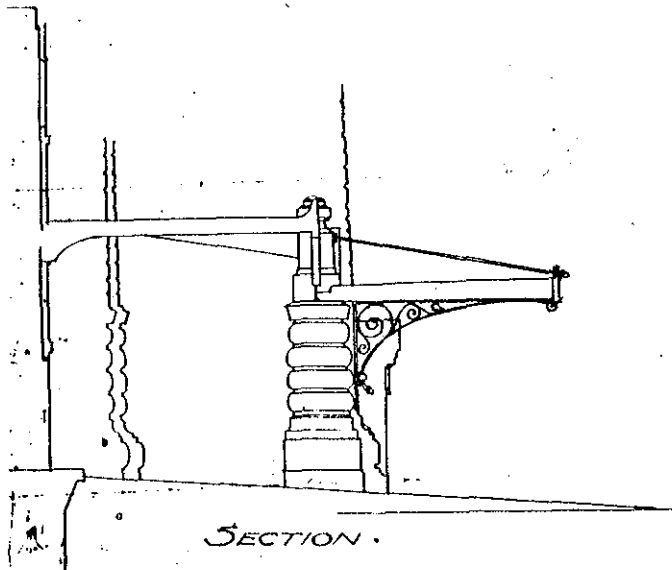
In the supplementary notes mailed to the competitors in October of 1897, the Supervising Architect had noted that "it is expected in the future to cover /the space between the main building and annexes/ with glass on the line between the annexes, but this enclosure--one story in height-- is on account of the limit of the appropriation, not be included in the designs submitted by the competitors."⁸¹ Drawings included in Boring and Tilton's 1898 construction documents and a rendering published in Inland Architect⁸² show three glass-and-iron-framed gable roofs which begin at the second floor balconies of the large arches and extend to the outer face of the towers. These roofs are supported on limestone piers which have quoining that echoes the bases of the towers and arches and sculptural animal heads near the top of the central piers.

Old plans and photographs of the demolished structure, however, indicate that substantial changes were made in the drawings around 1900. The copper roof had a shed form where it joined the second floor level of the central arches and then changed to three gable-roofed arcades extending toward the dock. The two side pavillions stepped just beyond the line of the towers, but the central one extended nearly as far as the wharf, offering greater protection to the disembarking passengers. Granite floors stepped up gradually from the dock to the level of the first floor, and columns were placed on high smooth granite pedestals in order to maintain a uniform height. In section, the framework presented a sort of triumphal arch motif, with two columns on either side of an elliptical arch supporting the gable. Details were academically classic, with fluted Ionic columns and acroteria along the eaves, and appear to have been standard foundry elements. Construction was begun in June, 1901 and completed in April, 1901. The New York Times called the finished walkway "the great attraction" of recent landscaping improvements.⁸³

Springfield

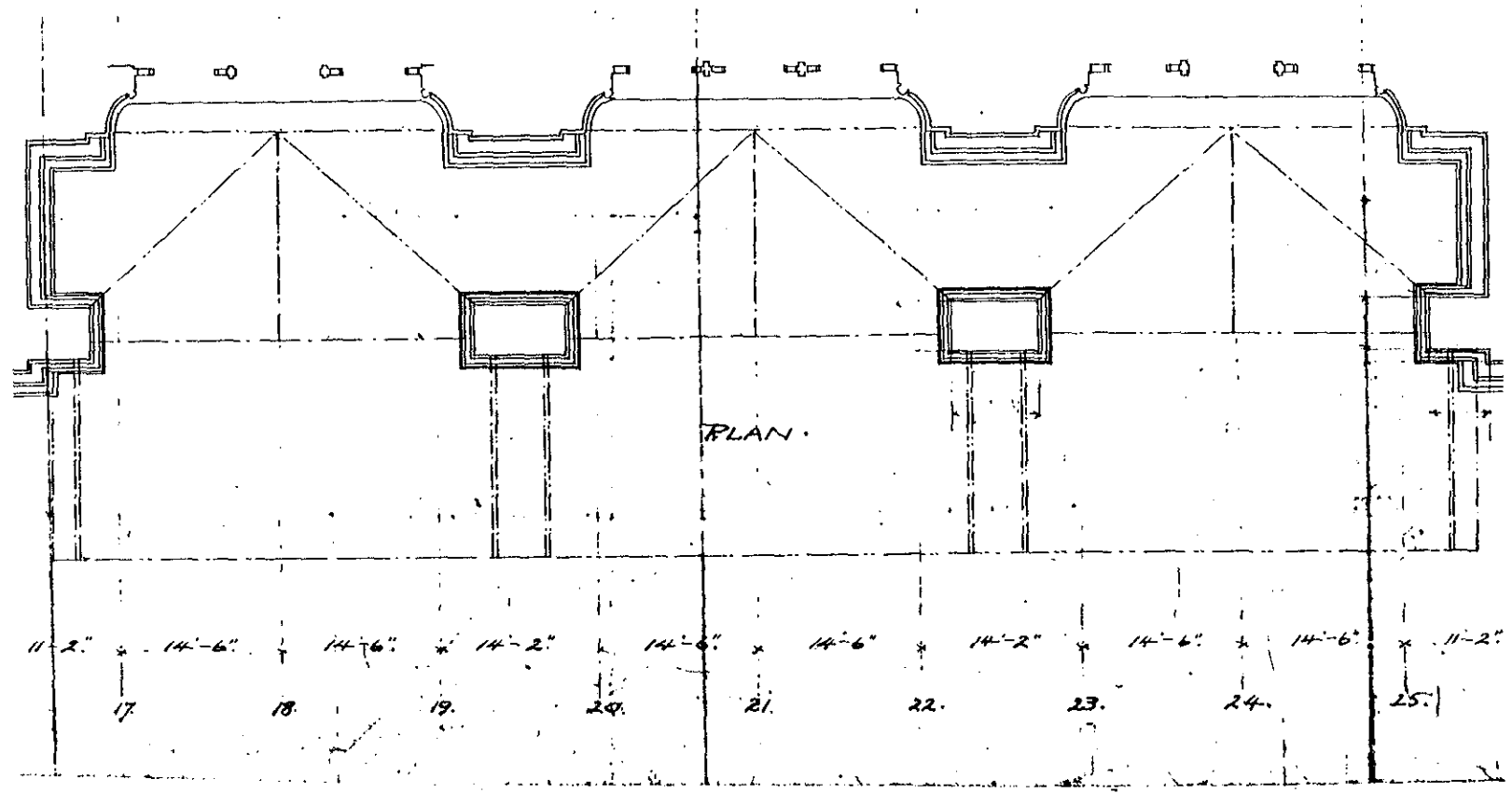


ELEVATION.

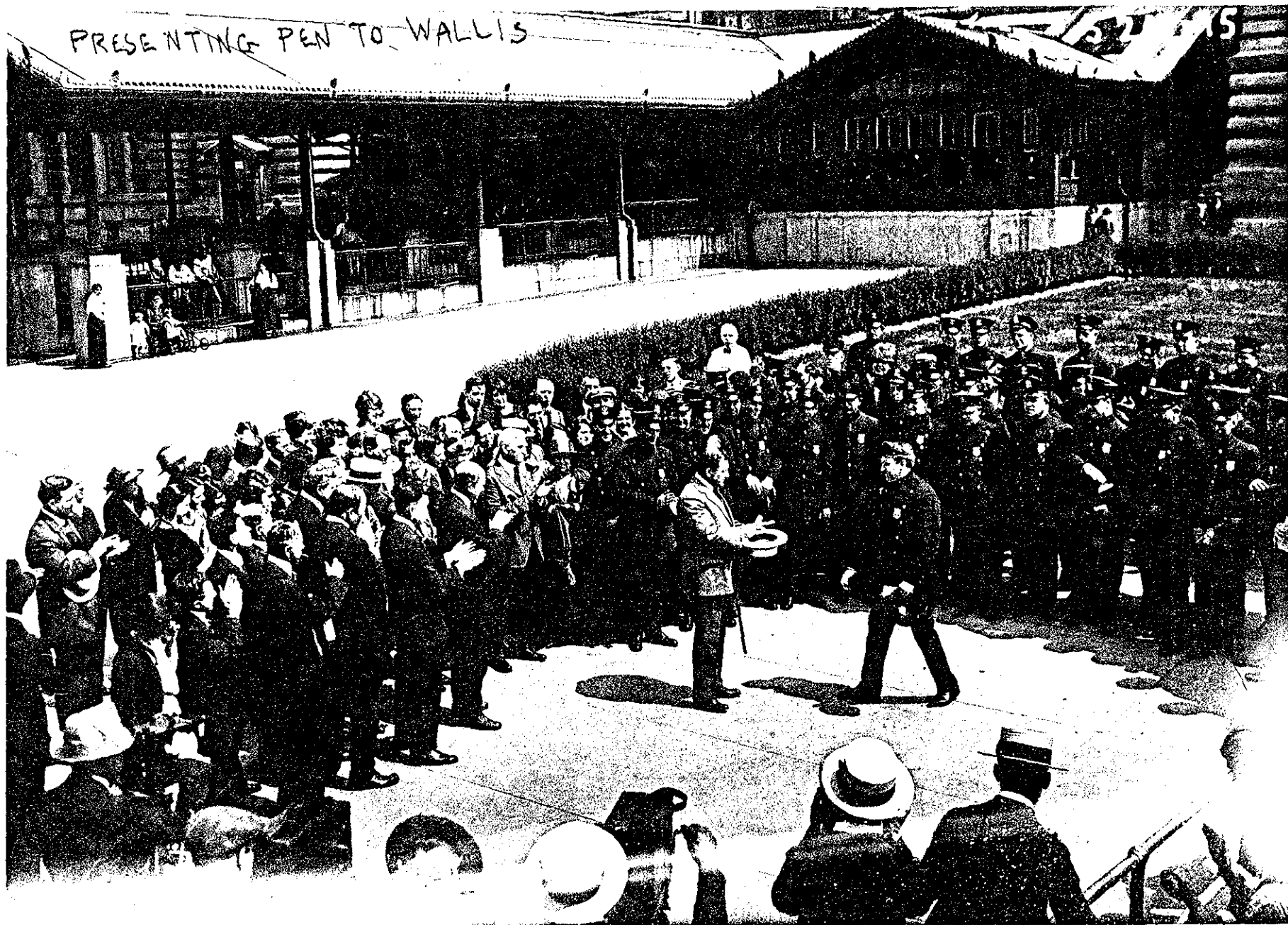


SECTION.

Elevation and Section Sketch of Covered Walkway, c. 1898. (NPS, Denver Service Center).

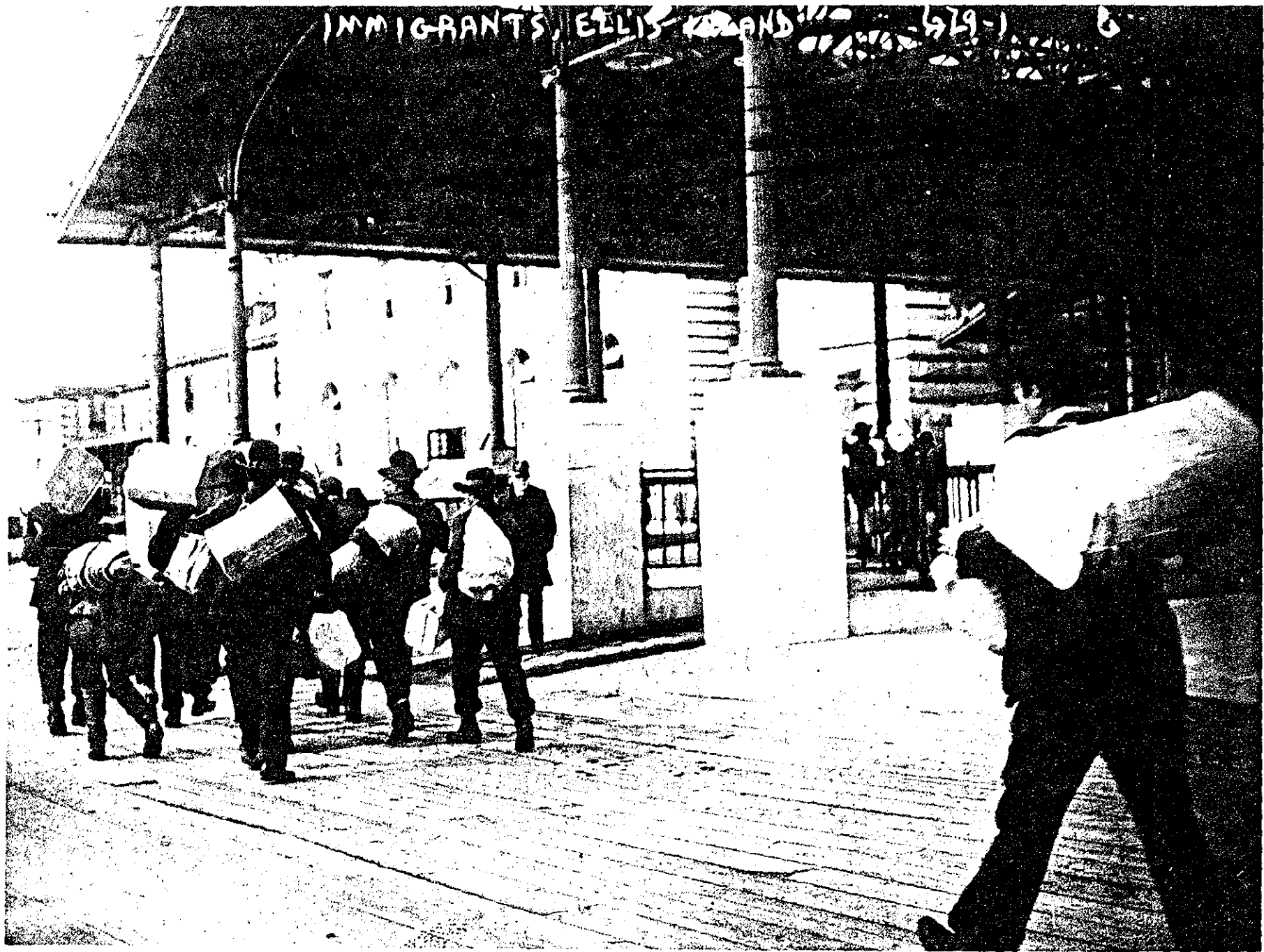


Plan of Covered Walkway, c. 1898. (NPS, Denver Service Center).



76

Covered walkway, c. 1920. (Library of Congress, Prints and Photographs Division, Washington, D.C.).



95

South end of covered walkway. (Library of Congress, Prints and Photographs Division, Washington, D.C.).



96

Interior view of covered walkway. (Library of Congress, Prints and Photographs Division, Washington, D.C.).

PART OF "1000 MARRIAGEABLE WOMEN OF 'EMERSON"



97

View of west wing, c. 1907 showing striped awnings on first and second floor windows. Extant awning hardware is documented in "Mechanical and Electrical Rehabilitation, Main Building, Ellis Island." (Library of Congress, Prints and Photographs Division, Washington, D.C.).

b. Railroad Ticket Office

As soon as the new Immigration Station was opened, it was apparent that the space was not adequate to handle the huge crowds. Harlan Unrau notes that

As early as 1902 Commissioner Williams had urged Congress to approve a special appropriation of \$370,000 for the extension of the two wings of the Main Building some 70 feet northward. The central portion of the structure was to be extended some 30 feet. The two wings would be connected across the north side by a steel, glass and copper construction similar in design to the porch on the south front of the building.⁸⁴

Approval was not given for the additions to the annexes, but in 1907, a one hundred foot deep "Railroad Room" was added along the north side of the central section. It has a granite base and brick walls with iron window bays and stone-trimmed lunettes mark the three gable roofs which recall those of the front porch.

In 1931, the roof was repaired and the existing, structural glass skylights were installed. Specifications for the work describe the construction as follows:

Glass for roof shall be what is known as #13 as manufactured by the Structural Glass Corporation. . . or equal, size 6-1/4" x 10-1/4" x 1" thick and made of hard pressed flint glass, prismatic type. . .

All glass units shall be set into a rustproof metal shield with mastic compound. Concrete ribs shall be doubly reinforced by 3/8" deformed iron rods and shall be spaced 8" and 12" respectively, center to center, with concrete mixed to a proportion of one part cement, two parts of sand and two pounds of waterproofing to each bag of cement used.⁸⁵

c. Additions to East and West Wings

The Railroad Waiting Room did not make up for the space shortages in the administrative and special inquiry divisions. Therefore, in 1909, the Commissioner-General of Immigration was asked to consider the addition of a third story to the west wing. The new structure was to be "mainly of glass and copper and would resemble somewhat in appearance the solarium" which had originally been planned to complement the roof garden.⁸⁶ As built in 1911, however, the addition was of more substantial steel and masonry construction with detailing nearly identical to that of the floor below it.

With the expansion of the special inquiry divisions into the new west wing, the crowding of the medical and clerical divisions at the other end of the building became more noticeable. In July of 1912, new appropriations were requested for a similar addition on that wing.⁸⁷ Funds were allocated the following year, but construction progressed slowly, in part because the amount was smaller than actually needed. Work was completed by June of 1915.⁸⁸

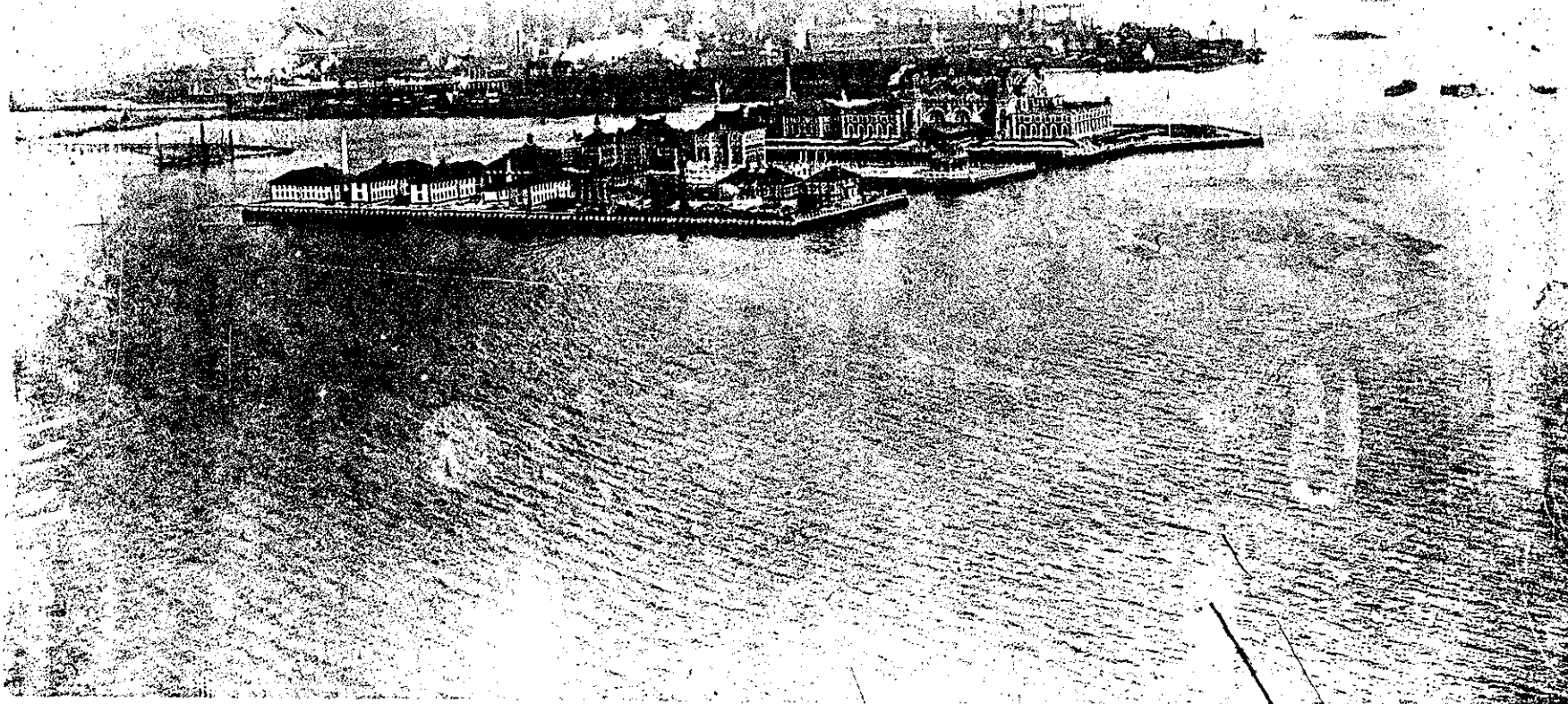


Ferry slip between Islands Two and Three, c. 1917, showing porches behind Hospital Buildings. (Library of Congress, Prints and Photographs Division, Washington, D.C.).

ELLIS ISLAND FROM TORCH OF "LIBERTY "

13-3

101



"Ellis Island from the Torch of Liberty" (1908). (Library of Congress, Prints and Photographs Division, Washington, D.C.).

¹Edwin Emerson, "The Threshold of America," Harper's Weekly, 26 February 1898, p. 210.

²Ibid.

³Samuel Graybill, Jr., "Bruce Price, American Architect, 1845-1903" (Ph. D. dissertation, Yale University, May 1957), p. 203.

⁴Tarsney Act (Erection of Public Buildings) 20 February 1893, Ch. 146, 27 Stat. 468.

⁵Harlan Unrau, Historic Structures Report, Ellis Island: Historical Data (U.S. National Park Service, Denver Service Center, Colorado, 1978), Chapter 3, Note 8.

⁶Records of the Public Buildings Service, Record Group 121, Box 369, National Archives, Washington National Records Center, Suitland, Maryland.

⁷Gage to Post, 27 August 1897 and Gage to Post, 4 September 1897, Record Group 121, Box 369.

⁸Post's letter listing the architects has not been found, but a reply from Gage to Post dated 4 September 1897 mentions that five architects and two alternates had been given. It is not clear whether all six architects were those selected by Post, or whether Barlow and Smithmeyer were selected by Gage from those architects applying on their own. See footnotes 16 and 20.

⁹William H. Jordy, American Buildings and Their Architects: Progressive and Academic Ideals at the Turn of the Twentieth Century (Garden City, New York: Doubleday and Company, Inc., 1972), p. 316.

¹⁰Ibid.

¹¹Talbot F. Hamlin, "John M. Carrere," Dictionary of American Biography, p. 519.

¹²Walter C. Kidney, The Architecture of Choice: Eclecticism in America, 1880-1930 (New York: George Braziller, 1974), plate 25.

¹³Hamlin, "Bruce Price," p. 211.

¹⁴Unrau, Appendix C.

¹⁵See John Y. Cole, "Smithmeyer and Peiz, Embattled Architects of the Library of Congress," Quarterly Journal of the Library of Congress 29 (October 1972): 282-307.

¹⁶Gage to Smithmeyer, 24 June 1897, Record Group 121, Box 369.

¹⁷Spaulding to Smithmeyer, 20 September 1897, Record Group 121, Box 369.

¹⁸The New York Times, 26 June 1897 reports on the recommendations of the Commissioner General of Immigration, which are assumed to be a paraphrase of Smithmeyers': "He. . . recommends the construction of a main building for the use of immigrants, a hospital with quarters for the medical corps, and a restaurant and kitchen. These three buildings. . . should be of steel and brick construction, fireproof and with all modern improvements."

¹⁹Wilson's Business Directory of New York City, 1880-1930.

²⁰Gage to Barlow, 22 July 1897 and Spaulding to Barlow, 28 August 1897, Record Group 121, Box 369.

²¹"The New York Immigrant Station," Architectural Record 12 (December 1902): 729.

²²Emerson, p. 210.

²³Letter from Supervising Architect to competitors, 1 October 1897, Record Group 121, Box 369.

²⁴Peabody, Chandler and Taylor to Secretary of the Treasury, 7 December 1897, Record Group 121, Box 369.

²⁵According to letters from Gage to the architects, December 1897, the drawings were returned to the competitors at the conclusion of the competition. Boring and Tilton's drawings were retained and are now located in the Denver Service Center and the U.S. Immigration Museum at Liberty Island. The following sources were consulted unsuccessfully for information on the possible location of the other architects' drawings:

Institutions

American Institute of Architects, New York and National offices
American Institute of Arts and Letters, New York, New York:
Carrere and Hastings Collection
Architectural League of New York, New York, New York
Avery Architectural Library, New York, New York
Committee for the Preservation of Architectural Records, New York,
New York
Library of Congress, Prints and Photographs Division, Washington,
D.C.
National Archives, Cartographic and Still Pictures Divisions,
Washington, D.C.

New York City Landmarks Preservation Commission, New York, New York
New York Historical Society, New York, New York, McKim, Meade and
White Collection
New York Public Library, New York, New York, Art and Architecture
and Local History and Genealogy Division
Office for Metropolitan History, New York, New York
Smithsonian Institution, Washington, D.C., Archives of American Art

Published Sources

Graybill, Samuel, Jr. "Bruce Price, American Architect, 1845-1903"
(Ph. D. dissertation, Yale University, May 1957). Graybill
states: "Price exhibited the Ellis Island design at the American
Institute of Architects. It is recorded in that institutions
Quarterly Bulletin, I (April 1900). The drawing has not been
preserved." (p. 267, note 43.)

Koyl, George S. American Architectural Drawings (Philadelphia, Pa.: Philadelphia Chapter, American Institute of Architects, 1969).

²⁶It is interesting to compare the comments made by Professor William Ware of the Columbia University School of Architecture on designs submitted during the Baltimore Courthouse competition in 1894, which attracted several of the same architects at the Immigration Station. Carrere and Hastings' design "employs no central hall /and thus/ . . . there is no obvious separation between the parts of the building intended for public use, and those devoted to the more private service of the officers of the court. . . The plan has little to commend it, but the facade is pleasing and dignified." Boring and Tilton's plan was one of several showing "a central hall, giving access to the principal rooms, which are distributed around it," which Ware termed "the best arrangement." He commented that their particular design was "one of the most picturesque and effective of all those presented. . . in its general scheme." Bruce Price entered, but was not placed among the ten best designs. The contract was awarded to a local architect, Wyatt and Nolting, of whose design Ware commented, "although it /lacks/ the imposing feature of a central hall, the entrance vestibule, with the staircase adjoining it, forms a dignified and effective combination." (Inland Architect, 24 (August 1894): 6-8.)

²⁷Peabody, Chandler and Taylor to Secretary of the Treasury, 7 December 1897, Record Group 121, Box 369.

²⁸Ibid.

²⁹Inland Architect 31 (April 1898): 26.

- ³⁰ Ibid., quoted by Boring and Tilton, p. 27.
- ³¹ Ibid., p. 26.
- ³² New York Times, 3 December 1900.
- ³³ Inland Architect 31 (April 1898): 27.
- ³⁴ Architectural Record, p. 730.
- ³⁵ John D. Thompson and Grace Goldin, The Hospital: A Social and Architectural History (New Haven: Yale University Press, 1975), p. 182.
- ³⁶ Inland Architect 31 (April 1898): 27.
- ³⁷ Architectural Record, p. 729.
- ³⁸ Nikolaus Pevsner, A History of Building Types (Princeton: Princeton University Press, 1976), p. 228.
- ³⁹ Architectural Record, p. 730.
- ⁴⁰ New York Times, 7 August 1898.
- ⁴¹ Ibid.
- ⁴² Halsey C. Ives, The Dream City (St. Louis, Mo.: N. D. Thompson Publishing Company, 1893), preface.
- ⁴³ Architectural Record, p. 733.
- ⁴⁴ Ibid., p. 732.
- ⁴⁵ Ibid.
- ⁴⁶ Ibid., p. 727.
- ⁴⁷ Peabody, Chandler and Taylor to Secretary of the Treasury, 7 December 1897, Record Group 121, Box 369.
- ⁴⁸ Architectural Record, pp. 730-732.
- ⁴⁹ The above information was taken from the report, Structural Investigation, Main Building, Ellis Island, N.J./N.Y., prepared by the office of Irwin Cantor, P.C. for the National Park Service, 1978, and from original framing plans, drawn by Pencoyd Iron Works, 1899, NPS drawing nos: 41.963.
- ⁵⁰ NPS drawing no. 41.962:11.

⁵¹ Nelson S. Thompson, Mechanical Equipment of Federal Buildings under the Control of the Treasury Department (Baltimore, Md.: Williams and Wilkins Company, 1912), p. 20.

⁵² Unrau, Appendix H and I.

⁵³ Building Conservation Technology, Inc. and Syska and Hennessy, Mechanical and Electrical Rehabilitation, Main Building, Ellis Island, for the National Park Service, Denver Service Center, 1978.

⁵⁴ Unrau, Chapter 6, Notes 81-164.

⁵⁵ Ibid., Note 61.

⁵⁶ See Ibid., Note 139.

⁵⁷ Ibid., Note 120.

⁵⁸ William E. Leland to Supervising Architect, 12 April 1901, Record Group 121, Box 369.

⁵⁹ Unrau, Chapter 6, Note 54.

⁶⁰ Ibid., Note 55.

⁶¹ Ibid., Note 142 A & B.

⁶² Ibid., Note 139.

⁶³ Keene's cement is a hard, white finishing plaster which takes a high polish. It is made by "burning gypsum at a high temperature, grinding it to a fine powder, and then adding alum to accelerate the set." (Cyril M. Harris, Dictionary of Architecture and Construction (New York: McGraw Hill Book Company, 1975), p. 277.

⁶⁴ New York Tribune, 17 December 1900.

⁶⁵ Unrau, Chapter 6, Note 1.

⁶⁶ Ibid., Appendix F.

⁶⁷ Ibid.

⁶⁸ Ibid., Note 5.

⁶⁹ "The Spectator," The Outlook 82 (March 1905): 731.

⁷⁰ Unrau, Chapter 7, Note 6.

⁷¹Unrau, Chapter 6, Notes 39, "Estimated Cost of Constructing Additional Story on West Wing of Main Building," Notes 59, 61, 78 and 89, respectively.

⁷²Mary B. Sayres, "The Keepers of the Gate," Outlook 87 (December 1907): 923.

⁷³New York Tribune, 2 February 1911.

⁷⁴George R. Collins, "The Transfer of Thin Masonry Vaulting from Spain to America," Journal of the Society of Architectural Historians 27 (October 1968): 176-20.

⁷⁵Ibid.

⁷⁶Unrau, Chapter 6, Appendix K, "Specification for the Installation of a Vaulted Ceiling in The Registry Division, Main Building, Ellis Island, N.Y. Harbor; and also Installation of Artificial Caen Stone or Artificial Limestone on the Side and End Walls of same room."

⁷⁷Ibid., Note 95.

⁷⁸Ibid., Appendix K, p. 2.

⁷⁹Ibid., p. 3.

⁸⁰Ibid.

⁸¹Letter from Supervising Architect to competitors, October 1897, Record Group 121, Box 369.

⁸²Inland Architect 1A, 31 (April 1898).

⁸³New York Times, 12 July 1903.

⁸⁴Unrau, Chapter 6, Note 45.

⁸⁵Ibid., Note 120.

⁸⁶Ibid., Note 47.

⁸⁷Ibid., Note 82.

⁸⁸Ibid., Notes 83 and 84.

II. Inventory of Structures

CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Main Building STRUCTURE NO. 1

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED: Est. Cost of Treatment Recommended: \$ _____

<input type="checkbox"/> Preservation	Date of this Estimate: _____ 197
<input type="checkbox"/> Restoration	
<input type="checkbox"/> Reconstruction	Est. Interim Cost (other than routine maintenance)
<input type="checkbox"/> Partial Reconstruction	pending completion of Recommended Treatment:
<input type="checkbox"/> Adaptive Restoration	\$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE:
A 18 580940 4505600 CLASS VI LAND ACREAGE (if not part of a complex or district): _____ acres.
Zone Easting Northing

STUDIES REQUIRED:

- Historical Studies Plan
- Historic Resource Study
- Historic Structure Report
- Historic Furnishing Study
- Historic Structure Preservation Guide

KEY:

- N - not needed
- P - programmed
- C - completed
- U - underway
- R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Red brick over steel frame with limestone and granite trim.

Physical Description: 390' x 172.5' Ticket Office: 62' x 120'

The lower two floors of the Main Building, used for the inspection and processing of immigrants, were finished in 1900. A single story Ticket Office was added to the north in 1904 and third floors were added to the west wing in 1911 and the east wing in 1913-14.

The building is differentiated functionally and structurally into three parts. The central section, housing the Great Hall (Registry Room) is marked by three two story units on the first floor, 64 units of metal 8-light sash fill the arches and pedimented doors open onto balconies at the second floor level. Each arch is rimmed with rounded limestone quoins with a carved head on the scrolled keystone. The arches are separated by additional columns of quoining with carved eagles on shields at the top

Above the central arches is a bracketted cornice with pivoting single light wood windows between the brackets. A brick wrought iron and limestone parapet marks the top of the wall. Behind the parapet a flat gravel covered roof leads to the central brick and limestone clerestory, which has three segmental arch window bays on the north and south sides and 1 larger semi-circular bay on the east and west. The arches are filled with multiple 8 light wood sash units and the surrounds have flat stone springers and keystones on the north (continue on reverse if necessary)

PRESENT CONDITION: Excellent Good Fair Deteriorated
Ruins Unaltered Altered Original Site Moved

Report prepared by:

Building Conservation Technology
Signature

December 1978
Date

and south facades and continuous rims of flat quoins on east and west. The roof is gabled over each window bay and is covered with clay tile.

Four stair towers separate the central hall from the wings. A granite base and limestone bands to the height of the second floor anchor the towers and red brick walls above are framed by limestone quoining to the third story roof, where brackets support the limestone cornice. The ground floor doors have triangular limestone pediments and dressed stone surrounds; the windows above have wood 1-over-1 sash with limestone sills and lintels; and a pivoting single light window fits between the brackets. Above the cornice line a round-headed door leads onto the roof and round, quadrant sash windows fill the other three sides. All have limestone segmental arch lintels, keystones and quoins. Above these openings are tall arches filled with overlapping terra cotta half circle tiles below triangular pediments. The domes at the apex of the towers were originally sheathed in moulded copper and had copper covered spires.

The flat roofed wings are 5 bays wide on the north and south and 9 bays on the east and west. The limestone-trimmed, Flemish bond red brick walls are set on a limestone and rusticated granite base. The walls are framed by limestone quoins at all 8 corners and are topped by limestone cornices above the second and third floors. Double doors with arched transoms pierce the centers of the west, south and east elevations and 2 bays of the north elevation. Basement windows have 4-light sash hinged on top. First floor window openings have 9-over-1 double hung wood sash in the center, a pivoting arched 9-light transom, and 8 side lights. Flat limestone quoins trim the windows and a projecting limestone belt course forms the sill. Second and third floor window openings have two 4-over-4 double hung wood sash with 2-light transoms and are surrounded by limestone quoins, keystones and horizontal bands at the sill and lintel levels. Windows on the second floor have projecting limestone sills supported on block modillions.

A single story Ticket Office abutts the center of the north side. The east elevation is 5 bays wide. Each bay is marked by a cast iron Tuscan column and contains 3 single light wood windows with moulded copper panels below and 8-light transoms above. A double door and steel stair and balustrade fill the center bay. Rows of flat quoins at either end of the window bays and limestone cornice mouldings set them off from the Flemish bond brick walls and brick and limestone parapets.

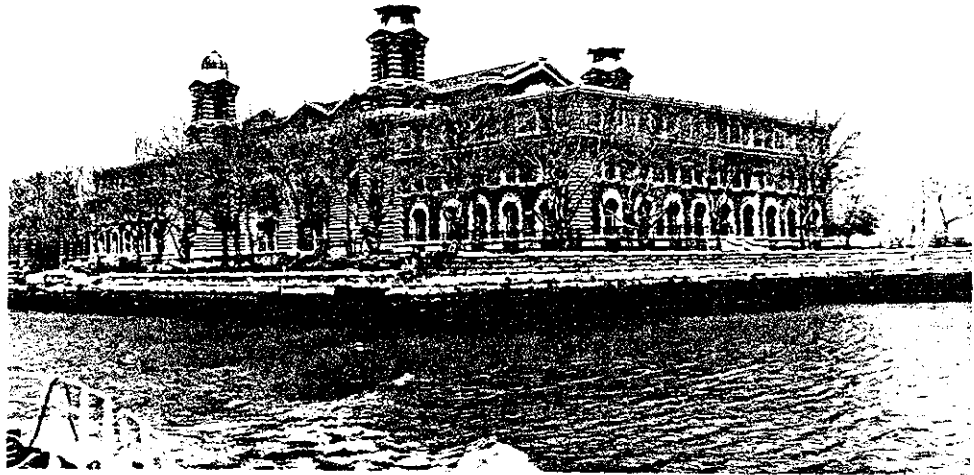
The north facade roofline of the Ticket Office is marked by 3 gables. The smaller gable at each end spans a 3 bay section bounded by quoins and contains a semi-circular, quoin-trimmed clerestory window at the cornice line. The central gable also spans 3 window bays, but the center bay is enlarged to include 4 window units and double doors. A large clerestory window fills the center gable. The triple gable roof is covered with tar and pierced by 14 reinforced concrete and glass block skylights.

The east and west wings are lit by a total of four two-story light courts, two in each wing. These have Flemish bond brick walls and a variety of fenestration types.

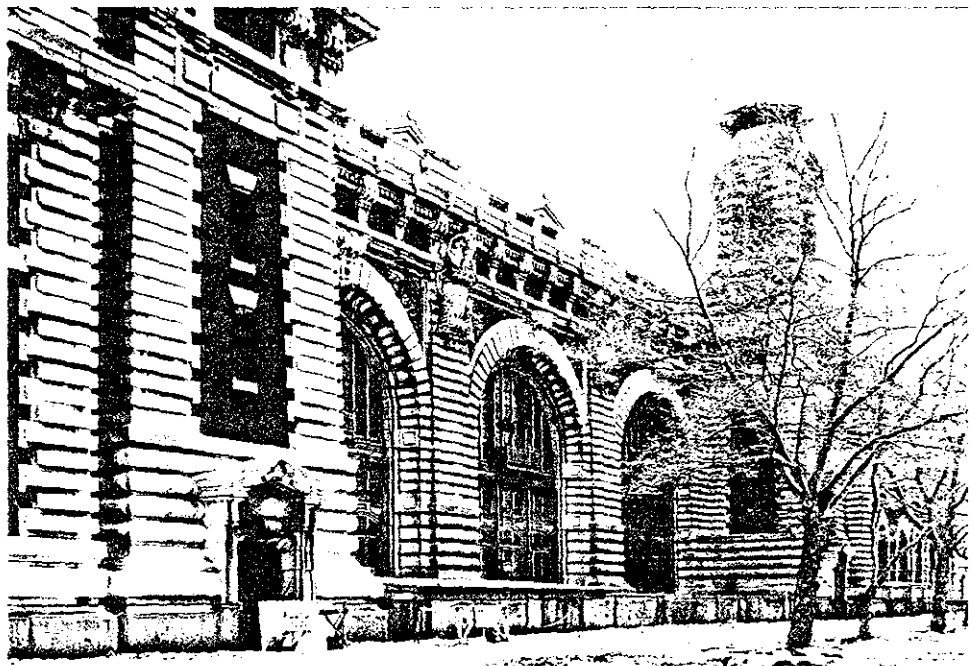
The Main Building is connected to the Kitchen and Laundry Building (#4) on the west and to the Baggage and Dormitory Building (#3) on the north by enclosed

passageways.

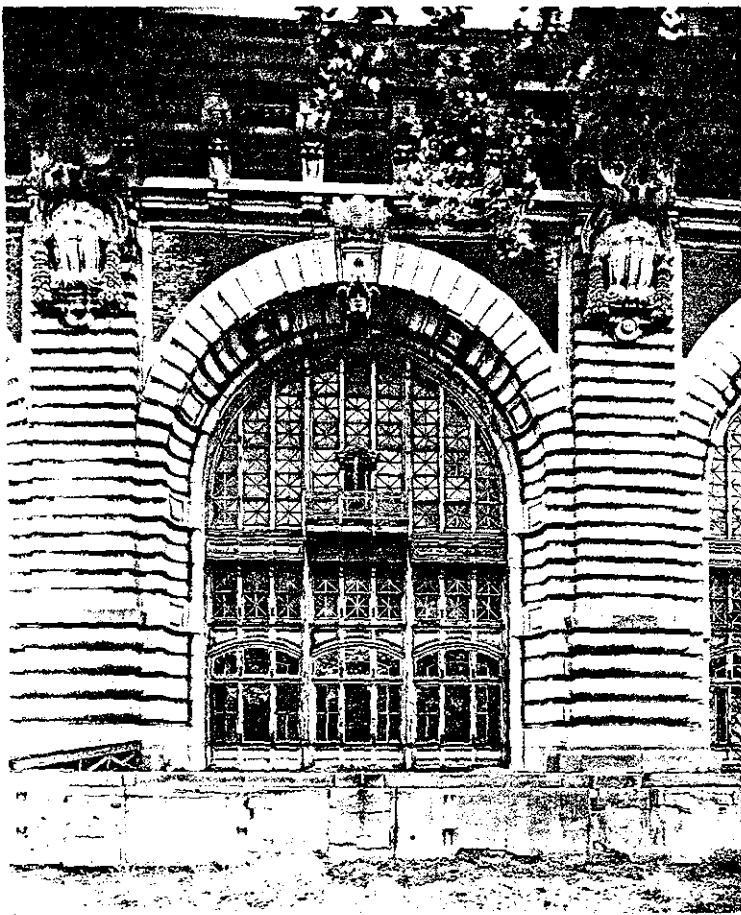
Interior spaces are finished in a variety of ways, including tile, wood and concrete floors and plaster walls and ceilings. In the majority of the spaces, excluding the offices on the upper floors of the wings, the lower walls are covered with white glazed tile wainscots. Steel stairs with slate treads are located in all four of the stair towers.



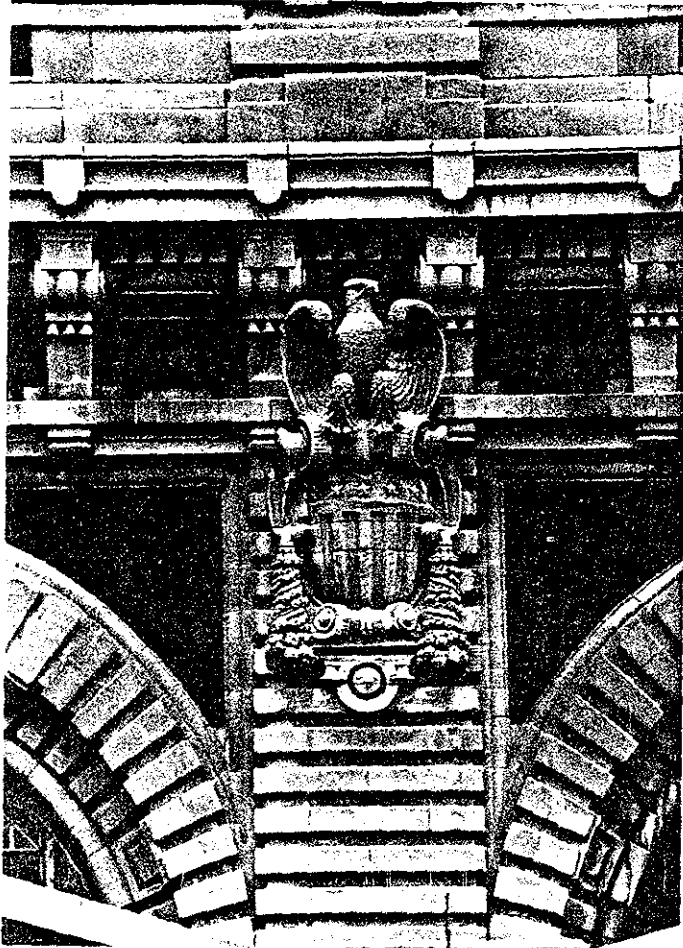
1.1 Main Building, Southeast Corner



1.2 Main Building, South Elevation



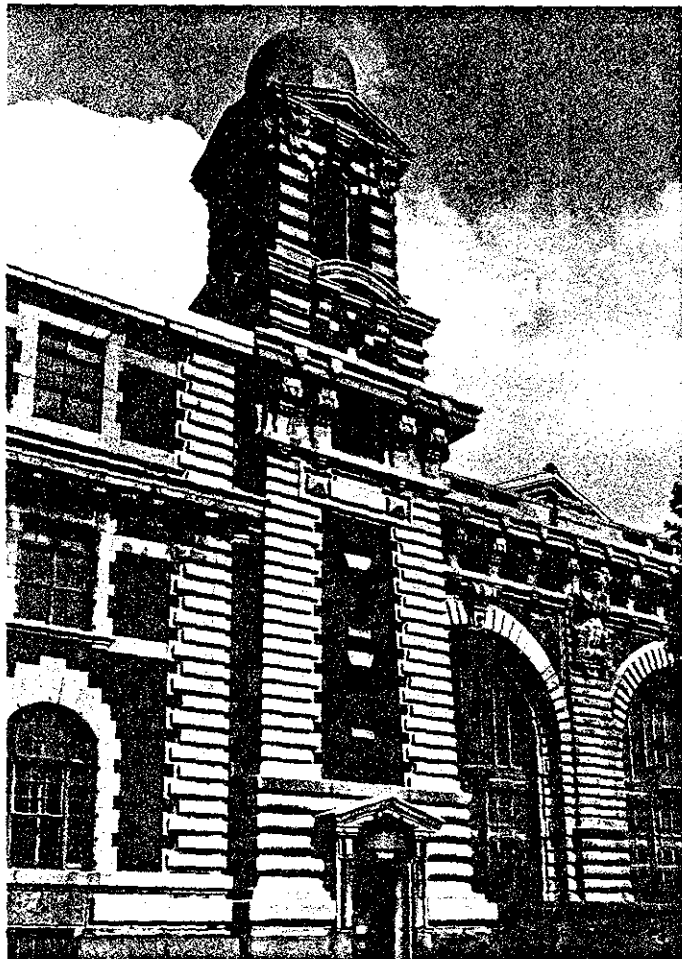
1.3 Main Building, Central Arch Detail



1.4 Main Building, Sculpture Detail



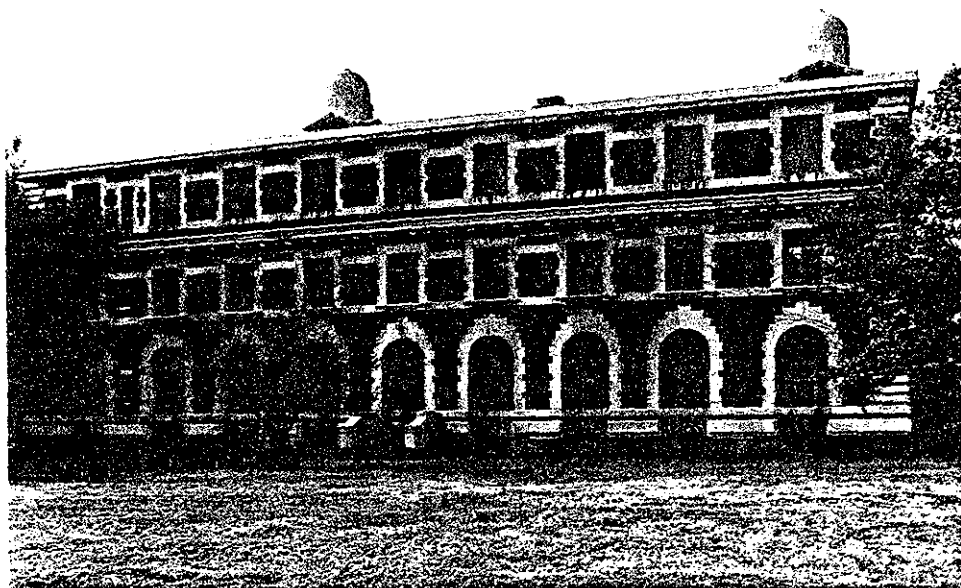
1.5 Main Building, South Entrance



1.6 Main Building, Southwest Tower



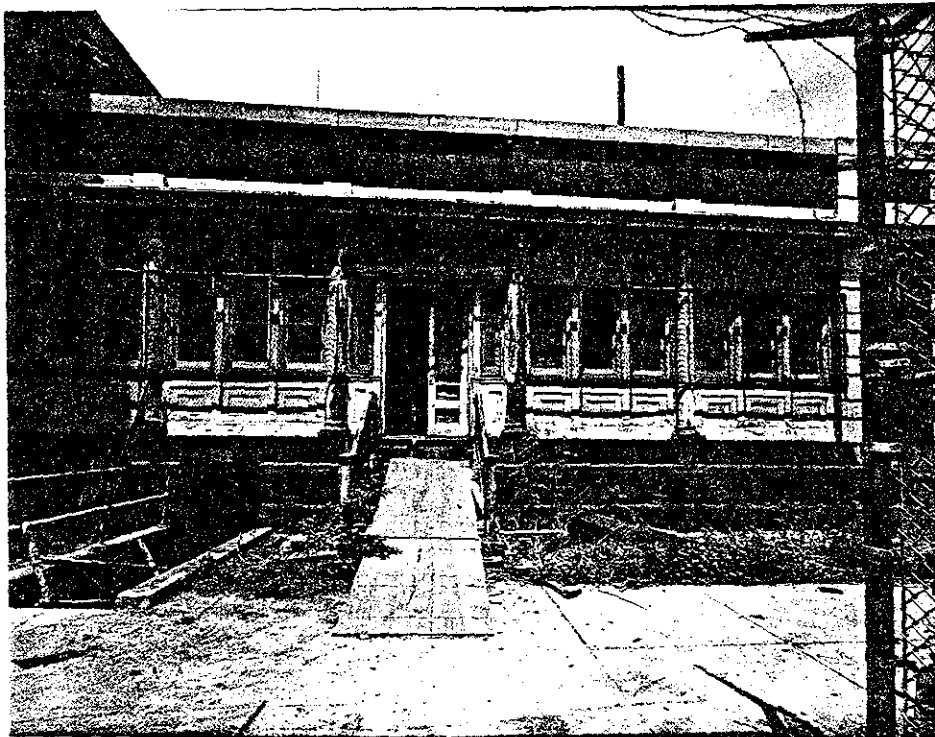
1.7 Main Building,
Southwest Tower Door



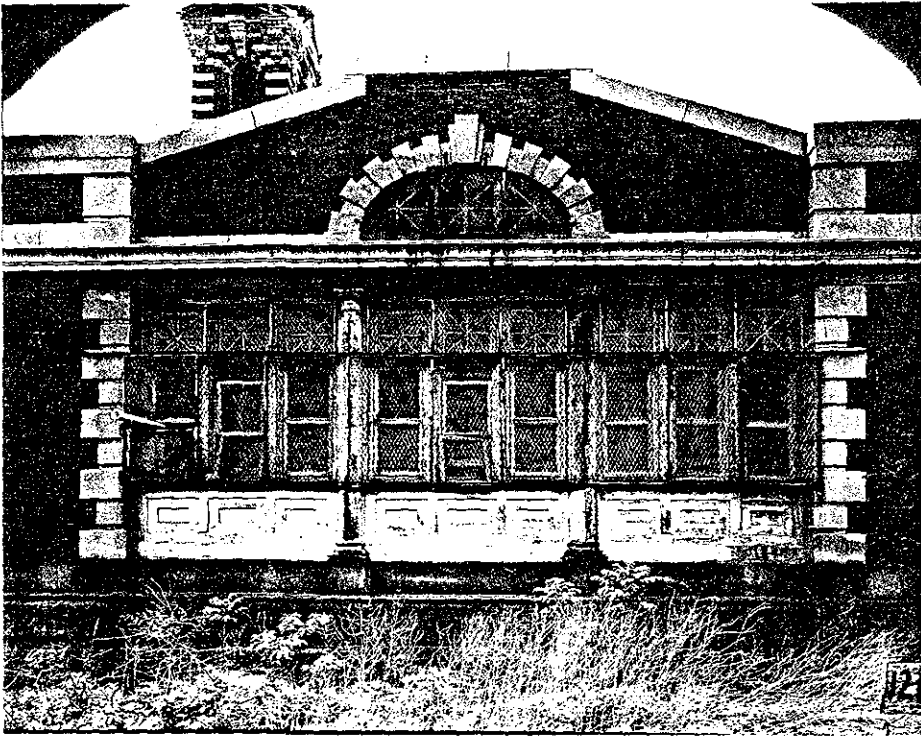
1.8 Main
Building,
East
Elevation



1.9 Main Building, North Elevation with Ticket Office



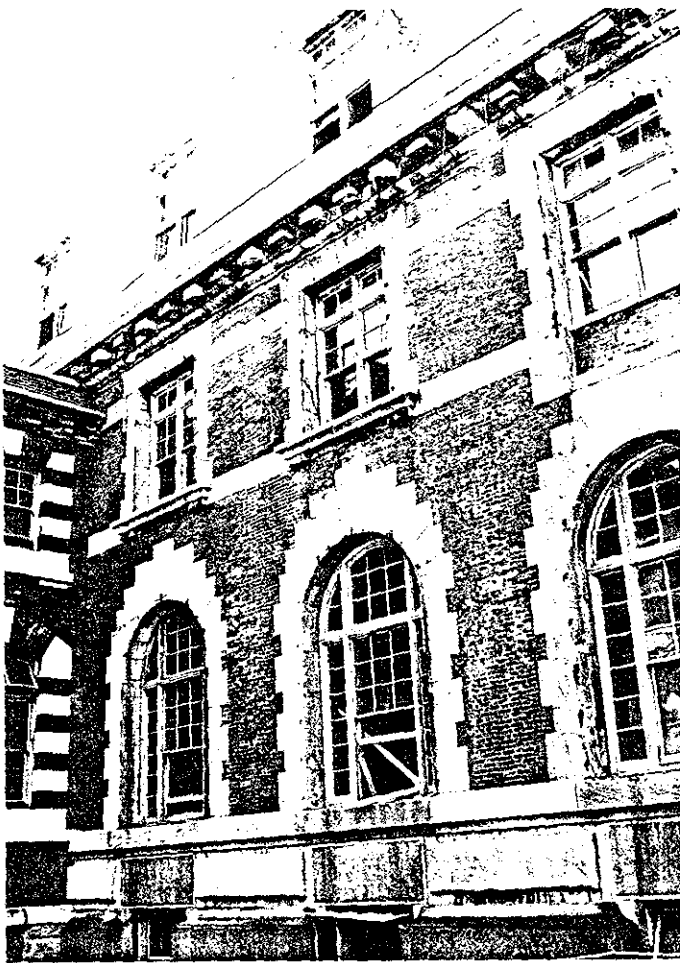
1.10 Main Building, East Elevation of Ticket Office



1.11 Main Building,
East Bays of
North Elevation
on Ticket
Office



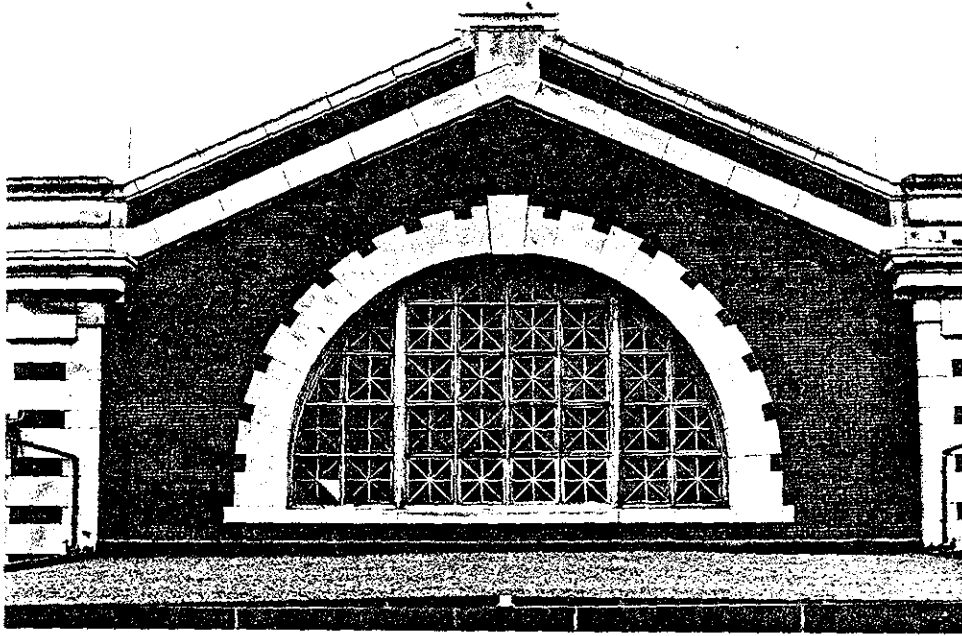
1.12 Main Building,
Central Bays of
North Elevation
on Ticket Office



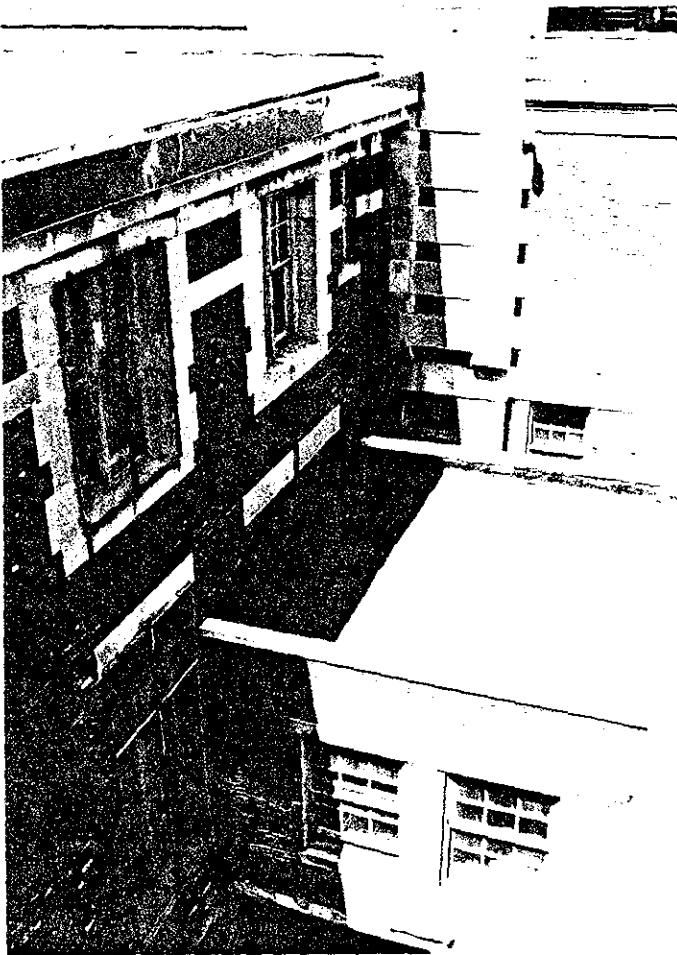
1.13 Main Building, West Elevation



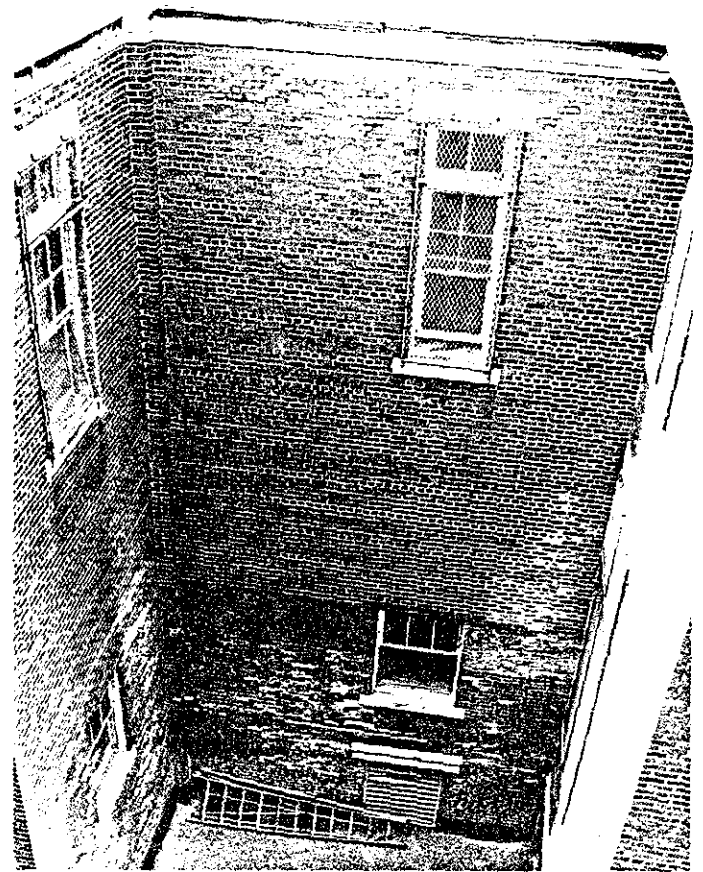
1.14 Main Building, Original Window Grill



1.15 Main Building,
East Clerestory
Window



1.16 Main Building, West Half of North-
east Light Court



1.17 Main Building, East Half of North-
east Light Court

CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Connecting Wing STRUCTURE NO. 2

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED: Est. Cost of Treatment Recommended: \$ _____

<input type="checkbox"/> Preservation	Date of this Estimate: _____ 197
<input type="checkbox"/> Restoration	
<input type="checkbox"/> Reconstruction	Est. Interim Cost (other than routine maintenance)
<input type="checkbox"/> Partial Reconstruction	pending completion of Recommended Treatment:
<input type="checkbox"/> Adaptive Restoration	\$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: A

1	8
5	8
0	9
4	0

4	5
0	5
6	0
0	0

CLASS VI LAND ACREAGE (if not part of a complex or district): _____ acres.

Zone Easting Northing

STUDIES REQUIRED:	KEY:
<input type="checkbox"/> Historical Studies Plan	N - not needed
<input type="checkbox"/> Historic Resource Study	P - programmed
<input type="checkbox"/> Historic Structure Report	C - completed
<input type="checkbox"/> Historic Furnishing Study	U - underway
<input type="checkbox"/> Historic Structure Preservation Guide	R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Bearing wall red brick with limestone trim; steel roof framing.

Physical Description: A - 36' x 39', B - 58' x 5.5'

The passageway between the Main Building and the Baggage and Dormitory Building is composed of two sections. The first (section A) is a single story high, with 3 bays on the south elevation and 3 on the west, and has connections to the Northwest Tower on the Main Building, the west side of the Railroad Ticket Office and the easternmost bay of the south elevation of the Baggage and Dormitory. It has Flemish bond brick walls above a smooth limestone sill and arched windows identical in sash and decorative treatment to those of the Main Building. The roof is flat, covered with square red clay tiles, and has a limestone cornice and coping. The interior is finished with large hexagonal ceramic floor tiles and a 5 foot high glazed tile wainscot below plaster walls. The second section (section B) of the passageway runs from the north bay of the west side of Section A to the fourth bay from the east on the Baggage and Dormitory Building. It is lower in height and probably later in construction than section A and is built of Flemish bond on a concrete base. The corrugated iron, gable roof is supported on steel trusses and tongue-and-groove wood sheathing, and a glassed roof section lights the entrance to the Baggage and Dormitory Building. There are 3 bays on the south side and 2 on the north, with 3 small 2-over-2 wood sash windows per bay.

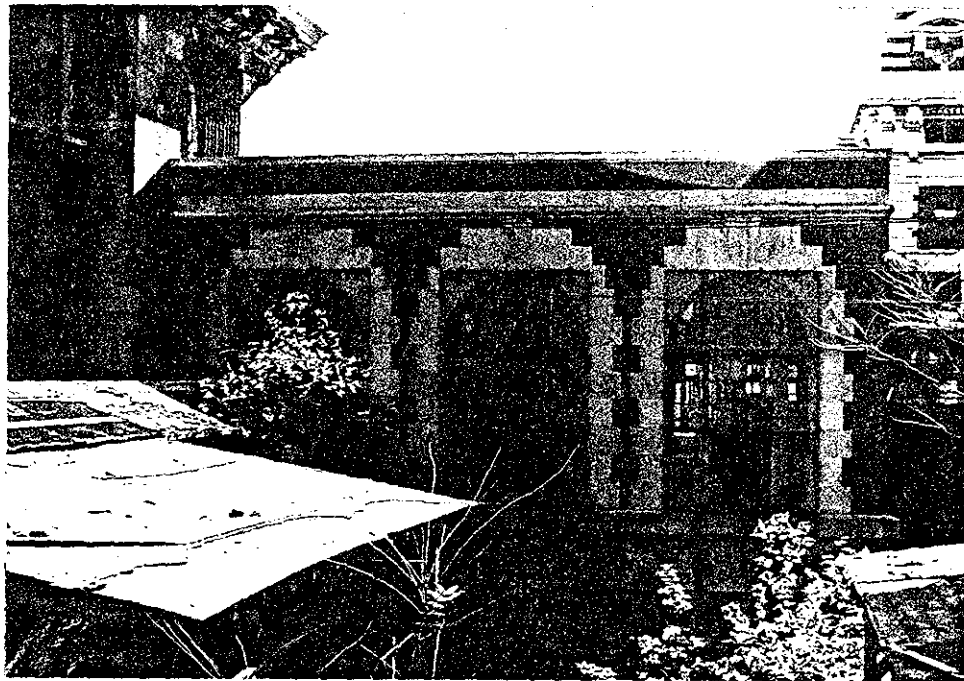
(continue on reverse if necessary)

PRESENT CONDITION: Excellent Good Fair Deteriorated
Ruins Unaltered Altered Original Site Moved

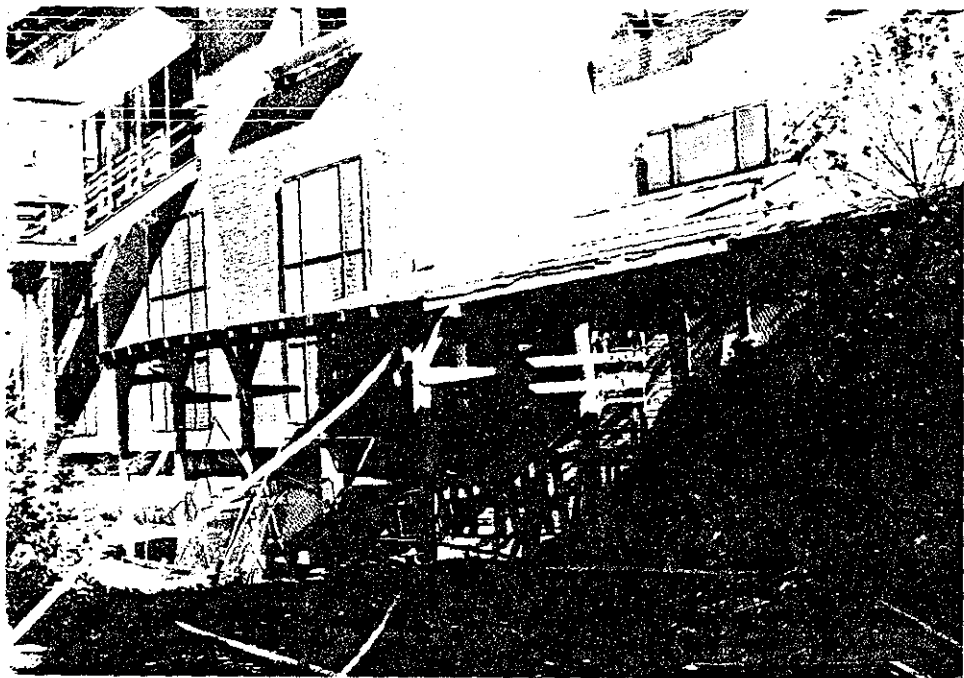
Report prepared by:

Building Conservation Technology
Signature

December 1978
Date



2.1 Building #2, Connection Between Main Building and Dormitory, West Elevation, Section A



2.2 Building #2, Connection Between Main Building and Dormitory, South Elevation, Section B

CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Baggage and Dormitory Building STRUCTURE NO. 3

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED: Est. Cost of Treatment Recommended: \$ _____

<input type="checkbox"/> Preservation	Date of this Estimate: _____ 197
<input type="checkbox"/> Restoration	
<input type="checkbox"/> Reconstruction	Est. Interim Cost (other than routine maintenance)
<input type="checkbox"/> Partial Reconstruction	pending completion of Recommended Treatment:
<input type="checkbox"/> Adaptive Restoration	\$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: CLASS VI LAND ACREAGE (if not part of a complex or district):
 A 1 8 5 8 0 9 4 0 4 5 0 5 6 0 0 _____ acres.
 Zone Easting Northing

STUDIES REQUIRED:

- Historical Studies Plan
- Historic Resource Study
- Historic Structure Report
- Historic Furnishing Study
- Historic Structure Preservation Guide

KEY:

- N - not needed
- P - programmed
- C - completed
- U - underway
- R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Steel frame red brick with limestone and terra cotta trim.

Physical Description: 232.5' x 213.75' + Wing - 232.5' x 52.5'
 The first two stories of the Baggage and Dormitory Building were constructed in 1908, the third floor added in 1913-14, and a two story enclosed porch along the north side added in 1917. A three story wing connecting the south side with the Kitchen and Laundry Building (#4) was built at a later date. An iron-framed covered stairway runs across the courtyard from the second floor of the south elevation of the Baggage and Dormitory Building connecting it to the first floor of the Main Building (#1). Its gable roof is covered with corrugated iron, and sides show traces of metal sash windows and sheet metal sheathing.

Both the main section and the south wing of the Baggage and Dormitory Building have granite bases, red Flemish bond brick walls and limestone trim. Window sash and surrounds are identical to those of the Main Building, as is the existence of cornices at both the second and third floor levels, although the third floor cornice of the Baggage and Dormitory Building is constructed of buff-colored glazed terra cotta rather than limestone. The roof is flat, covered with tar-coated roofing paper and trimmed with pressed copper cresting.

The two story central light court is faced with yellow brick and contains metal sash windows with 4-over-4 sash on the east (continue on reverse if necessary)

PRESENT CONDITION: Excellent Good Fair Deteriorated
 Ruins Unaltered Altered Original Site Moved

Report prepared by:

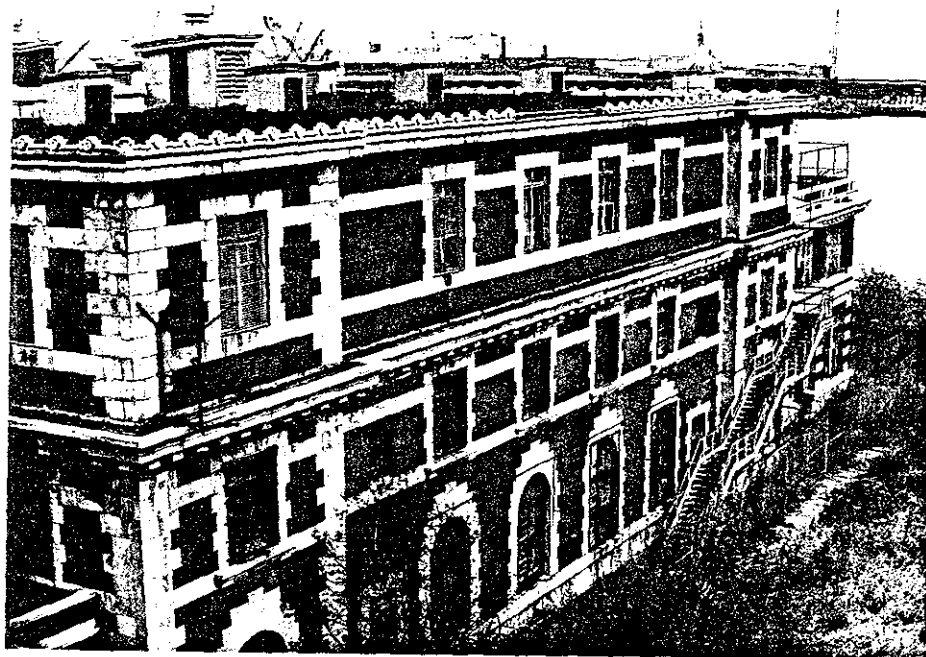
Building Conservation Technology
 Signature _____

December 1978
 Date _____

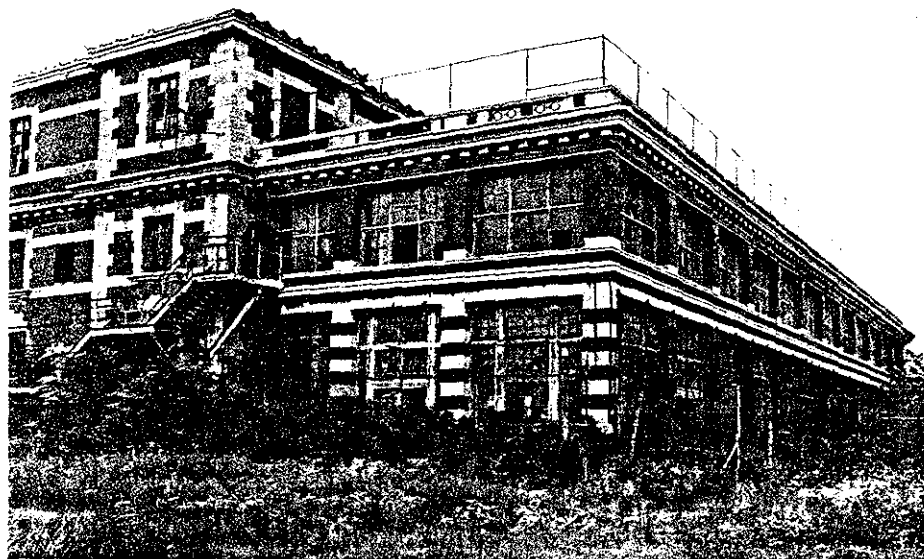
and west ends and 8-by-8 lights on the north and south sides. The first floor area below is lit by 6 copper frame skylights.

The north porch also has a granite base and limestone plinth, but first floor window bays are composed of 3 metal sash windows alternating 6-over-6-over-6, 15-over-15-over-15 and 6-over-6-over-6 lights and separated by piers banded with brick and limestone. More brick and limestone bands separate the two floors. Second floor windows have wood 4-over-4 light sash and plain brick piers, and are topped by a dentil cornice and a brick, limestone and wrought iron parapet.

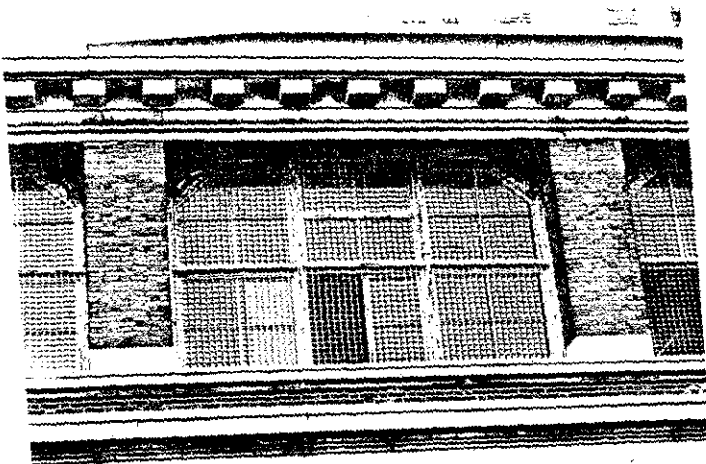
Interior finishes on the main part of the complex consist of white hexagonal tile floors, white rectangular glazed tile wainscoting and plaster walls and ceilings. The north wing has a concrete first floor and red quarry tiles on the second floor.



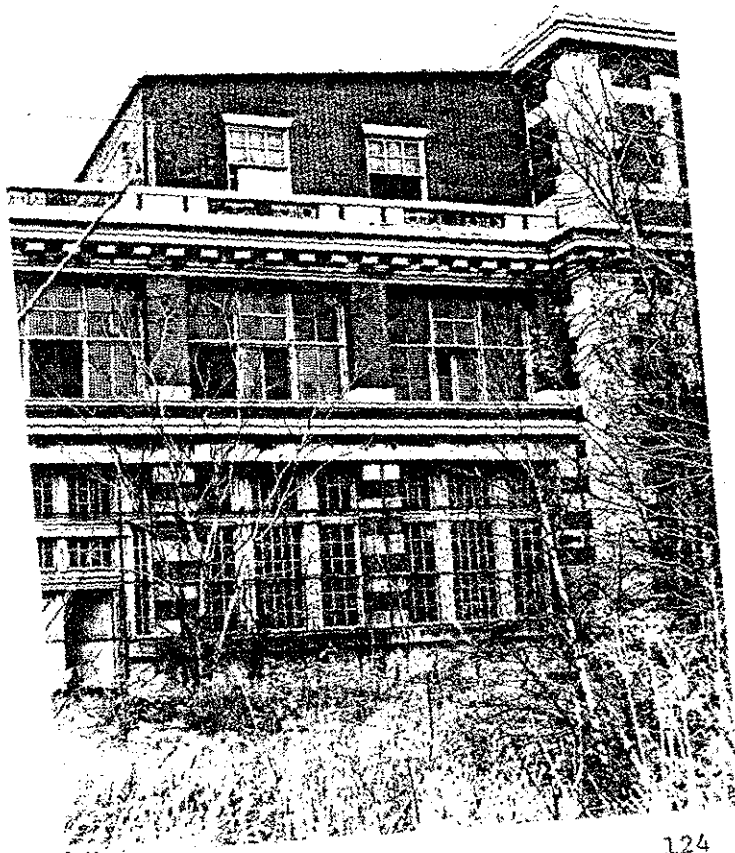
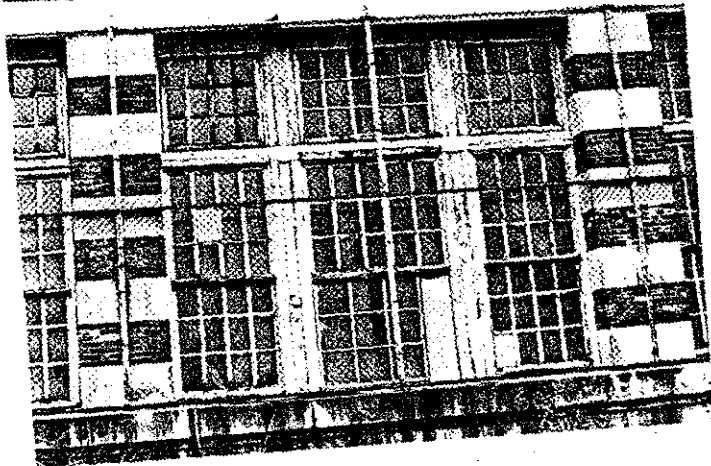
3.1 Baggage and Dormitory Building, East Elevation



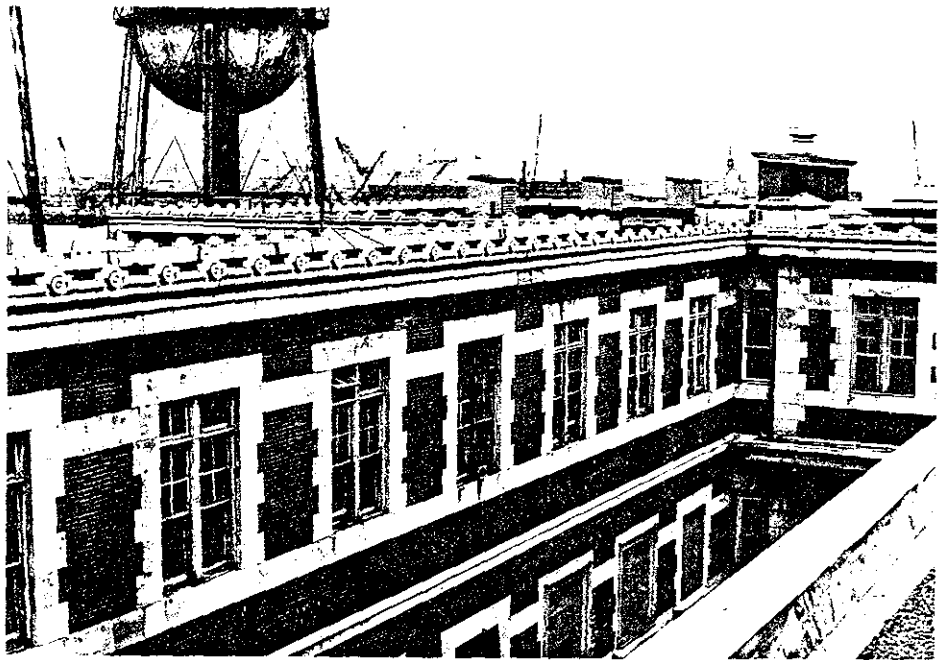
3.2 Baggage and Dormitory Building, Northeast Corner



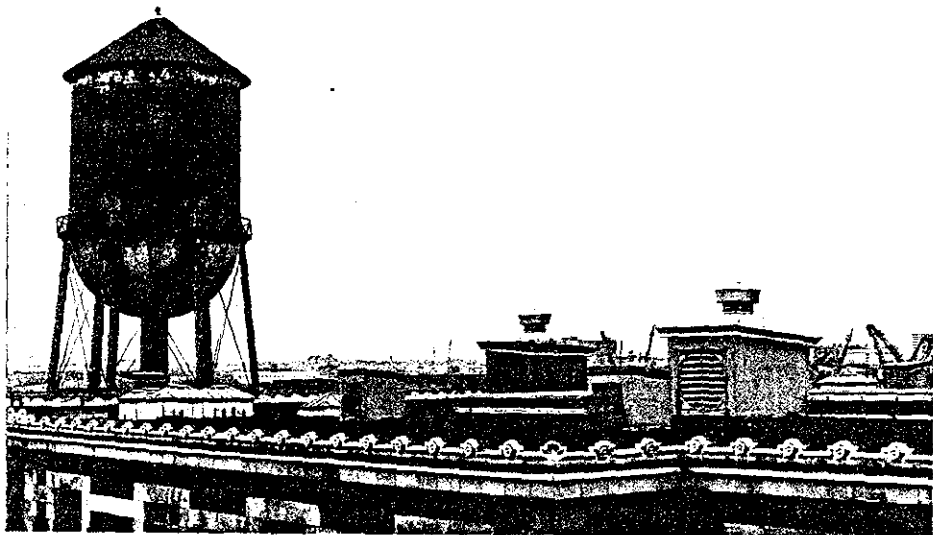
3.3 Baggage and Dormitory
Building, North Porch
Window Detail



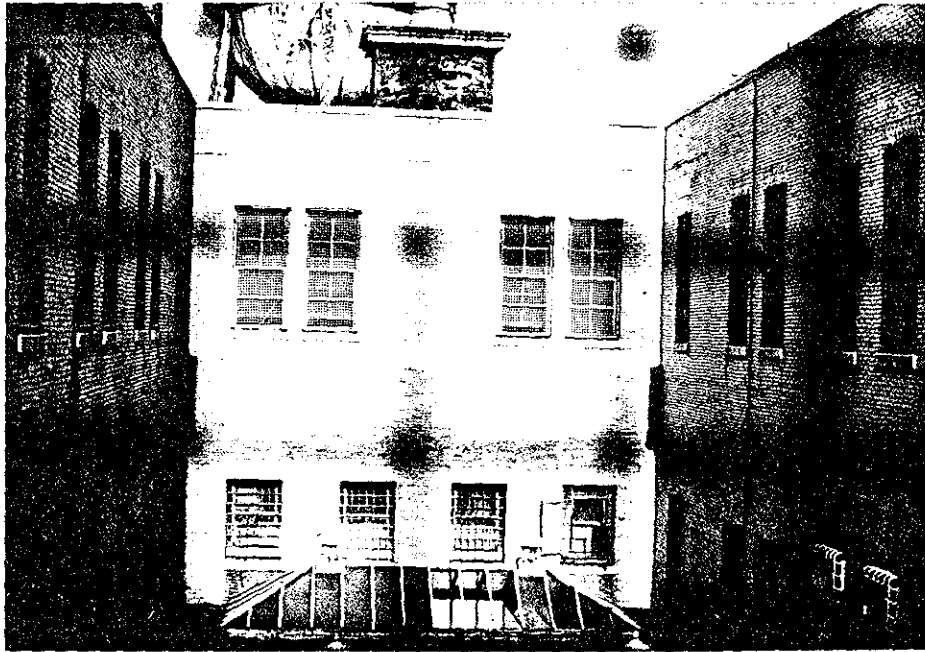
3.4 Baggage and Dormitory
Building, West
Elevation



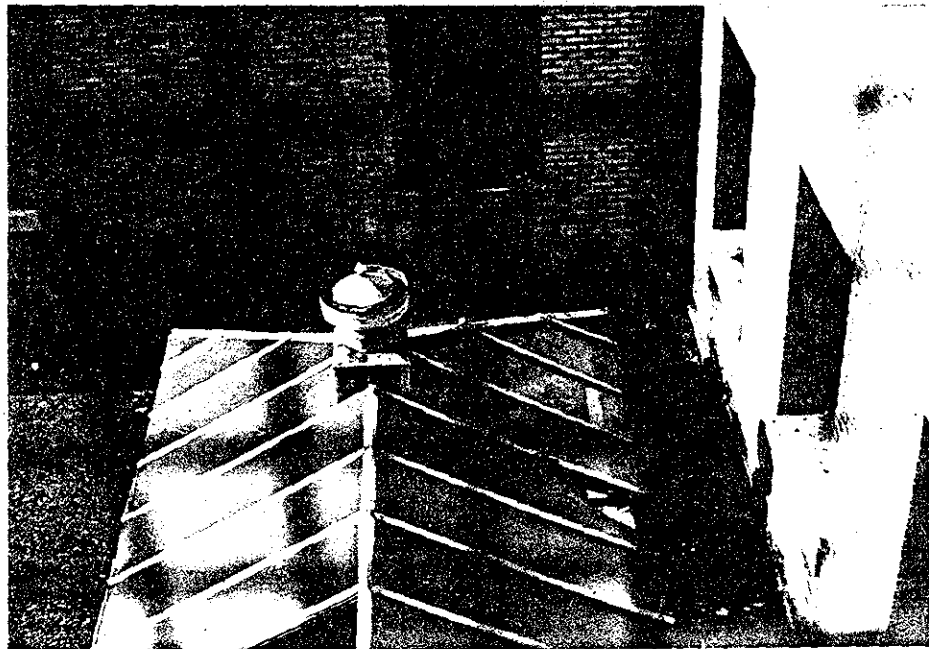
3.5 Baggage and Dormitory Building, East Elevation of South Wing



3.6 Baggage and Dormitory Building, Roofline



3.7 Baggage and Dormitory Building, West Half of Light Court



3.8 Baggage and Dormitory Building, Skylights in Central Court



3.9 Baggage and Dormitory Building, Stairway to Main Building, East Elevation



3.10 Baggage and Dormitory
Building, South End of
Stairway to Main
Building



3.11 Baggage and Dormitory
Building, North End of
Stairway to Main
Building

CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Kitchen and Laundry Building STRUCTURE NO. 4

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED: Est. Cost of Treatment Recommended: \$ _____

<input type="checkbox"/> Preservation	Date of this Estimate: _____ 197
<input type="checkbox"/> Restoration	
<input type="checkbox"/> Reconstruction	Est. Interim Cost (other than routine maintenance)
<input type="checkbox"/> Partial Reconstruction	pending completion of Recommended Treatment:
<input type="checkbox"/> Adaptive Restoration	\$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: CLASS VI LAND ACREAGE (if not part of a complex or district):
 A 1 8 5 8 0 9 4 0 4 5 0 5 6 0 0 _____ acres.
 Zone Easting Northing

STUDIES REQUIRED:	KEY:
<input type="checkbox"/> Historical Studies Plan	N - not needed
<input type="checkbox"/> Historic Resource Study	P - programmed
<input type="checkbox"/> Historic Structure Report	C - completed
<input type="checkbox"/> Historic Furnishing Study	U - underway
<input type="checkbox"/> Historic Structure Preservation Guide	R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Steel frame, red brick with limestone and bluestone trim.

Physical Description: West end: 104.5' x 30', Northeast end: 68.5' x 109', North addition: 22.5' x 92'

The Kitchen and Restaurant, Bathhouse and Laundry Building was constructed in 1901 as part of the original immigration complex designed by Boring and Tilton and was used as a laundry, kitchen and dining room on the first floor, and a chapel, library and schoolroom on the second floor. It is 2½ stories high, with fieldstone foundations, a rusticated limestone base, bluestone basement window sills, limestone water table and first floor sill lines and Flemish bond red brick walls with limestone trim. The hipped roof is covered with flat red clay tiles and trimmed with a copper modillion cornice and gutter. Hipped roof dormers protrude from the south and east slopes of the roof. A number of fenestration types occur throughout the building, but the original forms appear to have been four light single sash at the basement, 8-over-2 double hung sash windows with four light segmental arched transoms at the first floor and 3-over-2 double hung sash at the second floor, with eight light single sash on the dormers. All window frames and sash are of wood. A flat roofed three-bay, two story passageway with identical fenestration connects the Kitchen and Laundry and Main Buildings.

A single story steel and cast iron porch (continue on reverse if necessary)

PRESENT CONDITION:	Excellent <input type="checkbox"/>	Good <input type="checkbox"/>	Fair <input type="checkbox"/>	Deteriorated <input type="checkbox"/>
Ruins <input type="checkbox"/>	Unaltered <input type="checkbox"/>	Altered <input type="checkbox"/>	Original Site <input type="checkbox"/>	Moved <input type="checkbox"/>

Report prepared by:

Building Conservation Technology
Signature

December 1978
Date

fills the recessed porch of the south elevation, with wood ceiling, concrete floor and slate stair treads. The stylized scroll capitals on the columns are similar to those found on the Hospital Building #19 porches. A small, single story shed has been constructed opposite the basement door on the northwest corner of the building. Walls are of clay blocks parged with concrete and the flat slate roof is laid on wood beams.

A 1½ story addition (A) with a flat asphalt roof has been built at the north side of the building. It is 7 bays long and 2 bays wide, each bay marked by exterior brick piers and containing two 2-over-2 metal sash windows with clerestory windows above. The walls have a concrete base and bands at the sills and lintels of upper and lower windows and at the top of the parapet. The brick between these bands alternates between headers and stretchers every course and forms a decorative diamond pattern in the parapet. On the interior, the floor is covered with linoleum tile and walls and ceilings are plaster on metal lath.

A hallway (B) running north connects the Kitchen and Laundry Building with the Passageway #12. The southern section has a concrete base, with a soldier course above, Flemish bond red brick walls and copper standing seam roof. A single 4' x 4' light metal window exists on both the east and west elevations. The northern half is lower and has two windows with triple 2' x 3' light double hung wood sash with header sills and concrete lintels, and a tarpaper roof.

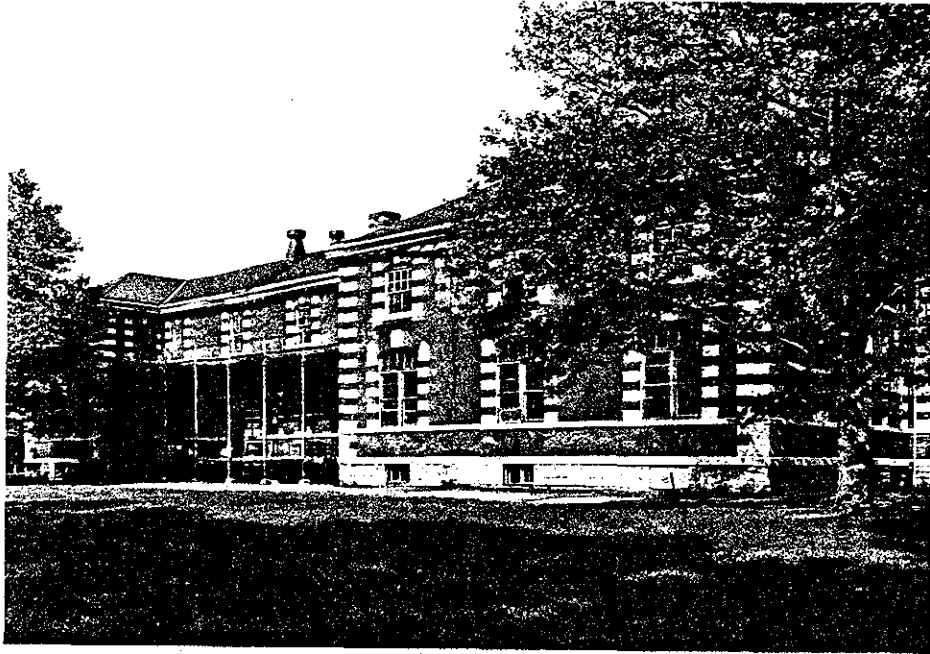
A series of three passages run from east to west between the main part of the Kitchen and Laundry Building and the concrete north addition connecting these buildings with the Carpentry and Bakery Buildings. The southernmost passage (C) is two stories high, with Flemish brick walls and a flat roof with parapets. The first story contains an open arch which allows access to the basement of the Kitchen and Laundry Building from the exterior. On the second floor, 3 bays with 6 light metal casements each illuminate a bathroom.

To the north of this is another two story passage (D) which is steel frame, has concrete walls and a flat tar roof. Only the north side of the second floor is exposed, and contains 3 window bays with 5 by 4 light metal sash containing a pivoting 9-light central section. Next, between the concrete addition and the brick Passageway #12, is a Flemish bond red brick structure (E) with an asphalt-covered shed roof. Beyond this to the north is a 5' high brick structure (F), built on a concrete slab with a flat single ply tarpaper roof and a single sashless window with a limestone sill and steel lintel.

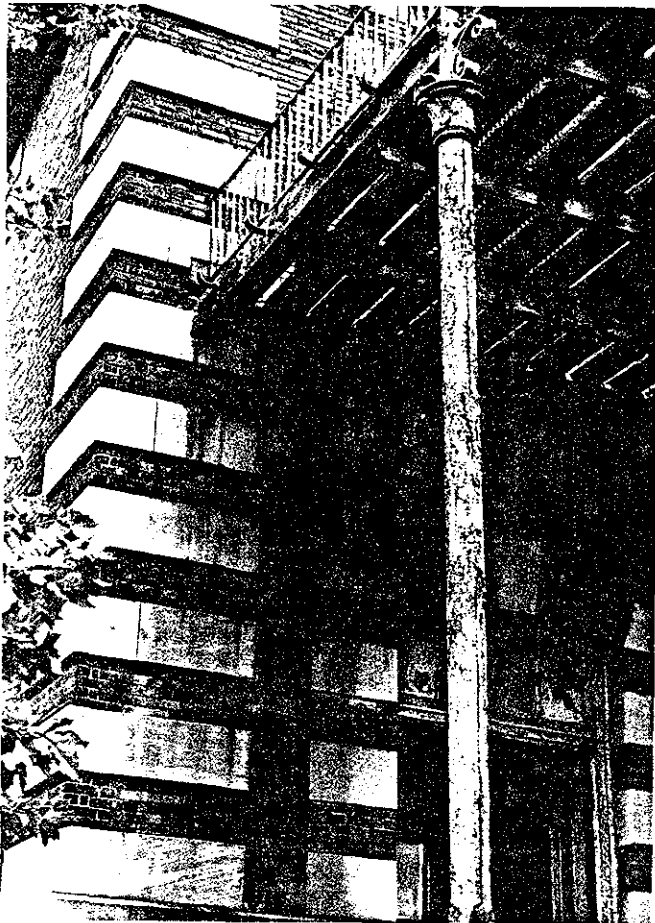
Interior finishes in the main part of the Kitchen and Laundry Building are simple. On the first floor, the octagonal room on the west end has small glazed hexagonal tile floors and plaster walls, with applied mouldings at 5' and the cornice level. The kitchen is floored with large red quarry tiles, has a 5' high wainscot of large cream colored glazed tiles and plaster walls and ceilings. Other areas of the building have scored concrete floors and plaster walls with a 5' high tiled wainscot.

On the second floor, the western octagonal room has buff-colored 6" x 6" unglazed floor tile and a 3' high glazed tile wainscot. The next room to the east was used as a schoolroom and has a linoleum on concrete floor with a star pattern cut into the center, a 4' high wainscot of glazed tiles and plastered walls. The east end is covered with hexagonal unglazed floor tile and has

been divided by wooden partitions into a number of rooms. One of these rooms, in the southeast corner, was used as a dining room and chapel, and contains a wood altar and three stained glass windows with semi-circular heads and sills. The room originally contained mural paintings of immigrant workers which have since been removed. The passageway between the Kitchen and Laundry and Main Buildings is covered with white mosaic tiles with a black fret border and a 4' high wainscot of similar material with red and black bands at the top.



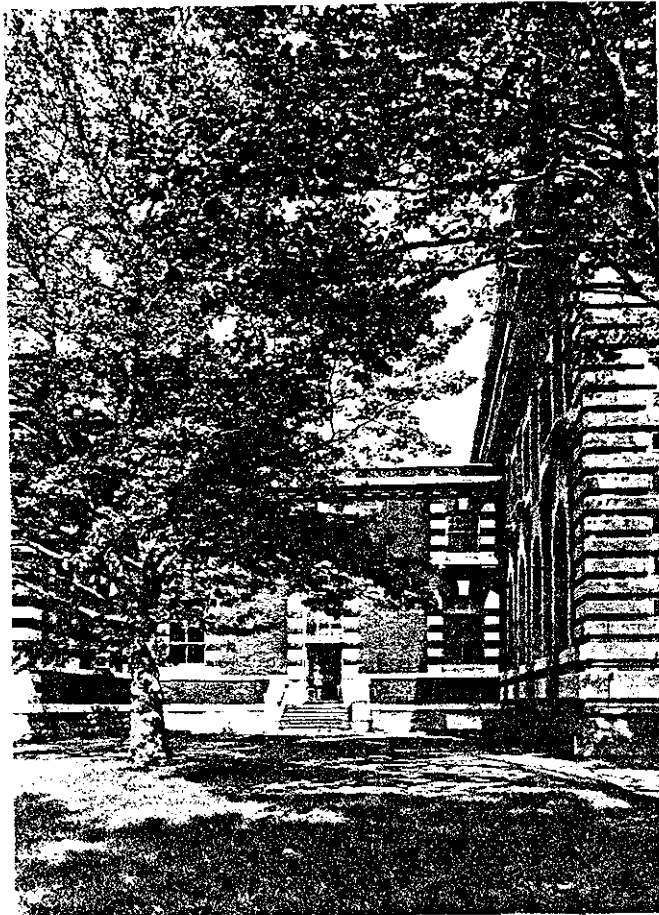
4.1 Kitchen and
Laundry
Building,
South
Elevation



4.2 Kitchen and Laundry
Building, Column
Detail on South
Porch



4.5 Kitchen and Laundry Building, Dormer and Skylight Detail



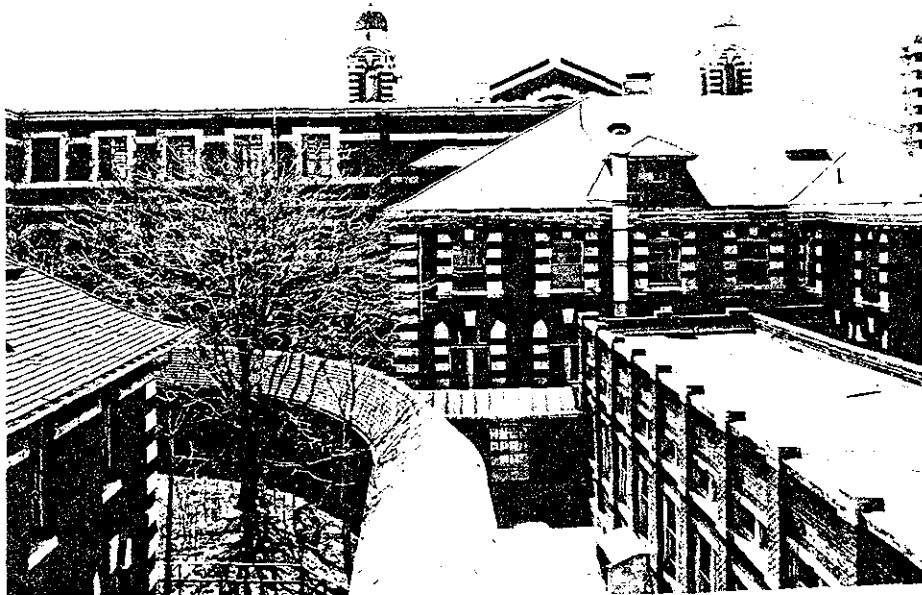
4.6 Kitchen and Laundry Building, South Elevation of Connection to Main Building



4.3 Kitchen and Laundry Building,
Door Opening Onto South Porch



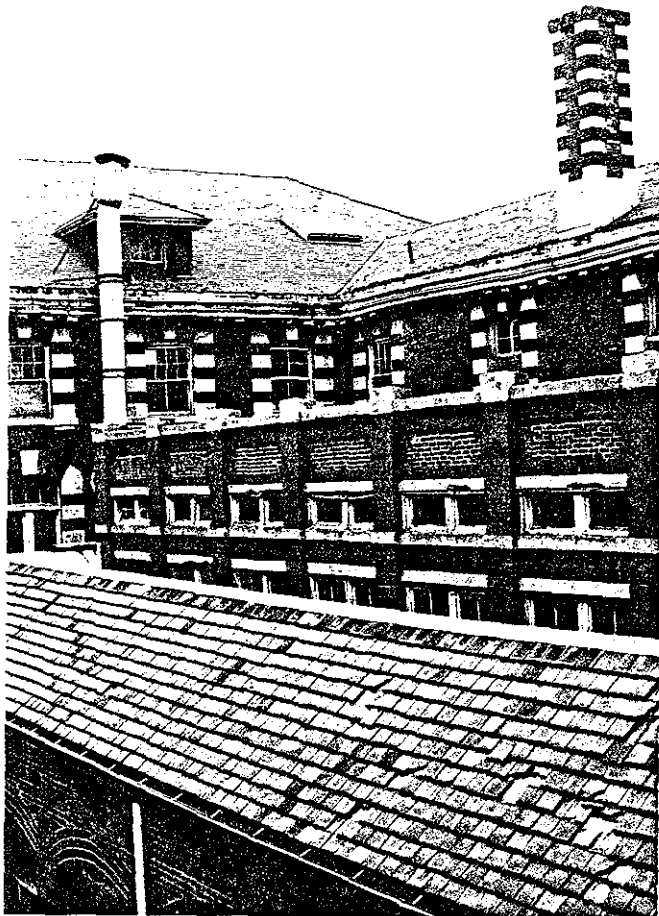
4.4 Kitchen and
Laundry
Building,
East Elevation



4.7 Kitchen and Laundry Building, West Elevation

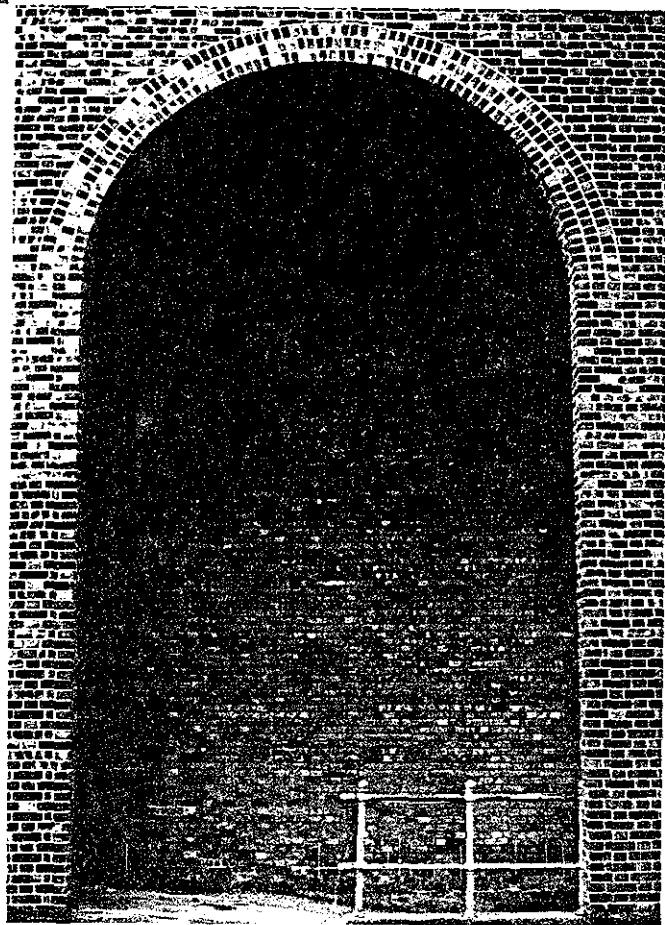


4.8 Kitchen and Laundry Building, Shed Beside Northwest Cellar Entrance



4.9 Kitchen and Laundry Building, North Wing

4.10 Kitchen and Laundry Building, Passageway C





4.11 Kitchen and
Laundry
Building,
Passageway D
Connecting
Kitchen and
Laundry
Building With
Bakery and
Carpentry
Building



4.12 Kitchen and Laundry Building,
Passageways E and F

CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Powerhouse STRUCTURE NO. 5

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED: Est. Cost of Treatment Recommended: \$ _____

Preservation Date of this Estimate: _____ 197__
 Restoration
 Reconstruction Est. Interim Cost (other than routine maintenance)
 Partial Reconstruction pending completion of Recommended Treatment:
 Adaptive Restoration \$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: CLASS VI LAND ACREAGE (if not
A 18 580 940 4505 600 part of a complex or district:
Zone Easting Northing _____ acres.

STUDIES REQUIRED: KEY:
 Historical Studies Plan N - not needed
 Historic Resource Study P - programmed
 Historic Structure Report C - completed
 Historic Furnishing Study U - underway
 Historic Structure Preservation Guide R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Load bearing brick walls with granite base, steel frame floor and roof structure.

Physical Description: 187.5' x 81'

The Powerhouse was designed as part of the original immigration complex and was completed in 1901. It is a 2 story structure of red brick laid in Flemish bond, with a quarry face, regular ashlar granite base, bluestone water table and first floor sill lines, and plain limestone quoins and window trim. The roof is hipped and has 3 gabled dormers each on the north and south ends and 6 skylights in the central portion. It is covered with flat clay tile on metal purlins and clay sheathing and has copper gutters and dormer cornices. First floor windows have 8-over-8 light wood sash in wood frames with segmental arched heads; second floor windows have 4-over-4 light wood sash in wood frames with segmental arched heads on the end pavillions and flat heads in the center. A 7' diameter brick chimney stack rises approximately 125' up from the center of the building.

Interior finishes on the first floor consist of white hexagonal floor tile, 4' high glazed rectangular tile wainscoting and painted brick in the entryway, with square quarry tile floors and painted brick walls in the mechanical rooms. The stairway to the second floor consists of an iron frame, balusters and newel post, wood railing and slate steps. Most rooms on the second floor have concrete floors and plaster on metal lath ceilings, but bath- (continue on reverse if necessary)

PRESENT CONDITION: Excellent Good Fair Deteriorated
Ruins Unaltered Altered Original Site Moved

Report prepared by:

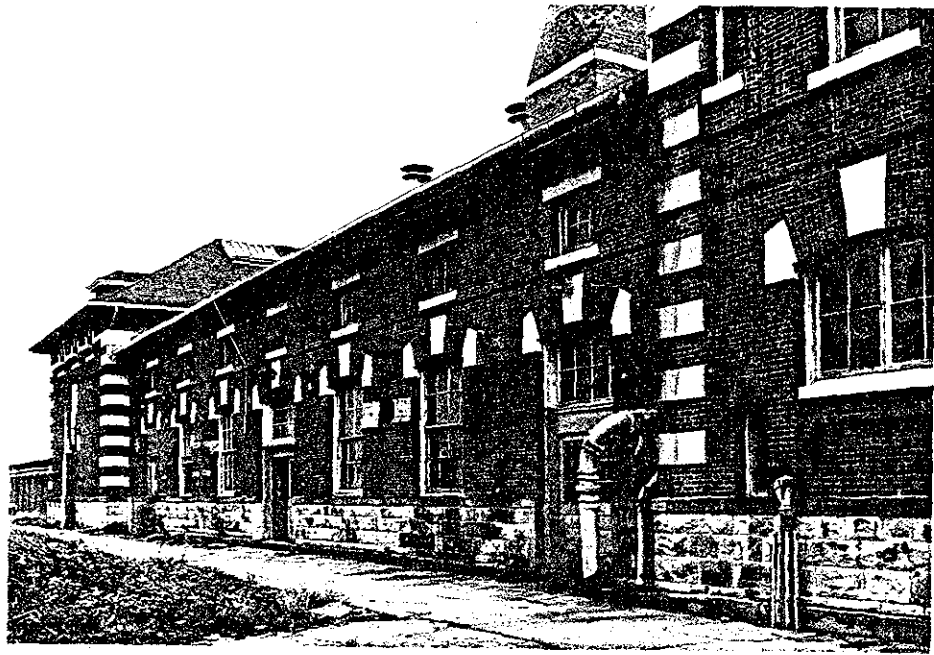
Building Conservation Technology
Signature

December 1978
Date

rooms have hexagonal tile floors, 6' high rectangular glazed tile wainscoting, marble partitions and panelled wood doors.



5.1 Powerhouse, North Elevation

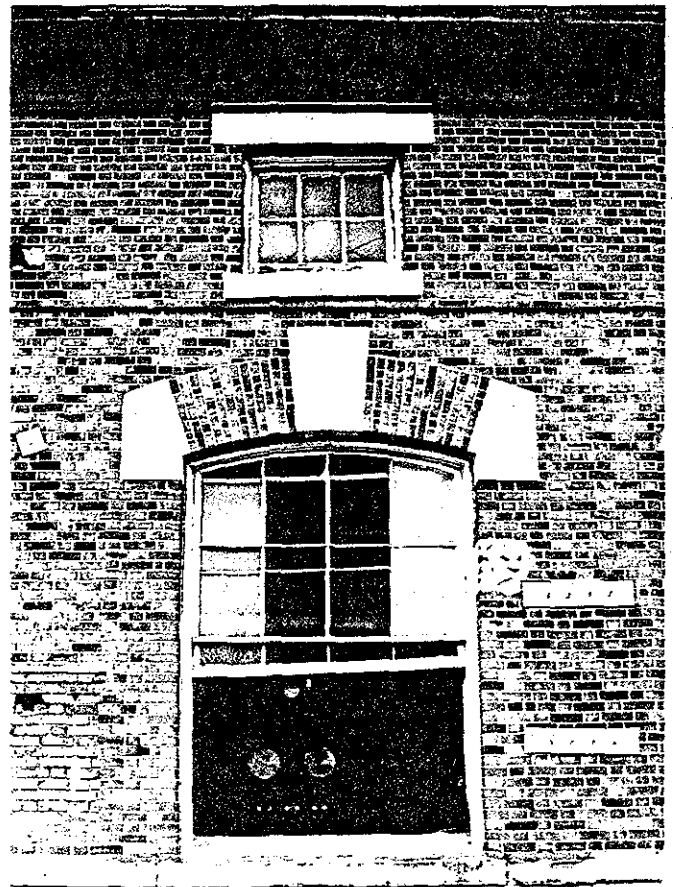


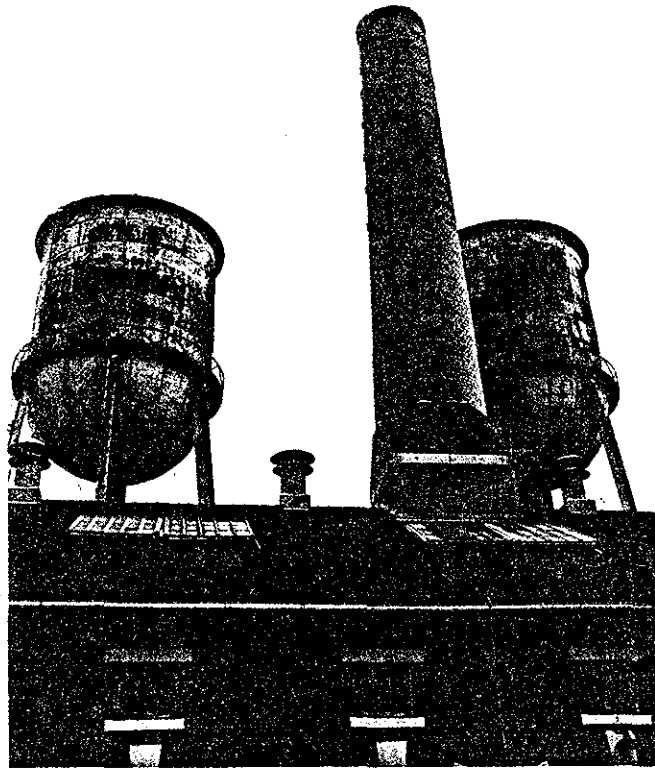
5.2 Powerhouse, West Elevation



5.3 Powerhouse, West Doorway

5.4 Powerhouse, First and Second Floor Windows





5.5 Powerhouse, Roofline

CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Shed STRUCTURE NO. 6

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED: Est. Cost of Treatment Recommended: \$ _____

<input type="checkbox"/> Preservation	Date of this Estimate: _____ 197
<input type="checkbox"/> Restoration	
<input type="checkbox"/> Reconstruction	Est. Interim Cost (other than routine maintenance)
<input type="checkbox"/> Partial Reconstruction	pending completion of Recommended Treatment:
<input type="checkbox"/> Adaptive Restoration	\$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: CLASS VI LAND ACREAGE (if not part of a complex or district: _____ acres.)

A	1	8	5	8	0	9	4	0	4	5	0	5	6	0	0
	Zone Easting					Northing									

STUDIES REQUIRED:

- Historical Studies Plan
- Historic Resource Study
- Historic Structure Report
- Historic Furnishing Study
- Historic Structure Preservation Guide

KEY:

- N - not needed
- P - programmed
- C - completed
- U - underway
- R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Gable roofed wood frame with clapboard siding.

Physical Description: 10' x 18'
 Located on the east side of the powerhouse, the wood frame storage shed has a gabled roof covered with asphalt shingles over tongue-in-groove sheathing. Walls are covered with wood clapboard siding. The wood sill and studs were erected directly on top of the concrete side walk and are covered with tarpaper. A single large opening fills the north facade and a square sashless window fills the southern end.

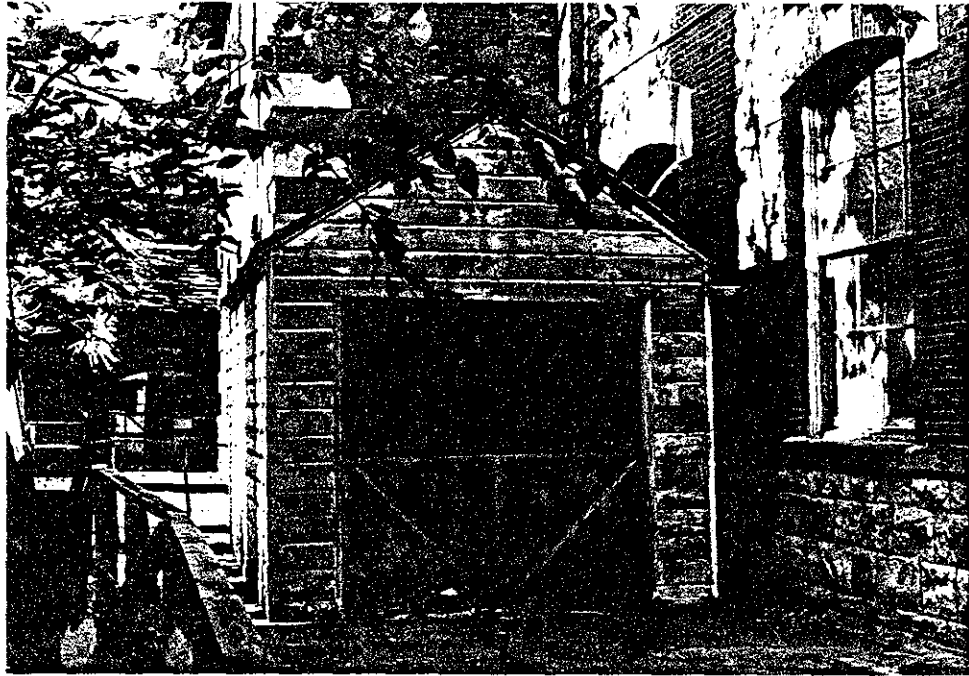
(continue on reverse if necessary)

PRESENT CONDITION: Excellent Good Fair Deteriorated
 Ruins Unaltered Altered Original Site Moved

Report prepared by:

Building Conservation Technology
Signature

December 1978
Date



6.1 Shed, North Elevation

CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Shelter STRUCTURE NO. 7

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED: Est. Cost of Treatment Recommended: \$ _____

<input type="checkbox"/> Preservation	Date of this Estimate: _____ 197__
<input type="checkbox"/> Restoration	
<input type="checkbox"/> Reconstruction	Est. Interim Cost (other than routine maintenance)
<input type="checkbox"/> Partial Reconstruction	pending completion of Recommended Treatment:
<input type="checkbox"/> Adaptive Restoration	\$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: CLASS VI LAND ACREAGE (if not part of a complex or district: _____ acres.)

A 1 8 5 8 0 9 4 0 4 5 0 15 6 0 10
 Zone Easting Northing

STUDIES REQUIRED:

<input type="checkbox"/> Historical Studies Plan	← KEY:
<input type="checkbox"/> Historic Resource Study	N - not needed
<input type="checkbox"/> Historic Structure Report	P - programmed
<input type="checkbox"/> Historic Furnishing Study	C - completed
<input type="checkbox"/> Historic Structure Preservation Guide	U - underway
	R - required, but not yet scheduled

STRUCTURE: Type of, and composition: One story red brick bearing wall masonry with terra cotta trim.

Physical Description: 81' x 17'
 Located at the northwest corner of Island 1, the building appears to have been constructed 1934-35 and was used for the storage of combustibles. It is one story red brick (Flemish bond) with a concrete foundation and flat asphalt roof enclosed by a parapet. The cornice and parapet coping are of buff-colored glazed terra cotta. The end bays of the 9 bay east and west elevations protrude slightly creating small pavillions with a single 9 light round metal sash window at each end of the building. The 7 center bays are divided by brick pilasters with terra cotta bases and capitals. On the east, each bay contains a single light square wood window with the exception of the center which contains a door enclosed by a pent-roofed brick entryway. The center bays of the west facade have no windows. The north and south elevations are 2 bays wide, each with a 9 light metal window. The interior has a concrete floor, painted brick walls and a plaster ceiling. Rooms are partitioned off at the north and south ends and the bathroom at the south end has tile floors and plaster walls.

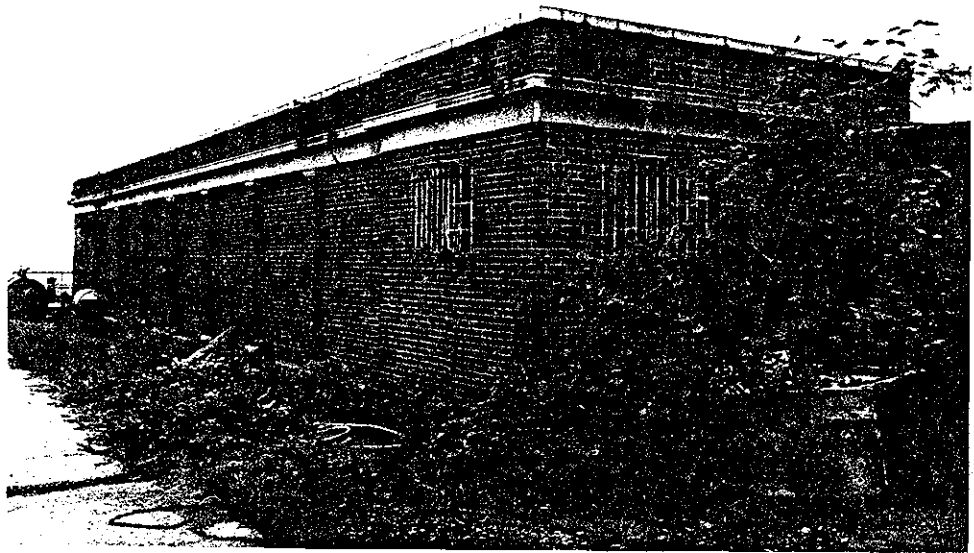
(continue on reverse if necessary)

PRESENT CONDITION: Excellent Good Fair Deteriorated
 Ruins Unaltered Altered Original Site Moved

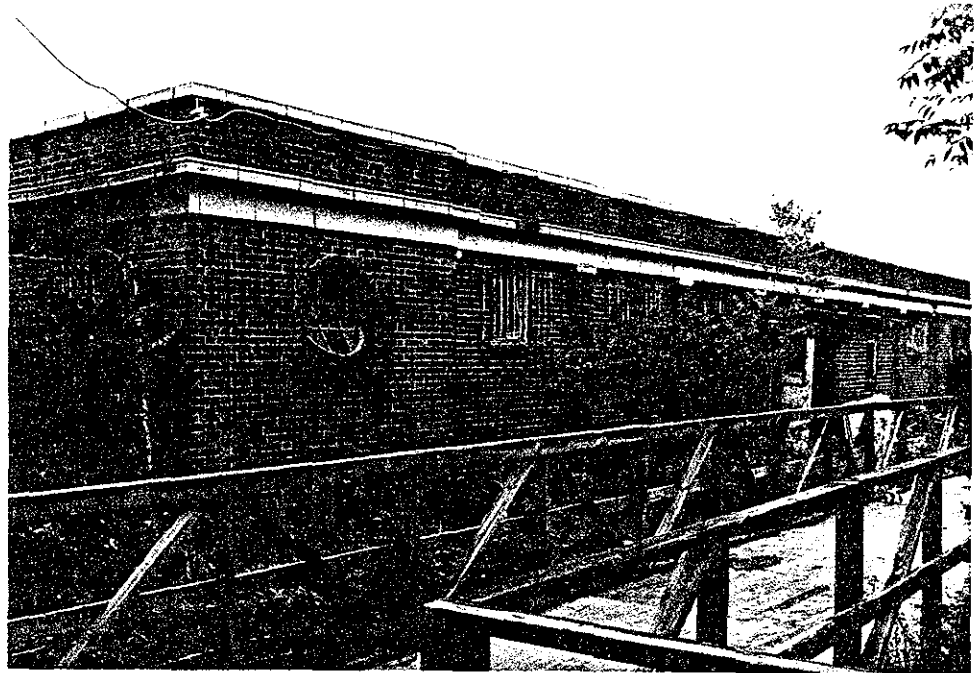
Report prepared by:

Building Conservation Technology
 Signature

December 1978
 Date



7.1 Shelter, Southwest Corner



7.2 Shelter, Southeast Corner

CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Greenhouse STRUCTURE NO. 8

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED: Est. Cost of Treatment Recommended: \$ _____

<input type="checkbox"/> Preservation	Date of this Estimate: _____	197
<input type="checkbox"/> Restoration		
<input type="checkbox"/> Reconstruction	Est. Interim Cost (other than routine maintenance)	
<input type="checkbox"/> Partial Reconstruction	pending completion of Recommended Treatment:	
<input type="checkbox"/> Adaptive Restoration		\$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: CLASS VI LAND ACREAGE (if not part of a complex or district): _____ acres.

A 1 8 5 8 0 9 4 0 4 5 0 5 6 0 0

Zone Easting Northing

STUDIES REQUIRED:

- Historical Studies Plan
- Historic Resource Study
- Historic Structure Report
- Historic Furnishing Study
- Historic Structure Preservation Guide

KEY:

- N - not needed
- P - programmed
- C - completed
- U - underway
- R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Steel and wood frame enclosed with glass.

Physical Description: 50' x 25'

The greenhouse, built in 1936, has a tile, brick and concrete foundation and stuccoed brick walls to a height of 4'. Above this are wood sash windows supported on steel angles and pipes. Windows at the sides and ridge open via a pivot arm crank mechanism. A small shed-roofed entrance pavillion at the south end is also enclosed in glass above stuccoed brick walls and contains a 9 light over 1 panel door on the east side and a red tile floor. Interior features include a concrete floor and growing tables along the sides and center of the structure with heating pipes below them.

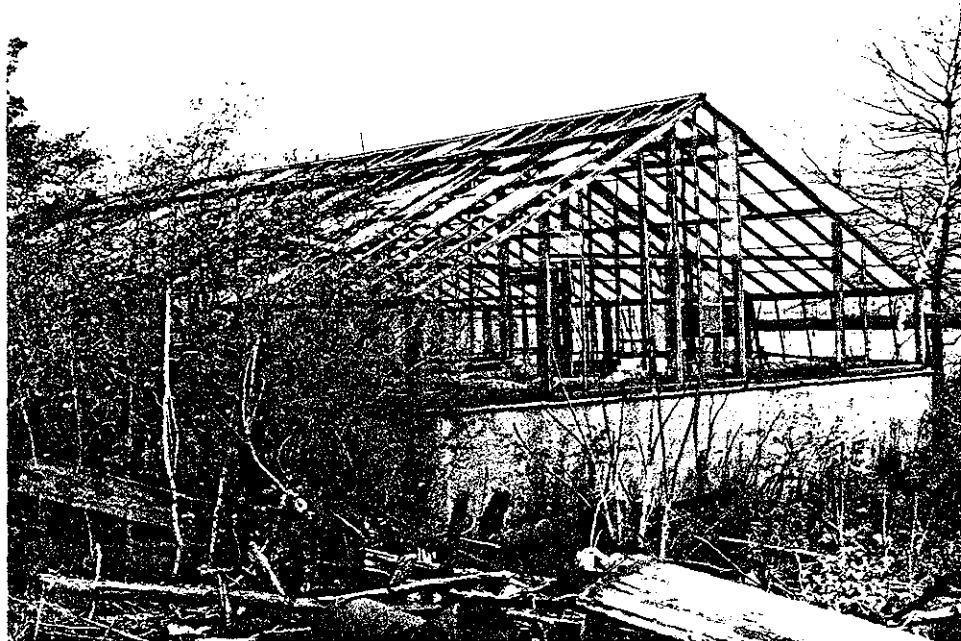
(continue on reverse if necessary)

PRESENT CONDITION: Excellent Good Fair Deteriorated
Ruins Unaltered Altered Original Site Moved

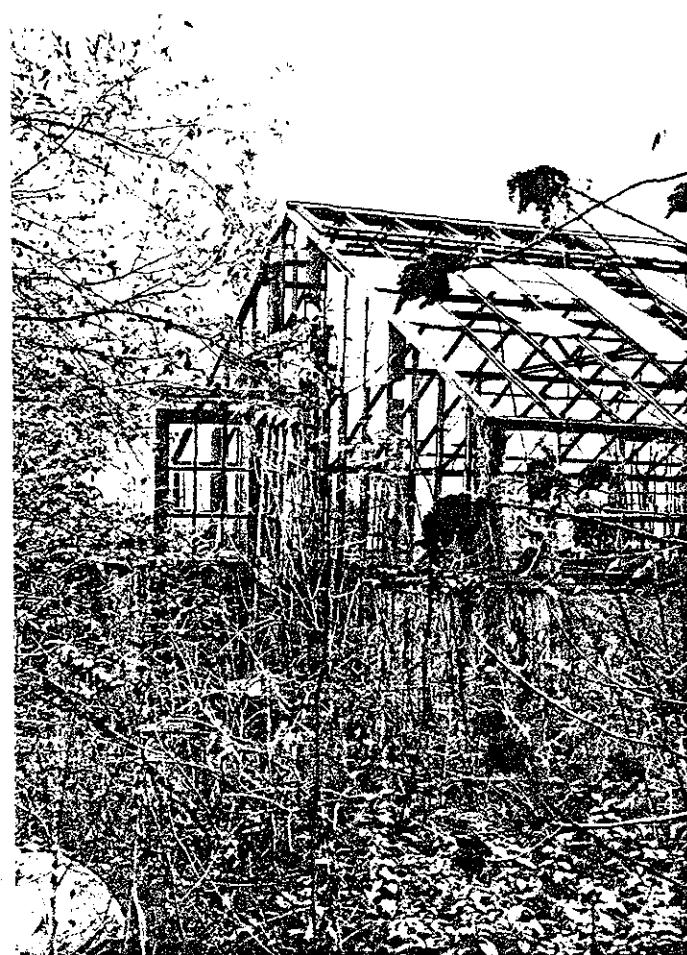
Report prepared by:

Building Conservation Technology
Signature

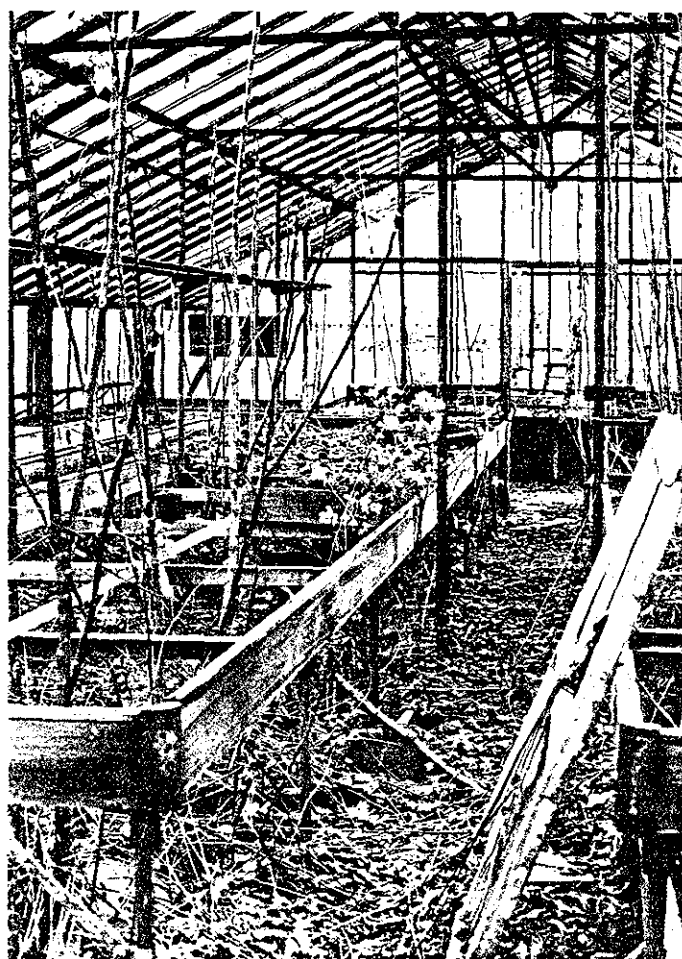
December 1978
Date



8.1 Greenhouse,
North Elevation



8.2 Greenhouse, South Elevation



8.3 Greenhouse, Interior

CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Incinerator STRUCTURE NO. 9

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED: Est. Cost of Treatment Recommended: \$ _____

<input type="checkbox"/> Preservation	Date of this Estimate: _____ 197
<input type="checkbox"/> Restoration	
<input type="checkbox"/> Reconstruction	Est. Interim Cost (other than routine maintenance)
<input type="checkbox"/> Partial Reconstruction	pending completion of Recommended Treatment:
<input type="checkbox"/> Adaptive Restoration	\$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: CLASS VI LAND ACREAGE (if not part of a complex or district):
 A

1	8	5	8	0	9	4	0	4	5	0	5	6	0	0
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

 _____ acres.
 Zone Easting Northing

STUDIES REQUIRED:

- Historical Studies Plan
- Historic Resource Study
- Historic Structure Report
- Historic Furnishing Study
- Historic Structure Preservation Guide

KEY:

- N - not needed
- P - programmed
- C - completed
- U - underway
- R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Reinforced concrete and steel frame with cement stucco coating.

Physical Description: 30' x 45'

The single story flat roofed Incinerator Building originally housed two garbage incinerators. The reinforced concrete and steel frame with cement stucco coating building is 3 bays wide on each elevation; the south side containing a steel door and 2 six light wood sash and frame windows, the east and west sides each have 2 six light wood sash and frame windows and a rectangular copper vent at ceiling height, and the north side has two rectangular copper vents at ceiling height and 1 six light wood sash and frame window. All of the windows have concrete sills and iron gratings. To the west is a separate brick furnace and a 70' high 4' diameter steel stack with a ladder rivetted to the side. The interior was not accessible. The building was constructed in 1911 and the present stack dates from 1941.

(continue on reverse if necessary)

PRESENT CONDITION: Excellent Good Fair Deteriorated
 Ruins Unaltered Altered Original Site Moved

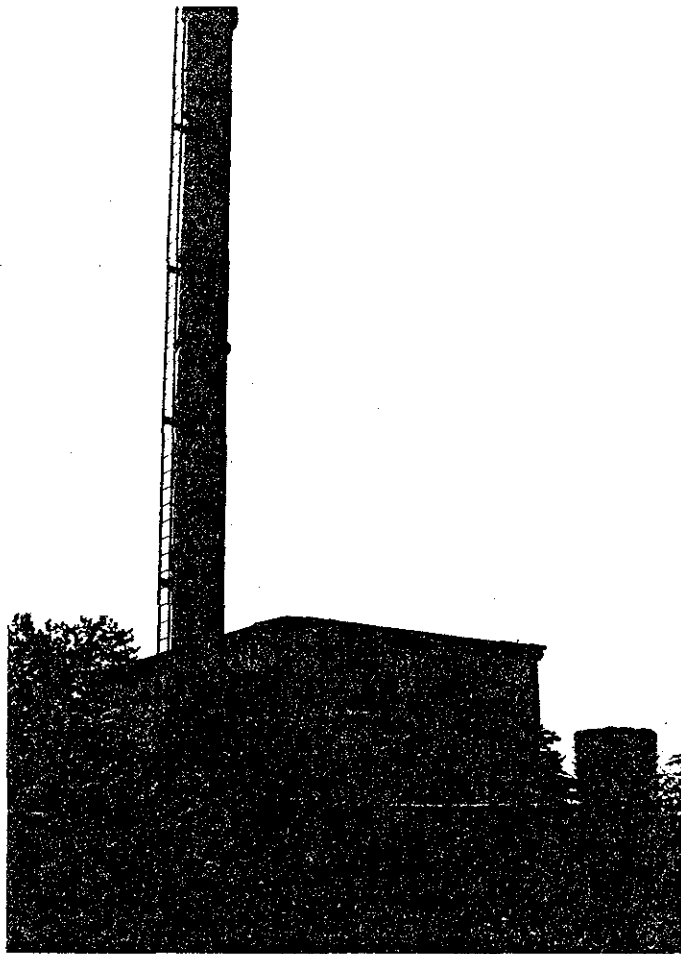
Report prepared by:

Building Conservation Technology

 Signature

December 1978

 Date



9.1 Incinerator, North Elevation

CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Bakery and Carpentry Building STRUCTURE NO. 10

DEGREE OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED: Est. Cost of Treatment Recommended: \$ _____

Preservation Date of this Estimate: _____ 197__
 Restoration
 Reconstruction Est. Interim Cost (other than routine maintenance)
 Partial Reconstruction pending completion of Recommended Treatment:
 Adaptive Restoration \$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

GRID REFERENCE: 18 | 5 | 8 | 0 | 9 | 4 | 0 | 4 | 5 | 0 | 5 | 6 | 0 | 0 CLASS VI LAND ACREAGE (if not part of a complex or district): _____ acres.

Zone Easting Northing

TASKS REQUIRED: KEY:

<input type="checkbox"/> Historical Studies Plan	N - not needed
<input type="checkbox"/> Historic Resource Study	P - programmed
<input type="checkbox"/> Historic Structure Report	C - completed
<input type="checkbox"/> Historic Furnishing Study	U - underway
<input type="checkbox"/> Historic Structure Preservation Guide	R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Brick over steel frame with limestone trim and granite base.

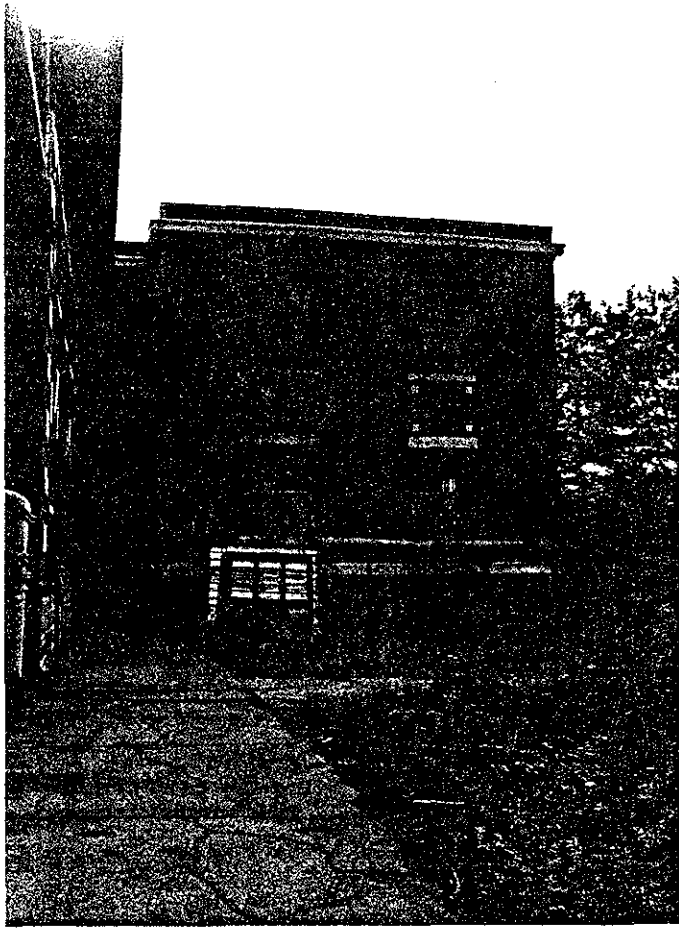
Physical Description: 111' x 51' + 22.5' x 51'
 The Bakery and Carpentry Building was erected in 1913-14 and contained bakery facilities on the first floor and a carpenter's workshop on the second. The two-story building is constructed of red brick laid in Flemish bond over steel frame with a quarry faced granite and brick foundation, limestone water table and limestone sills and lintels. Although constructed of the same material as other buildings on Ellis of the same period, the detailing is more closely allied to industrial architecture than to the Beaux Arts. The building is divided into 6 bays on the west elevation and 3 bays on the north and south. The east side connects to the Kitchen and Laundry (#4) and the Powerhouse (#5) at the second floor via covered walkways and to the passageway (#12) on the first floor. Each bay contains rectangular, 30 light metal sash and frame windows, the center section of which pivots. Each bay is delineated by double rows of header bricks around the sides and top, and by decorative spandrels between floors consisting of a wide extruded brick bands surrounding a square formed by soldier-coursed brick with limestone corner squares. The center of the square is filled with brick in Flemish bond with glazed headers. The roof is flat, covered with tar and gravel and surrounded by a parapet with limestone coping. (continue on reverse if necessary)

PRESENT CONDITION: Excellent Good Fair Deteriorated
 Ruins Unaltered Altered Original Site Moved

Report prepared by: _____

 Signature Date
 _____ December 1978

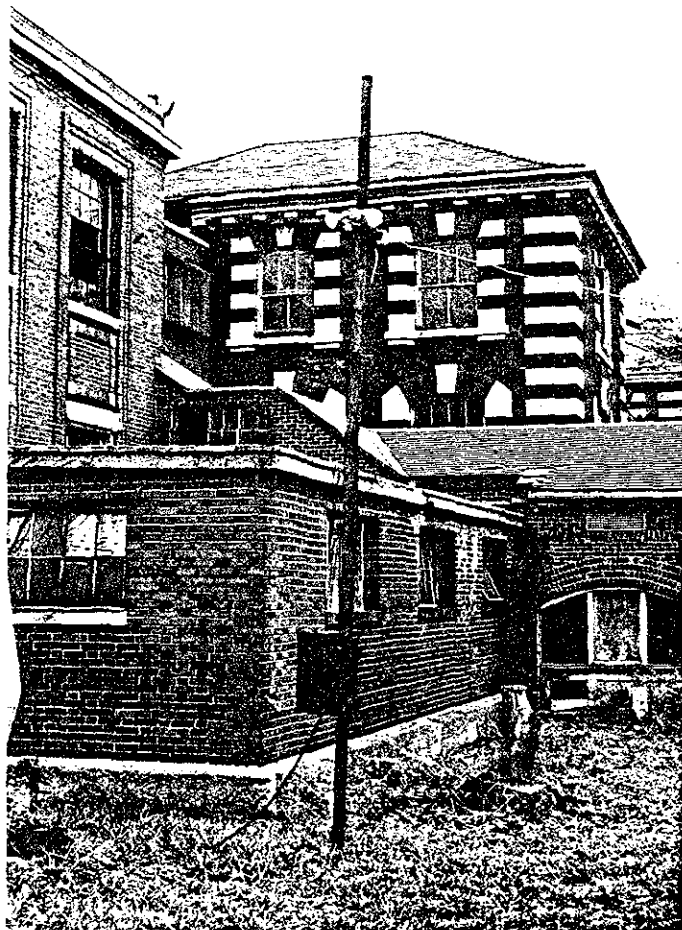
On the south end of the building is a single story flat roofed addition which is 2 bays on the west and 3 on the south. Both the base and cornice are of concrete and the walls are of red brick laid in Flemish bond. The window openings have 6 light metal sash and frames with operable center sections.



10.1 Bakery and Carpentry
Building, North
Elevation

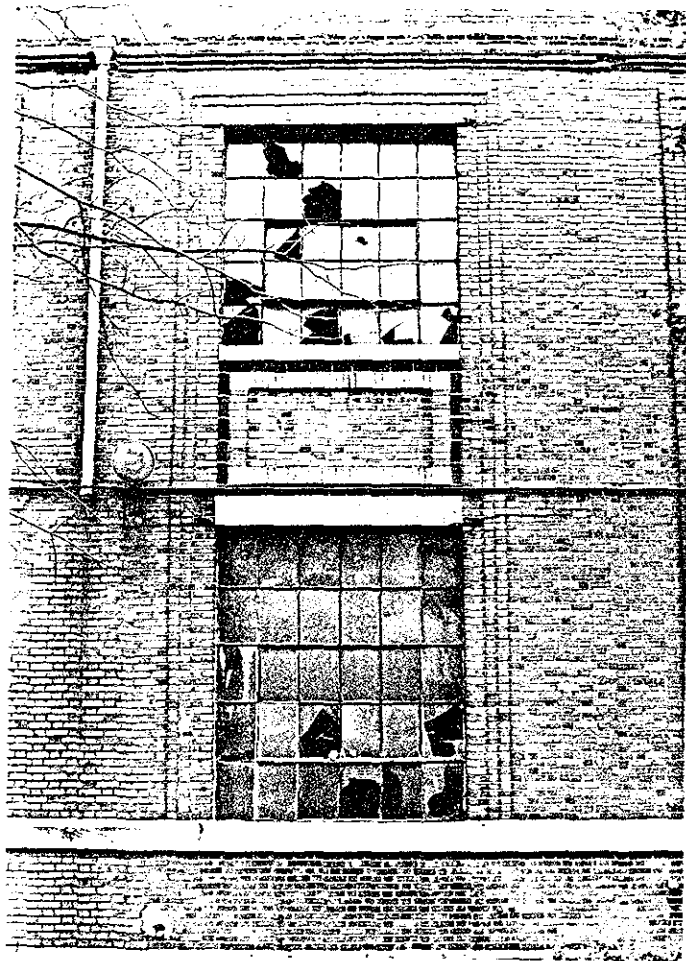


10.2 Bakery and
Carpentry
Building,
Southwest
Corner



10.3 Bakery and Carpentry Building, South Wing

10.4 Bakery and Carpentry Building, Window Bay Detail



CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Shed STRUCTURE NO. 11

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED: Est. Cost of Treatment Recommended: \$ _____

Preservation Date of this Estimate: _____ 197
 Restoration
 Reconstruction Est. Interim Cost (other than routine maintenance)
 Partial Reconstruction pending completion of Recommended Treatment:
 Adaptive Restoration \$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: A 1 8 5 8 0 9 4 0 4 5 0 5 6 0 0 CLASS VI LAND ACREAGE (if not
Zone Easting Northing part of a complex or district: _____ acres.

STUDIES REQUIRED:

- Historical Studies Plan
- Historic Resource Study
- Historic Structure Report
- Historic Furnishing Study
- Historic Structure Preservation Guide

KEY:

- N - not needed
- P - programmed
- C - completed
- U - underway
- R - required, but not yet scheduled

STRUCTURE: Type of, and composition: one story wood frame with clapboard siding.

Physical Description: 45' x 10'

A single story wood frame shack stands to the south of the Bakery and Carpentry Building and west of the Covered Passageway on Island I. It is 2 bays long on the north and south sides and 10 bays on the east and west, the bays being divided by a T-shaped framing post to which the 6' clapboard is nailed. The structure is built on a concrete slab and has a shed roof of tar paper over wood sheathing. There is a single window on the north and south sides and 4 windows and 2 doors on the west; windows have no glazing but are covered with wire mesh and iron bars. Interior walls are sheathed in particle board.

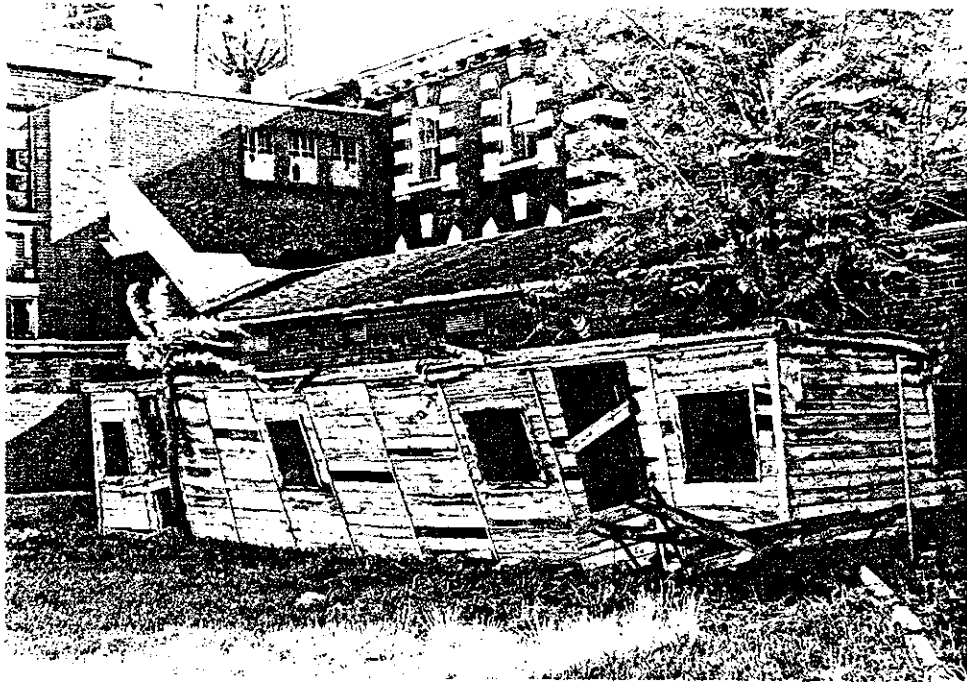
(continue on reverse if necessary)

PRESENT CONDITION: Excellent Good Fair Deteriorated
Ruins Unaltered Altered Original Site Moved

Report prepared by:

Building Conservation Technology
Signature

December 1978
Date



11.1 Shed, West Elevation

CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Passageway STRUCTURE NO. 12

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED: Est. Cost of Treatment Recommended: \$ _____

<input type="checkbox"/> Preservation	Date of this Estimate: _____ 197
<input type="checkbox"/> Restoration	
<input type="checkbox"/> Reconstruction	Est. Interim Cost (other than routine maintenance)
<input type="checkbox"/> Partial Reconstruction	pending completion of Recommended Treatment:
<input type="checkbox"/> Adaptive Restoration	\$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: A 18 580 940 4505 600 CLASS VI LAND ACREAGE (if not part of a complex or district: _____ acres.

Zone Easting Northing

STUDIES REQUIRED:

- Historical Studies Plan
- Historic Resource Study
- Historic Structure Report
- Historic Furnishing Study
- Historic Structure Preservation Guide

KEY:

- N - not needed
- P - programmed
- C - completed
- U - underway
- R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Red brick bearing wall masonry with steel roof trusses and concrete floor.

Physical Description: 387' x 15'

To facilitate discussion and analysis, the network of passageways connecting the buildings on all 3 islands has been divided into 4 different units according to location and materials of construction. Each unit has been further subdivided in order to describe specific details.

A single-story brick passageway runs from the southwest corner of the Baggage and Dormitory Building to the north end of the Ferry Building, connecting these buildings with the Kitchen and Laundry, Powerhouse and Bakery and Carpentry Buildings. It has a concrete slab foundation and ceiling, Flemish bond red brick walls and a tile covered gable roof on steel trusses. Sides of the passageway form an arcade, with brick piers on bluestone plinths and segmental arches formed of 4 header rows. Another single header course runs under rectangular metal ventilators at roof level.

A tall, flat-roofed brick unit with iron and limestone parapets joins the arcade to the Baggage and Dormitory Building. Corner pavillions rising above the height of the passageway mark the south ends of sections C and D. The Flemish Bond walls are open on two sides with high, semi-circular arches trimmed with raised brick quoins and limestone keystones. The arches (continue on reverse if necessary)

PRESENT CONDITION: Excellent Good Fair Deteriorated
Ruins Unaltered Altered Original Site Moved

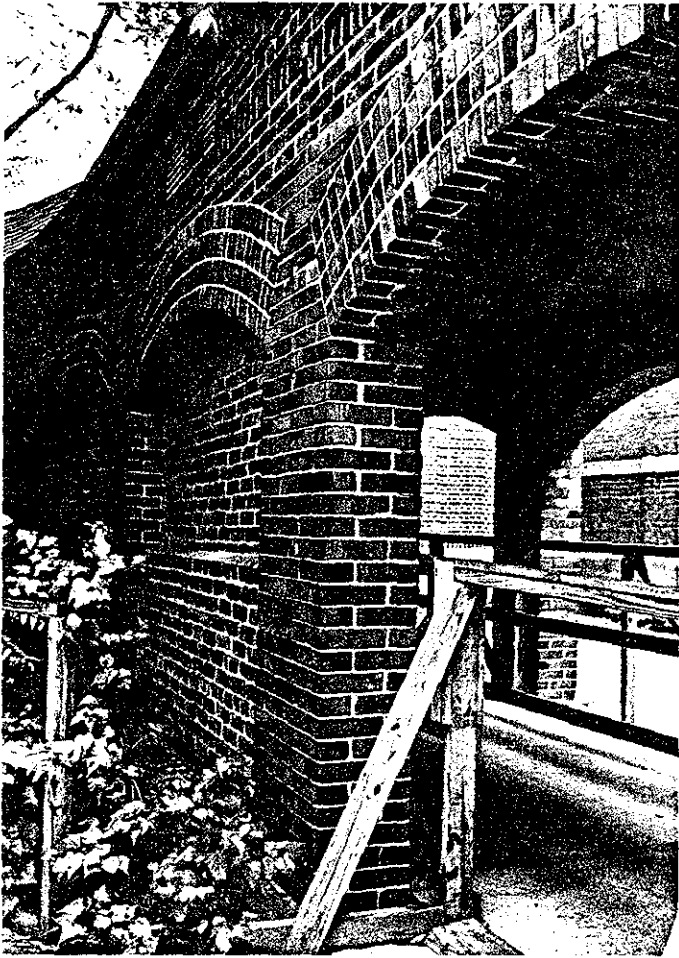
Report prepared by:

Building Conservation Technology
Signature

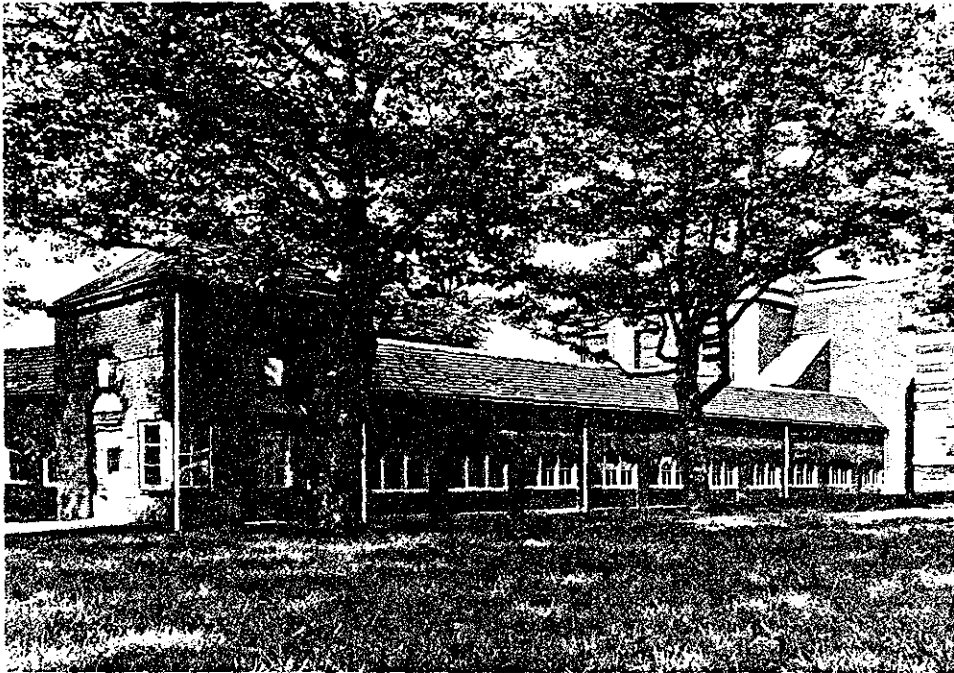
December 1978
Date

on the pavillion between C and D are now filled with brick, wood, concrete and a variety of window and door sash, and a 6 light window with header sill and soldier brick lintel has been cut into the southeast corner. On the pavillion at the south end of section D, the upper part of the arch has been filled with concrete, and wood double doors and frames inserted below.

Sections A and B are largely open, though arches in the west side of A are filled with brick. The arches of the east sides of sections C and D contain a low brick wall approximately $2\frac{1}{2}$ feet high with headers at the sill and 3 section, 4 light inoperable wood sash above. The west side of D, separated by an interior wall from the east side, has similar sash with 3 wood panels below rather than brick.



12.1 Passageway, Open Arches
in Section A



12.2 Passageway,
East Elevation,
Sections C and
D



12.3 Passageway, West Elevation, Section D



12.4 Passageway, Wood Sash Unit, West Elevation of Section D

CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Passage STRUCTURE NO. 13

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED: Est. Cost of Treatment Recommended: \$ _____

<input type="checkbox"/>	Preservation	Date of this Estimate: _____	197
<input type="checkbox"/>	Restoration		
<input type="checkbox"/>	Reconstruction	Est. Interim Cost (other than routine maintenance)	
<input type="checkbox"/>	Partial Reconstruction	pending completion of Recommended Treatment:	
<input type="checkbox"/>	Adaptive Restoration		\$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: CLASS VI LAND ACREAGE (if not part of a complex or district): _____ acres.

A 1 8 5 8 0 9 4 0 4 5 0 5 6 0 0

Zone Easting Northing

STUDIES REQUIRED:

<input type="checkbox"/>	Historical Studies Plan	N - not needed
<input type="checkbox"/>	Historic Resource Study	P - programmed
<input type="checkbox"/>	Historic Structure Report	C - completed
<input type="checkbox"/>	Historic Furnishing Study	U - underway
<input type="checkbox"/>	Historic Structure Preservation Guide	R - required, but not yet scheduled

KEY: ←

STRUCTURE: Type of, and composition: Red brick bearing wall masonry with steel roof trusses and concrete floor.

Physical Description: 120' x 15'
Passageway #13, running along the west side of the Ferry Building and to the Immigration Building, was constructed c. 1935. It is similar in construction to Passageway #12, but all archways are filled with metal window units consisting of three 4-light fixed sash with 3 square panels below.

(continue on reverse if necessary)

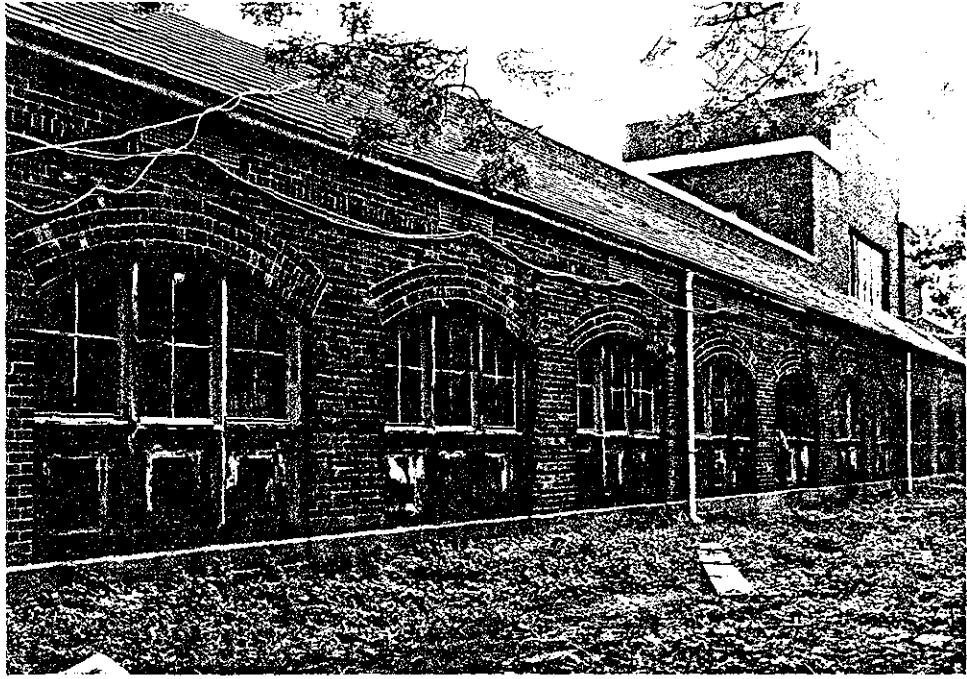
PRESENT CONDITION: Excellent Good Fair Deteriorated

Ruins Unaltered Altered Original Site Moved

Report prepared by:

Building Conservation Technology
Signature

December 1978
Date



13.1 Passageway, West Elevation

CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Ferry Building STRUCTURE NO. 14

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED: Est. Cost of Treatment Recommended: \$ _____

<input type="checkbox"/> Preservation	Date of this Estimate: _____ 197__
<input type="checkbox"/> Restoration	
<input type="checkbox"/> Reconstruction	Est. Interim Cost (other than routine maintenance)
<input type="checkbox"/> Partial Reconstruction	pending completion of Recommended Treatment:
<input type="checkbox"/> Adaptive Restoration	\$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: A 1850940 4505600 CLASS VI LAND ACREAGE (if not part of a complex or district: _____ acres.

Zone Easting Northing

<u>STUDIES REQUIRED:</u>	<u>KEY:</u>
<input type="checkbox"/> Historical Studies Plan	N - not needed
<input type="checkbox"/> Historic Resource Study	P - programmed
<input type="checkbox"/> Historic Structure Report	C - completed
<input type="checkbox"/> Historic Furnishing Study	U - underway
<input type="checkbox"/> Historic Structure Preservation Guide	R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Red brick and steel frame with limestone and terra cotta trim.

Physical Description: 112.5' x 197'
The Ferry Building, constructed in 1934-36 and used as a waiting room and cafeteria, consists of a 2 story central structure with a 4 story tower and single story wings, all with flat tar and gravel roofs. Walls are composed of Flemish bond red brick on steel frames, with limestone sills above the quarry faced ashlar granite and limestone base and buff-glazed terra cotta trim at the lintel line and roof copings. The single story wings are 4 bays long and 2 bays wide, with metal 4x5 light sash made up of operable casements on the lower part and hinged transoms above. At ground level on the east elevation of the central pavillion are three sets of double single light, single panel metal doors with transoms above. A galvanized metal marquise with a moulded cornice and panelled soffit is suspended from chains to shelter the doorway. Above the east doors and on the three other sides are large glazed areas 12 lights across and 4 lights high. On the main (east) face, the window and the doors below are set off by a deeply recessed terra cotta surround. The roof above the central section breaks and is set back at the sides twice before reaching the bottom of the tower. The lower section has buff colored, glazed terra cotta coping with foliage patterned blocks at the corners. The upper section coping, also of buff colored glazing terra cotta, is (continue on reverse if necessary)

PRESENT CONDITION: Excellent Good Fair Deteriorated
Ruins Unaltered Altered Original Site Moved

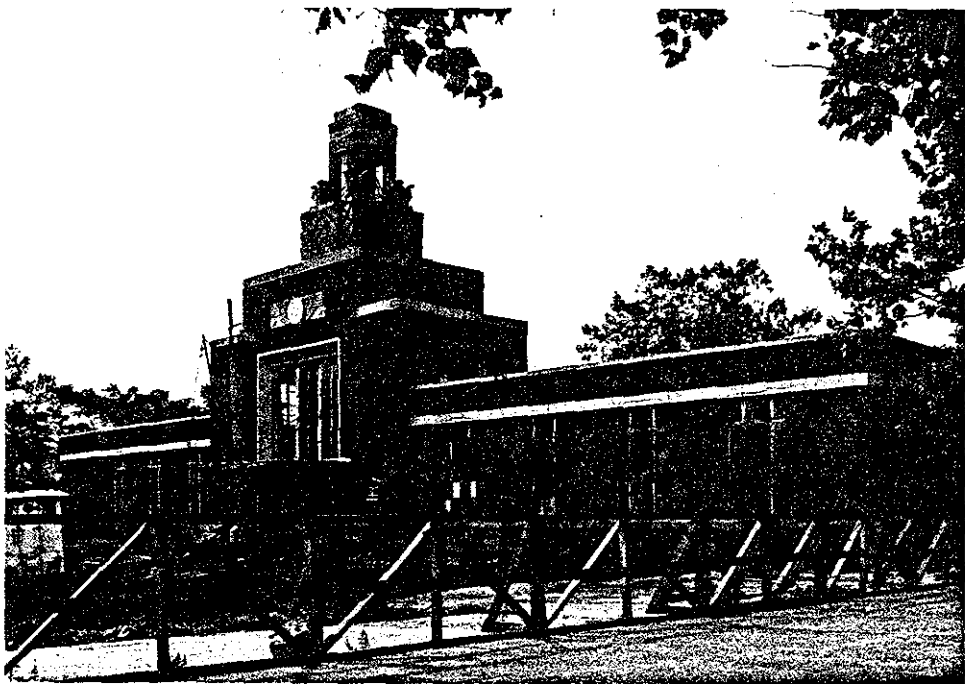
Report prepared by:

Building Conservation Technology
Signature

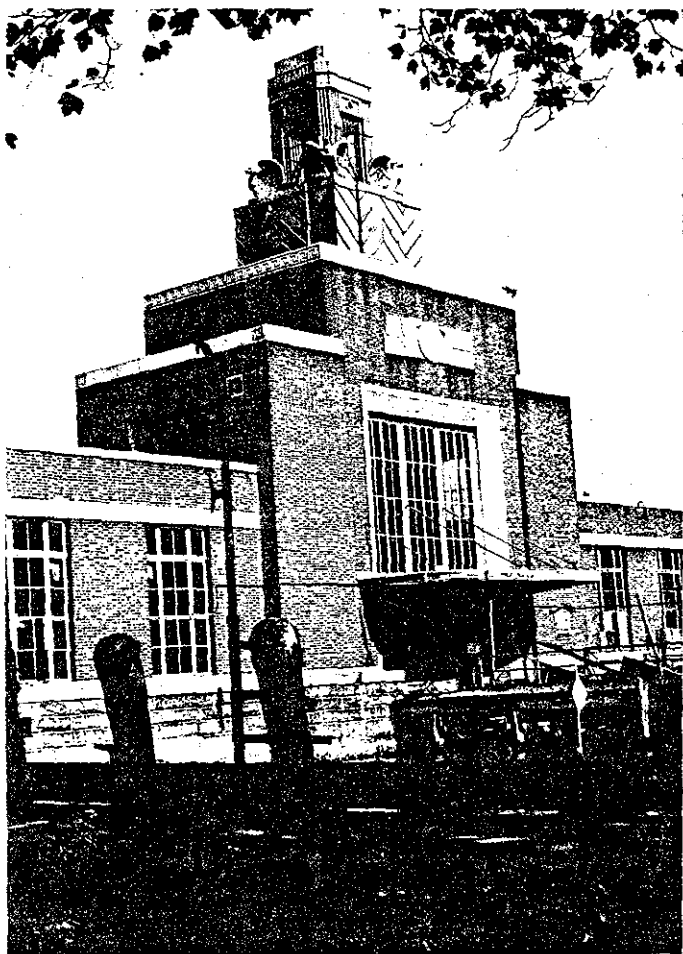
December 1978
Date

moulded in a Greek fret design. At the center of this upper area directly above the east window is a terra cotta disc with wings which may originally have held a clock. The upper tower is constructed of moulded lead-colored metal sheets on a steel frame, and consists of a base covered with chevron patterns, surmounted by eagles at all 4 corners, and a square cupola with truncated corners covered with fluted lead colored metal sheets. The cupola has one 9 light metal window on each face.

On the interior of the central pavillion, the floor is concrete and the walls have an 8' high wainscot of large, cream colored glazed tiles with plaster above. In each corner of the waiting room are highbacked oak benches. Metal sash French doors lead to rooms on either side which have linoleum floors and similar wall treatment. Rooms at the south end have concrete floors, plaster walls and wood baseboards and trim. Bathrooms at the north end have cream colored unglazed square tiles on the floor and wainscot, plaster walls and ceilings and porcelain partitions.



14.1 Ferry Building,
East Elevation



14.2 Ferry Building, Central
Tower Detail



14.3 Ferry Building,
East
Elevation
Window Units



14.4 Ferry Building, South
Elevation Door

CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Immigration Building STRUCTURE NO. 15

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED:

Est. Cost of Treatment Recommended: \$ _____

<input type="checkbox"/> Preservation	Date of this Estimate: _____ 197_
<input type="checkbox"/> Restoration	
<input type="checkbox"/> Reconstruction	Est. Interim Cost (other than routine maintenance)
<input type="checkbox"/> Partial Reconstruction	pending completion of Recommended Treatment:
<input type="checkbox"/> Adaptive Restoration	\$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: A 18 580940 45015600 CLASS VI LAND ACREAGE (if not part of a complex or district: _____ acres.
Zone Easting Northing

STUDIES REQUIRED:

- Historical Studies Plan
- Historic Resource Study
- Historic Structure Report
- Historic Furnishing Study
- Historic Structure Preservation Guide

KEY:

- N - not needed
- P - programmed
- C - completed
- U - underway
- R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Red brick over steel frame with glazed terra cotta trim.

Physical Description: 112' x 197'

The Immigration Building, a single story structure with a double E-shaped plan, was built in 1934-36 and used for judicial hearings. The framework is steel with red brick cladding, composed of a common bond foundation, a soldier brick water table, and Flemish bond walls with a header course along the window lintels. Windows have buff glazed terra cotta sills and are composed of metal casement units with a 4 light fixed transom and 6 light casement section. There are 9 window bays on the north and south sides, alternating double and triple casements with double doors in the center; the south appears to have the original 8 light doors. The east and west sides contain 11 bays, with 1 triple window on the wings, 5 triple windows in the central pavillion, and 2 double windows in both recessed areas between. The roof is flat, covered with tar and gravel and surrounded by a terra cotta and brick parapet covered by copper flashing. The main focus of the interior is on the central room on the west side, which has pine-panelled walls, exposed wood columns and beams and fireplaces at the north and south ends. Other rooms and hallways are floored with terrazzo, walls are plastered and ceilings covered with accoustical tile. Bathrooms have 6" square cream colored matte tile on floors and wainscotting and porcelain stall dividers. (continue on reverse if necessary)

PRESENT CONDITION: Excellent Good Fair Deteriorated
Ruins Unaltered Altered Original Site Moved

Report prepared by:

Building Conservation Technology
Signature

December 1978
Date



15.1 Immigration
Building, North
Elevation



15.2 Immigration
Building,
Northeast Corner



15.3 Immigration
Building,
Window Units



15.4 Immigration
Building, West
Elevation

CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Passageway STRUCTURE NO. 16

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED: Est. Cost of Treatment Recommended: \$ _____

<input type="checkbox"/> Preservation	Date of this Estimate: _____ 197__
<input type="checkbox"/> Restoration	
<input type="checkbox"/> Reconstruction	Est. Interim Cost (other than routine maintenance)
<input type="checkbox"/> Partial Reconstruction	pending completion of Recommended Treatment:
<input type="checkbox"/> Adaptive Restoration	\$ _____

LOCATION OF STRUCTURE:

UTM REFERENCE: CLASS VI LAND ACREAGE (if not part of a complex or district):
 A 18 580 940 450 15 600 _____ acres.
 Zone Easting Northing

STUDIES REQUIRED:

- Historical Studies Plan
- Historic Resource Study
- Historic Structure Report
- Historic Furnishing Study
- Historic Structure Preservation Guide

KEY:

- N - not needed
- P - programmed
- C - completed
- U - underway
- R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Red brick bearing wall with steel roof trusses and concrete floor.

Physical Description: 247' x 15'
Passageway #16 stretches from the south end of Passageway #13 to the beginning of Passageway #27 on Island 3. Section A curves southeastward from a pavillion similar to Passageway #12D and connects to a hip-roofed structure of equal height at the west end of the Hospital Building, #19. It is interrupted midway by entrances to the Laundry Building, #17 and the Psychiatric Ward, #18. The Laundry entrance is a pavillion, the Psychiatric Ward entrance is a gable-roofed passageway the same height as the main passage with a short hipped section and door on the north side. Window openings are segmental arches between brick piers with 3 fixed 4 light wood sash and frames and a low brick wall in each.

The east elevations of sections B and C are similar to section A but the brick piers do not have bluestone plinths. There are 4 doorways intersecting the east wall of Section C: 2 openings to the exterior with 6 light doors and 6 light side-lights, 1 opening into the Laundry (#17) and on into the Recreation Hall (#22). An interior brick wall runs the length of the passageway creating a narrow corridor along the west wall through which run the main water supply lines. The west wall contains 6 light metal casement sash and frames at widely spaced intervals.
 (continue on reverse if necessary)

PRESENT CONDITION: Excellent Good Fair Deteriorated
 Ruins Unaltered Altered Original Site Moved

Report prepared by:

Building Conservation Technology

 Signature

December 1978

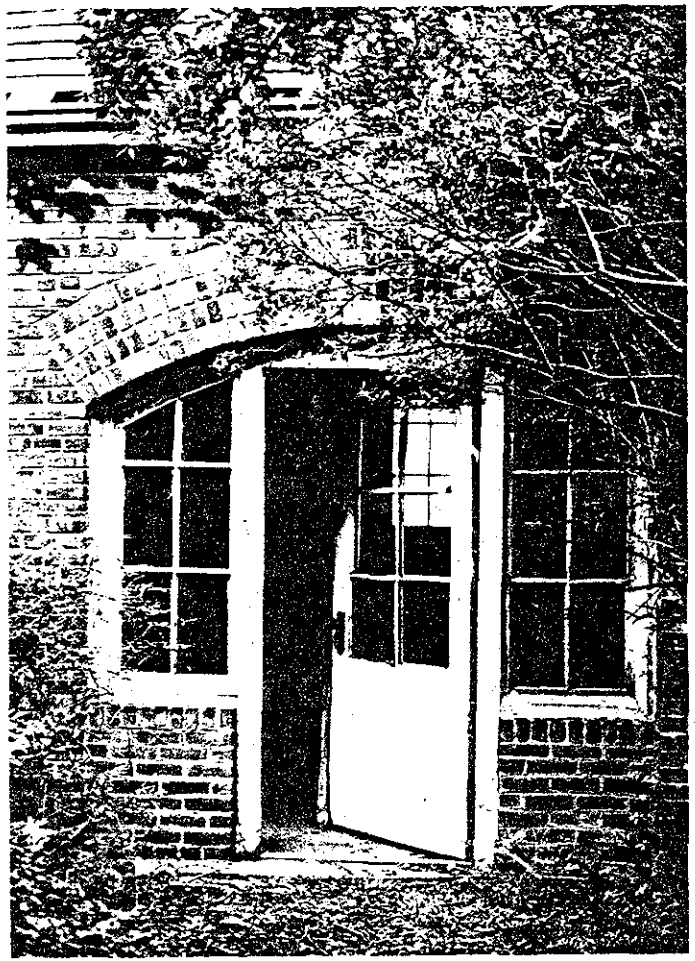
 Date



16.1 Passageway, North and East Elevations, Part A



16.2 Passageway, East Elevation of End Pavillion in Part A



16.3 Passageway, Door Unit in Part C

CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Laundry STRUCTURE NO. 17

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED:

Est. Cost of Treatment Recommended: \$ _____

<input type="checkbox"/> Preservation	Date of this Estimate: _____ 197
<input type="checkbox"/> Restoration	
<input type="checkbox"/> Reconstruction	Est. Interim Cost (other than routine maintenance)
<input type="checkbox"/> Partial Reconstruction	pending completion of Recommended Treatment:
<input type="checkbox"/> Adaptive Restoration	\$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: CLASS VI LAND ACREAGE (if not part of a complex or district): _____ acres.

A 1 8 5 8 0 9 4 0 4 5 0 5 6 0 0

Zone Easting Northing

STUDIES REQUIRED:

- Historical Studies Plan
- Historic Resource Study
- Historic Structure Report
- Historic Furnishing Study
- Historic Structure Preservation Guide

KEY:

- N - not needed
- P - programmed
- C - completed
- U - underway
- R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Bearing wall brick masonry with steel floor and roof framing - limestone trim.

Physical Description: 60.5' x 48'

The Laundry and Linen Exchange, constructed in 1907 and later enlarged, is 1½ stories high with a hipped red flat tile roof and dormers supported on a bracketed wood cornice. The foundation is bluestone and walls are Flemish bond red brick with projected brick quoins at the corners. A square brick chimney with brick quoins, limestone base and coping and a copper cap supported on wrought iron scrolls rises from the center of the roof. Window bays are composed of multiples of 2-over-2 double hung wood sash and frames and have limestone keystones and springers with a brick segmental arch between. There are 2 4 light single sash dormers each on the east and west elevations and 3 each on the north and south. On the first floor of the south elevation, there are two triple windows with a single 4 light 2 panel door between; and on the north elevation, 2 single and 3 double windows arranged in random order. The original west elevation is now obscured by a single story brick addition which connects with the Passageway to the west. The 3 arched window bays on the north and south sides of this addition are filled with wood sash identical to those in the adjacent Passageway, and it is topped by a low mansard roof.

The first floor of the building was _____ (continue on reverse if necessary)

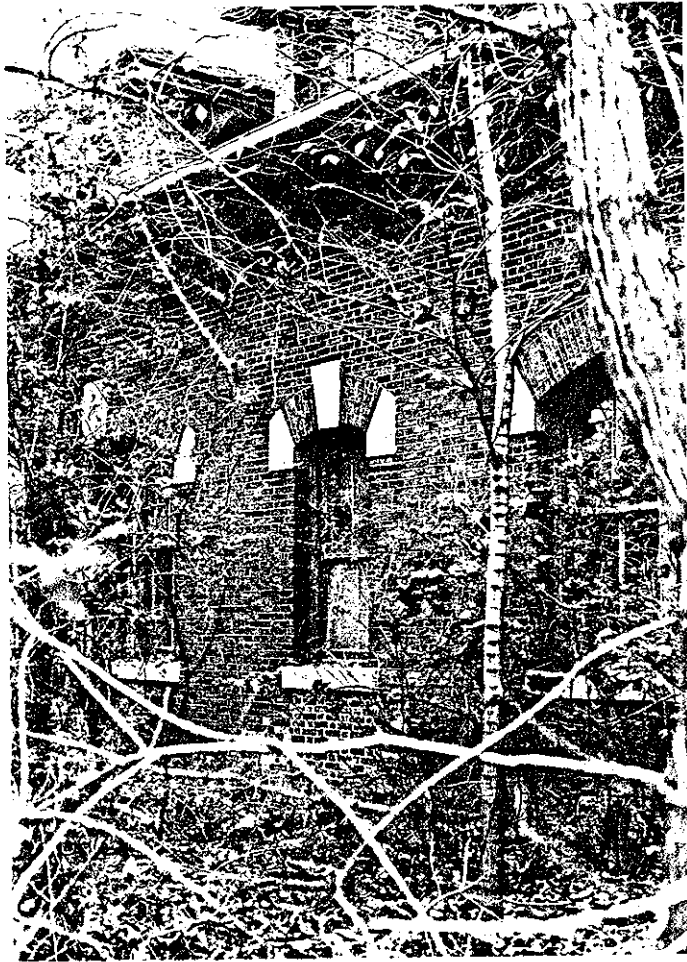
PRESENT CONDITION: Excellent Good Fair Deteriorated
Ruins Unaltered Altered Original Site Moved

Report prepared by:

Building Conservation Technology
Signature _____

December 1978
Date _____

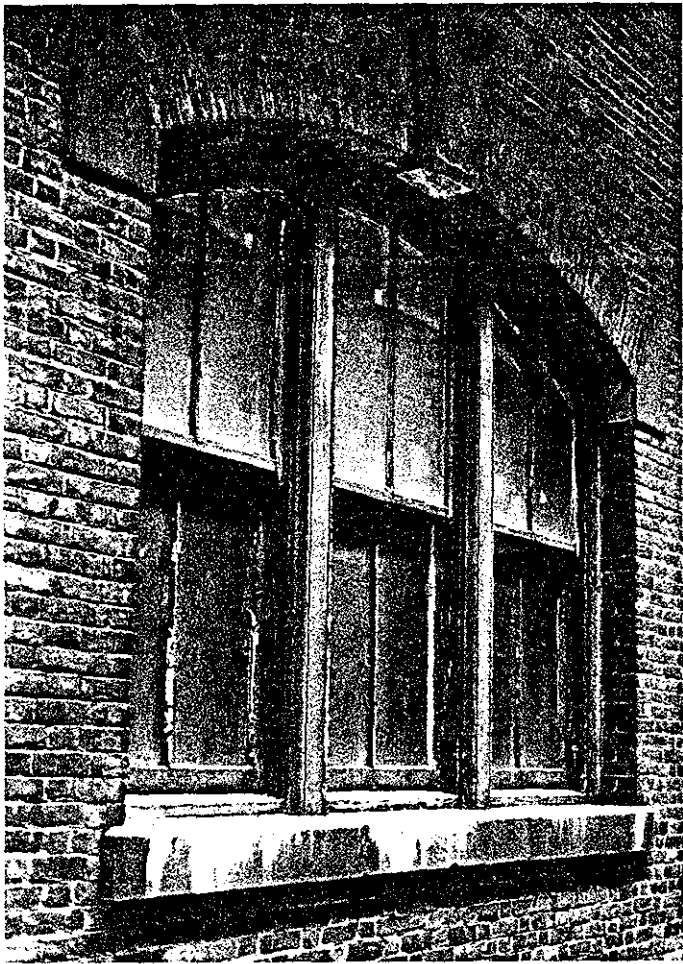
designated for use as a laundry and the second and employee living quarters. The first floor floor is concrete and original walls are plaster with wood baseboards. Doric cast iron columns support the plaster ceiling of the large southeast room, and a later sheet metal partition and door frame leads to the stair hall. The stair has steel framing, balusters and risers and slate treads. The second floor hall has a painted concrete floor, while rooms have wood floors and plaster walls with wood chairrail mouldings.



17.1 Laundry Building, North
Elevation



17.2 Laundry Building, East
Elevation

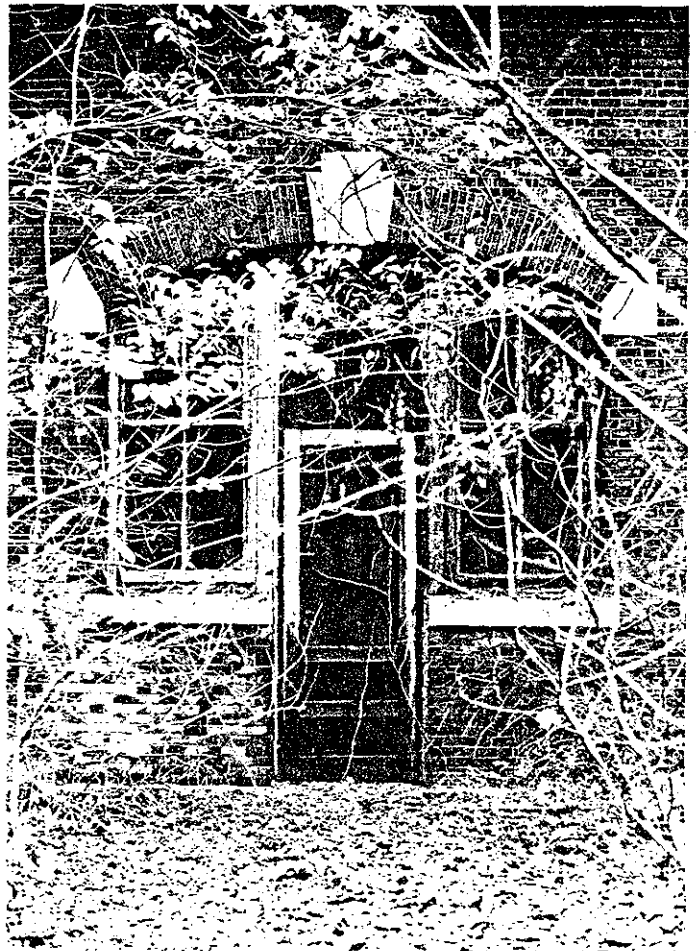


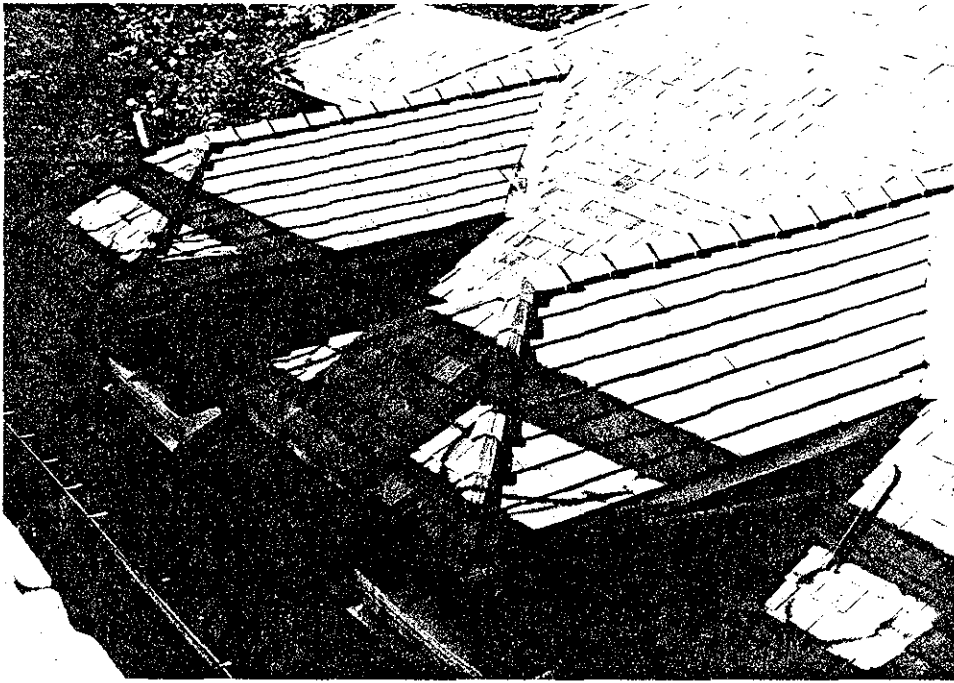
17.3 (above, left) Laundry Building,
East Window Detail



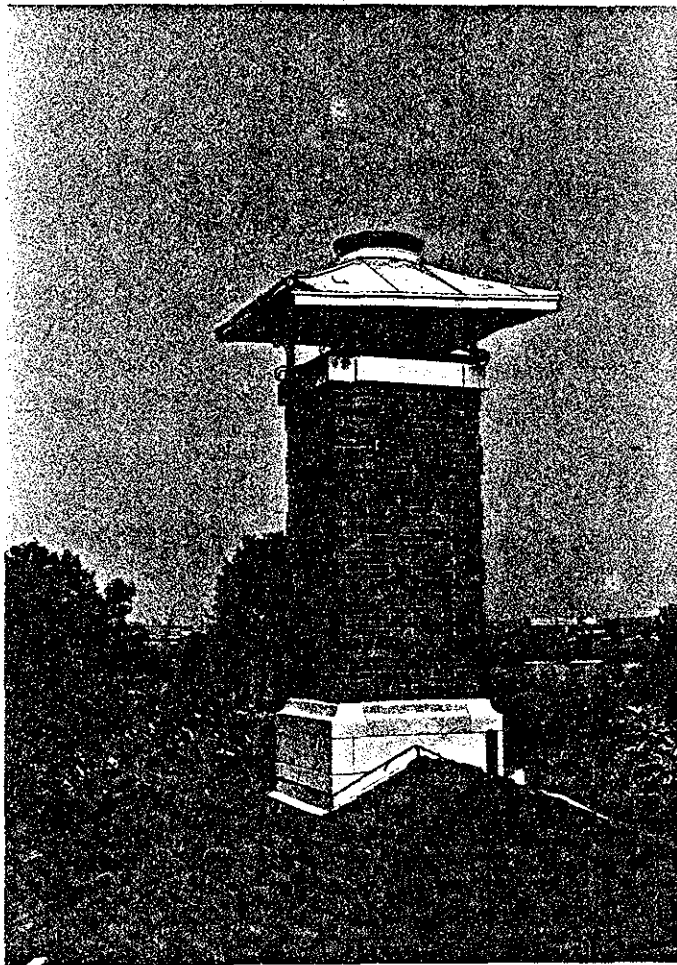
17.4 (above, right) Laundry Building,
South Elevation

17.5 (right) Laundry Building, South
Door





17.6 Laundry,
East Dormers



17.7 Laundry, Vent Stack

CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Psychiatric Ward STRUCTURE NO. 18

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED: Est. Cost of Treatment Recommended: \$ _____

<input type="checkbox"/> Preservation	Date of this Estimate: _____ 197__
<input type="checkbox"/> Restoration	
<input type="checkbox"/> Reconstruction	Est. Interim Cost (other than routine maintenance)
<input type="checkbox"/> Partial Reconstruction	pending completion of Recommended Treatment:
<input type="checkbox"/> Adaptive Restoration	\$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: CLASS VI LAND ACREAGE (if not part of a complex or district):
 A 18 580 940 4505 600 _____ acres.
 Zone Easting Northing

STUDIES REQUIRED:	KEY:
<input type="checkbox"/> Historical Studies Plan	N - not needed
<input type="checkbox"/> Historic Resource Study	P - programmed
<input type="checkbox"/> Historic Structure Report	C - completed
<input type="checkbox"/> Historic Furnishing Study	U - underway
<input type="checkbox"/> Historic Structure Preservation Guide	R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Two story brick and steel frame with terra cotta and limestone trim.

Physical Description: 53' x 31'
 The two story Psychiatric Ward was constructed in 1907. Walls are Flemish bond red brick on steel framing, with cement parging at the base and a terra cotta dentiled cornice below the brick and limestone parapet. Quoins, window springers and keystones and sills are limestone as well. There are 5 window bays each on the east and west elevations and 3 bays each on the north and south. Windows are 2-over-2 double hung wood sash, with arched 2 light transoms on the first floor, and are covered with decorative iron grillwork at both levels. On the north side, the center bay contains a double window, while on the south side, the original double windows have been filled and doors inserted in the middle, with a fire escape leading to the second story. On the north side, a single story brick structure provides access to the Covered Passageway from the easternmost bay. It has a gable roof of tile and double casement steel windows with 8 light sash. Both floors of the interior have been divided into individual rooms, each with one window and two lavatories, with a central corridor. Doors and door frames are metal, flooring is poured terrazzo and walls are plastered on both first and second floors, while bathrooms contain a 5' high white glazed tile wainscot and marble partitions.

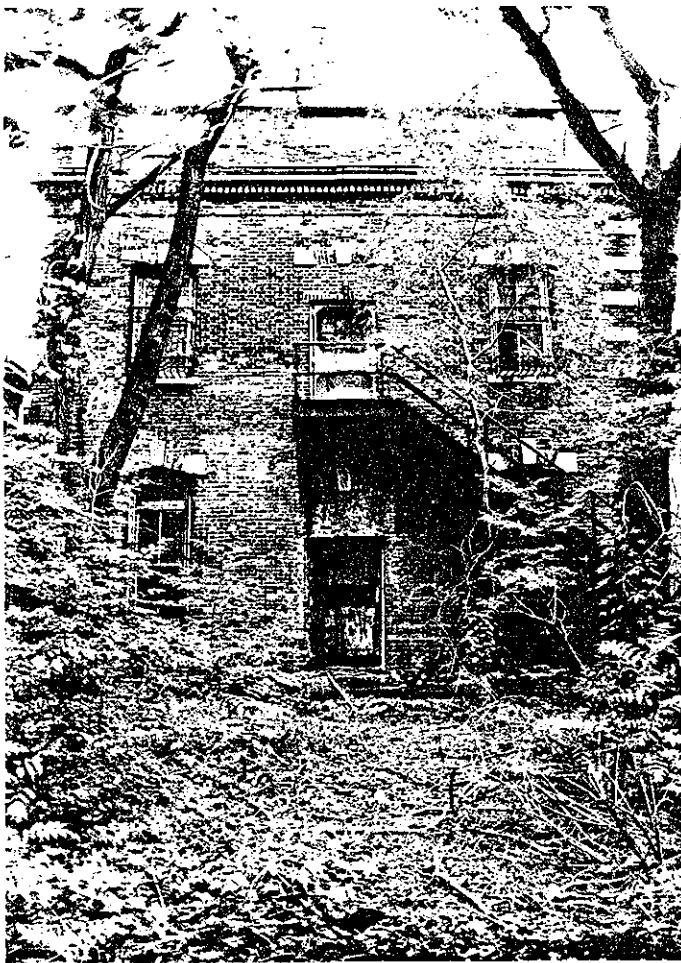
(continue on reverse if necessary)

PRESENT CONDITION:	Excellent <input type="checkbox"/>	Good <input type="checkbox"/>	Fair <input type="checkbox"/>	Deteriorated <input type="checkbox"/>
Ruins <input type="checkbox"/>	Unaltered <input type="checkbox"/>	Altered <input type="checkbox"/>	Original Site <input type="checkbox"/>	Moved <input type="checkbox"/>

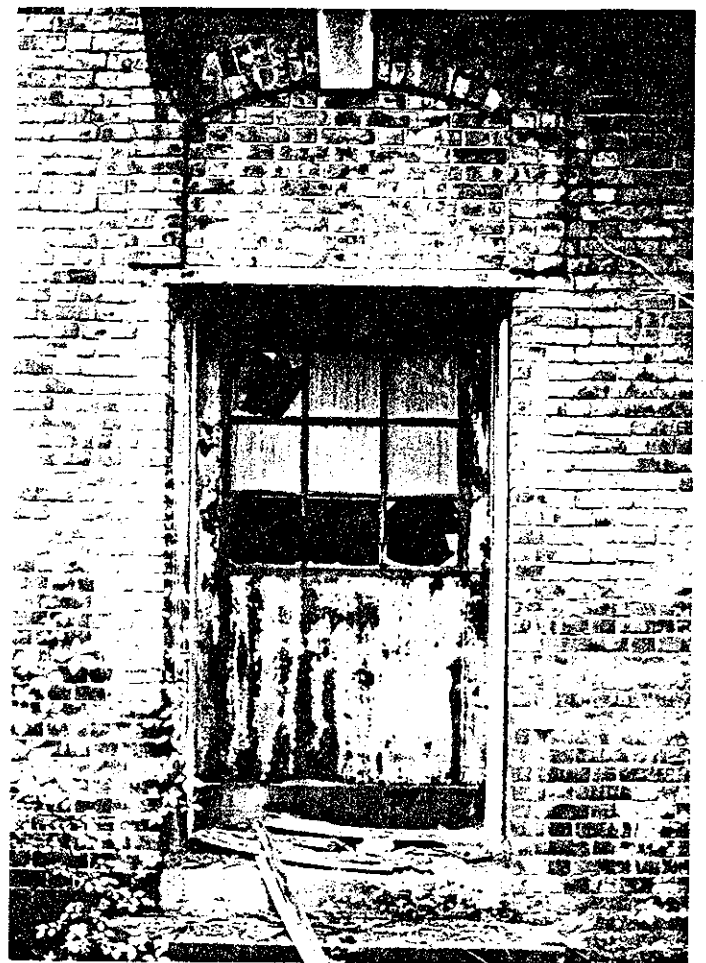
Report prepared by:

Building Conservation Technology
Signature

December 1978
Date

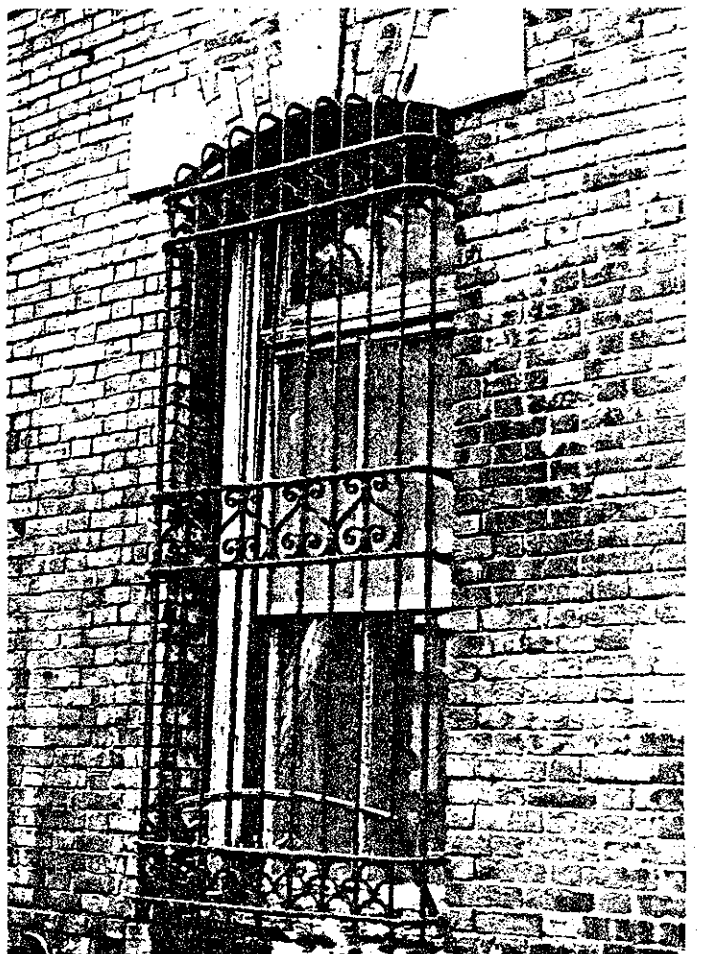


18.1 (above, left) Psychiatric Ward,
South Elevation



18.2 (above, right) Psychiatric Ward,
South Door

18.3 (right) Psychiatric Ward, Window
and Grill Detail



CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Hospital #1 STRUCTURE NO. 19

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED: Est. Cost of Treatment Recommended: \$ _____

<input type="checkbox"/> Preservation	Date of this Estimate: _____ 197__
<input type="checkbox"/> Restoration	
<input type="checkbox"/> Reconstruction	Est. Interim Cost (other than routine maintenance)
<input type="checkbox"/> Partial Reconstruction	pending completion of Recommended Treatment:
<input type="checkbox"/> Adaptive Restoration	\$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: CLASS VI LAND ACREAGE (if not part of a complex or district):
 A 1 8 5 8 0 9 4 0 4 5 0 5 6 0 0 _____ acres.
 Zone Easting Northing

STUDIES REQUIRED:

- Historical Studies Plan
- Historic Resource Study
- Historic Structure Report
- Historic Furnishing Study
- Historic Structure Preservation Guide

KEY:

- N - not needed
- P - programmed
- C - completed
- U - underway
- R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Red brick over steel frame with limestone trim.

Physical Description: 142' x 82'

Hospital #1 was built in 1902 as part of Boring and Tilden's original immigration complex and echoes the Renaissance Revival character of the Main Building across the ferry slip. It is composed of a 3½ story central pavillion with flanking 2½ story wings all constructed of masonry on a steel frame. The basement level is faced with rusticated grey granite ashlar and the upper stories with red brick laid in Flemish bond and limestone quoins, string courses, sill and lintel courses and window and door surrounds.

The central pavillion is 5 bays long on the north and south sides. Each bay above the basement level contains double hung 2-over-2 wood sash with segmental arched transoms on the first floor and flat head transoms on the second and third floors. At the center granite steps and a closed limestone balustrade lead to single light, two panel transomed double wood doors on the first floor. The door opening has a limestone surround with a sculptured face on the keystone. The steeply pitched hip, red tile roof has large chimneys at the east and west ends of the center ridge and three dormers each on the north and south slopes and one dormer on each of the side slopes. The center dormers on the north and south slopes have brick and limestone walls, copper (continue on reverse if necessary)

PRESENT CONDITION: Excellent Good Fair Deteriorated
 Ruins Unaltered Altered Original Site Moved

Report prepared by:

Building Conservation Technology
Signature

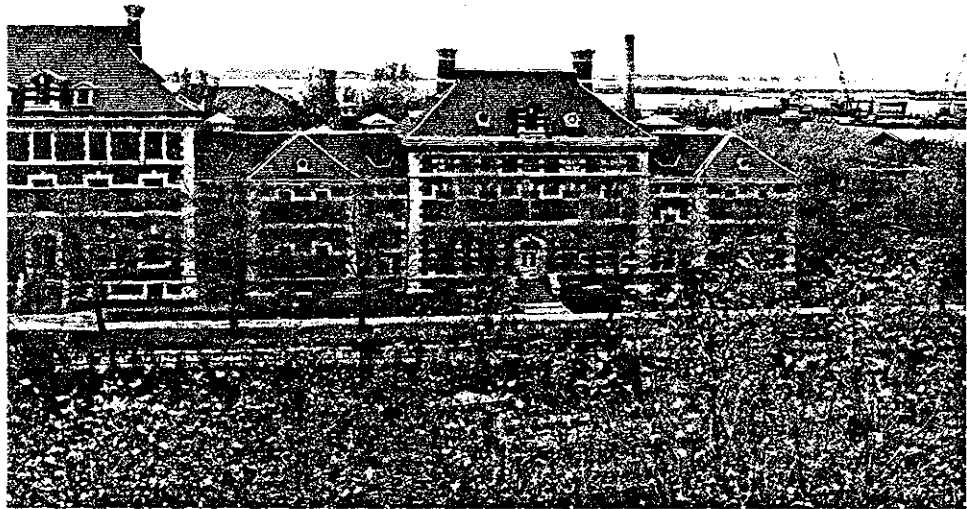
December 1978
Date

trim and 1-over-1 wood sash, while the remainder have round, single light pivoting sash set in decorative copper trim over a steel frame.

The two 2½ story wings are separated from the central pavillion by a single recessed bay. Stairwells are located in these bays and thus windows fall between stories with short single light windows at the first and third levels and a 1-over-1 double hung transomed window at the second. The stairwells are lit from above by skylights which have tile covered sides, metal frame clerestory windows and copper-frame glass roofs. The roofs over the wings are a combination of hip, gable and flat and are covered with red clay tile and tar respectively. The flat roof areas over the south sections of the central pavillion wing connections have three additional skylights each. The sloped tiled areas of the roof have round single light pivot sash windows set in decorative copper trim over a steel frame; one each on the north and south slopes, and one to three each on the east and west slopes.

The wings are two bays wide on the north and south and seven bays long on the east and west. Windows are half the width of those in the center pavillion with 1-over-1 double hung wood sash. Both first and second floor windows have flat head wood transoms. Three bay two story porches are attached to the south ends of the rear wings. They are similar in construction to the porch on the contemporary Kitchen and Laundry Building (#4) with steel framing, concrete floors and steel columns and balustrades. The west wing porch has been enclosed with coarse wire mesh.

Interior floors are covered with hardwood, except in the main entry, which has marble tile, and the bathrooms, which have white ceramic tiles. Walls and ceilings are plastered, with varnished oak doors and window frames, chairrails and picture mouldings, save in the bathrooms, which have high ceramic tile wainscotting. The most notable remaining interior feature is a first floor wood fireplace surround with columns supporting the mantlepiece.



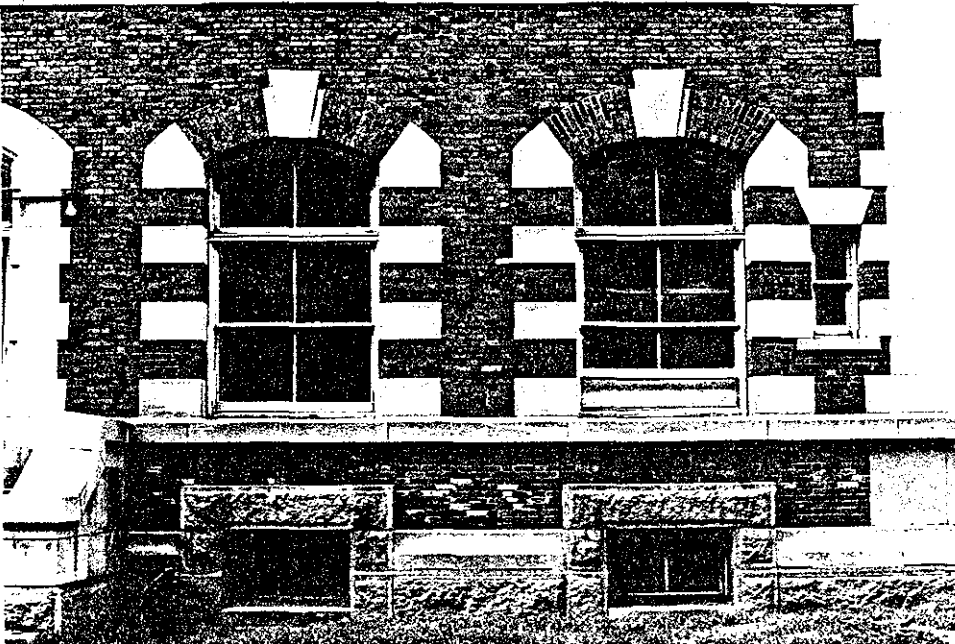
19.1 Hospital #1, North Elevation



19.2 Hospital #1, Northwest Corner



19.3 Hospital #1, Central Door

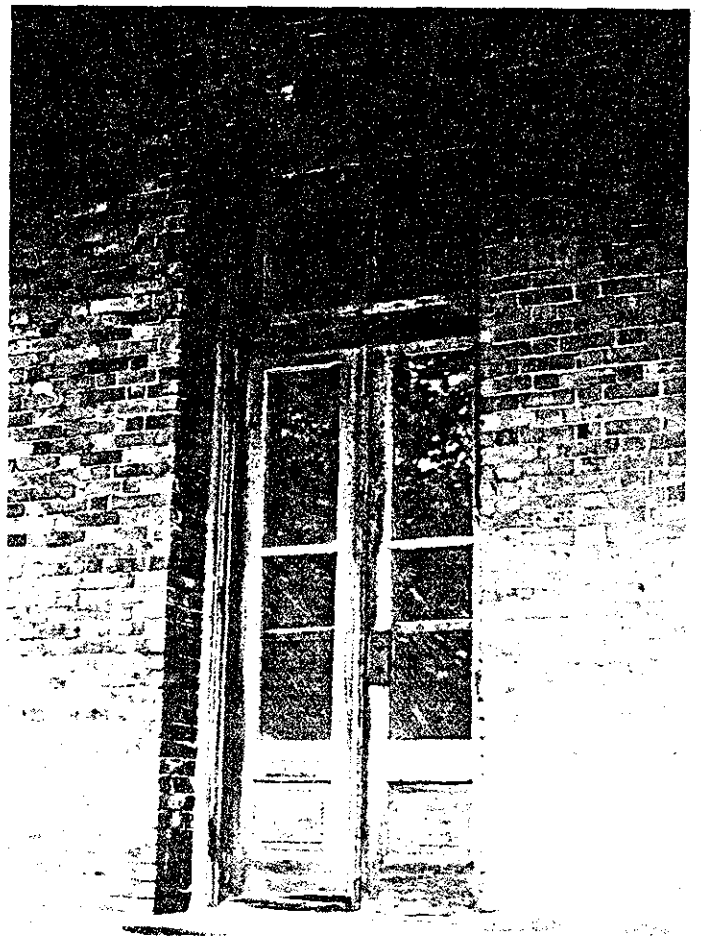


19.4 Hospital #1, First Floor Windows



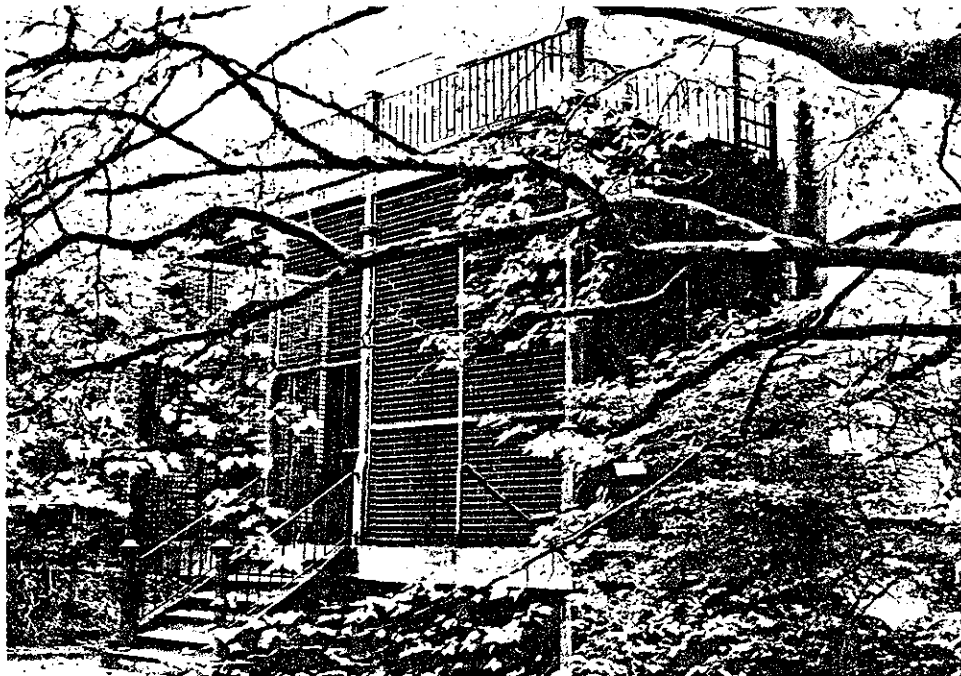
19.5 Hospital #1, Southwest
Porch

19.6 Hospital #1, Door to Southwest
Porch





19.7 Hospital #1, Porch
Newel Post



19.8 Hospital #1,
Southeast
Porch

CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Administration Building STRUCTURE NO. 20

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED: Est. Cost of Treatment Recommended: \$ _____

<input type="checkbox"/> Preservation	Date of this Estimate: _____ 197__
<input type="checkbox"/> Restoration	
<input type="checkbox"/> Reconstruction	Est. Interim Cost (other than routine maintenance)
<input type="checkbox"/> Partial Reconstruction	pending completion of Recommended Treatment:
<input type="checkbox"/> Adaptive Restoration	\$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: A 18 580940 4505600 CLASS VI LAND ACREAGE (if not part of a complex or district: _____ acres.
Zone Easting Northing

STUDIES REQUIRED:

<input type="checkbox"/> Historical Studies Plan	← KEY:
<input type="checkbox"/> Historic Resource Study	N - not needed
<input type="checkbox"/> Historic Structure Report	P - programmed
<input type="checkbox"/> Historic Furnishing Study	C - completed
<input type="checkbox"/> Historic Structure Preservation Guide	U - underway
	R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Red brick on a steel frame with limestone and terra cotta trim.

Physical Description: 108' x 62'

The Administration Building is a 3½ story structure erected in 1908. The construction materials are the same as Hospital #1 & Building #19, with the exception of the roof cornice, dormer trim and chimney copings which are of buff-colored glazed terra cotta rather than limestone. The base of the building is rusticated granite, the walls, red brick laid in Flemish bond with limestone quoins and window and door surrounds and the hipped roof covered with red clay tiles. The building is 5 bays wide on the north with 2-over-2 double hung wood sash, transomed at the first and second floor levels. The windows at the third floor level are slightly higher than those of the Hospital Buildings, #19 and #21. The door opening at the center of the first floor has double, single light, two panel, transomed doors with a limestone surround and granite and limestone steps. The keystone above the door is decorated with a carved console rather than the sculpted face of buildings #19 and #21. The north and south roof slopes are pierced by three dormers each; the center dormer being identical to those of building #19. The flanking dormers have 1-over-1 light double hung wood sash and triangular pediments. The south elevation is broken up into seven bays, the center three being recessed slightly. All window openings have 1-over-1 light double hung wood (continue on reverse if necessary)

PRESENT CONDITION: Excellent Good Fair Deteriorated
Ruins Unaltered Altered Original Site Moved

Report prepared by:

Building Conservation Technology

Signature

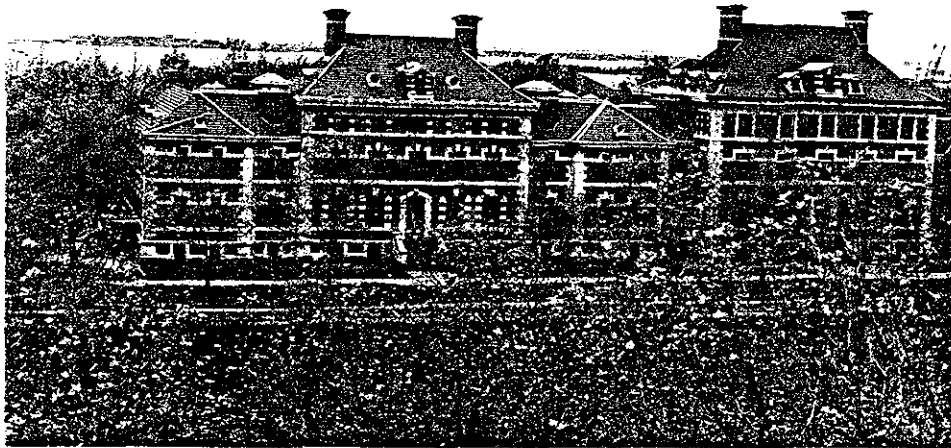
December 1978

Date

sash. The door and door surround at the center of the first floor are similar to that of the north facade.

Recessed bays at either end of the Administration Building similar to those of Building #19 provide access to the Hospitals (#19 and #21) to the east and west. The access halls have double hung 1-over-1 wood sash at the first and second floors and large skylights above the third floor.

The interior spaces have concrete floors, plaster walls and ceilings, oak trim in the halls and rooms and white tile floors and wainscoting in the bathrooms.



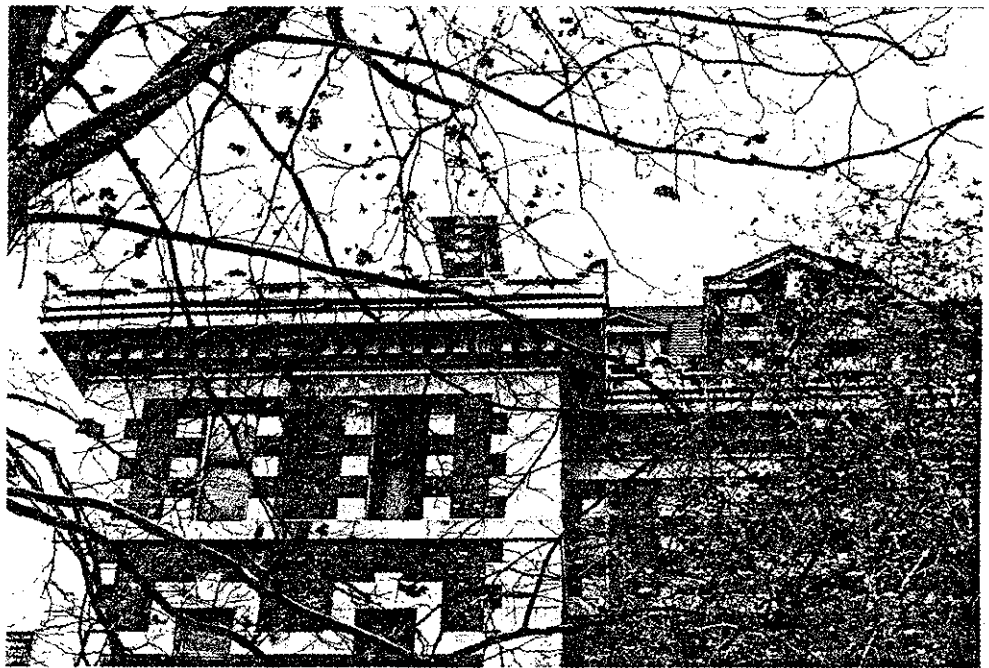
20.1 Administration Building,
North
Elevation



20.2 Administration Building,
Central Door



20.3 Administration Building, South Elevation



20.4 Administration Building, South Elevation

CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Hospital #2 STRUCTURE NO. 21

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED: Est. Cost of Treatment Recommended: \$ _____

<input type="checkbox"/> Preservation	Date of this Estimate: _____ 197_
<input type="checkbox"/> Restoration	
<input type="checkbox"/> Reconstruction	Est. Interim Cost (other than routine maintenance)
<input type="checkbox"/> Partial Reconstruction	pending completion of Recommended Treatment:
<input type="checkbox"/> Adaptive Restoration	\$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: CLASS VI LAND ACREAGE (if not part of a complex or district: _____ acres.)

A	1	8	5	8	0	9	4	0	4	5	0	5	6	0	0	
Zone	East				ing				North				ing			

STUDIES REQUIRED:

- Historical Studies Plan
- Historic Resource Study
- Historic Structure Report
- Historic Furnishing Study
- Historic Structure Preservation Guide

KEY:

- N - not needed
- P - programmed
- C - completed
- U - underway
- R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Red brick over steel frame with limestone and terra cotta trim.

Physical Description: 142' x 83'

Hospital #2 echoes the design of Hospital #1 (#19) with the same 3½ story central pavillion and 2½ story flanking wing configuration. Materials of construction also match Hospital #1 with the exception of the roof cornice, dormer trim and chimney copings which are of buff colored glazed terra cotta rather than limestone. The basement level is faced with rusticated granite ashlar and the upper stories with red brick laid in Flemish bond and limestone quoins, string courses, sill and lintel courses and window and door surrounds. The central pavillion is 5 bays long on the north and south sides. Each bay above the basement level contains double hung 2-over-2 wood sash with segmental arched transoms on the first floor and flat head transoms on the second and third floors. At the center, granite steps and a closed limestone balustrade lead to single light, two panel transomed double wood doors on the first floor. The door opening has a limestone surround with a sculptured face on the keystone. The steeply pitched hip, red tile roof has large chimneys at the east and west ends of the center ridge and three dormers each on the north and south slopes and one dormer on each of the side slopes. The center dormers on the north and south slopes have brick and terra cotta walls, copper trim and 1-over-1 wood sash, while the (continue on reverse if necessary)

PRESENT CONDITION: Excellent Good Fair Deteriorated
Ruins Unaltered Altered Original Site Moved

Report prepared by:

Building Conservation Technology
Signature

December 1978
Date

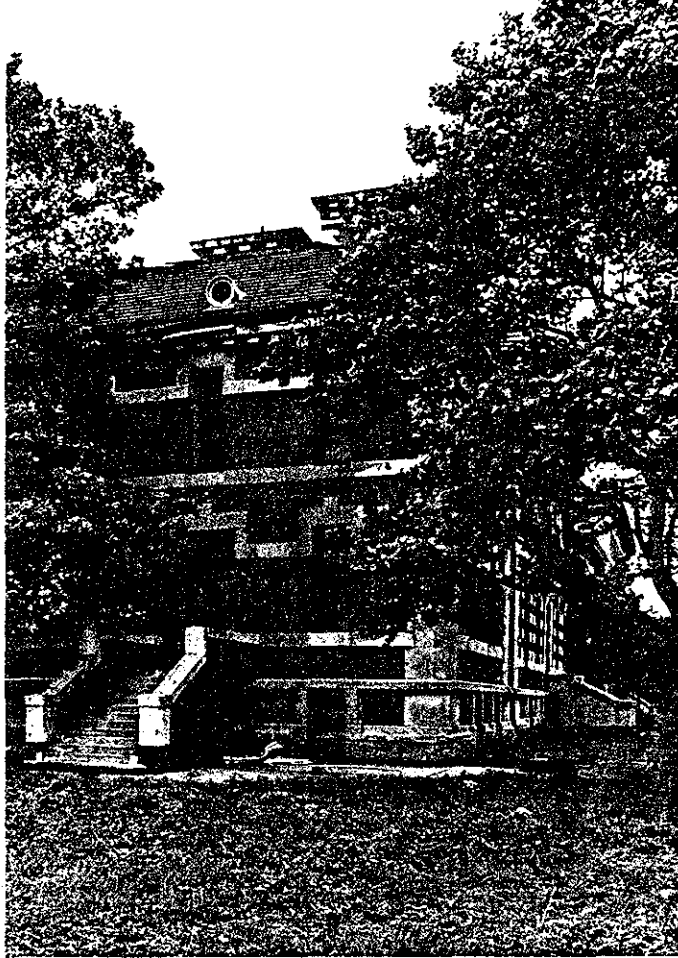
remainder have round, single light pivoting sash set in decorative copper trim over a steel frame.

The two 2½ story wings are separated from the central pavillion by a single recessed bay. Stairwells are located in these bays and thus windows fall between stories with short single light windows at the first and third levels and a 1-over-1 double hung transomed window at the second. The stairwells are lit from above by skylights which have tile covered sides, metal frame clerestory windows and standing seam copper roofs. The roofs over the wings are a combination of hip, gable and flat and are covered with red clay tile and tar respectively. The flat roof areas over the south sections of the central pavillion wing connections have three additional skylights each. The sloped tiled areas of the roof have round single light pivot sash windows set in decorative copper trim over a steel frame; one each on the north and south slopes, and one to three each on the east and west slopes.

The wings are two bays wide on the north and south and seven bays long on the east and west. Windows are half the width of those in the center pavillion with 1-over-1 double hung wood sash. Both first and second floor windows have flat head wood transoms. Three bay, two story porches are attached to the south ends of the rear wings and a five bay, three story porch spans the rear of the central pavillion. All have granite foundations and steel framing with brick and terra cotta cladding. Concrete stairs with brick railings lead to the ground and elaborate wrought iron grills cover the basement openings.

Two wood frame sheds which appear to have been garbage receptacles are sited on the southeast corner of the west wing porch. The first is three bays by two bays, with a wood floor and sills raised 6' above a concrete slab and a shed roof. The lower half of the sides are enclosed by 6" planks and the upper half with screening. The second structure has a wood framed roof covered with canvas over boards, which is supported by four iron posts set in a concrete slab.

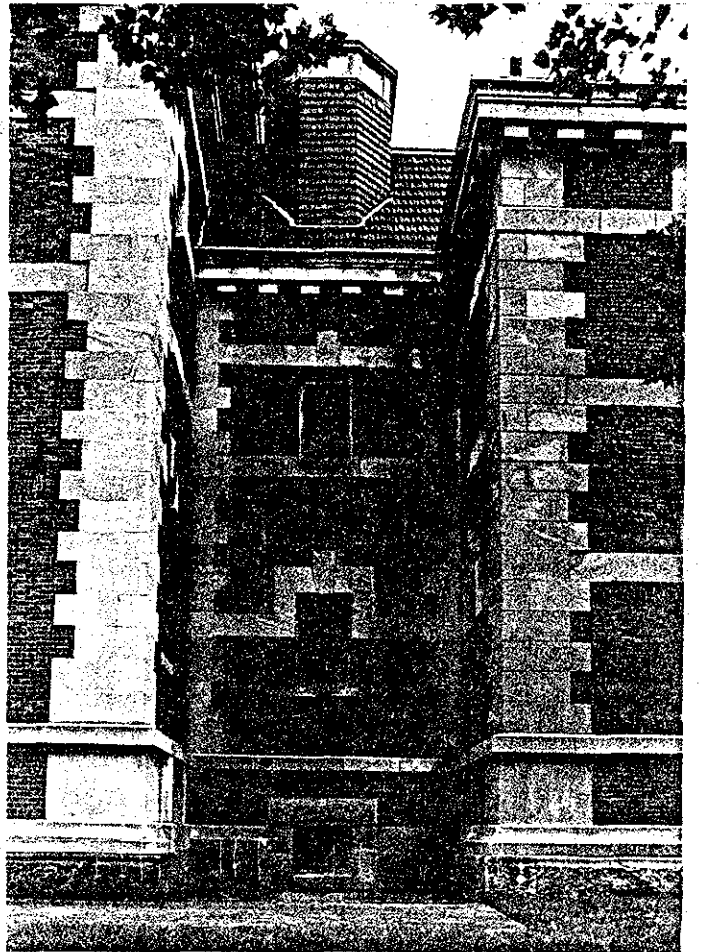
Interior finishes consist of concrete floors, plastered walls and ceilings, varnished oak window and door trim and baseboards, and oak veneered doors in wards and offices and tile and marble floors and wainscotting in the bathrooms.



21.1 (above, left) Hospital #2,
Northeast Corner



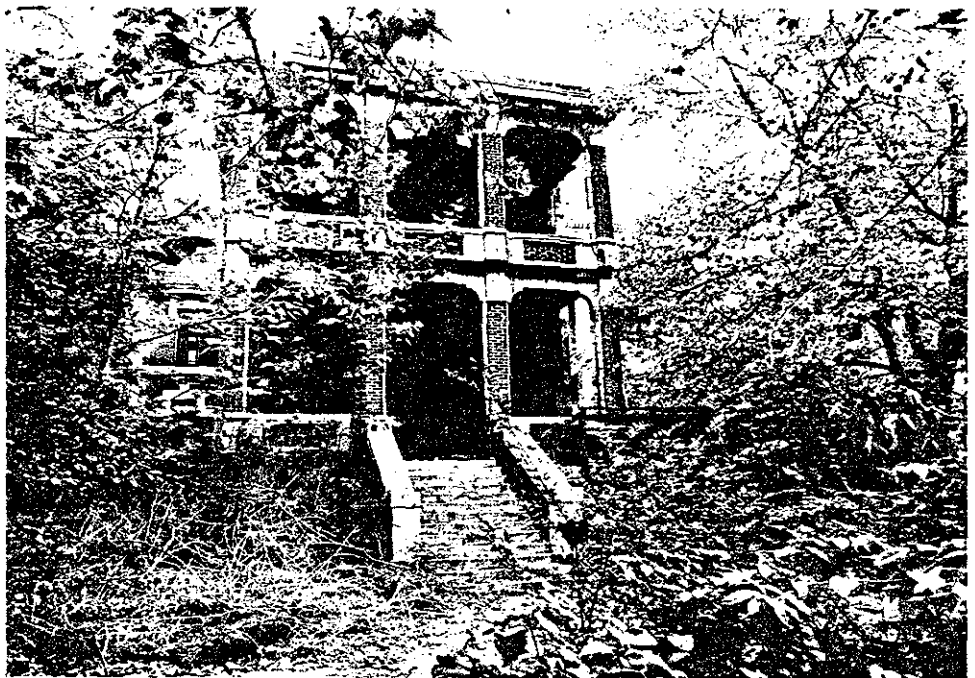
21.2 (above, right) Hospital #2,
North Elevation Doorway



21.3 (right) Hospital #2, Stairwell
Detail

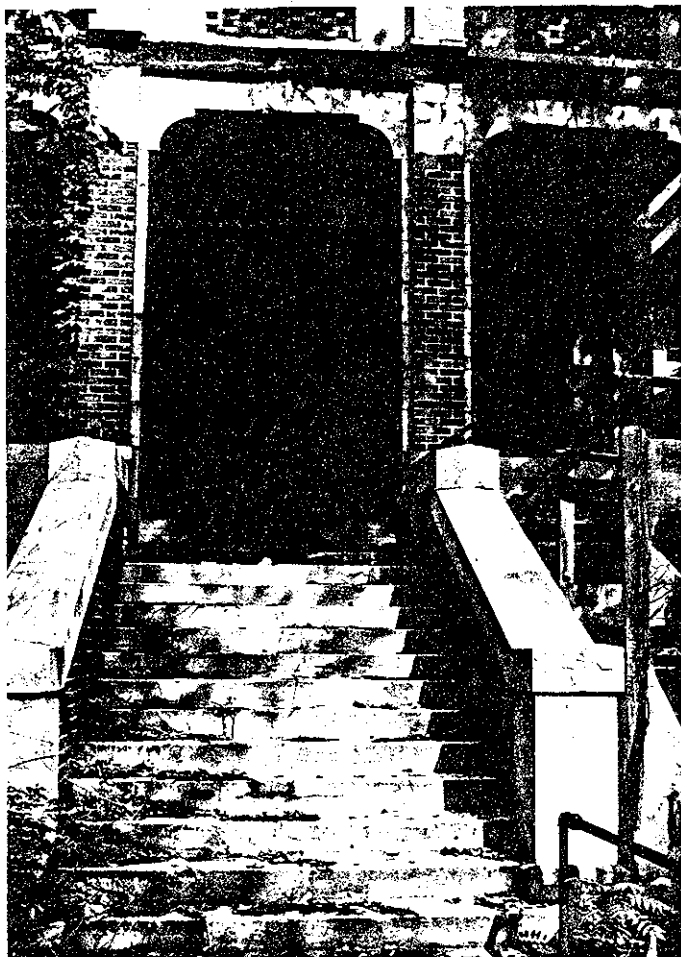


21.4 Hospital #2, Southeast Wing



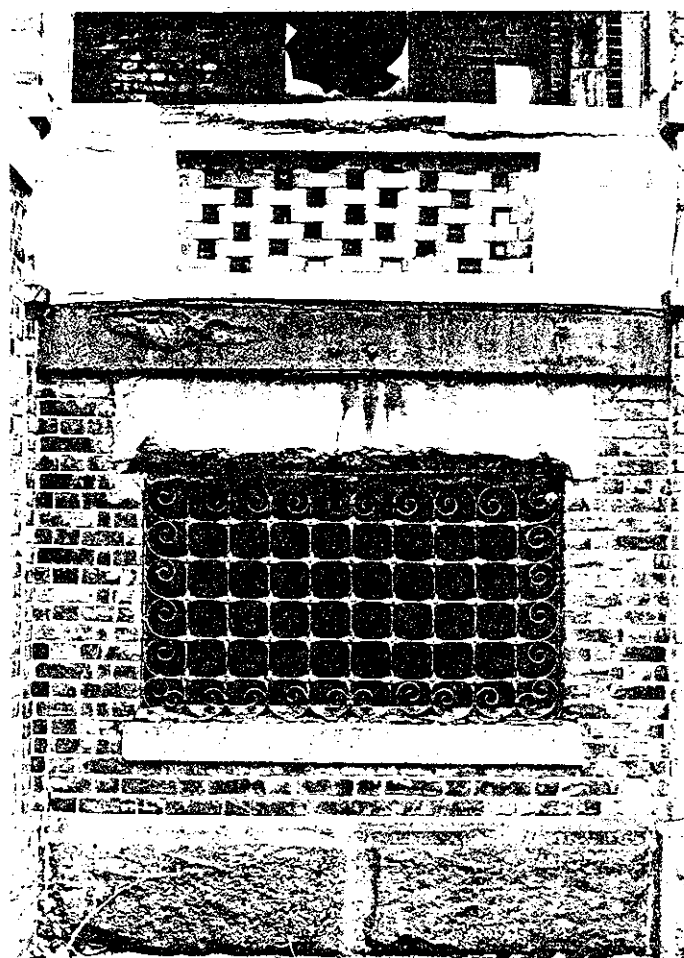
21.5 Hospital #2, South Elevation of Southeast Porch

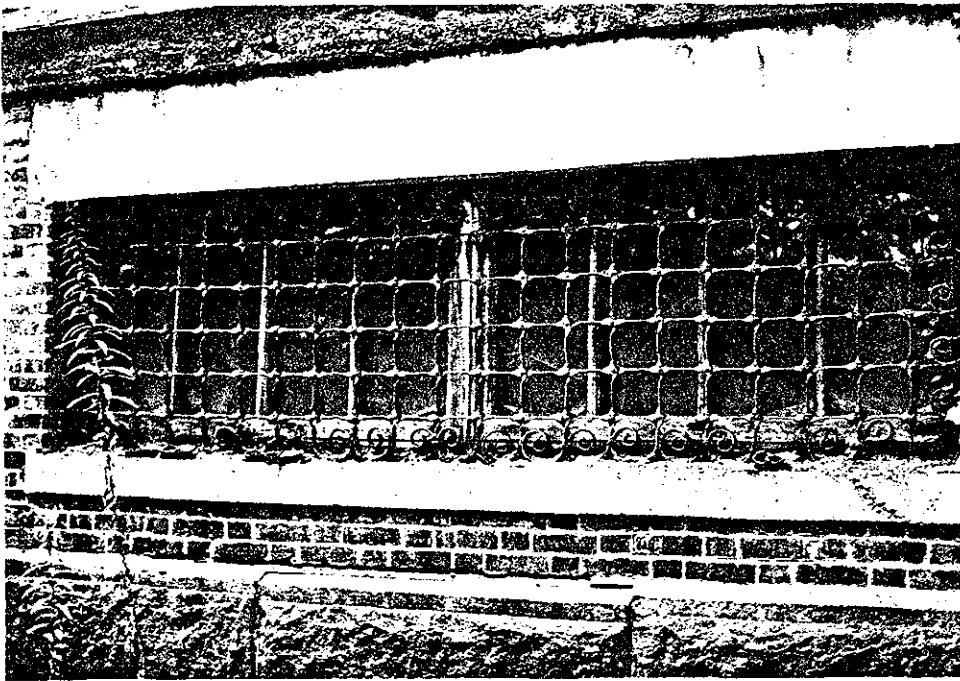
counter runs across the north wall of the auditorium, with two rooms behind. A steel stairway behind the counter leads to the second floor, where 2 additional rooms and the stage manager's box are located.



21.6 Hospital #2, Doorway
Detail, Southeast Porch

21.7 Hospital #2, Porch Grill
and Balustrade Detail





21.8 Hospital #2,
Porch Grill
Detail



21.9 Hospital #2, Cellar Door

CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Recreation Hall STRUCTURE NO. 22

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED:

- Preservation
- Restoration
- Reconstruction
- Partial Reconstruction
- Adaptive Restoration

Est. Cost of Treatment Recommended: \$ _____

Date of this Estimate: _____ 197__

Est. Interim Cost (other than routine maintenance) pending completion of Recommended Treatment: \$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: A 185940 4505600 CLASS VI LAND ACREAGE (if not part of a complex or district): _____ acres.
Zone Easting Northing

STUDIES REQUIRED:

- Historical Studies Plan
- Historic Resource Study
- Historic Structure Report
- Historic Furnishing Study
- Historic Structure Preservation Guide

KEY:

- N - not needed
- P - programmed
- C - completed
- U - underway
- R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Two story steel and red brick masonry structure with terra cotta trim.

Physical Description: 43' x 111'

The Recreation Hall was built in 1936 as an auditorium. Like the Ferry Building, the foundations are concrete, walls to the sill level are dressed limestone, walls above are Flemish bond red brick and lintel lines, coping and eaves are trimmed with buff-colored glazed terra cotta. The east, or principal facade centers around a massive chimney decorated by terra cotta consoles at the eave line. Three large partial casement windows with metal 24 light sash flank the chimney, and this entire section is covered by a clay tile gable roof. To the east and west are lower, flat-roofed sections 1 bay wide and 4 long. The short ends contain round metal sash identical to that on the shelters, #7 and #23, with ground level French doors on the east side. The north wing elevation has 4 3-light casements, while the south has a single large window. On the west elevation, 2 of the large 24 light windows are separated by 3 clerestory windows above a single story, flat-roofed wing which extends to the Passageway, #16-C. The auditorium space is 2 stories high, ceiled with a plastered vault hung on expanded metal lath and floored with black and white linoleum squares. The fireplace surround is of dressed limestone in large quoins, with a mantle above. A stage and wings fills the south end of the building, while an oak-panelled, screened _____ (continue on reverse if necessary)

PRESENT CONDITION: Excellent Good Fair Deteriorated
Ruins Unaltered Altered Original Site Moved

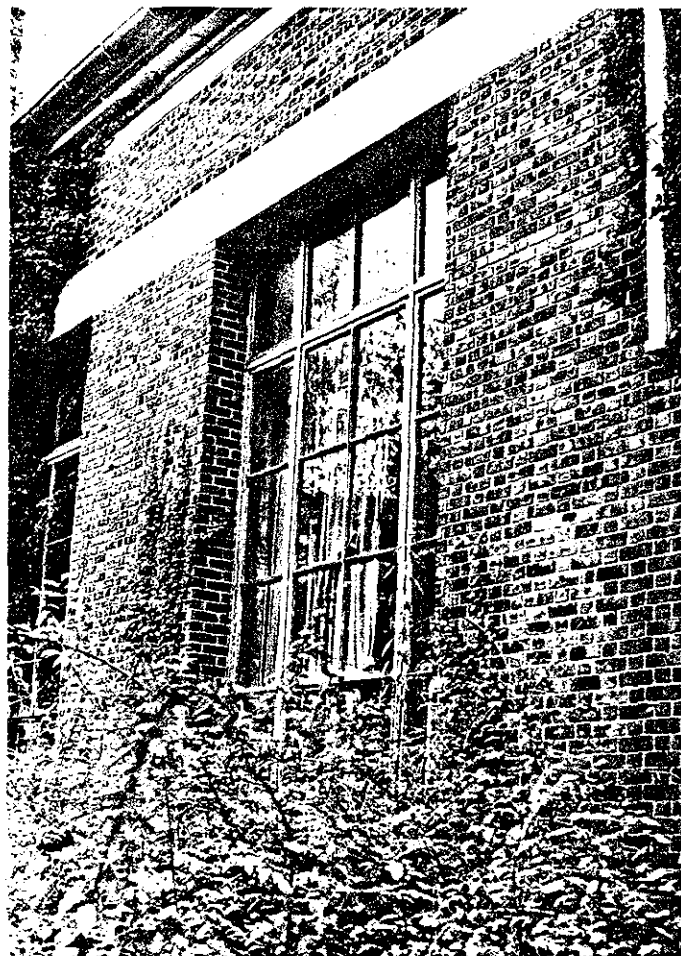
Report prepared by:

Building Conservation Technology
Signature _____

December 1978
Date _____



22.1 (above, left) Recreation Hall,
East Elevation



22.2 (above, right) Recreation Hall,
First Floor Window



22.3 (right) Recreation Hall, Second
Floor Window

CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Shelter STRUCTURE NO. 23

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED: Est. Cost of Treatment Recommended: \$ _____

<input type="checkbox"/> Preservation	Date of this Estimate: _____ 197
<input type="checkbox"/> Restoration	
<input type="checkbox"/> Reconstruction	Est. Interim Cost (other than routine maintenance)
<input type="checkbox"/> Partial Reconstruction	pending completion of Recommended Treatment:
<input type="checkbox"/> Adaptive Restoration	\$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: CLASS VI LAND ACREAGE (if not part of a complex or district: _____ acres.

A	1	8	5	8	0	9	4	0	4	5	0	5	6	0	0
	Zone Easting					Northing									

STUDIES REQUIRED:

- Historical Studies Plan
- Historic Resource Study
- Historic Structure Report
- Historic Furnishing Study
- Historic Structure Preservation Guide

KEY:

- N - not needed
- P - programmed
- C - completed
- U - underway
- R - required, but not yet scheduled

STRUCTURE: Type of, and composition: One story bearing wall red brick masonry with terra cotta trim.

Physical Description: 81' x 17'

The Shelter between Islands 2 and 3 was built 1934-35, the same time as that on Island 1, and is similar in plan and detail. It is one story high and constructed of red brick with terra cotta cornice and coping on a concrete slab with a flat parapeted roof. It has enclosed rooms at the north and south ends with single round metal 9 light pivot sash windows on each of the east and west elevations and 2 windows each on the north and south elevations. Windows have circular header surrounds and square iron grilles. Doors with header brick surrounds on the inner side of each pavillion open onto a 7 bay double collonade of brick piers with terra cotta bases and capitals. The interior of the end pavillions are finished with plaster on clay furring and plaster hung ceilings.

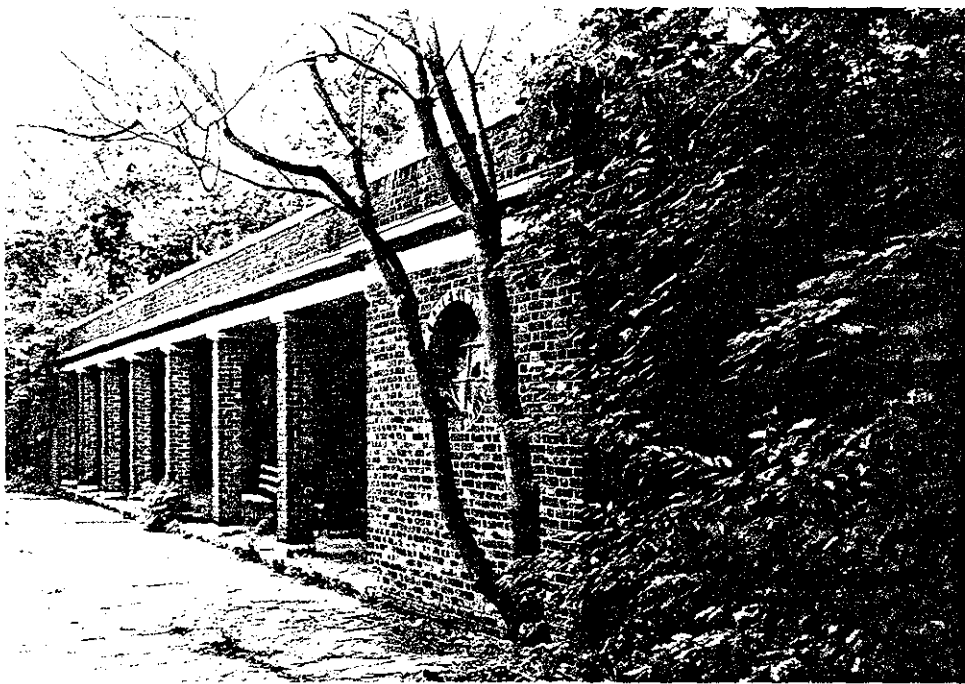
(continue on reverse if necessary)

PRESENT CONDITION:	Excellent <input type="checkbox"/>	Good <input type="checkbox"/>	Fair <input type="checkbox"/>	Deteriorated <input type="checkbox"/>
	Ruins <input type="checkbox"/>	Unaltered <input type="checkbox"/>	Altered <input type="checkbox"/>	Original Site <input type="checkbox"/>
				Moved <input type="checkbox"/>

Report prepared by:

Building Conservation Technology
Signature

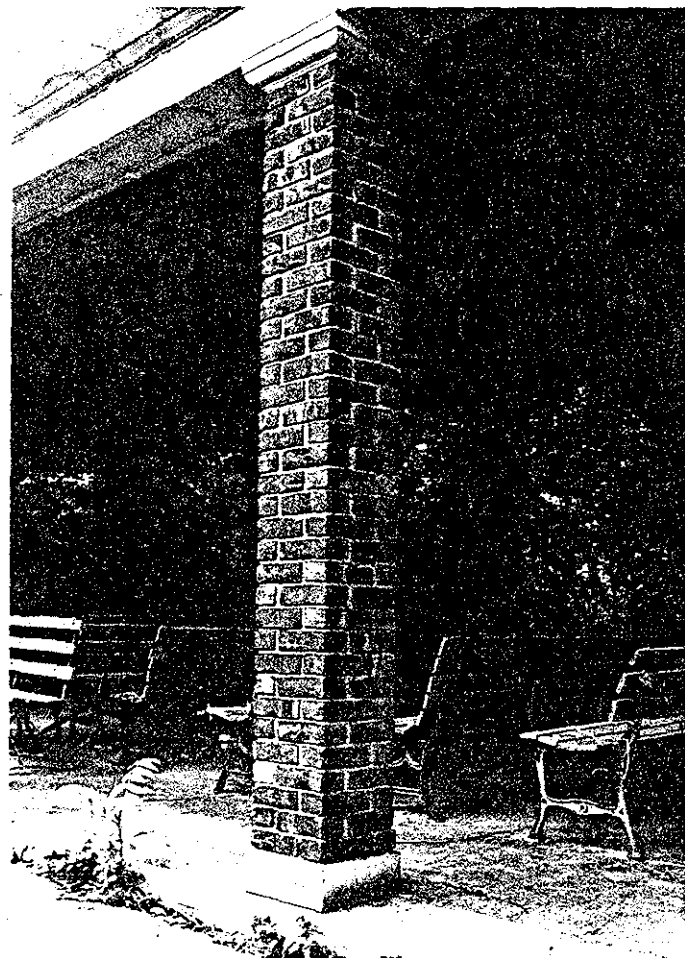
December 1978
Date



23.1 Shelter, East Elevation



23.2 Shelter, Window Detail



23.3 Shelter, Column Detail

CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Powerhouse and Storage STRUCTURE NO. 24

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED:

Est. Cost of Treatment Recommended: \$ _____

<input type="checkbox"/>	Preservation	Date of this Estimate: _____ 197__
<input type="checkbox"/>	Restoration	
<input type="checkbox"/>	Reconstruction	Est. Interim Cost (other than routine maintenance)
<input type="checkbox"/>	Partial Reconstruction	pending completion of Recommended Treatment:
<input type="checkbox"/>	Adaptive Restoration	\$ _____

LOCATION OF STRUCTURE:

UTM REFERENCE: CLASS VI LAND ACREAGE (if not part of a complex or district: _____ acres.)
 A 1 8 5 8 0 9 4 0 4 5 0 5 6 0 0
 Zone Easting Northing

STUDIES REQUIRED:

<input type="checkbox"/>	Historical Studies Plan	← KEY:
<input type="checkbox"/>	Historic Resource Study	N - not needed
<input type="checkbox"/>	Historic Structure Report	P - programmed
<input type="checkbox"/>	Historic Furnishing Study	C - completed
<input type="checkbox"/>	Historic Structure Preservation Guide	U - underway
		R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Steel frame red brick with large aggregate stucco coating.

Physical Description: Powerhouse - 49' x 66', Dormitory - 109' x 49'
The 2 story building designated "Powerhouse" was built in 1907 to serve a dual purpose; the north side as a boiler house, with 3 coal fired boilers, and the south side as a Dormitory and Morgue. The former is built on a concrete slab, the latter on a concrete pile foundation, with a masonry-clad steel frame above. Walls have a granite sill, common bond red brick base with headers every 6 courses, and brick walls covered with 1" thick large aggregate stucco. The roof is hipped, covered with flat red clay tile and is supported on wood brackets. Quoins, window springers and keystones are red brick and lintels are limestone. The above is standard construction for all buildings on Island 3.

The boiler room is differentiated on the exterior by the use of circular, 4 light metal sash with four brick quoins, 2 on the west side, one on the east, and 6 on the north. A yellow brick chimney stack rises 100' from an octagonal base on the east side. The dormitory section has wood 2-over-2 double hung sash, with flat heads on the first floor, segmental arched heads on the second, and recessed stucco panels between. There are 8 windows on the west side, beginning with a larger loading bay. The south side is 11 bays long, including double hung doors in the center, a single door with iron porch at the (continue on reverse if necessary)

PRESENT CONDITION: Excellent Good Fair Deteriorated
 Ruins Unaltered Altered Original Site Moved

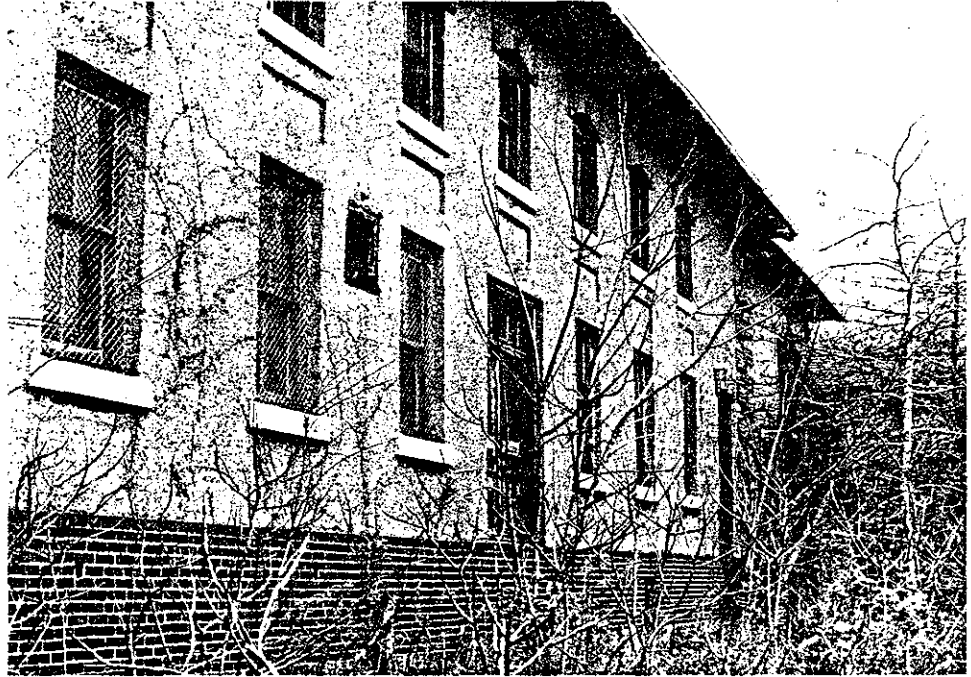
Report prepared by:

Building Conservation Technology
Signature

December 1978
Date

east end, and a second story fire escape. The east elevation has 3 windows with an exposed chimney and fire escape between, then returns for 2 bays to meet the Passageway, #27 and the Powerhouse section.

On the interior, the powerhouse is open to the steel roof trusses and is faced in plaster. Rooms in the southwest part of the Dormitory section have linoleum floors, wood baseboards, plaster walls and ceilings and 5 panel doors on the first floor. The morgue and autopsy room in the southwest corner contains 8 metal-lined cadaver bins and concrete floors and bleachers. Store rooms on the west side have painted brick walls. 2 concrete stairs with iron rails and balusters lead to the second floor, where rooms and hallways have linoleum or hardwood floors and oak trim and picture mouldings. Bathrooms have concrete floors and marble partitions.



24.1 Powerhouse and Storage, South Elevation From West



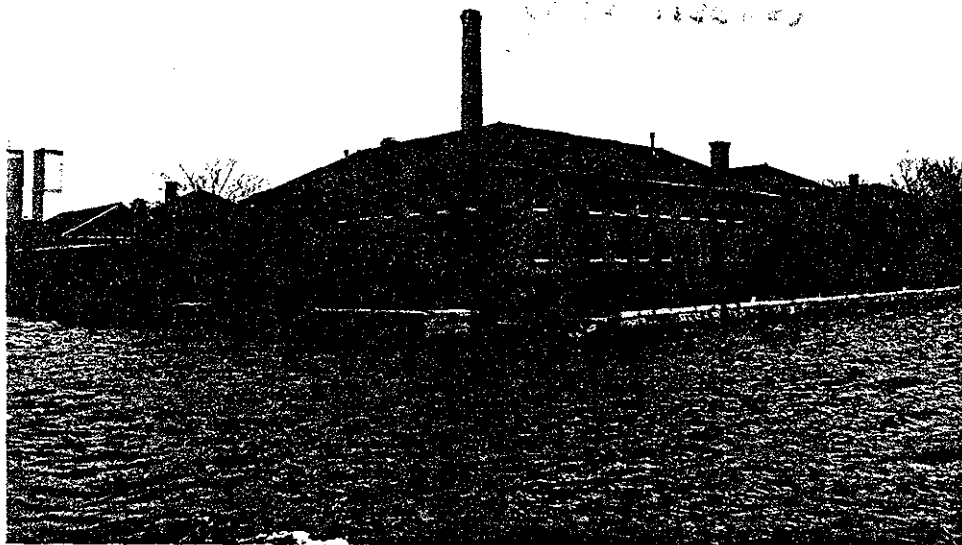
24.2 Powerhouse and Storage, South Elevation From East



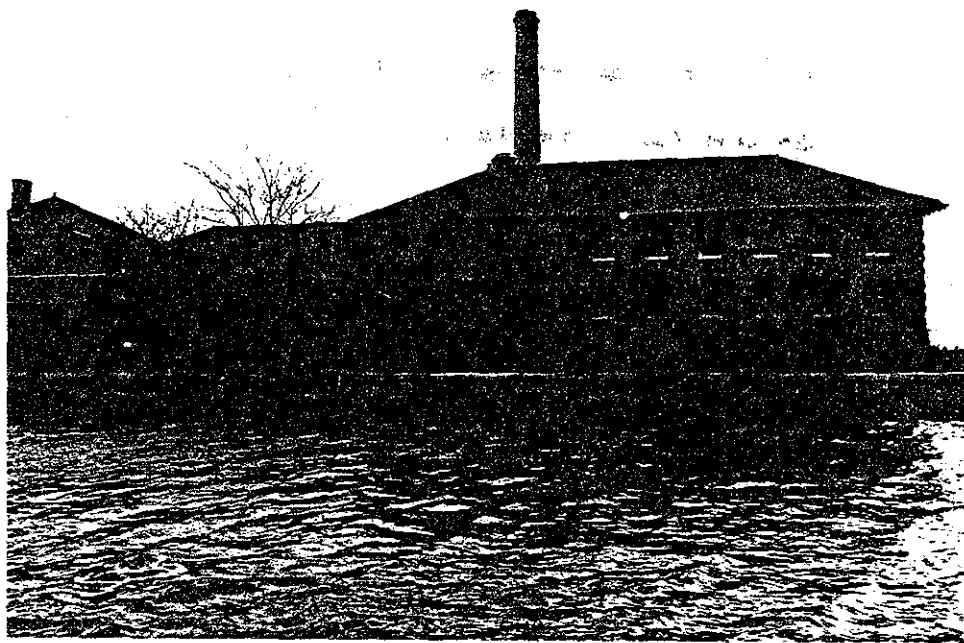
24.3 Powerhouse
and Storage,
Second Floor
Window Detail



24.4 Powerhouse and Storage,
East Elevation



24.5 Powerhouse, Southwest Corner



24.6 Powerhouse, West Elevation

CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Animal House STRUCTURE NO. 25

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED: Est. Cost of Treatment Recommended: \$ _____

Preservation Date of this Estimate: _____ 197__
 Restoration
 Reconstruction Est. Interim Cost (other than routine maintenance)
 Partial Reconstruction pending completion of Recommended Treatment:
 Adaptive Restoration \$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: CLASS VI LAND ACREAGE (if not part of a complex or district: _____ acres.
A 18 580 940 4505 600
Zone Easting Northing

STUDIES REQUIRED:

- Historical Studies Plan
- Historic Resource Study
- Historic Structure Report
- Historic Furnishing Study
- Historic Structure Preservation Guide

KEY:

- N - not needed
- P - programmed
- C - completed
- U - underway
- R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Red brick with large aggregate stucco coating.

Physical Description: 22.5' x 17'

Building #25, constructed in 1907 to house laboratory animals, has the same detailing and construction as the other buildings on Island 3, though it contains only a single room. Walls have granite sills, red brick bases, rough stuccoed upper areas and red brick quoins and keystones. The roof is tiled and hipped, with a round copper-covered vent at the peak. Windows are shorter than usual, with segmental arched heads and 2 light sash which pivot at the center. A 5-panel door with an arched head opens onto a porch and to Passageway #27. The interior floor is concrete and walls and ceilings are plastered.

(continue on reverse if necessary)

PRESENT CONDITION: Excellent Good Fair Deteriorated
Ruins Unaltered Altered Original Site Moved

Report prepared by:

Building Conservation Technology
Signature

December 1978
Date



25.1 Animal House window detail.

CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Laboratory STRUCTURE NO. 26

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED: Est. Cost of Treatment Recommended: \$ _____

<input type="checkbox"/> Preservation	Date of this Estimate: _____ 197_
<input type="checkbox"/> Restoration	
<input type="checkbox"/> Reconstruction	Est. Interim Cost (other than routine maintenance)
<input type="checkbox"/> Partial Reconstruction	pending completion of Recommended Treatment:
<input type="checkbox"/> Adaptive Restoration	\$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: A 18 580 940 4505 600 CLASS VI LAND ACREAGE (if not part of a complex or district: _____ acres.

Zone Easting Northing

STUDIES REQUIRED:

- Historical Studies Plan
- Historic Resource Study
- Historic Structure Report
- Historic Furnishing Study
- Historic Structure Preservation Guide

KEY:

- N - not needed
- P - programmed
- C - completed
- U - underway
- R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Steel frame, red brick with large aggregate stucco coating and limestone trim.

Physical Description: 45' x 45'
Building #26, constructed in 1907, had employee quarters on the first floor and a laboratory on the second. Construction materials and methods are the same as for the Powerhouse, #24, but each side is only 3 bays wide. The north, or principal facade is differentiated by a central doorway with a sculptured limestone surround and sweeping granite steps. Rusticated Doric columns and pilasters on either side of the doorway support a full Doric entablature, and the window above has a broad limestone surround with flat volutes at the bottom. The south or rear elevation is connected to Passageway #27. Wood framed, copper trimmed bulls' eye dormers punctuate the tile covered hipped roof on the north, east and south sides, and a chimney pierces the west.

Interior floors, baseboards, picture mouldings, door trim and fireplace surrounds are made of oak and show a Colonial Revival influence. Bathrooms have tile floors and wainscots. A steel stairway with slate risers leads to the second floor, where laboratory storage shelves and benches are constructed of varnished oak.

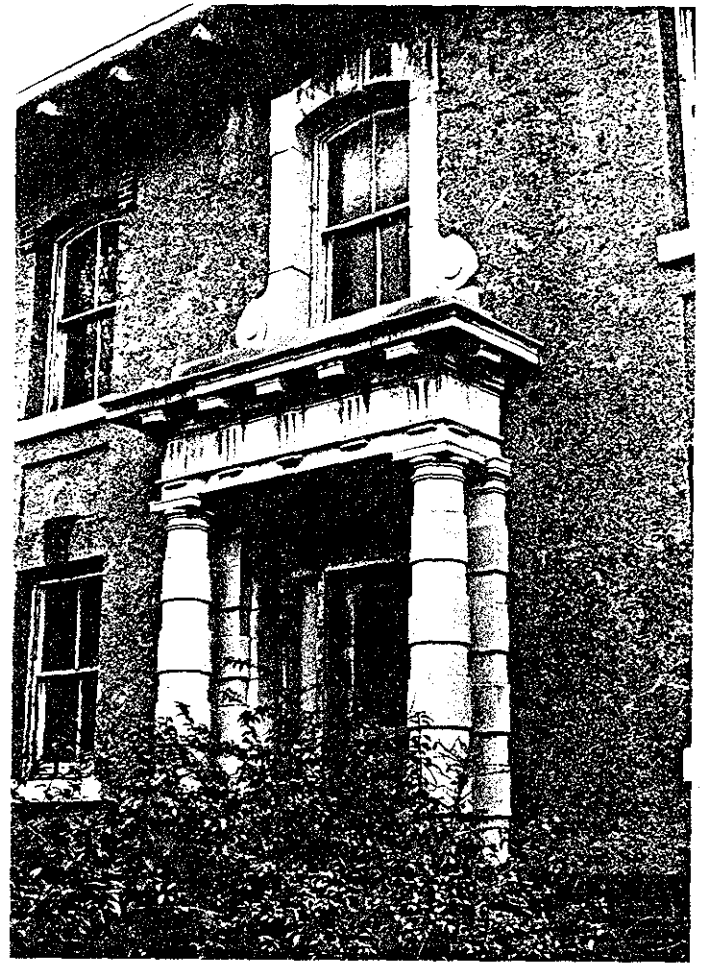
(continue on reverse if necessary)

PRESENT CONDITION: Excellent Good Fair Deteriorated
 Ruins Unaltered Altered Original Site Moved

Report prepared by:

Building Conservation Technology
Signature

December 1978
Date



26.1 (above, left) Laboratory,
North Elevation

26.2 (above, right) Laboratory,
North Door Detail

26.3 (left) Laboratory, East
Elevation



CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Passageway STRUCTURE NO. 27

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED:

Est. Cost of Treatment Recommended: \$ _____

<input type="checkbox"/> Preservation	Date of this Estimate: _____ 197
<input type="checkbox"/> Restoration	
<input type="checkbox"/> Reconstruction	Est. Interim Cost (other than routine maintenance)
<input type="checkbox"/> Partial Reconstruction	pending completion of Recommended Treatment:
<input type="checkbox"/> Adaptive Restoration	\$ _____

LOCATION OF STRUCTURE:

UTM REFERENCE: CLASS VI LAND ACREAGE (if not part of a complex or district: _____ acres.)

A 18 580 940 450 5600
 Zone Easting Northing

STUDIES REQUIRED:

<input type="checkbox"/>	Historical Studies Plan
<input type="checkbox"/>	Historic Resource Study
<input type="checkbox"/>	Historic Structure Report
<input type="checkbox"/>	Historic Furnishing Study
<input type="checkbox"/>	Historic Structure Preservation Guide

KEY:

N	- not needed
P	- programmed
C	- completed
U	- underway
R	- required, but not yet scheduled

STRUCTURE: Type of, and composition: Red brick and concrete with areas of large aggregate stucco.

Physical Description: 712.5' x 11.25'

The concrete and steel passageway connecting the buildings on Island 3 has been subdivided for discussion into 5 parts. Part 27A is one story high, with a granite sill, common bond brick base with headers at the bottom and sixth course, and exposed aggregate concrete walls above. The walls are divided into window bays with raised concrete quoins at the piers and keystones above the lintels, limestone sills with two recessed panels below, and metal 20 light fixed sash or 24 light pivoting sash. A moulded concrete cornice frames the flat gravel roof. Interior finishes consist of concrete floors and hung plaster ceilings. Parts 2/B, C and D are two stories high. Wall construction and window bays are the same as those in section A, but bays are further delineated by colossal pilasters with stuccoed shafts and smooth concrete bases and capitals. The passageways are broken at regular intervals by doors and concrete stairways leading into the yards. The roof above sections B and D are extensions of the hipped roofs of adjacent isolation wards. The roof over section C, which runs to the south of the Administration Building, #32, is flat and covered with asphalt. Section E is another single story passageway similar to section A except that the hallways are narrower, have a bracketed gable roof, and window bays are plain (continue on reverse if necessary)

PRESENT CONDITION: Excellent Good Fair Deteriorated
 Ruins Unaltered Altered Original Site Moved

Report prepared by:

Building Conservation Technology
 Signature _____

December 1978
 Date _____

rather than being trimmed with quoins. At Buildings #38 and #40, the passageway forms a semi-circle which joins to the recessed central section of the buildings through two doors. At the center of each semi-circular hall is a door leading to the small yard within.



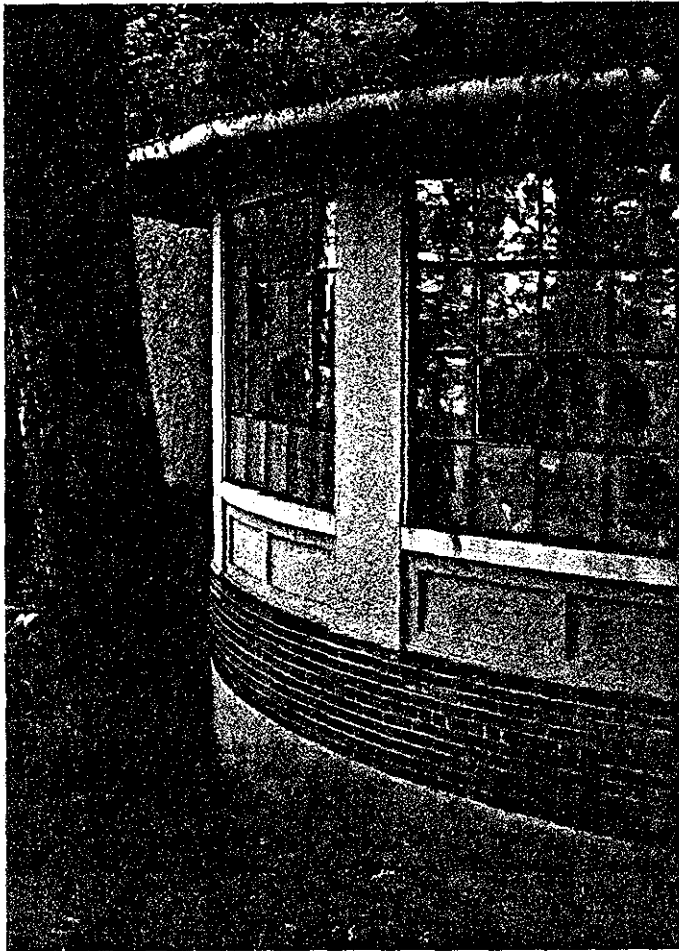
27.1 Passageway,
Section B



27.2 Passageway, Section D



27.3 Passageway,
Section E



27.4 Passageway, Section E
Detail



27.5 Passageway, Section E



27.6 Passageway. Lean-to on west side of
Section E.

CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Contagious Disease Wards 11/12 STRUCTURE NO. 28

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED: Est. Cost of Treatment Recommended: \$ _____

<input type="checkbox"/> Preservation	Date of this Estimate: _____ 197_
<input type="checkbox"/> Restoration	
<input type="checkbox"/> Reconstruction	Est. Interim Cost (other than routine maintenance)
<input type="checkbox"/> Partial Reconstruction	pending completion of Recommended Treatment:
<input type="checkbox"/> Adaptive Restoration	\$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: A 18 580 940 450 5600 CLASS VI LAND ACREAGE (if not part of a complex or district: _____ acres.
Zone Easting Northing

STUDIES REQUIRED:	KEY:
<input type="checkbox"/> Historical Studies Plan	N - not needed
<input type="checkbox"/> Historic Resource Study	P - programmed
<input type="checkbox"/> Historic Structure Report	C - completed
<input type="checkbox"/> Historic Furnishing Study	U - underway
<input type="checkbox"/> Historic Structure Preservation Guide	R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Red brick with large aggregate stucco coating and limestone trim.

Physical Description: 37.5' x 88'
Wards 11/12 were constructed in 1907. The building is 2 stories high and constructed of the same material as the other ward buildings. Windows have limestone lintels, recessed panels between floors, and brick keystones and springers on the second floor. The south elevation is enclosed by the passageway (27) and the south slope of the hipped roof covers both the end of the ward and the passageway. On the east and west elevations, the section adjacent to the passageway is set off by brick quoins and contains three window bays on each floor, the center window doubled in width. Walls north of these sections are recessed slightly and contain 6 bays. Doors in the center of the north facade open onto a concrete stairway on the ground floor and an iron fire escape on the second floor. Both first and second floor windows have limestone sills with recessed panels between, but only the arched heads of the second floor are marked with brick springers and keystones. All windows have metal, double hung, 30-over-30 light sash. A copper-covered ventilator intersects the roof ridge near the south end.

Interior rooms open off a central corridor. The section nearest the passageway contains bathrooms and storage rooms, finished with terrazzo floors, glazed tile wainscotting and marble partitions. The (continue on reverse if necessary)

PRESENT CONDITION: Excellent Good Fair Deteriorated
 Ruins Unaltered Altered Original Site Moved

Report prepared by:

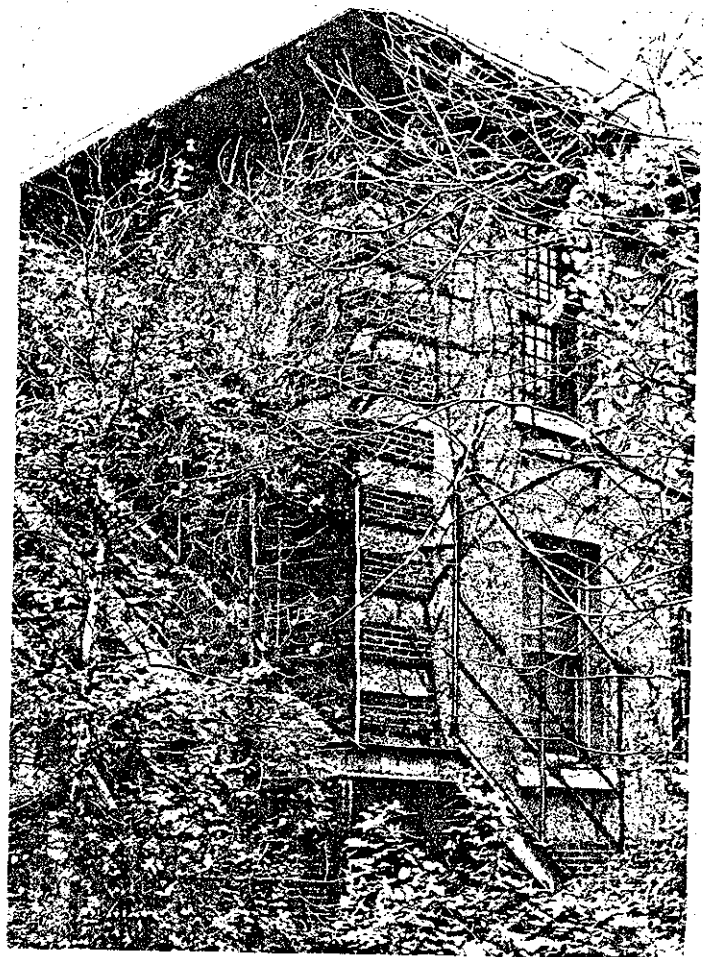
Building Conservation Technology December 1978
 Signature _____ Date _____

remainder of the floor is devoted to individual rooms, each with a window and lavatory, linoleum floor, metal door and frame and plaster walls. A steel stair with slate treads leads to the second floor, which was not accessible.



28.1 Ward 11/12, West Elevation

28.2 Ward 11/12



CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Contagious Disease Wards 13/14 STRUCTURE NO. 29

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED: Est. Cost of Treatment Recommended: \$ _____

Preservation Date of this Estimate: _____ 197__

Restoration

Reconstruction Est. Interim Cost (other than routine maintenance)

Partial Reconstruction pending completion of Recommended Treatment:

Adaptive Restoration \$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: CLASS VI LAND ACREAGE (if not part of a complex or district):
A 1 8 5 8 0 9 4 0 4 5 0 5 6 0 0 _____ acres.
Zone Easting Northing

STUDIES REQUIRED:

- Historical Studies Plan
- Historic Resource Study
- Historic Structure Report
- Historic Furnishing Study
- Historic Structure Preservation Guide

KEY:

- N - not needed
- P - programmed
- C - completed
- U - underway
- R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Red brick with large aggregate stucco coating and limestone trim.

Physical Description: 37.5' x 88'

The exterior of Wards 13/14 is identical to that of Wards 11/12, except that it is located on the south side of the Passageway, #27 thus reversing the orientation. There are no doors on the south end, only single, wider window bays on each floor. The interior was remodeled in 1952 for use as an insane ward, adding radiant heat, recessed lighting and plumbing.

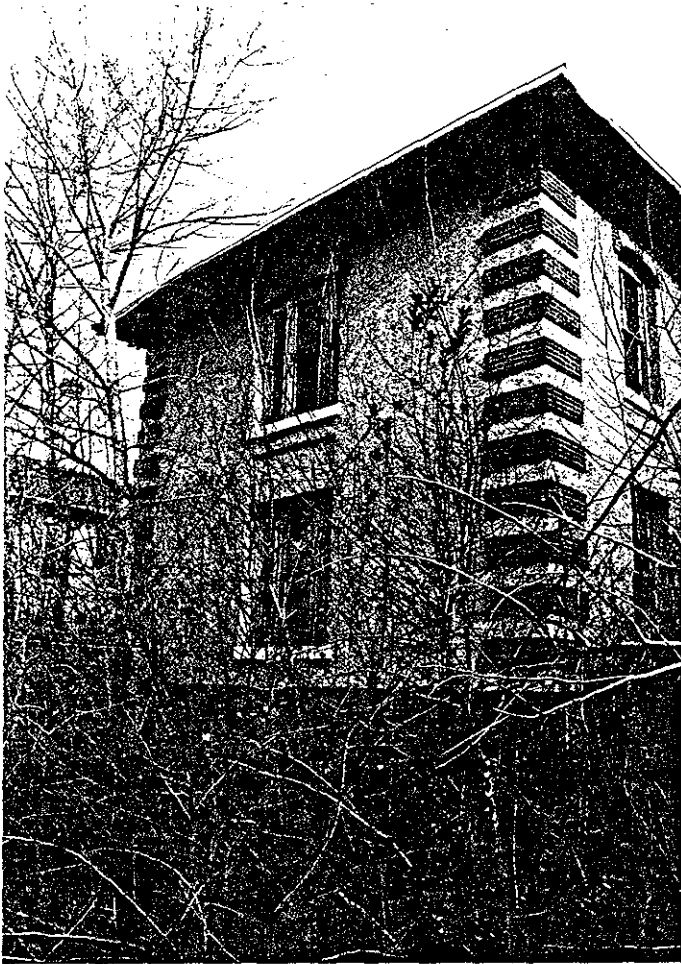
(continue on reverse if necessary)

PRESENT CONDITION: Excellent Good Fair Deteriorated
Ruins Unaltered Altered Original Site Moved

Report prepared by:

Building Conservation Technology
Signature

December 1978
Date



29.1 Wards 13/14, South
Elevation



29.2 Wards 13/14,
East Elevation

CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Contagious Disease Wards 15/16 STRUCTURE NO. 30

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED:

Est. Cost of Treatment Recommended: \$ _____

<input type="checkbox"/> Preservation	Date of this Estimate: _____ 197__
<input type="checkbox"/> Restoration	
<input type="checkbox"/> Reconstruction	Est. Interim Cost (other than routine maintenance)
<input type="checkbox"/> Partial Reconstruction	pending completion of Recommended Treatment:
<input type="checkbox"/> Adaptive Restoration	\$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: CLASS VI LAND ACREAGE (if not part of a complex or district):
 A 1 8 5 8 0 9 4 0 4 5 0 5 6 0 0 _____ acres.
 Zone Easting Northing

STUDIES REQUIRED:

- Historical Studies Plan
- Historic Resource Study
- Historic Structure Report
- Historic Furnishing Study
- Historic Structure Preservation Guide

KEY:

- N - not needed
- P - programmed
- C - completed
- U - underway
- R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Red brick with large aggregate stucco coating and limestone trim.

Physical Description: 37.5' x 88'

Wards 15/16 are identical to Wards 11/12, including the existence of metal doors and fire escapes on the north end. Window openings in the south portion of the building contain 2-over-2 double hung sash in metal frames while openings in the narrower north section contain 1-over-1 double hung wood sash in wood frames.

(continue on reverse if necessary)

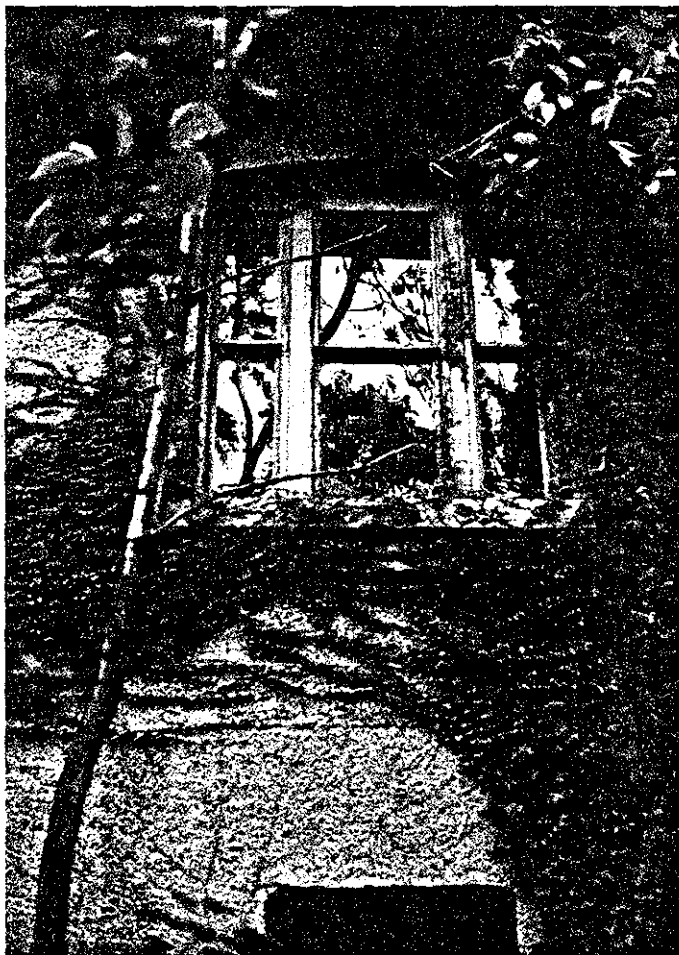
PRESENT CONDITION: Excellent Good Fair Deteriorated
 Ruins Unaltered Altered Original Site Moved

Report prepared by:

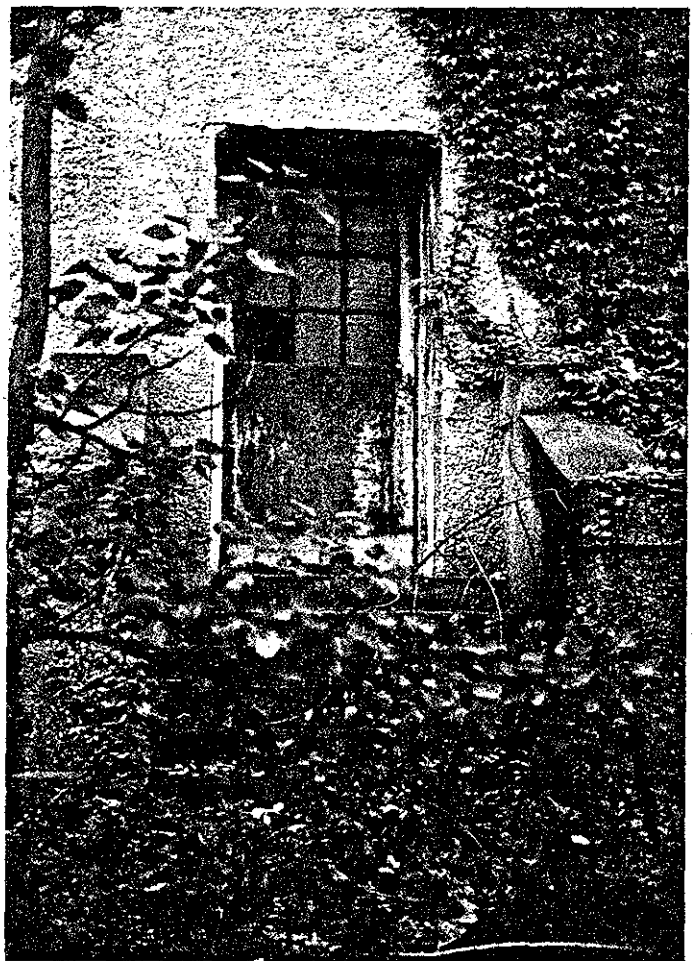
Building Conservation Technology
Signature

219

December 1978
Date



30.1 (above, left) Ward 15/16, Second Floor Window, North Elevation



30.2 (above, right) Ward 15/16, North Door

30.3 (right) Ward 15/16



CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Contagious Disease Wards 17/18 STRUCTURE NO. 31

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED: Est. Cost of Treatment Recommended: \$ _____

<input type="checkbox"/> Preservation	Date of this Estimate: _____ 197
<input type="checkbox"/> Restoration	
<input type="checkbox"/> Reconstruction	Est. Interim Cost (other than routine maintenance)
<input type="checkbox"/> Partial Reconstruction	pending completion of Recommended Treatment:
<input type="checkbox"/> Adaptive Restoration	\$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: CLASS VI LAND ACREAGE (if not part of a complex or district): _____ acres.

A 18 580 940 4505 600

Zone Easting Northing

STUDIES REQUIRED:	KEY:
<input type="checkbox"/> Historical Studies Plan	N - not needed
<input type="checkbox"/> Historic Resource Study	P - programmed
<input type="checkbox"/> Historic Structure Report	C - completed
<input type="checkbox"/> Historic Furnishing Study	U - underway
<input type="checkbox"/> Historic Structure Preservation Guide	R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Red brick with large aggregate stucco coating and limestone trim.

Physical Description: 37.5' x 88'
Wards 17/18 are essentially the same as Wards 11/12 with a reversed orientation and wood rather than metal sash. The window units are 2-over-2, double hung sash in wood frames. The central bays in the pavillion adjacent to the Passageway, #27, contain double sash units, while the openings on the south elevation of the building have triple 1-over-1 wood sash in wood frames. Interior finishes are similar, with the exception of the rooms near the Passageway, #27, which has clay tile floors and baseboards. The south end of the first floor was left as one open space rather than being divided into individual rooms.

(continue on reverse if necessary)

PRESENT CONDITION: Excellent Good Fair Deteriorated
Ruins Unaltered Altered Original Site Moved

Report prepared by:

Building Conservation Technology
Signature

December 1978
Date



31.1 Ward 17/18, East Elevation

CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Nurses Quarters STRUCTURE NO. 32

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED: Est. Cost of Treatment Recommended: \$ _____

<input type="checkbox"/> Preservation	Date of this Estimate: _____ 197
<input type="checkbox"/> Restoration	
<input type="checkbox"/> Reconstruction	Est. Interim Cost (other than routine maintenance)
<input type="checkbox"/> Partial Reconstruction	pending completion of Recommended Treatment:
<input type="checkbox"/> Adaptive Restoration	\$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: A 18 580940 4505600 CLASS VI LAND ACREAGE (if not part of a complex or district: _____ acres.
Zone Easting Northing

STUDIES REQUIRED:

<input type="checkbox"/> Historical Studies Plan	N - not needed
<input type="checkbox"/> Historic Resource Study	P - programmed
<input type="checkbox"/> Historic Structure Report	C - completed
<input type="checkbox"/> Historic Furnishing Study	U - underway
<input type="checkbox"/> Historic Structure Preservation Guide	R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Red brick bearing wall with limestone trim.

Physical Description: 105' x 58'

The $3\frac{1}{2}$ story nurses quarters were constructed in 1907, using the same materials as other buildings on Island 3 but with more elaborate details in keeping with its greater size. There are 9 bays on the north facade and 5 on the east and west with 9 third floor windows exposed on the south above the Passageway, #27. First and second floor bays are recessed within a two story arch topped with brick springers and keystones. Windows have limestone lintels with a recessed panel between. The second floor window heads are arched to echo the surrounds. The third floor windows, set off by a 5 course brick belt course, are set within square recessed brick panels which alternate with projecting concrete panels. All windows have wood 2-over-2 double hung sash. At the center of the north facade are double, single light, two panel, transomed doors with a limestone surround and granite steps identical to those on Building #21. Doors on the east and west elevations have simple granite stoops with iron balustrades and no surrounds. The roof is hipped and is pierced by 8 round 5 light single sash dormers. Rooms on the first floor have hardwood floors, plaster walls and ceilings and oak door and window trim, baseboards and picture mouldings. Doors have 5 horizontal recessed panels. Bathrooms have terrazzo floors, 6' high marble wainscotting (continue on reverse if necessary)

PRESENT CONDITION: Excellent Good Fair Deteriorated
Ruins Unaltered Altered Original Site Moved

Report prepared by:

Building Conservation Technology
Signature

December 1978
Date

and plaster walls and ceilings. A steel stair with slate treads leads to the second floor, where finishes are the same, with the addition of linoleum floors in the rooms and hexagonal tile floors and glazed tile wainscotting in the bathrooms. Third floor finishes are the same as those on the second.



32.1 Nurses Quarters, North
Elevation

32.2 Nurses Quarters, First
Floor Window





32.3 Nurses Quarters, Second
and Third Floor Windows



32.4 Nurses
Quarters,
South
Elevation

CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Kitchen STRUCTURE NO. 33

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED: Est. Cost of Treatment Recommended: \$ _____

<input type="checkbox"/> Preservation	Date of this Estimate: _____ 197_
<input type="checkbox"/> Restoration	
<input type="checkbox"/> Reconstruction	Est. Interim Cost (other than routine maintenance)
<input type="checkbox"/> Partial Reconstruction	pending completion of Recommended Treatment:
<input type="checkbox"/> Adaptive Restoration	\$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: CLASS VI LAND ACREAGE (if not part of a complex or district):
 A

1	8
5	8
0	9
4	0

4	5
0	5
6	0
0	0

 _____ acres.
 Zone Easting Northing

STUDIES REQUIRED:	KEY:
<input type="checkbox"/> Historical Studies Plan	N - not needed
<input type="checkbox"/> Historic Resource Study	P - programmed
<input type="checkbox"/> Historic Structure Report	C - completed
<input type="checkbox"/> Historic Furnishing Study	U - underway
<input type="checkbox"/> Historic Structure Preservation Guide	R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Stucco over red brick with exposed red brick trim.

Physical Description: 15' x 21.5'
 The kitchen, a single story single room structure constructed in 1907 is three bays wide on each facade. Construction materials and detailing are identical to adjacent building; red brick base with large aggregate stucco over brick walls with exposed brick quoins, springers and keystones. Windows have 2-over-2 light double hung wood sash and frames with segmental arched heads. A four light two panel wood door on the south elevation opens into a granite and brick stair. Evidence of a now removed porch remains on the south facade. A tall chimney stack runs up the east facade and a square, hooded ventilator intersects the ridge of the tile covered hip roof. Interior finishes consist of 10" square clay tile flooring, a 5' high white glazed tile wainscot, plaster walls and ceiling and exposed plastered beams. A large panelled oak ice box fills the north end.

(continue on reverse if necessary)

PRESENT CONDITION: Excellent Good Fair Deteriorated
 Ruins Unaltered Altered Original Site Moved

Report prepared by:

Building Conservation Technology December 1978
 Signature Date



33.1 Kitchen, Southeast Corner



33.2 Kitchen, South Elevation.



33.3 Kitchen, East Elevation.

CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Contagious Disease Wards 19/20 STRUCTURE NO. 34

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED: Est. Cost of Treatment Recommended: \$ _____

<input type="checkbox"/> Preservation	Date of this Estimate: _____ 197
<input type="checkbox"/> Restoration	
<input type="checkbox"/> Reconstruction	Est. Interim Cost (other than routine maintenance)
<input type="checkbox"/> Partial Reconstruction	pending completion of Recommended Treatment:
<input type="checkbox"/> Adaptive Restoration	\$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: CLASS VI LAND ACREAGE (if not part of a complex or district): _____ acres.

A 18 580 940 4505 600

Zone Easting Northing

STUDIES REQUIRED:

<input type="checkbox"/> Historical Studies Plan	← KEY:
<input type="checkbox"/> Historic Resource Study	N - not needed
<input type="checkbox"/> Historic Structure Report	P - programmed
<input type="checkbox"/> Historic Furnishing Study	C - completed
<input type="checkbox"/> Historic Structure Preservation Guide	U - underway
	R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Red brick with large aggregate stucco coating and limestone trim.

Physical Description: 37.5' x 88'
The Wards 19/20 building is of the same configuration and constructed of the same materials as Wards 11/12, but with a reversed orientation and triple wood sash windows on the south elevation. Both the first and second floors are a single open space on the south end rather than individual rooms.

(continue on reverse if necessary)

PRESENT CONDITION: Excellent Good Fair Deteriorated
Ruins Unaltered Altered Original Site Moved

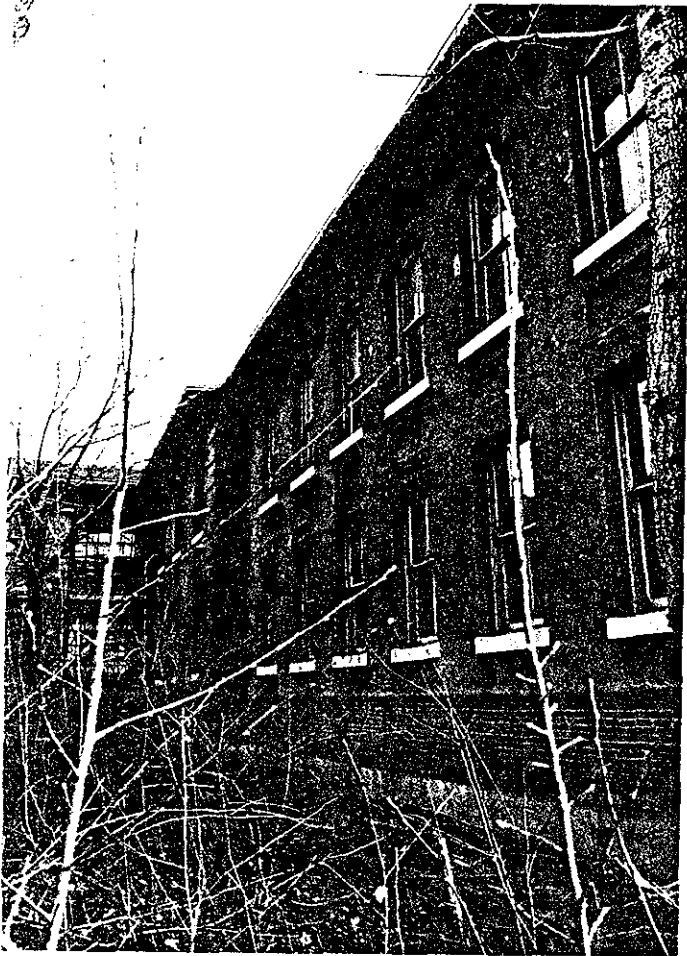
Report prepared by:

Building Conservation Technology
Signature

December 1978
Date



34.1 Wards 19/20,
Northeast
Corner



34.2 Wards 19/20, West Elevation

CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Contagious Disease Wards 21/22 STRUCTURE NO. 35

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED: Est. Cost of Treatment Recommended: \$ _____

Preservation Date of this Estimate: _____ 197__
 Restoration
 Reconstruction Est. Interim Cost (other than routine maintenance)
 Partial Reconstruction pending completion of Recommended Treatment:
 Adaptive Restoration \$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: A 18 580940 45015600 CLASS VI LAND ACREAGE (if not
Zone Easting Northing _____ acres.

STUDIES REQUIRED:

- Historical Studies Plan
- Historic Resource Study
- Historic Structure Report
- Historic Furnishing Study
- Historic Structure Preservation Guide

KEY:

- N - not needed
- P - programmed
- C - completed
- U - underway
- R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Red brick with large aggregate stucco coating and limestone trim.

Physical Description: 37.5' x 88'

Wards 21/22 were constructed in 1907-09. The building is two stories high and constructed of red brick covered with large aggregate stucco above a granite base. Windows have limestone lintels, recessed panels between floors and brick keystones and springers. The south elevation is enclosed by Passageway #27 and the south slope of the tile covered hipped roof covers both the ends of the ward and the passageway. On the east and west elevations, the section adjacent to the passageway is set off by brick quoins and contains 3 bays on each floor, the center window doubled in width. Walls north of this section are recessed slightly and contain 6 bays. Doors in the center of the north facade open onto a concrete stairway on the ground floor and an iron fire escape on the second floor. Both first and second floor windows have limestone sills with recessed panels between, but only the arched heads of the second floor are marked with brick springers and keystones. All windows have 2-over-2 double hung wood sash in wood frames. The interior is finished with linoleum over wood floors, plaster walls and ceilings and wood trim and doors.

Bathrooms have white hexagonal tiled floors, glazed tile wainscoting and marble partitions. A steel stair with slate treads leads to the second floor.

(continue on reverse if necessary)

PRESENT CONDITION: Excellent Good Fair Deteriorated
Ruins Unaltered Altered Original Site Moved

Report prepared by:

Building Conservation Technology

Signature

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December

Date

1978

CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Contagious Disease Wards 23/24 STRUCTURE NO. 36

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED: Est. Cost of Treatment Recommended: \$ _____

<input type="checkbox"/> Preservation	Date of this Estimate: _____ 197
<input type="checkbox"/> Restoration	
<input type="checkbox"/> Reconstruction	Est. Interim Cost (other than routine maintenance)
<input type="checkbox"/> Partial Reconstruction	pending completion of Recommended Treatment:
<input type="checkbox"/> Adaptive Restoration	\$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: A 1 8 5 8 0 9 4 0 4 5 0 5 6 0 0 CLASS VI LAND ACREAGE (if not part of a complex or district: _____ acres.
Zone Easting Northing

STUDIES REQUIRED:

- Historical Studies Plan
- Historic Resource Study
- Historic Structure Report
- Historic Furnishing Study
- Historic Structure Preservation Guide

KEY:

- N - not needed
- P - programmed
- C - completed
- U - underway
- R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Red brick with large aggregate stucco coating and limestone trim.

Physical Description: 37.5' x 88'

The Wards 23/24 building is 2 stories high and constructed of red brick covered with large aggregate stucco above a granite base. Windows have limestone lintels, recessed panels between floors, and brick keystones and springers. The north elevation is enclosed by Passageway #27 and the north slope of the tile covered hipped roof covers both the end of the ward and the passageway. On the east and west elevations, the section adjacent to the passageway is set off by brick quoins and contains 3 window bays on each floor, the center window on the east facade being double in width. Walls south of this section are recessed slightly and contain 6 bays. Doors in the center of the south facade open onto a concrete stairway. Both first and second floor windows have limestone sills with recessed panels between, but only the arched heads of the second floor have brick springers and keystones. All windows have wood 2-over-2 light double hung sash in wood frames.

Interior spaces have linoleum or wood floors, metal doors and frames, plaster walls and acoustical tile ceilings. Bathrooms have white hexagonal tile floors, 6' high glazed tile wainscots and marble partitions. The second floor is open and contains tile storage.

(continue on reverse if necessary)

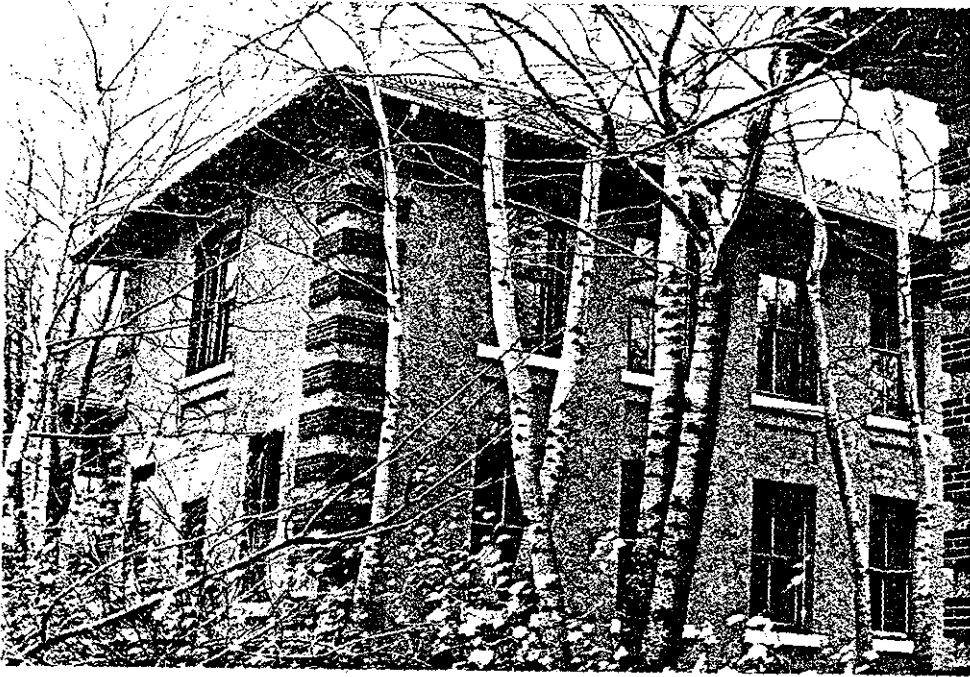
PRESENT CONDITION: Excellent Good Fair Deteriorated
Ruins Unaltered Altered Original Site Moved

Report prepared by:

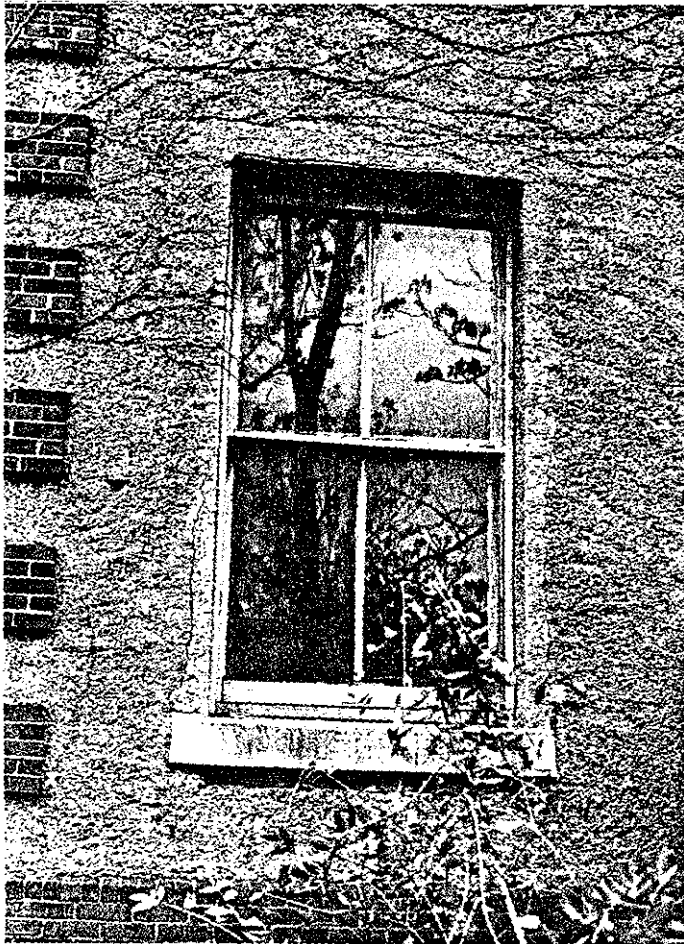
Building Conservation Technology
Signature

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December 1978
Date



36.1 Wards 23/24,
East
Elevation



36.2 Wards 23/24, South Window
Detail



36.3 Wards 23/24, South Elevation

CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Contagious Disease Wards 25/26 STRUCTURE NO. 37

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED: Est. Cost of Treatment Recommended: \$ _____

Preservation Date of this Estimate: _____ 197
 Restoration
 Reconstruction Est. Interim Cost (other than routine maintenance)
 Partial Reconstruction pending completion of Recommended Treatment:
 Adaptive Restoration \$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: A 18 580940 4505600 CLASS VI LAND ACREAGE (if not
Zone Easting Northing part of a complex or district: _____ acres.

STUDIES REQUIRED:

- Historical Studies Plan
- Historic Resource Study
- Historic Structure Report
- Historic Furnishing Study
- Historic Structure Preservation Guide

KEY:

- N - not needed
- P - programmed
- C - completed
- U - underway
- R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Red brick with large aggregate stucco coating and limestone and exposed red brick trim.

Physical Description: 37.5' x 88'

The building is 2 stories high and constructed of red brick with stucco coating above a granite base and has limestone and exposed red brick trim. The south facade is enclosed by Passageway #27 and the south slope of the tile covered hipped roof covers both the end of the ward and the passageway. On the east and west elevations, the section adjacent to the passageway is set off by brick quoins and contains 3 window bays on each floor, the center window being double in width. Walls north of this section are recessed slightly and contain 6 bays. Doors at the center of the north facade open onto a concrete stairway. Both first and second floor windows have limestone sills with recessed panels between. The arch heads of the second floor opening have brick springers and keystones. All windows have wood 2-over-2 double hung sash in wood frames.

Interior spaces are finished with linoleum over wood floors, plaster walls and ceilings with wood picture moulding, trim and 5 panel doors. Bathrooms have white hexagonal floor tile, 6' high glazed tile wainscots and marble stall partitions.

(continue on reverse if necessary)

PRESENT CONDITION: Excellent Good Fair Deteriorated
Ruins Unaltered Altered Original Site Moved

Report prepared by:

Building Conservation Technology
Signature

December 1978
Date

CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Contagious Disease Wards 27/28 STRUCTURE NO. 38

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED: Est. Cost of Treatment Recommended: \$ _____

<input type="checkbox"/> Preservation	Date of this Estimate: _____ 197
<input type="checkbox"/> Restoration	
<input type="checkbox"/> Reconstruction	Est. Interim Cost (other than routine maintenance)
<input type="checkbox"/> Partial Reconstruction	pending completion of Recommended Treatment:
<input type="checkbox"/> Adaptive Restoration	\$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: CLASS VI LAND ACREAGE (if not part of a complex or district: _____ acres.

A	1	8	5	8	0	9	4	0	4	5	0	5	6	0	0
	Zone Easting					Northing									

STUDIES REQUIRED:

- Historical Studies Plan
- Historic Resource Study
- Historic Structure Report
- Historic Furnishing Study
- Historic Structure Preservation Guide

KEY:

- N - not needed
- P - programmed
- C - completed
- U - underway
- R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Red brick covered with large aggregate stucco with exposed red brick and limestone trim.

Physical Description: 56' x 101'

Ward Building 27/28 is 1½ stories high with an H-shaped plan. The east and west facades are 5 bays long, each bay containing a single 2-over-2 double hung wood sash window with limestone sill and a recessed panel above. The south elevation is divided into 3 bay end pavillions set off by brick quoins, and a 4 bay recessed center pavillion. Windows of the end pavillions are similar to those on the east and west facades, though several have been blocked off. The window openings of the center pavillion are double in width and contain two 1-over-1 double hung sash units with segmental arched transoms, brick keystones and springers and recessed stuccoed panels below. The two bays at the west end of the center pavillion contain double glazed and panelled doors which open onto granite stoops with iron railings. The north facade is similar to the south but the center pavillion is divided into 6 single bays with door openings connecting to Passageway #27 at each end. The tiled hipped roof has a major ridge running east-west, ventilators at each end of the ridge, and 2 skylights at the center of the north slope. The roof is pierced at the eave line of the center pavillion by dormers; two on the north slope and three on the south slope. The north dormers have hipped roofs and 2-over-2 light double hung wooden sash. The (continue on reverse if necessary)

PRESENT CONDITION: Excellent Good Fair Deteriorated
Ruins Unaltered Altered Original Site Moved

Report prepared by:

Building Conservation Technology
Signature

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December 1978
Date

center south dormer contains two 1-over-1 double hung sash units while the smaller flanking dormers are round single light pivoting sash in copper frames.

Interior rooms are finished with linoleum or hardwood floors, plaster walls and ceilings, narrow wood door trim and five panel doors. Bathrooms have hexagonal tile floors, 6' high glazed tile wainscots and marble partitions. Two concrete stairways lead to the finished portions of the second floor.



38.1 Wards 27/28, South Elevation



38.2 Wards 27/28, East Elevation

CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Contagious Disease Wards 29/30 STRUCTURE NO. 39

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED: Est. Cost of Treatment Recommended: \$ _____

<input type="checkbox"/> Preservation	Date of this Estimate: _____ 197_
<input type="checkbox"/> Restoration	
<input type="checkbox"/> Reconstruction	Est. Interim Cost (other than routine maintenance)
<input type="checkbox"/> Partial Reconstruction	pending completion of Recommended Treatment:
<input type="checkbox"/> Adaptive Restoration	\$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: CLASS VI LAND ACREAGE (if not part of a complex or district):
 A 1 8 5 8 0 9 4 0 4 5 0 5 6 0 0 _____ acres.
 Zone Easting Northing

<u>STUDIES REQUIRED:</u>	<u>KEY:</u>
<input type="checkbox"/> Historical Studies Plan	N - not needed
<input type="checkbox"/> Historic Resource Study	P - programmed
<input type="checkbox"/> Historic Structure Report	C - completed
<input type="checkbox"/> Historic Furnishing Study	U - underway
<input type="checkbox"/> Historic Structure Preservation Guide	R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Red brick covered with large aggregate stucco with exposed red brick and limestone trim.

Physical Description: 56' x 101'
Ward Building 29/30 is 1½ stories high with an H-shaped plan. The east and west facades are 5 bays long, each bay containing a single 2-over-2 double hung wood sash window with limestone sill and a recessed panel above. The north elevation is divided into 3 bay end pavillions set off by brick quoins, and a 4 bay recessed center pavillion. Windows of the end pavillion are similar to those on the east and west facades. The window openings of the center pavillion are double in width and contain two 1-over-1 double hung sash units with segmental arched transoms, brick keystones and springers and recessed stuccoed panels below. The two bays at the east end of the center pavillion contain double glazed and panelled doors which open onto granite stoops with iron railings. The south facade is similar to the north but the center pavillion is divided into 6 single bays with door openings at each end. The tiled hipped roof has a major ridge running east-west, ventilators at each end of the ridge, and 2 skylights at the center of the north slope. The roof is pierced at the eave line of the center pavillion by dormers; two on the north slope and three on the south slope. The north dormers have hipped roofs and 2-over-2 light double hung wooden sash. The center south dormer contains two 1-over-1 double hung sash units while the smaller (continue on reverse if necessary)

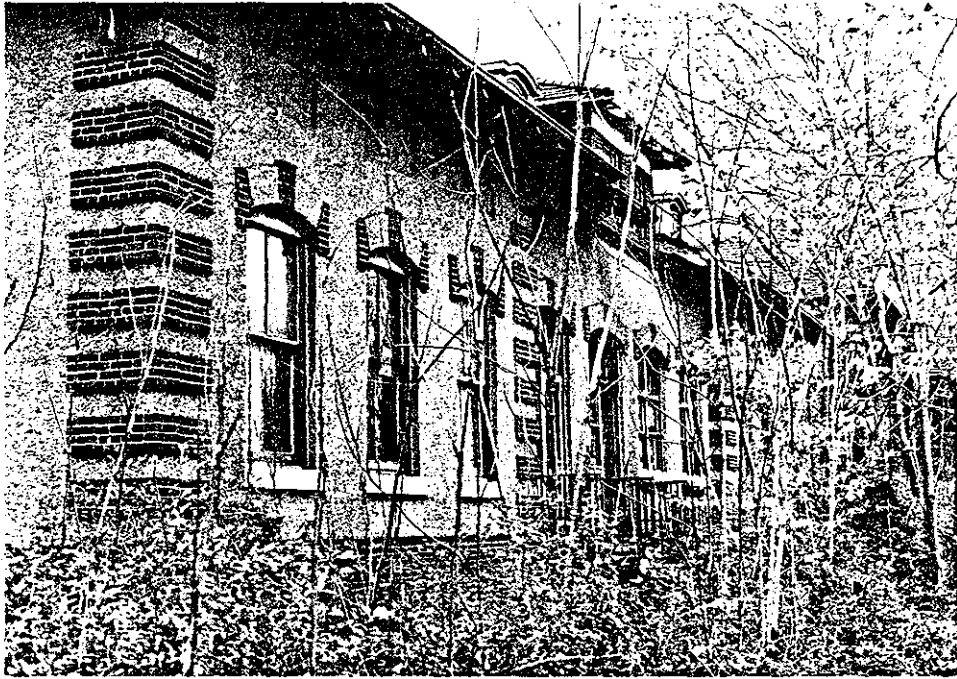
PRESENT CONDITION: Excellent Good Fair Deteriorated
 Ruins Unaltered Altered Original Site Moved

Report prepared by:

Building Conservation Technology _____ December _____ 1978
 Signature Date

flanking dormers are round single light pivoting sash in copper frames.

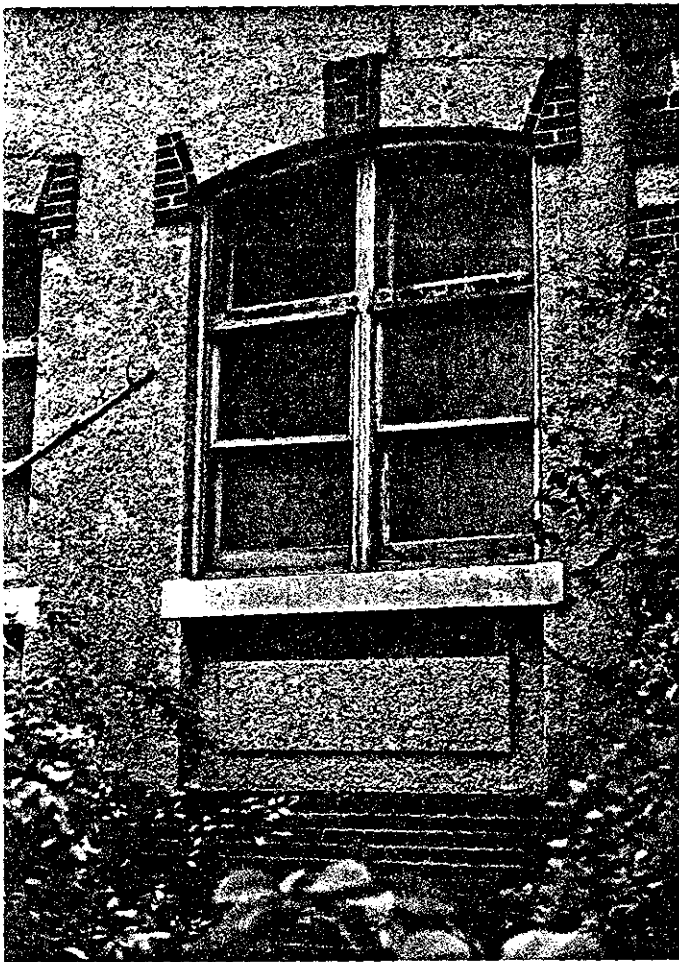
Interior rooms are finished with linoleum or hardwood floors, plaster walls and ceilings, narrow wood door trim and 5 panel doors. Bathrooms have hexagonal tile floors, 6' high glazed tile wainscots and marble partitions. Two concrete stairways lead to the finished portions of the second floor.



39.1 Wards 29/30
North
Elevation

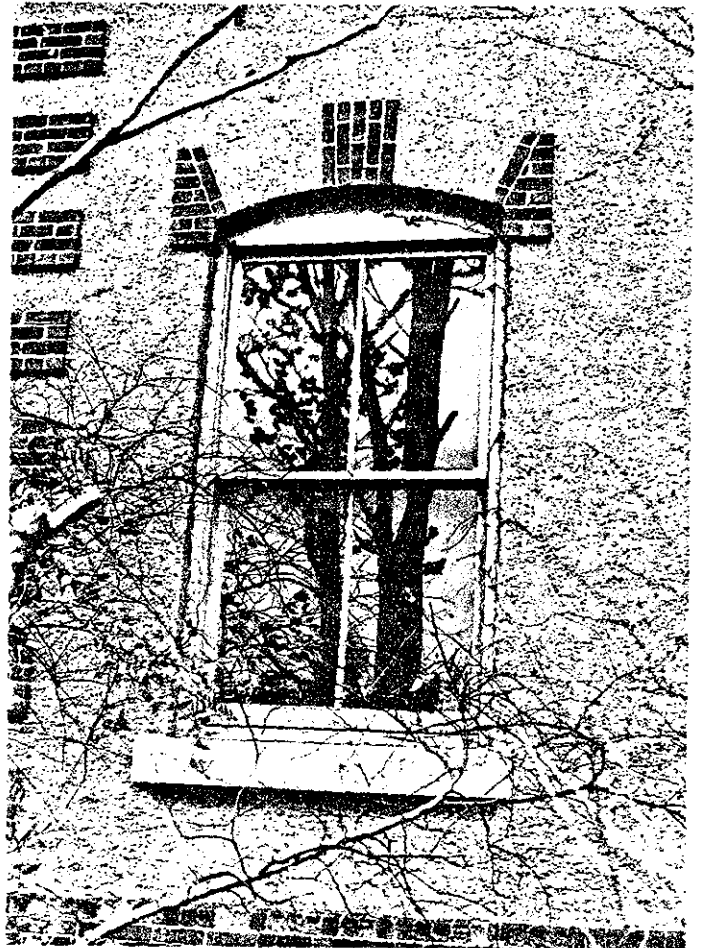


39.2 Wards 29/30, North Door



39.3 Wards 29/30, Double Window Unit

39.4 Wards 29/30, Single Window Unit



CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Contagious Disease Wards 31/32 STRUCTURE NO. 40

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED: Est. Cost of Treatment Recommended: \$ _____

<input type="checkbox"/> Preservation	Date of this Estimate: _____ 197__
<input type="checkbox"/> Restoration	
<input type="checkbox"/> Reconstruction	Est. Interim Cost (other than routine maintenance)
<input type="checkbox"/> Partial Reconstruction	pending completion of Recommended Treatment:
<input type="checkbox"/> Adaptive Restoration	\$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: A 18 580940 4505600 CLASS VI LAND ACREAGE (if not part of a complex or district: _____ acres.
Zone Easting Northing

STUDIES REQUIRED:

- Historical Studies Plan
- Historic Resource Study
- Historic Structure Report
- Historic Furnishing Study
- Historic Structure Preservation Guide

KEY:

- N - not needed
- P - programmed
- C - completed
- U - underway
- R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Red brick covered with large aggregate stucco with exposed red brick and limestone trim.

Physical Description: 56' x 101'

Ward Building 31/32 is 1½ stories high with an H-shaped plan. The east and west facades are 5 bays long, each bay containing a single 2-over-2 double hung wood sash window with limestone sill and a recessed panel above. The south elevation is divided into 3 bay end pavillions set off by brick quoins, and a 4 bay recessed center pavillion. Windows of the end pavillions are similar to those on the east and west facades. The window openings of the center pavillion are double in width and contain two 1-over-1 double hung sash units with segmental arched transoms, brick keystones and springers and recessed stuccoed panels below. The two bays at the west end of the center pavillion contain double, glazed and panelled doors which open onto granite stoops with iron railings. The north facade is similar to the south but the center pavillion is divided into 6 single bays with door openings connecting to Passageway #27 at each end. The tiled hipped roof has a major ridge running east-west, ventilators at each end of the ridge, and 2 skylights at the center of the north slope. The roof is pierced at the eave line of the center pavillion by dormers; two on the north slope and three on the south slope. The north dormers have hipped roofs and 2-over-2 light double hung wooden sash. The center south dormer contains two 1-over-1 (continue on reverse if necessary)

PRESENT CONDITION: Excellent Good Fair Deteriorated
Ruins Unaltered Altered Original Site Moved

Report prepared by:

Building Conservation Technology
Signature

December 1978
Date

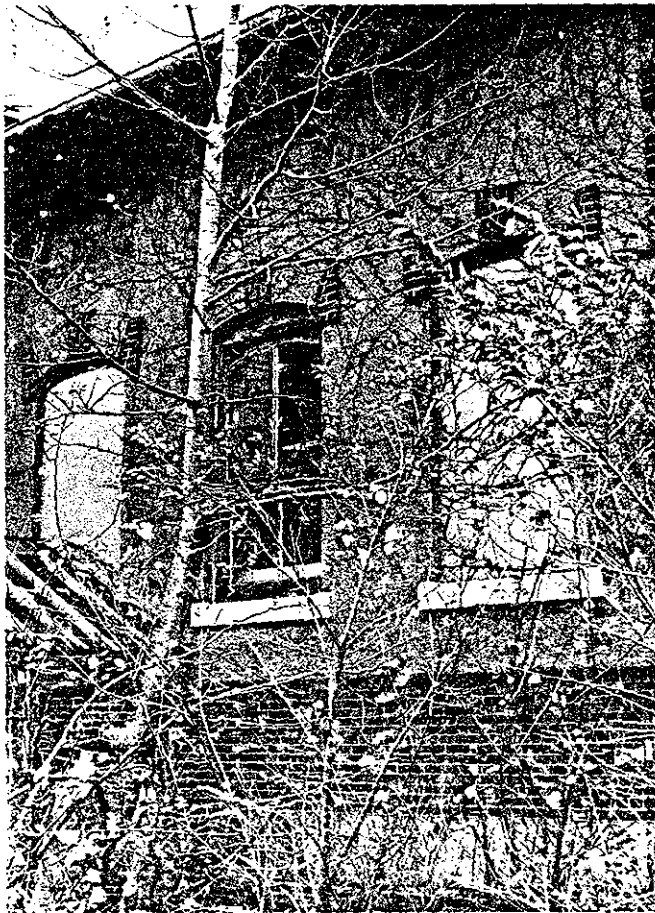
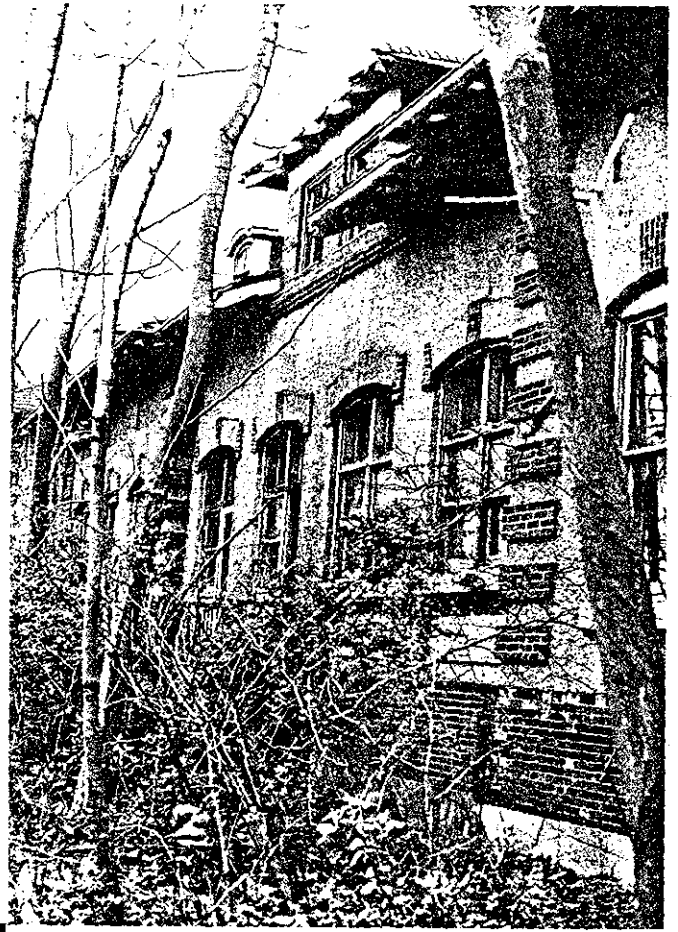
double hung sash units while the smaller flanking dormers are round single light pivoting sash in copper frames.

Interior rooms are finished with linoleum or hardwood floors, plaster walls and ceilings, narrow wood door trim and 5 panel doors. Bathrooms have hexagonal tile floors, 6' high glazed tile wainscots and marble partitions.

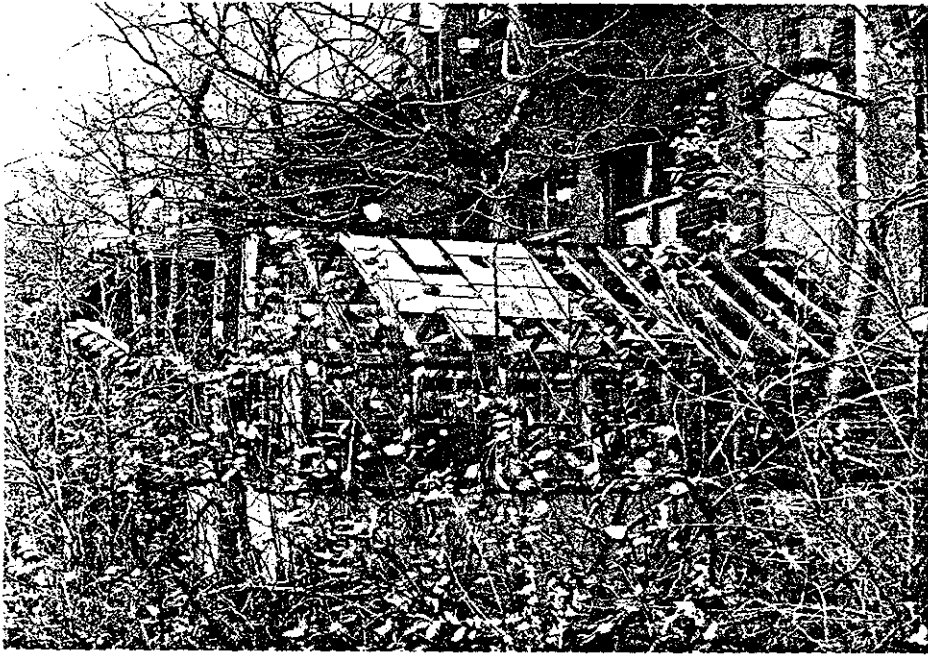
A greenhouse addition is attached to the east end of the south facade. This gable roofed structure has a 3' high stuccoed clay block base with wood frames, walls and roof. It is 7 bays wide on the east and west facades and 5 bays wide on the south, each bay containing 4 light sash units. The center bay on the south contains a door opening. Inside are wood growing trenches on a concrete floor.

III. Condition Survey

40.1 Wards 31/32, South Elevation



40.2 Wards 31/32, Southeast Corner



40.3 Wards 31/32,
Greenhouse
at Southeast
Corner



40.4 Wards 31/32, South Dormers

CLASSIFIED STRUCTURE FIELD INVENTORY REPORT
(Attach 4"x5" B&W Photo)

NPS ORGANIZATION

REGION North Atlantic PARK/AREA NAME Statue of Liberty Nat. Mon. CODE NO. 1945

STRUCTURE NAME Staff Headquarters STRUCTURE NO. 41

ORDER OF SIGNIFICANCE: National State Local

TREATMENT RECOMMENDED: Est. Cost of Treatment Recommended: \$ _____

<input type="checkbox"/> Preservation	Date of this Estimate: _____ 197
<input type="checkbox"/> Restoration	
<input type="checkbox"/> Reconstruction	Est. Interim Cost (other than routine maintenance)
<input type="checkbox"/> Partial Reconstruction	pending completion of Recommended Treatment:
<input type="checkbox"/> Adaptive Restoration	\$ _____

LOCATION OF STRUCTURE: Ellis Island, New York Harbor

UTM REFERENCE: CLASS VI LAND ACREAGE (if not part of a complex or district):
 A 1 8 5 8 0 9 4 0 4 5 0 5 6 0 0 _____ acres.
 Zone Easting Northing

<u>STUDIES REQUIRED:</u>	<u>KEY:</u>
<input type="checkbox"/> Historical Studies Plan	N - not needed
<input type="checkbox"/> Historic Resource Study	P - programmed
<input type="checkbox"/> Historic Structure Report	C - completed
<input type="checkbox"/> Historic Furnishing Study	U - underway
<input type="checkbox"/> Historic Structure Preservation Guide	R - required, but not yet scheduled

STRUCTURE: Type of, and composition: Red brick over steel frame with brick trim.

Physical Description: 72' x 47'
The easternmost building on Island 3, Building #41 was constructed in 1907 as a two family staff house. It is 2½ stories high with a brick base, stuccoed brick walls with brick trim, a hipped roof and 8 round headed gable roofed dormers. The north and south elevations have 6 bays each and the east and west 9 bays each. All windows have 2-over-2 light double hung wood sash. Those at the first level which reach nearly to the floor on the interior and are protected on the exterior by semi-circular iron balustrades have flat heads while windows at the second floor have arched heads. On the east and west elevations, the central bay contains a door with limestone surrounds on the first floor and a wider triple window on the second floor. On the west facade, now partially obscured by the corridor, the door surround is similar to that on Buildings #25 and #30 and the inner door has side-lights and a transom. The east doorway appears originally to have had a porch with a hipped roof on wood brackets, square corners and 2 freestanding Doric columns. The walls have now been filled in; and the roof has been altered. A third porch with granite risers and an iron balustrade leads to French doors on the north end of the east elevation. Interior finishes are more elaborate than for the wood buildings and reflect the Colonial Revival (continue on reverse if necessary)

PRESENT CONDITION: Excellent Good Fair Deteriorated
 Ruins Unaltered Altered Original Site Moved

Report prepared by:

Building Conservation Technology
Signature

December 1978
Date

influence previously noted in Building #25. The first floor has hardwood floors, wood baseboards, chairrails and picture mouldings and plaster walls and ceilings. The fireplace surrounds have classical detailing and doors have carved surrounds with panelled soffits. The original east porch and the room to the north of it have been converted to a kitchen, with linoleum floors and baseboards, plaster walls and ceiling, and metal 3 light casement sash.

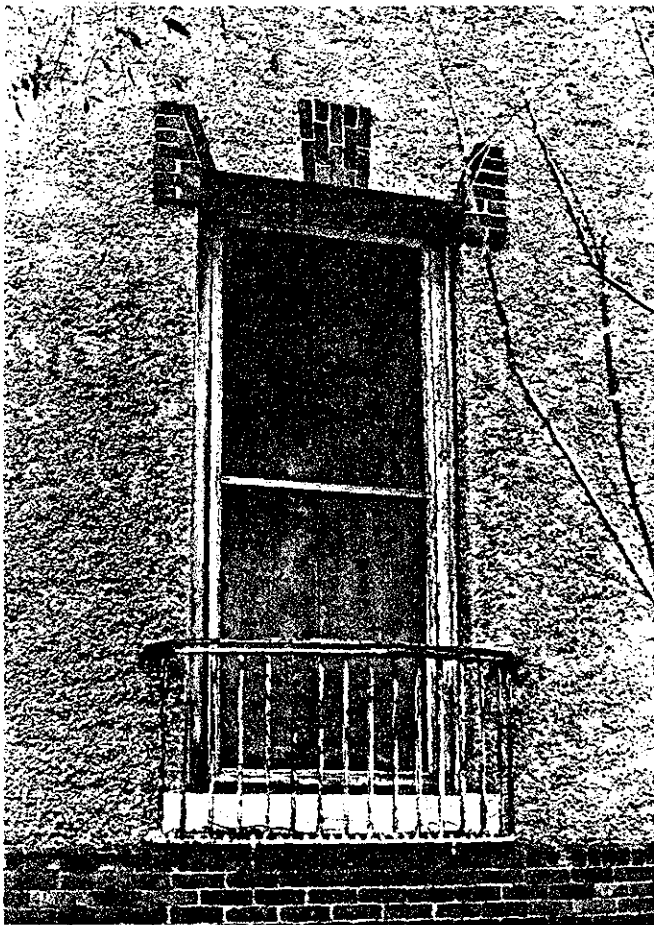
An iron stair with slate treads and landing leads to the second floor. There floor and wall treatments are similar. Doors have panelled soffits but plain surrounds. Bathrooms have hexagonal tile floors and a glazed tile wainscot. Concrete stairs provide access to the attic, which is unfinished.



41.1 Staff Headquarters,
North Elevation



41.2 Staff Head-
quarters,
South
Elevation



41.3 (above, left) Staff Headquarters,
First Floor Window



41.4 (above, right) Staff Headquarters,
East Porches



41.5 (right) Staff Headquarters, West
Porch

The 40 structures on Ellis Island other than the Main Building were examined in order to determine the quantity of repairs necessary to stabilize each building. Since protection from the weather is the key to such stabilization efforts, the focus of the study was on roofs, drainage systems, walls and door or window openings. Although signs of structural instability, such as cracked or bulging walls, were noted, no detailed structural investigation was attempted, with the exception of the Kitchen and Laundry, Powerhouse and Hospital Buildings, which are discussed in Section IV.

Examinations were primarily visual and were limited to areas which could be reached safely. Any parts which were not accessible, such as the attics and basement crawl spaces of ward buildings on Island 3 or walls covered with vegetation, were noted on the report. The building elements were assessed in terms of both how well they function at present and whether they would continue to function adequately during the next ten years. In addition, conditions which might damage the building fabric if left unattended, such as corroding grill anchors, porches or stairways attached to stone or brick, were recorded. Visual appearance or historical appropriateness of the elements and condition of interior finishes were only noted insofar as they indicated exterior problems.

Summaries and photographs of existing conditions on each building are given on the following pages. Required repairs and cost estimates are listed in Section V.

#2 PASSAGEWAY

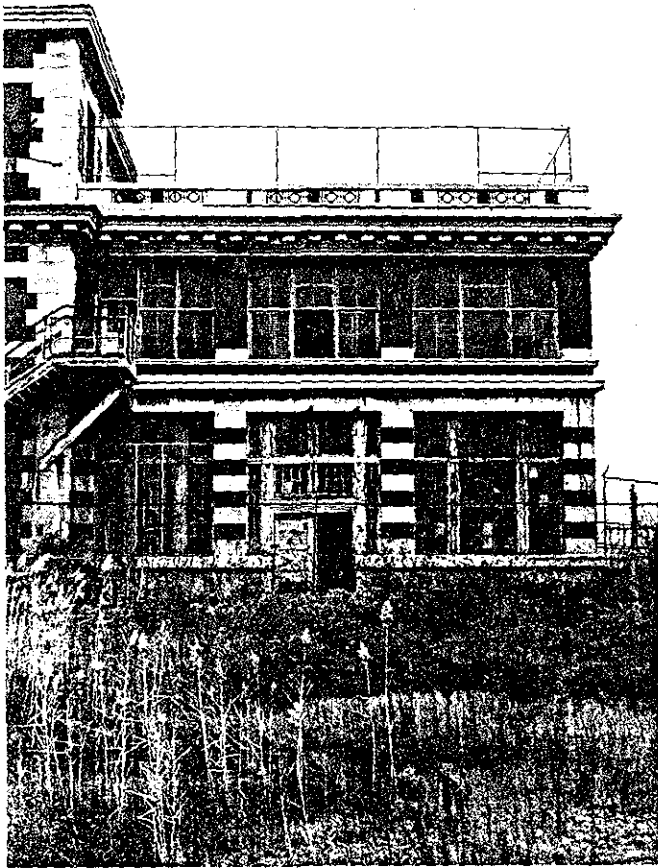
As with all buildings on the Island, the major problems in Building #2 are connected with the drainage systems. The single cast iron leader and drain in Section A lacks grating, is clogged and corroded. Roof tiles are cracked and loose as a result of water building up on the roof and freezing. Four square feet of the stone parapet walls need rebuilding, and approximately 700 square feet of brick requires repointing. Section B has no gutter system, and run-off has eroded the pointing of the west side of Section A and caused foundation settlement along the south wall, creating cracks as wide as 3/4" and holes as large as 1 square foot.



2.1 Passageway. Loose and cracked roof tiles on Section A.

#3 BAGGAGE AND DORMITORY BUILDING

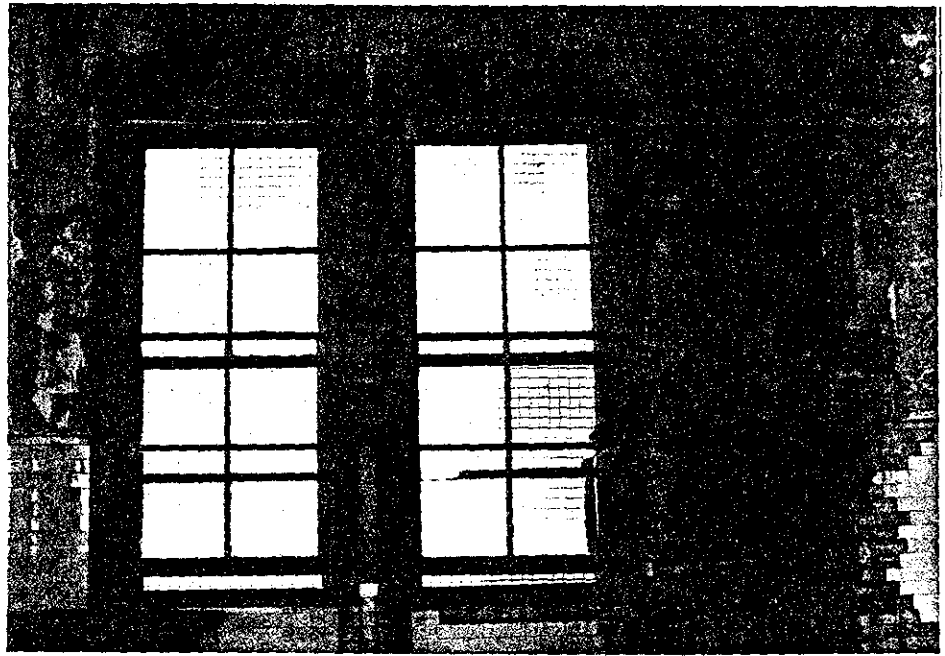
The Baggage and Dormitory Building is in very poor condition. Interior plaster has fallen off most walls and ceilings, pools of water were found on the third floor, algae has developed in many of the interior walls, and plants grow under the skylights of the courtyard. The roof drains well, although the tar coating is bubbled and cracked, but flashing is torn or missing from the hatchways and vent covers and all downspouts are clogged with debris. Approximately 1/3 of the copper cresting/gutter on the third floor is missing or requires replacement, and those on the second floor are so shallow and clogged with debris that water runs over and onto the lower walls. Stone window surrounds require repointing and have been damaged by rusting grill anchors. Subsequent water infiltration through window heads coupled with internal moisture from damaged downspouts has caused rot to develop in approximately 50% of the wood sash windows. Metal sash windows in the north wing and the light wells have lost all protective paint coating and muntins and sills have corroded. Both the skylights and roof of the light court are deteriorated and first and second floor joists and floor coverings in the south wing are rotted.



3.1 Baggage and Dormitory Building, North Wing. Note missing sash units and damaged stonework above doorway.



3.2 Baggage and Dormitory Building, North Wing. Corrosion of window sill and muntins.



3.3 Baggage and Dormitory Building, Light Court. Damage to leader at right of windows has caused deterioration of finishes and sash.



3.4 Baggage and Dormitory Building, Light Court Window. Corrosion on lower parts of window frame.

#4 KITCHEN AND LAUNDRY BUILDING

Although the underside of the Kitchen and Laundry Building roof was not accessible for close inspection, the areas visible through open hatchways and bare wire lath indicate that large areas of the clay tile sheathing have spalled and that conditions are similar to those observed in the Powerhouse (see also Section III C.5 of Structural Investigation). Five to ten percent of the roof tiles are cracked or missing, and valley flashing and ventilator caps are torn and fatigued. Joints in the copper gutter generally are open, and a total of linear feet of gutter is missing on the north, south and west elevations. Most downspouts are missing; some have been replaced by visually incompatible PVC piping.

Rainwater coursing down the walls has proved a hazard to the masonry. Fifty to sixty percent of the brick joints require repointing, and square feet of brick are cracked or dislodged, particularly around the south porch and north and east elevations (see also Section III C.3). Corroding grill anchors in the second floor window surround on the south elevation are also causing the stonework to spall. The bluestone basement sills are delaminating, the outer crust of the granite foundation is spalling, and thirty to fifty percent of the stone joints require repointing.

Twenty-seven of fifty-four windows have rotten frames, and the remainder have split or rotted sash. The south and porch doors are split and warped and should be replaced.

The south porch is in very poor condition. Plate and beam ends at both the floor and roof level and stair risers are corroded through. The concrete floor has spalled at the edges, exposing the steel reinforcement, and no covering is left on the roof, so that planking is split and rotted (see also Section III C.4 of Structural Investigation).

The north wing is in extremely poor condition. The flat roof is covered with vegetation and water is coursing down the west wall from an adjacent roof. Cracks run through the center of most window bays, and concrete lintels have spalled over the corroding steelwork. Seventy-five

percent of the interior finishes have detached and all structural steel is heavily corroded. This area is a great potential hazard and should be demolished (see Section III C.6 of Structural Investigation).

The passageway to the east of this North Wing is in need of new roofing and gutters, lintels are rusted and the triple wood six light sash requires replacement, but pointing and overall construction is generally sound.

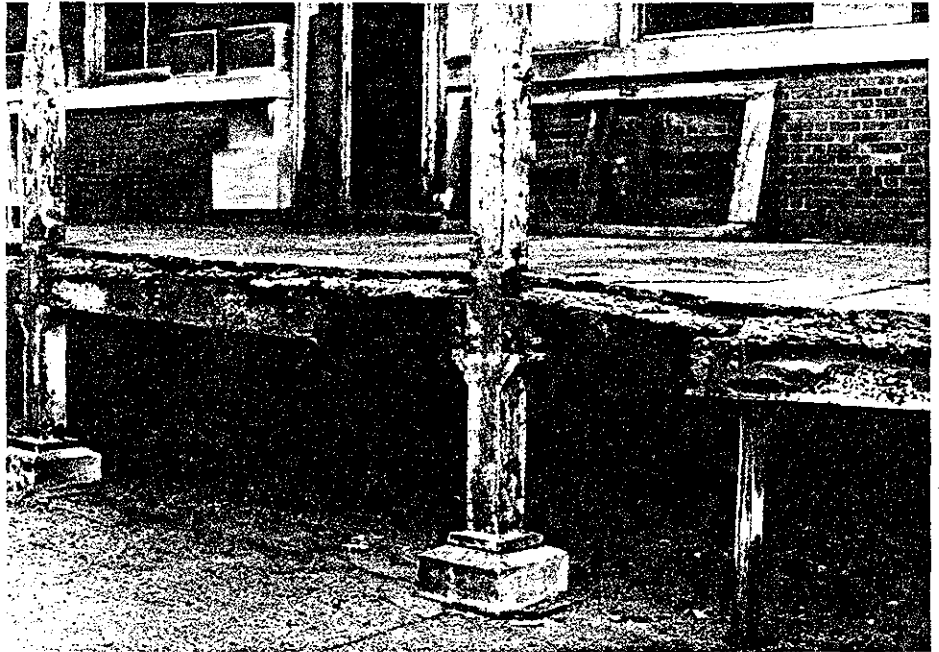
Of the four passageways designated C, D, E and F and connecting the Kitchen and Laundry Building with the Bakery and Carpentry Building, only the southernmost one (C) is structurally sound. All the steel framing in Section D is corroded, concrete and clay structural tile is spalled, and windows are falling out of the walls, taking the adjacent wall material with them. Section E has faulty gutters and open brick joints, and Section F has a bowed foundation, cracked walls and spalled lintel area.



4.1 Kitchen and
Laundry
Building.
Damaged gutter
at southeast
corner.



4.2 Kitchen and Laundry Building.
Torn gutter on northwest
corner. Note also spalling
concrete on cornice of
Passageway D.



4.3 Kitchen and Laundry Building. Corroded plate and beam ends on south porch.



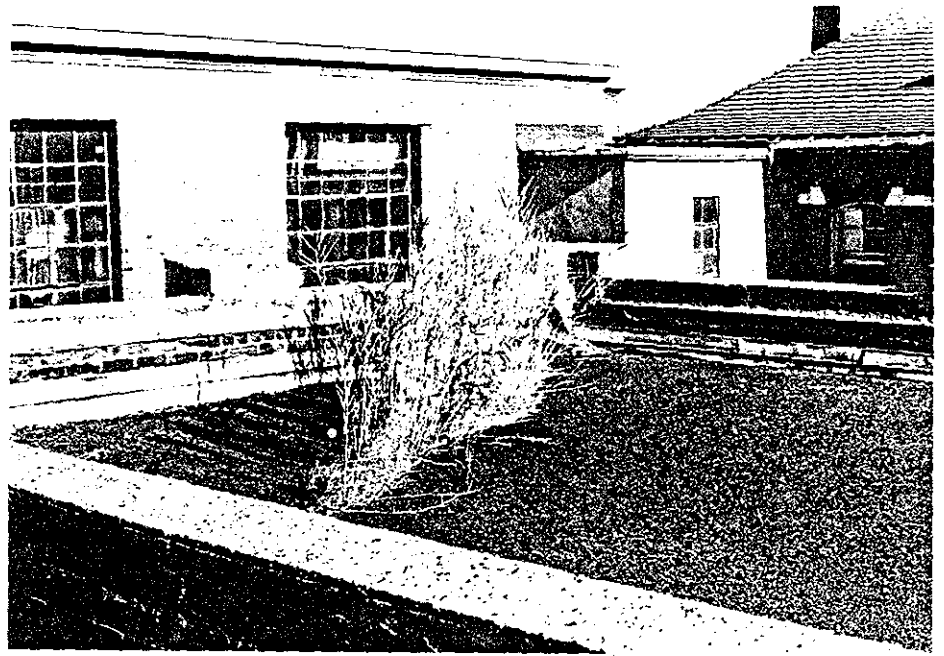
4.4 Kitchen and Laundry Building. Loose and missing brickwork on northwest wall above cellar door resulting from missing drainpipe.



4.5 Kitchen and Laundry Building. Spalling brick on south elevation.



4.6 Kitchen and Laundry Building. Lintel condition on interior of Passageway D.



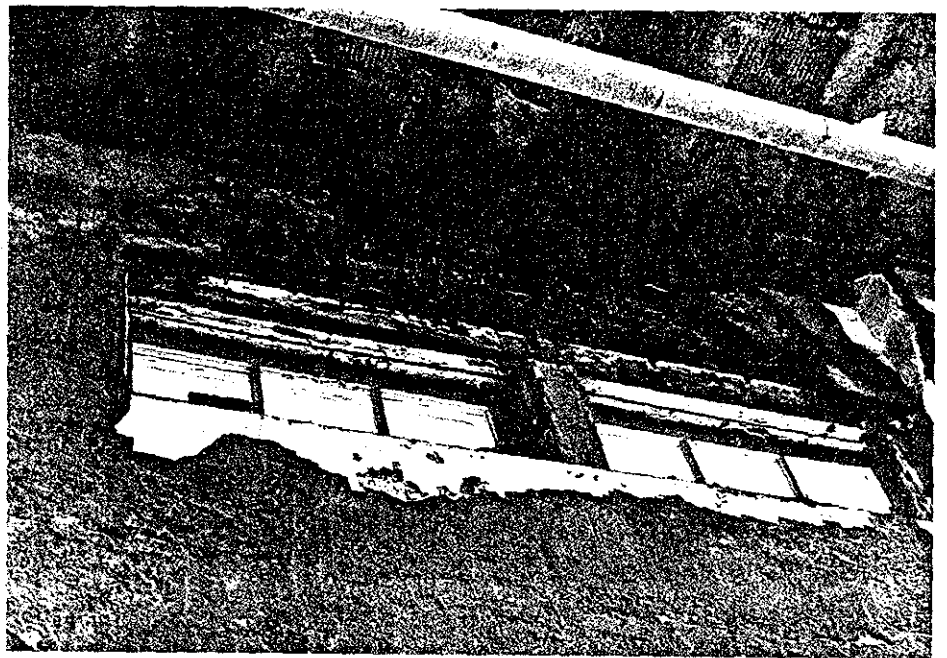
4.7 Kitchen and Laundry Building. Vegetation on roof of north wing.



4.8 Kitchen and Laundry Building. Corroding steel and spalled concrete in lintels of north wing.



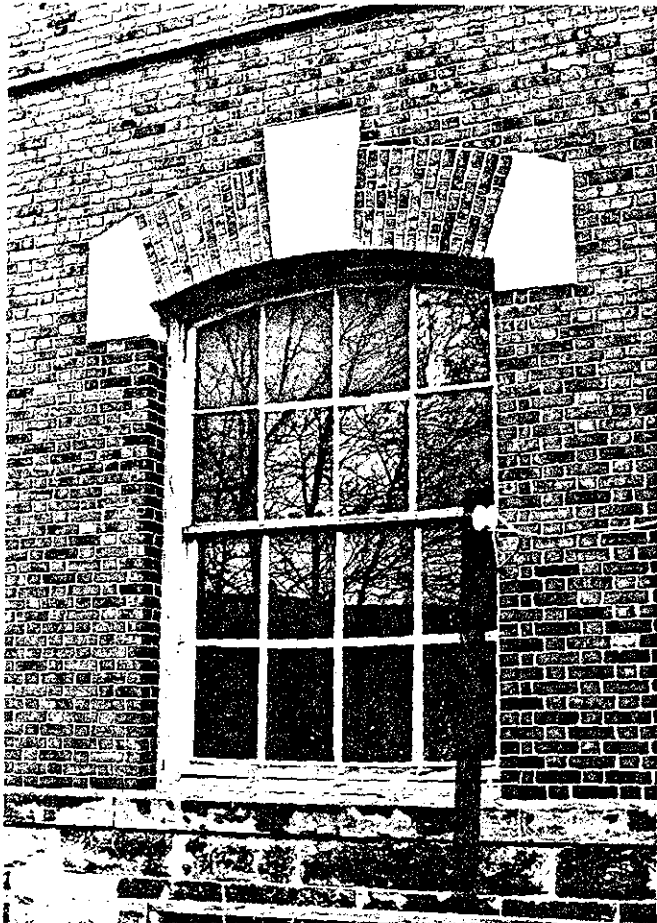
4.9 Kitchen and Laundry Building. Exposed and corroded steel framing on interior of north wing.



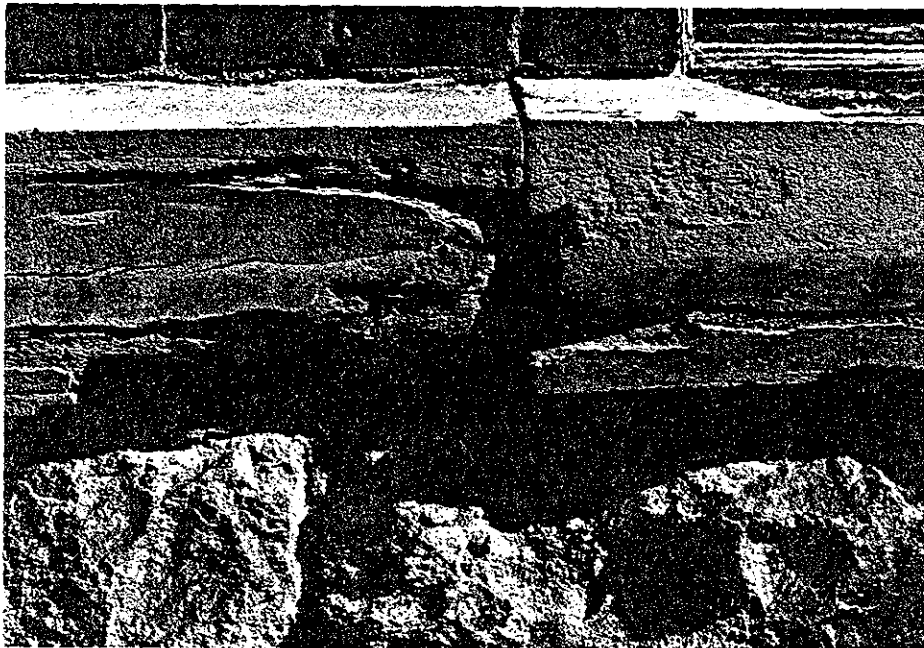
4.10 Kitchen and Laundry Building. Deteriorated finishes on interior of north wing.

#5 POWERHOUSE

The Powerhouse roof is in poor condition. The clay roof sheathing has spalled. Steelwork is corroded and at least fifty square feet of roof tiles have disintegrated completely. (More detailed discussion of roof problems is included in Section III B.5 of the Structural Investigation.) Approximately five percent of the gutters have holes in them, those on the east elevation are bent and crushed, all downspouts are missing, and flashing around the center stack and dormers should be replaced. The entire center smokestack, seventy percent of the stonework and twenty percent of the brickwork requires repointing. Corroding steel angles in the northwest corner have caused large bulges in the brickwork; these should be removed and the brickwork rebuilt (see Section III B.3 of Structural Investigation). The bluestone sill courses are delaminating and the granite base is spalled. Wood window sills are generally split, bottom rails are sagging and are rotted, and muntin joints are open, so that twenty-seven sash units, eight frames and all dormers require replacement.



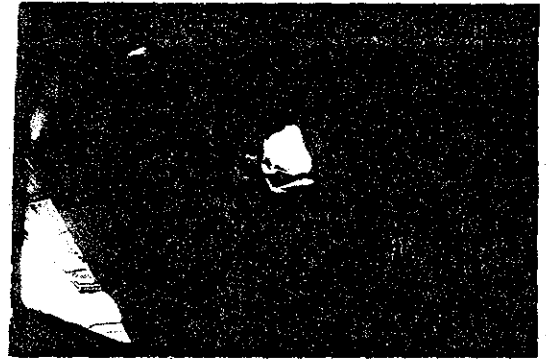
5.1 Powerhouse. Typical first floor window. Note warped bottom rail and spalling granite and bluestone.



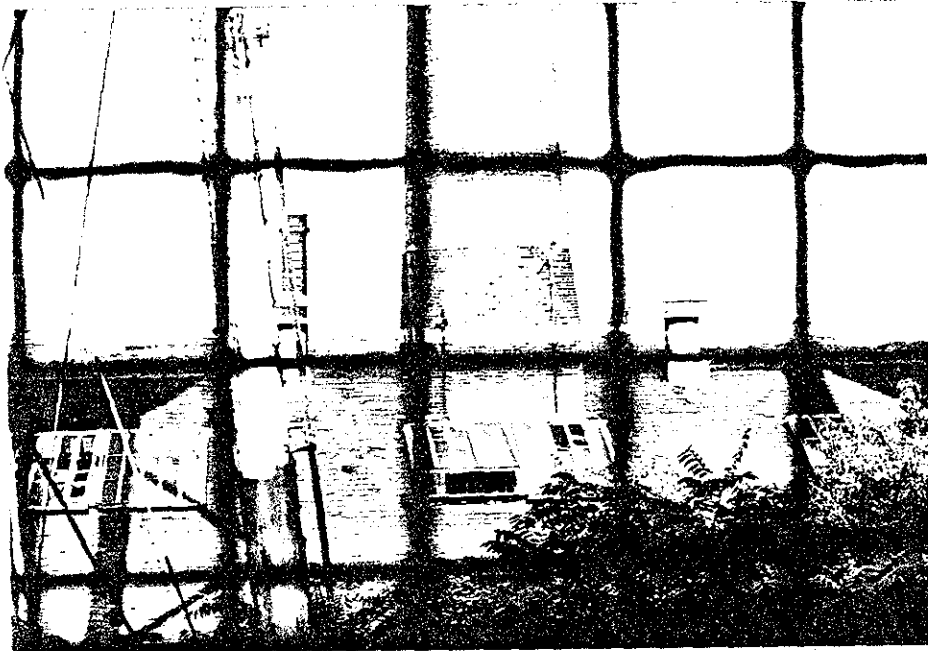
5.2 Powerhouse. Delaminated bluestone sill.



5.3 Powerhouse. Spalled terra cotta roof sheathing.



5.4 Powerhouse. Detail of hole in terra cotta sheathing.



5.5 Powerhouse. East side of roof. Note cracked and missing tiles, damaged skylights and three holes in roof in left and center of photograph.

#6 SHED

There is a 3' x 5' wide hole at the north corner of the west roof pitch. Adjacent studs and sheathing in both roof and sides are rotted. Clapboards at the bottom of all walls are rotted and others are split and cupped and nails are loose.

#7 SHELTER

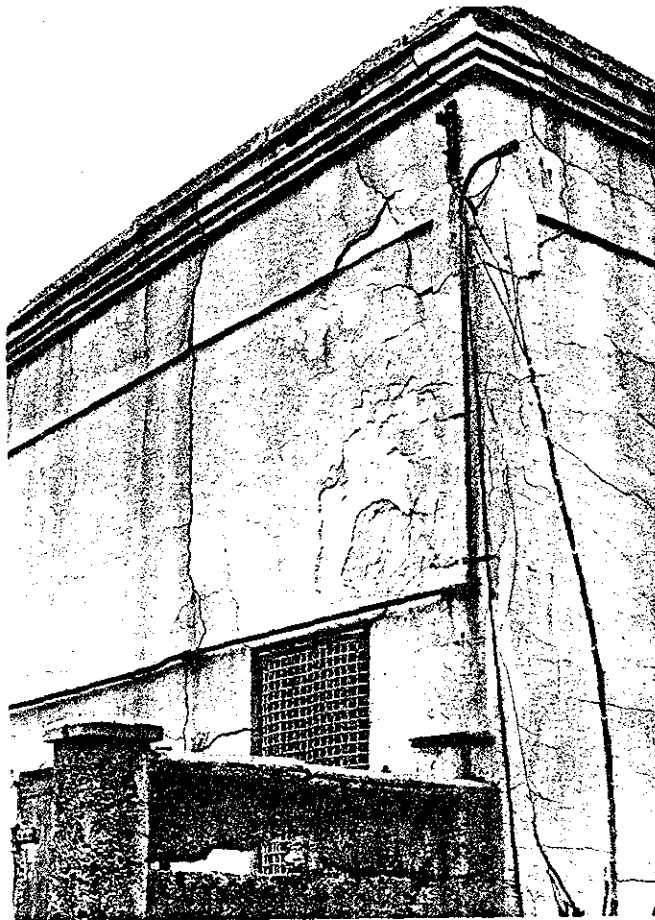
The Shelter is in generally good condition. The roof was not accessible, but both drain pipes are clogged by corroded material at the exit point, and the north leader is exposed and split. Joints of the wood frame windows are open and sash should be replaced. The brick entry constructed outside the west door has settled away from the building so that a 1 inch gap appears between the shelter and the entry. This should be removed before it collapses.

#8 GREENHOUSE

Although the steel frame shows only surface corrosion, the wood sash members are split and warped and joints are open and falling apart. Seventy percent of the glazing on the roof and walls is missing or broken.

#9 INCINERATOR

The roof and interior of the Incinerator was not accessible. Side walls show no evidence of gutters or downspouts. The concrete on all elevations is cracked and spalling, particularly on the west elevation where the steel framework is corroded and seventy percent of the surface has fallen off. The door on the south elevation is corroded and falling out of the wall and the chimney stack is corroded, scaling and causing the adjacent wall area to crack.



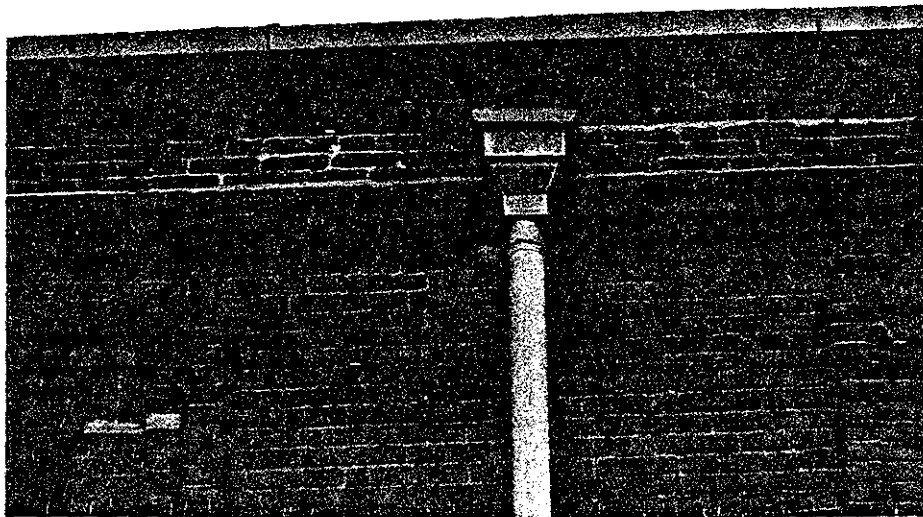
9.1 Incinerator. Concrete surface is cracking, bulging and spalling.

#10 BAKERY AND CARPENTRY BUILDING

The Bakery and Carpentry Building is badly deteriorated. Vegetation and shifting gravel block drains into the gutter outside the parapet. Downspouts are partially or entirely missing. As a result, water has coursed down the facades, eroding forty to fifty percent of the brick pointing. Rusting grill and steam pipe anchors have caused extensive stone damage and rusting lintels have created cracks in the surrounding brick. Water has penetrated to the interior through the roof and ventilators, which lack caps, and through the windows, where smaller sash members are corroded and glazing is missing.

The southern wing addition has no visible drainage system. There is no flashing at the roof edge, and steel reinforcement has corroded causing the concrete cornice to spall. Lintels are corroded and the surrounding bricks have spalled. Sixty percent of the masonry requires repointing and extensive cracks from the foundation through the walls have damaged the brick.

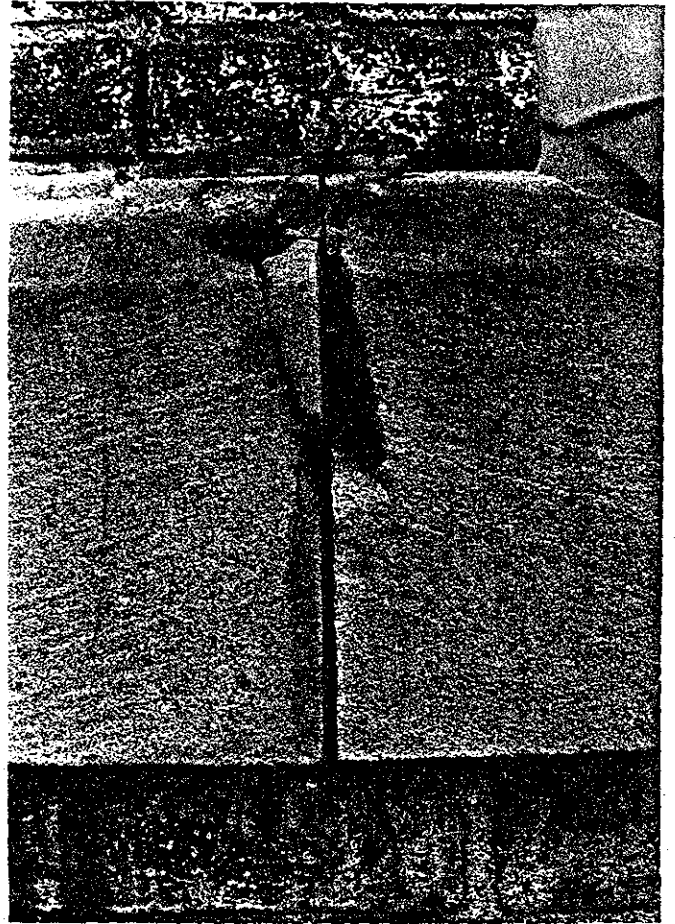
The connection from B and C to the Powerhouse also has no visible drainage system. Reinforcement has corroded and the concrete is cracked and spalling on both the south and east sides.



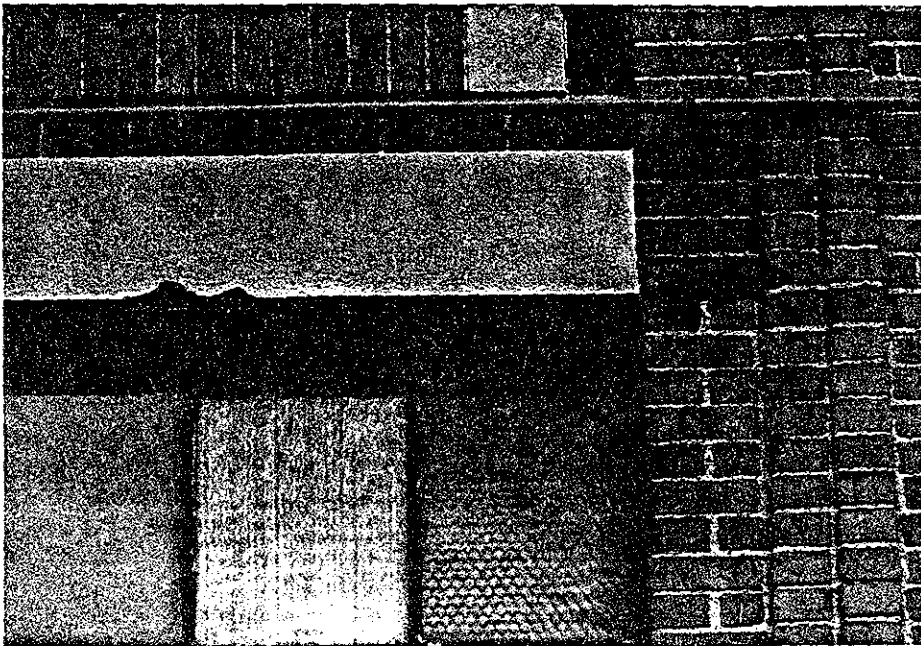
10.1 Bakery and Carpentry Building. Exposed steel angle adjacent to gutter box.



10.2 Bakery and Carpentry Building.
Typical window bay showing cracked
brickwork around lintels.



10.3 Bakery and Carpentry Building.
Damage to limestone sill caused
by corroding grill anchors.



10.4 Bakery and
Carpentry
Building.
Detail of
stone and
brick damage
on lintels.

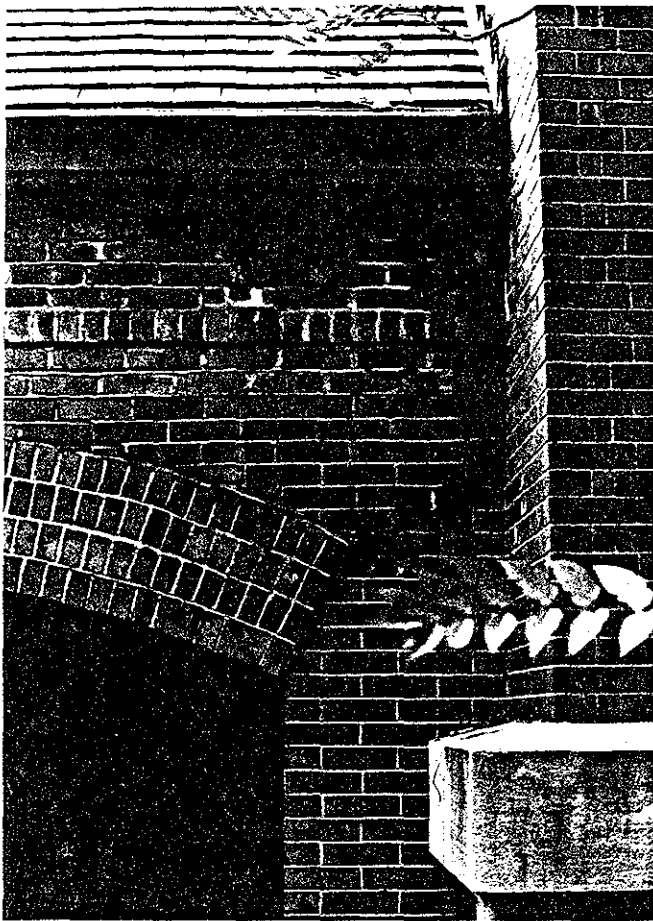
#11 SHED

The building is presently being supported only by a tree growing next to the west side. Roof members are rotted and have caved in. There are no window sash or doors, and the structure is leaning to the west at approximately a thirty degree angle. It should be demolished before it collapses.

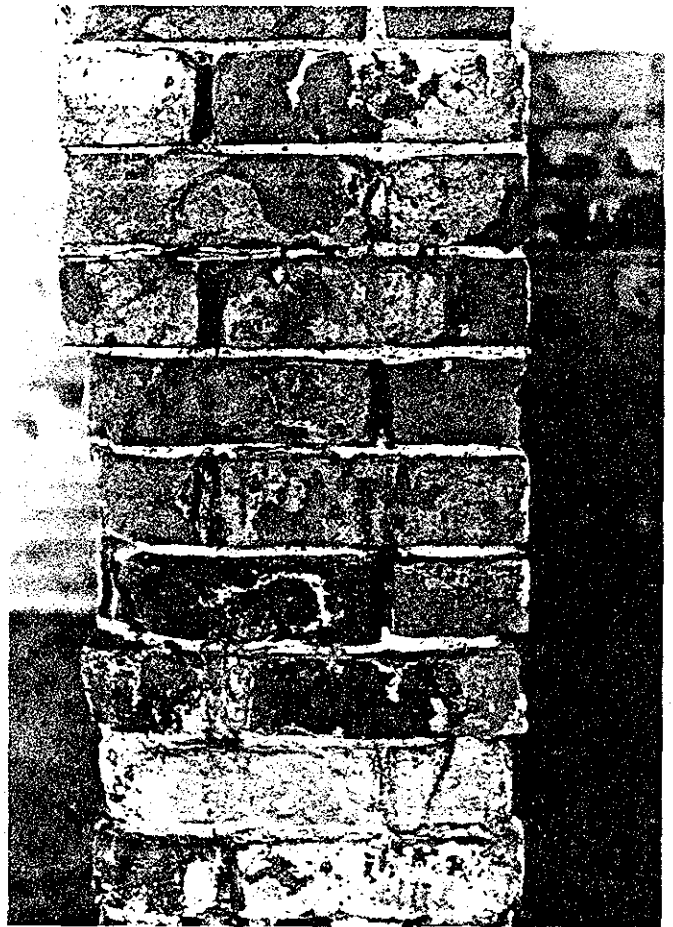
#12 PASSAGEWAY

Although the brick arcades appear to be in good condition, closer inspection reveals a number of problems. Nearly all downspouts are missing, five to ten percent of the roof tiles require replacement, and gutters are all open at the joints. Approximately seventy percent of the wood sheathing under the roof tiles is rotted. Eighteen of twenty wood sash units are split, warped and rotted, including all units on the west side.

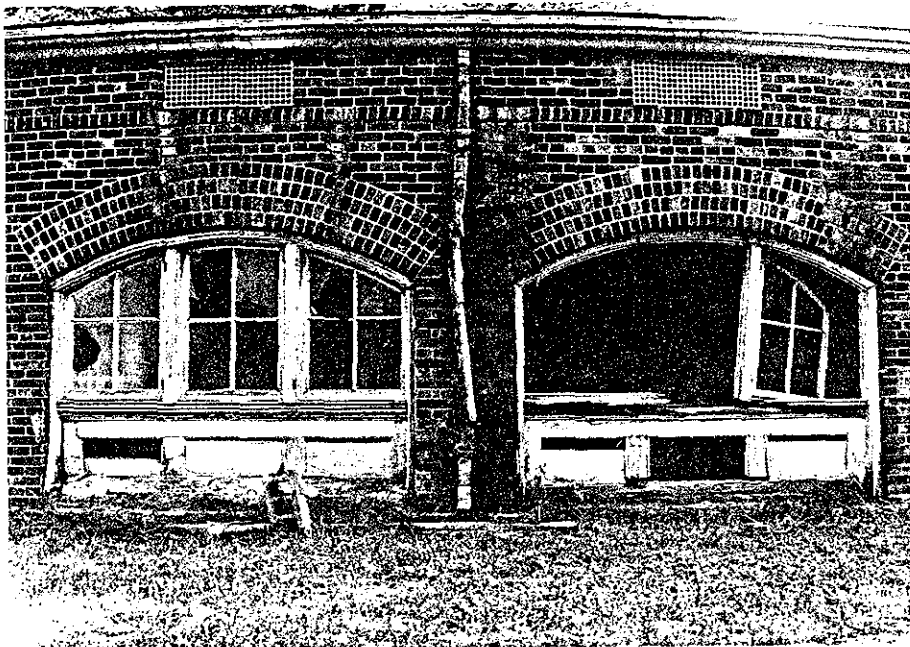
Masonry is generally sound, although joints on areas under missing downspouts or open gutter joints require repointing, outer brick surfaces have spalled over twenty percent of sections C and D, and concrete parging in the pavillion archways has spalled. Several structural problems were also noted, including loose parapet blocks on the unit joining part A with the Baggage and Dormitory Building, cracks and wall movement as great as 1/2" where part A joints this unit, and spalled brick and wall shifts of 3/4" where section B meets the Powerhouse. Cracks run across the foundation and ceiling slabs at four to six foot intervals, but according to the URS condition survey of Island 1, "frequent transverse concrete slab cracks seem to be in the nature of this construction."



12.1 Passageway. Cracked and shifting brick wall at north end of Section A. Note also the 1 inch gap between the flashing and adjacent wall.



12.2 Passageway. Condition of interior wall where section D meets Passageway #13.



12.3 Passageway. Typical wood sash units, west elevation of section D, showing loose, warped or missing panels and sash. Note also bent and corroded downspout.

#13 PASSAGEWAY

As in Passageway #12, eighty percent of the wood roof sheathing is rotted. Deterioration is particularly severe at valleys and along the Ferry Building, where the roof is flat and covered with tar. Metal sash is heavily corroded, most seriously along the sills and lower muntin joints, which frequently are rusted through. Twenty to forty percent of the brick requires repointing, not only under missing downspouts, but also where the passageway joins the Ferry Building and the pavillions at each end, the joints of which have been poorly detailed.



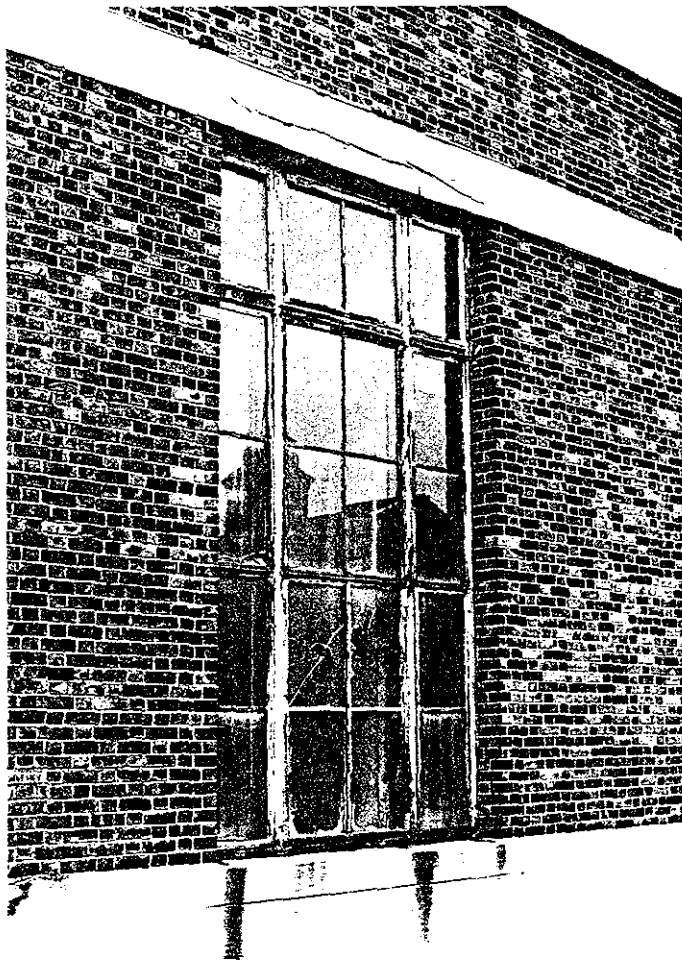
13.1 Passageway. Typical window unit, showing corroded sills and panels. Downspout to the right is missing.

#14 FERRY BUILDING

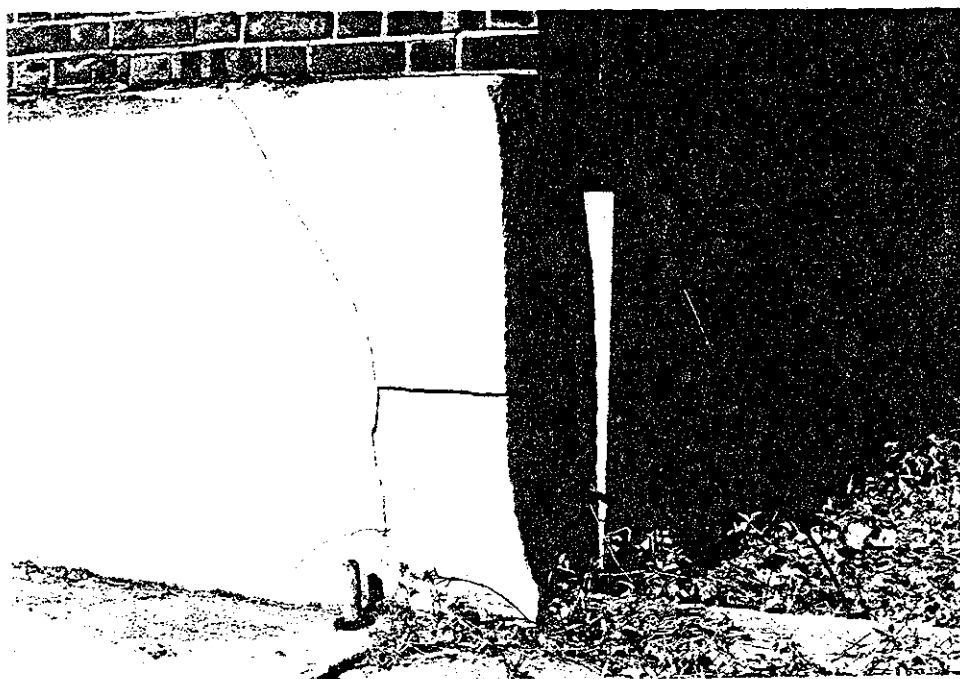
The upper portions of the central tower were not accessible for close inspection. Extensive loss of the interior finishes, however, is evidence of leakage problems. As on the other buildings on the Island, all leaders and drains are clogged, caulking above the parapet flashing is cracked and gravel above the tarred roof covering has shifted. Considerable damage has also occurred with the various masonry wall elements. The hard exterior coating has spalled from approximately fifty to eighty-five percent of the bricks on all four sides; greatest damage has occurred on the east side facing the ferry slip, indicating that salt spray and winter wave action may be a contributing factor. According to specifications for waterproofing dated February 4, 1938, "both sides of parapets, copings and all exterior surfaces of masonry from the bottom of the belt course at window heads to the coping except at the central tower" were coated with waterproofing. Salt build-up behind this coating may also have caused the damage. The terra cotta parapet copings contain numerous small spalled areas, and all terra cotta lintels blocks on the wings are cracked where the steel lintels behind have corroded.



14.1 Ferry Building. Deterioration of interior finishes in central tower.



14.2 Ferry Building. Cracked terra cotta lintel.



14.3 Ferry Building. Cracked and missing limestone foundation at northeast corner.

#15 IMMIGRATION BUILDING

Problems on the Immigration Building are similar to those on the Ferry Building, since they are of the same age and construction. Edges of the felt roofing are curled, seams in the parapet flashing are open, thirty to forty percent of the copper is missing and internal leaders are clogged. A six inch deep pool of water was found on the northeast corner of the roof, and interior finishes in all eight corners of the north and south wings have been destroyed by water penetration around the leaders. Approximately eighty percent of the brick facing has spalled, particularly along the outside of the parapet and around windows. The Immigration Building was waterproofed in 1938 on "both sides of parapets, copings and all exterior masonry surfaces from the bottom of the soldier course at the first floor window heads to the coping, and the entire wall at windows 1/4 and 1/46." As on the Ferry Building, salt build-up behind the coating may have caused the spalling. Steel sash and lintels are also corroded.

#16 PASSAGEWAY

On section 16A, roof sheathing on the northeast side of the curve is rotted, gutters are clogged and drainpipes missing. Over fifty percent of the brick requires repointing, particularly on the northeast face, and thirty to forty percent of the brick surface is spalled. On the northern pavillion, the northeast and northwest corners, as well as adjacent sections of Passageway #13, have cracked or dislodged brick and ten square feet should be rebuilt.

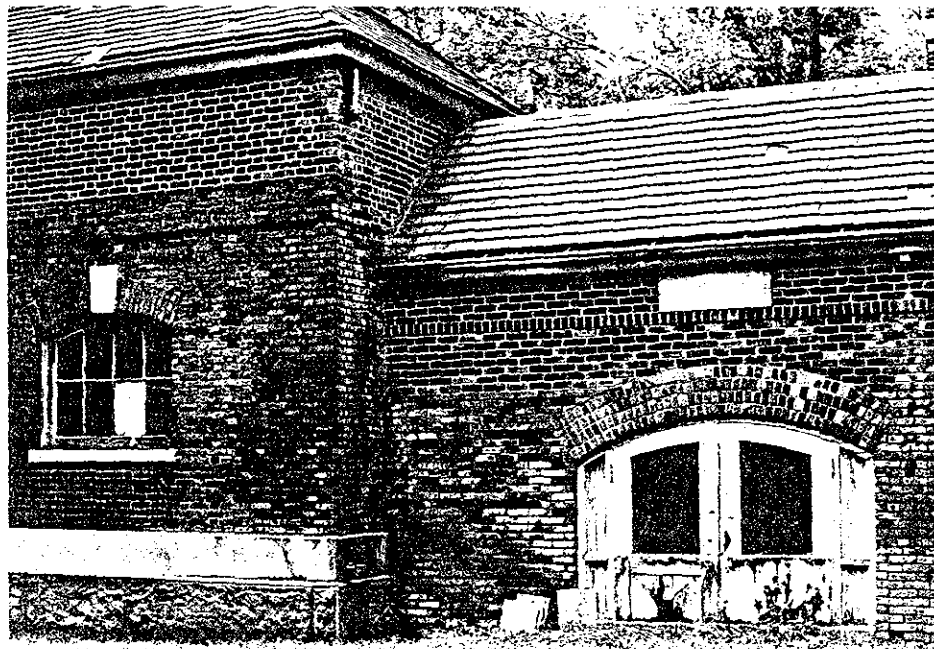
On sections 16B-D, approximately fifty percent of the ridge tiles are missing and seventy percent of the wood sheathing is rotted, especially on the west side near the Ferry Building and at the curved north end. The rippled roof tiles caused by weakened underlayment can be seen in the accompanying photos. Four-fifths of the wood sash units are sound, and three-fourths of the metal sash are sound though corroded, but eighty percent of the glass panes require replacement.

As noted above, five to fifteen percent of the brick surface is spalled and fifteen percent requires repointing on the east and northwest portions. On approximately one hundred square feet at the center of the west side, however, far more serious damage was discovered. Joints have been eroded to depths of greater than two inches, brick edges are worn and as much as one and one-half inches of the brick face has spalled. This section is located adjacent to the corner where the gardens south of the Immigration Building end and the seawall turns in to follow the passageway. The accelerated weathering is thus probably due to concentrated wave action.

A number of foundation problems are also evident. Where the passageway joins the Laundry and Recreation Buildings, expansion joints were created in the passageway. On the east side, most joints have lost their caulking and adjacent brickwork is spalled. On the west side, these joints were originally protected by lapped bronze strips screwed into the brickwork. Screws are now loose, and strips are completely missing

from the southernmost joint, where walls have shifted one inch and the joint is two inches wide at the top.

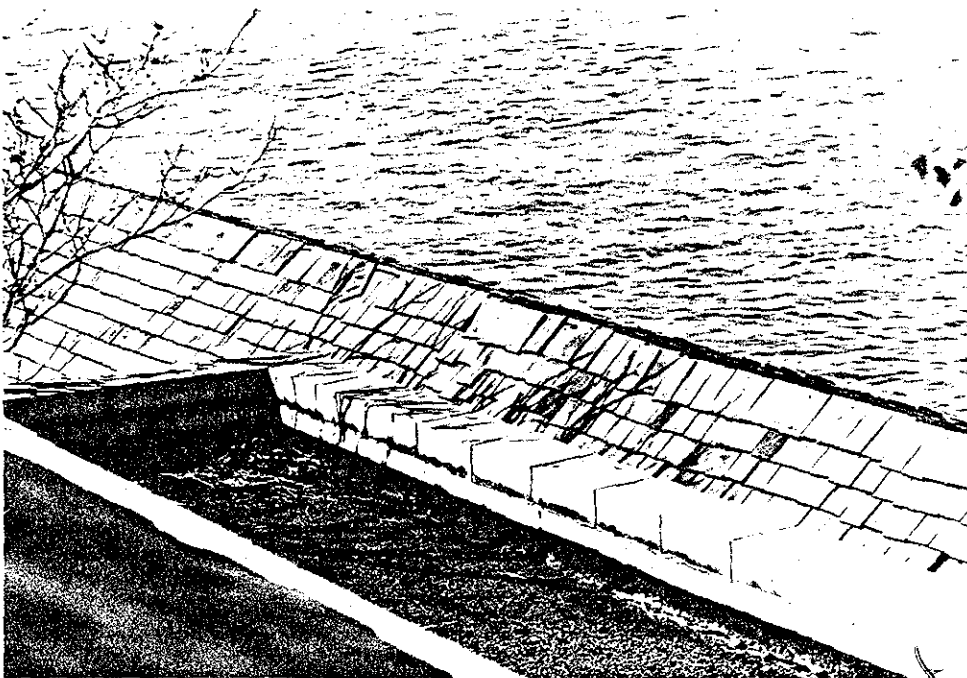
The west, center and east walls from the southwest corner of the passageway to the beginning of Passageway #27 show a large number of cracks, shifts and bulges ranging from one-half inch to one inch in width. From the direction of the cracks and bulges, it appears that the walls are sinking toward the northwest corner. At the same time, two foot high cracks appear at regular intervals along the bottom of the west wall. Both problems appear to stem from deterioration of the foundations. The south half of the passageway was built on fill directly adjacent to the granite breakwater. Open joints and general deterioration in the breakwater, as well as winter storm seas, have washed away the fill, rotted the wood cribbing and rusted the steel reinforcement, until very little support remains.



16.1 Passageway. Section A of Passageway at point where it joins Hospital #1. Note lost pointing, spalled brickwork, efflorescence and deteriorated window sash.



16.2 Passageway.
Cracked and dislodged
brickwork on interior
wall of north pavillion
of section A.



16.3 Passageway.
Fifty percent
of the ridge
tiles on
sections B-D
are missing.



16.4 Passageway.
Rippling in
roof tiles
caused by
rotted roof
sheathing.



16.5 Passageway. Seven inch
wide joint open between
south end of Passageway
\$16 and Passageway #27.



16.6 Passageway. Cracked and bulging wall at southwest corner of passageway.



16.7 Passageway. West foundation wall of section D. Fill has been washed away, cribbing is rotted and steel reinforcement is corroded.



16.8 Passageway. Deteriorated brickwork on west side of section D.



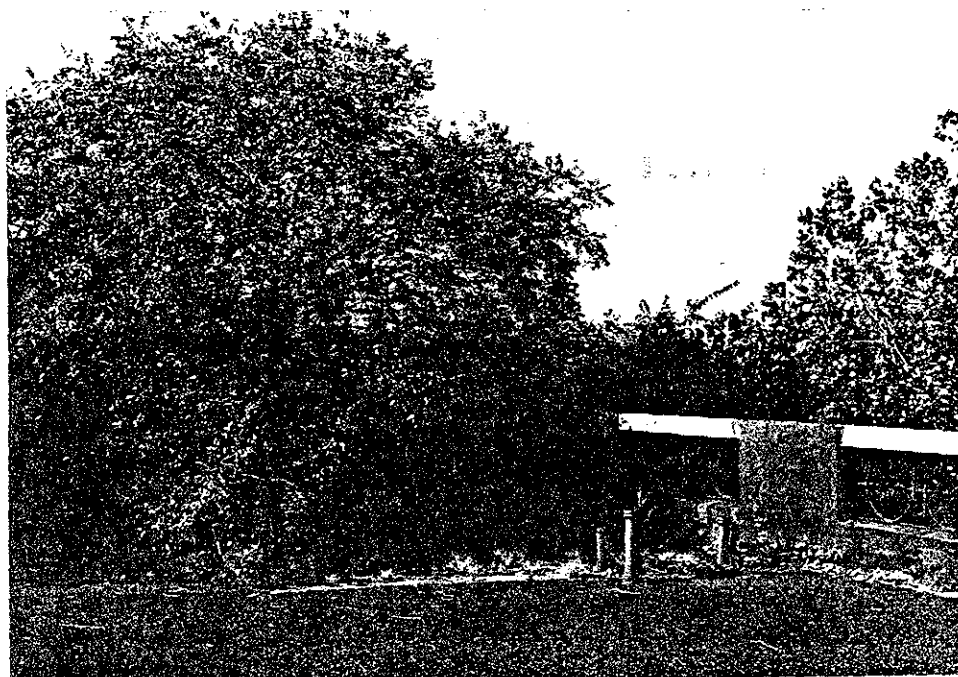
16.9 Passageway. Open joints on west side of section D.

#17 LAUNDRY

The Laundry appears to be in relatively good condition, although the underside of the roof was not accessible for inspection. Gutters, valley and dormer flashing and the chimney cap require repair or replacement (see photos 17.6 and 17.7 on Classified Structure Form). Wood dormer framing has been exposed to the weather and should be replaced, as should the wood cornice, in which many of the brackets and sheathing are split. Sash is generally in good condition except on the north elevation, where windows should be boarded up. The only serious damage to interior finishes has occurred at the west end of the addition, where the walls have pulled away from the Passageway, creating a two-and-a-half inch wide gap allowing rainwater to flow in.

#18 PSYCHIATRIC WARD

Material defects in the Psychiatric Ward begin at the roof, where gravel has shifted to the south end, clogging drains and promoting extensive vegetative growth. The inside of the parapet is covered with cloth dipped in tar, which is now cracked and allowing water to penetrate behind and spall the brick. Both leaders are missing on the south elevation. Between forty and eighty percent of the brick requires repointing, the terra cotta cornice has become dislodged on the southwest corner, and the limestone quoining in the path of the downspouts on both sides of the south elevation is severely cracked. The iron grillwork on the windows and balustrade is corroded, and window surrounds have cracked and spalled as a result. Interior finishes and wood window sash are seriously deteriorated on the south end of the building under the clogged drainage system.



18.1 Psychiatric Ward. Shrubbery growing over drains on the south end of the roof.



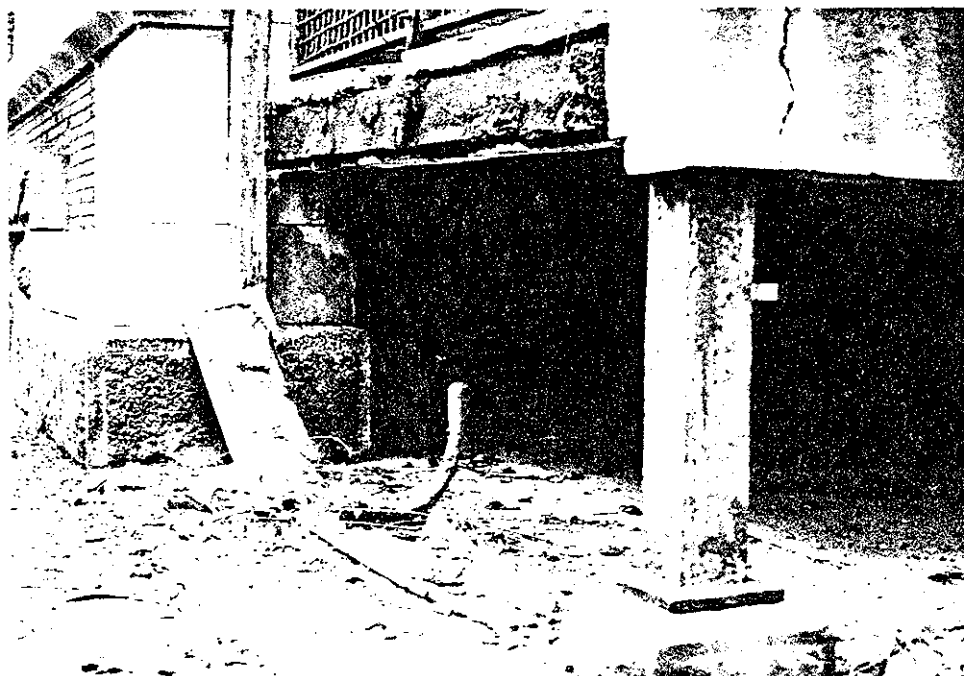
18.2 Psychiatric Ward.
South elevation showing
open joints, efflores-
cence and spalled bricks.



18.3 Psychiatric Ward.
Loose terra
cotta cor-
nice block
on southwest
corner.

The condition of both the interior and exterior finishes on Hospital #1 indicates serious water problems. Only five percent of the roofing tiles require replacement, although seventy-five percent of the tiling around the skylights is broken or detached. Valley flashing, gutters and dormer covers are all torn or deteriorated, however, causing the clay sheathing to crack and spall at the ridge and valley lines and around the dormers. On the lower floors, plaster and clay furring have spalled around all internal leaders, which have clogged, corroded and cracked, allowing water to penetrate inside. Seventy to eighty percent of the external brick and stonework requires repointing. Although most wood sash is in relatively good condition, over forty panes of glass require replacement, and all skylights have loose or missing flashing and sash. All exterior doors are split and warped.

Both porches, like that on the Kitchen and Laundry Building, are in poor condition. The steel has corroded, spalling the concrete slab and parging. Steps have fallen apart and columns are heavily corroded.



19.1 Hospital #1. Spalled concrete and corroded floor beams on south porch.



19.2 Hospital #1. Loose and missing tiles on skylights.



19.3 Hospital #1. Efflorescence and open joints above water table.

#20 ADMINISTRATION BUILDING

Problems on the Administration Building are essentially the same as those on Hospital #1. Water infiltration through valleys, dormers, ridges and gutters has had more serious effects in this case, however, since the clay roofing tile was laid over wood sheathing. Approximately seventy percent of this sheathing is rotted, especially around the dormers and eaves and below the west chimney. Brick requires about fifty percent repointing, and large areas of the south facade have spalled under the effects of efflorescence. Water penetration has caused rot in seven of the third floor windows and in flooring on the north side, and several interior partitions are damaged where the clay furring has spalled.



20.1 Administration Building. Spalled and efflorescing brick on north facade.

#21 HOSPITAL #2

Roof and drainage problems are parallel to those on Hospital #1. Roof tile and underlayment are damaged wherever ridge tiles or flashing is missing, and valley flashing and gutters require replacement. Serious damage to the terra cotta cornice is evident. Approximately 300 linear feet of cornice is cracked, large areas of dentils have spalled off completely, and other blocks have dislodged and may fall off at any moment. Brick pointing mortar is sound, but stone and terra cotta joints require repointing and five to ten percent of the brick units have spalled. Approximately sixty windows and six doors are split, warped and rotted, and iron lintels are exposed on the third floor. Steel on all three porches has corroded and plaster, brick and terra cotta are spalling.



21.1 Hospital #2. Cracked
terra cotta cornice
blocks.



21.2 Hospital #2.
Spalled dentils
in terra cotta
cornice.



21.3 Hospital #2. Split and warped cellar doors.



21.4 Hospital #2. Corroded ironwork and lintels on south porches.



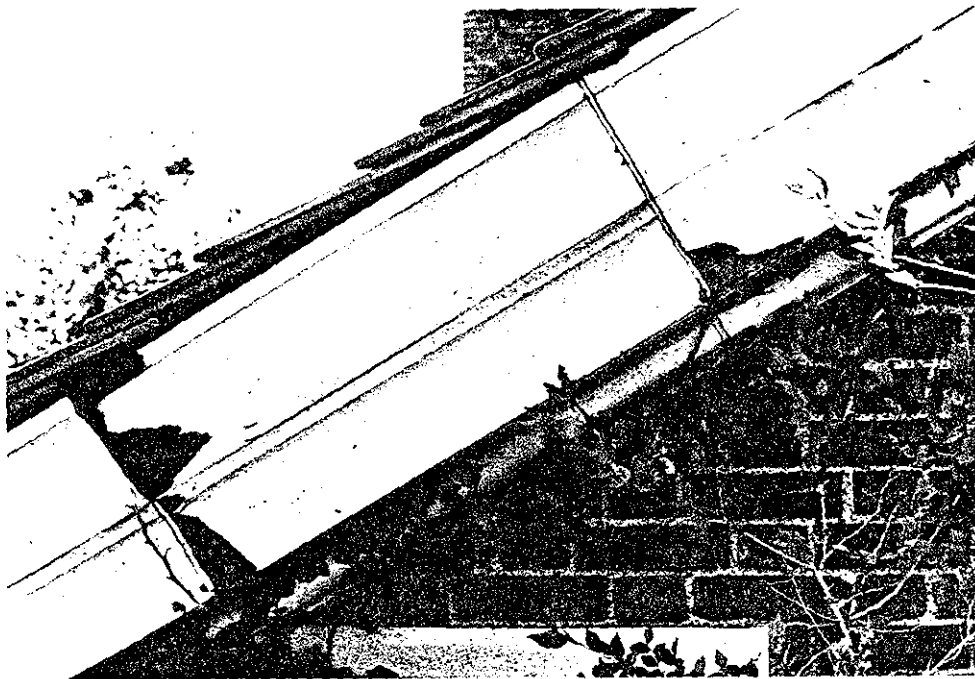
21.5 Hospital #2. Spalling brick, terra cotta and concrete on rear porch.



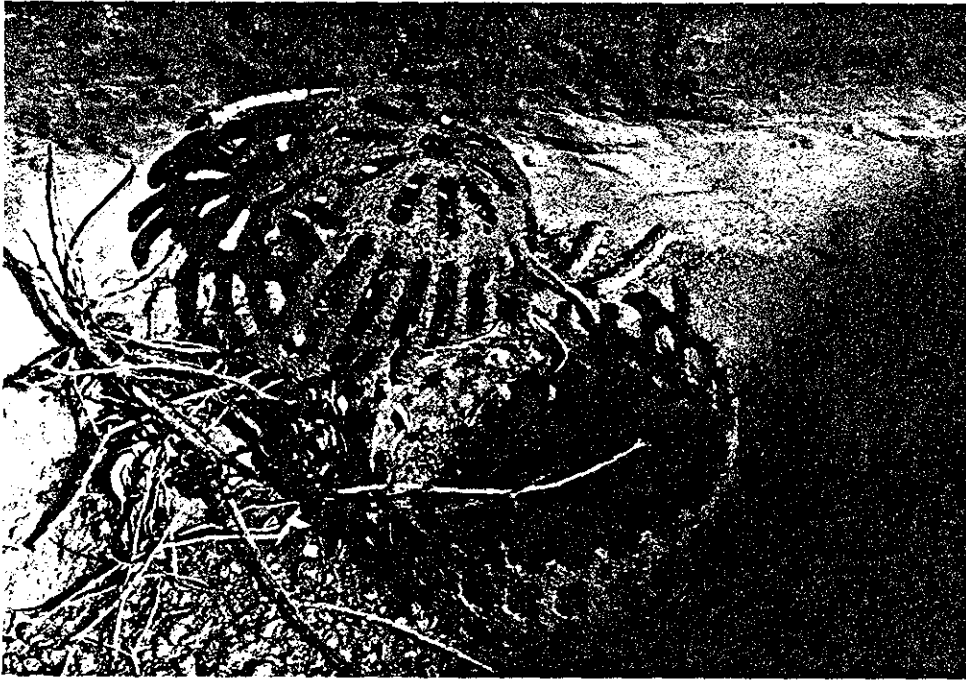
21.6 Hospital #2. Exposed and corroding second floor beams on rear porch.

#22 RECREATION HALL

Material problems are again related to a faulty water drainage system. Exposed gutters and downspouts on the gable-roofed section are worn and perforated, and cast iron grating, drains and internal leaders in the wings are clogged and corroded. Shrubbery grows over the drains of both the north and west wing roofs. Extensive loss of ceiling and wall plaster around the center chimney indicates that the flashing has failed, and surrounding underlayment and structural members have probably deteriorated. Five percent of the terra cotta eave and parapet trim has spalled and the entire east elevation is covered with English ivy, which is destroying the pointing mortar. Metal sash is generally in good condition, although it needs cleaning, painting and new glazing.



22.1 Recreation Hall. Spalled terra cotta eave blocks.



22.2 Recreation Hall.
Corroded drain
on north roof.



22.3 Recreation Hall.
Damage to interior
finishes around
central chimney.

#23 SHELTER

Although the flat roof was not accessible, both leaders are clogged or cracked and the terra cotta enclosed gutters are clogged with vegetation. Fifty percent of the terra cotta capitals are spalling and both north and south facades are covered with vines. Both doors lack hardware, the bottom three inches of the north doors are rotten, and metal sash is corroded.

#24 POWERHOUSE AND STORAGE

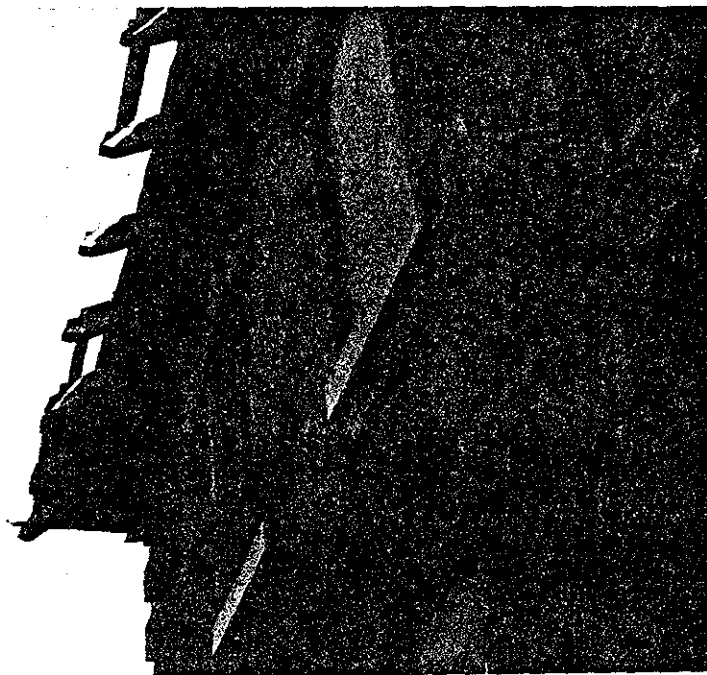
Most of the problems encountered thus far are found in the Powerhouse/Storage Building, many to a greater degree. The underside of the roof was not accessible, but downspouts and gutters are missing, clogged or perforated. The wood eaves are split and rotted where water has entered the exposed end grain. Loss of interior plaster and rotted floor boards around the east chimney indicates failure of the flashing. Water run-off around the southwest corner has exposed the below-grade brick and caused foundation settlement with accompanying cracks in the granite and brick walls. Fire escapes on the south and east are corroded and surrounding stucco is beginning to spall. More serious than these typical problems, however, is the complete lack of drainage on Passageway #27 attached to the northeast corner of the building, as evidenced by six to eight inches of standing water on the passageway roof (see Photo 27.1). Water is flowing into the building just above the second floor level at all points adjacent to the passageway, endangering not only the interior finishes, but the masonry wall and structural steel. Wood sash is also more severely deteriorated than in most buildings on the Island, because its location on the southwest corner of the island has resulted in greater exposure to rain, salt spray and wind. All sash on the first floor are split, warped and rotted.

#25 ANIMAL HOUSE

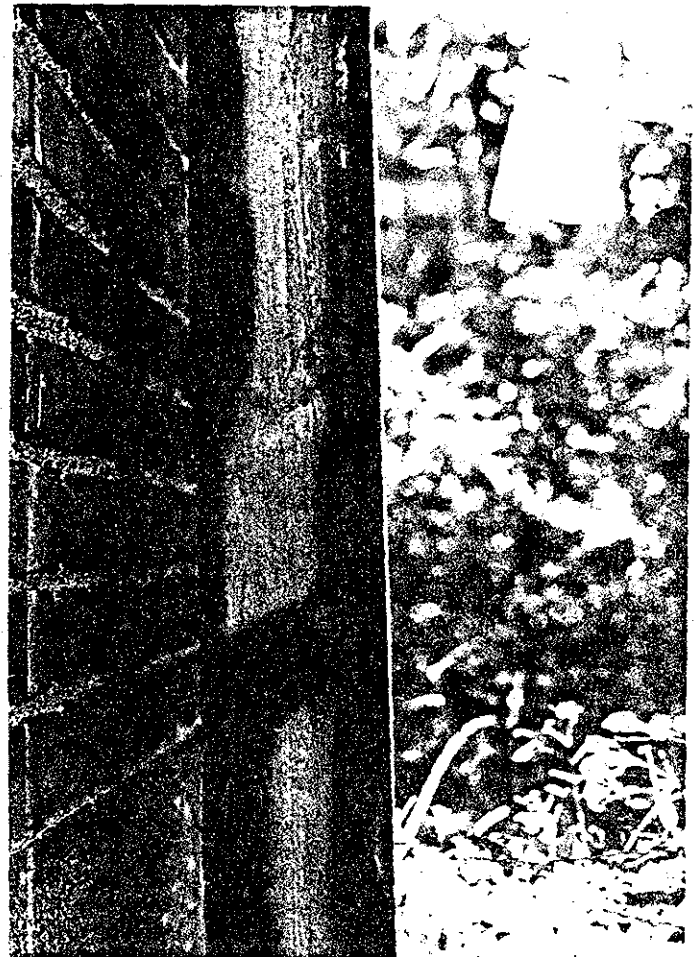
Gutters and downspouts require replacement and the ventilator cap requires repair. One sash section should be replaced and the bottom two inches of the door and frame are rotted.

#26 LABORATORY

The Laboratory has more serious roof problems than observed on most other buildings of the same construction. Roof tiles were laid on wood sheathing, seventy to eighty percent of which is now rotted, particularly around the eaves, dormers and chimneys; it is assumed that the valley flashing in these areas is defective. The entire west eave and gutter has fallen off, the masonry beneath is moist to the touch, and the foundation has settled where the soil has been washed away. The limestone surround on the north elevation is in need of repointing, as are the brick courses under the eaves.



26.1 Laboratory. West eave has fallen off.



26.2 Laboratory. Cracked cast iron ground drain. This condition is typical for all similar drains on the island.

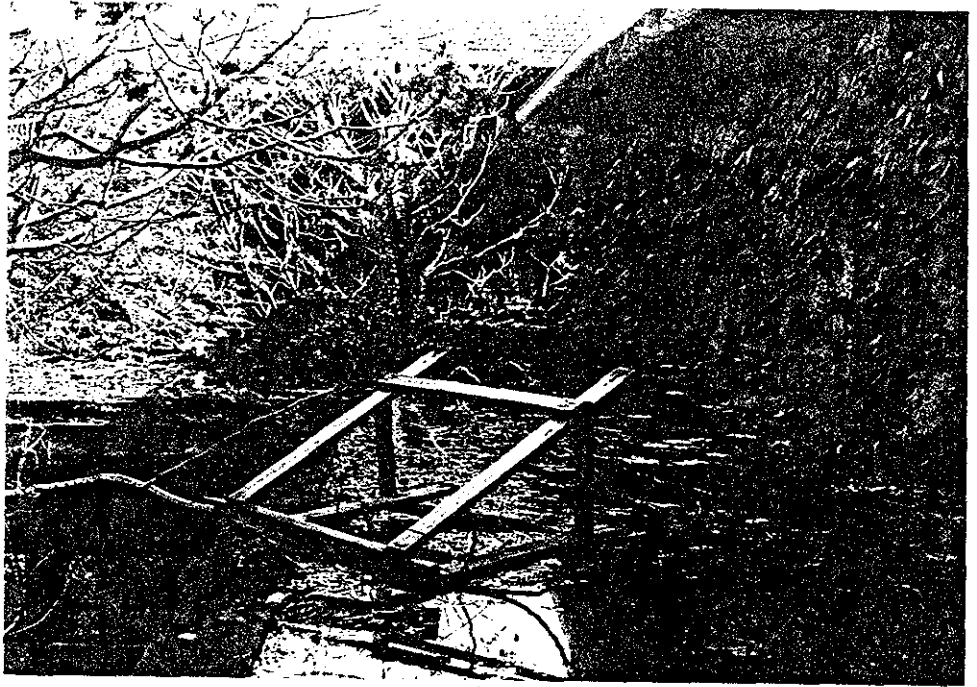
#27 PASSAGEWAY

Section A of Passageway #27 is in very poor condition. Drainage is blocked and rainwater has either formed standing pools or cascaded down the walls. Metal sash and lintels are heavily corroded and have caused approximately 170 square feet of the concrete to spall.

Roofing and drainage problems for sections B and D are discussed under their respective ward buildings. The passageways are generally in good condition, and although sash is buckled, only about thirty-five square feet of concrete around the windows requires repair. As in section A, wood door units are split, warped and rotted.

The roof over section C is bubbled and cracked, and both first and second floor ceilings show evidence of extensive water infiltration. All lintels are spalling, many on the inner faces of the wall. Sash is badly corroded, and seventy percent of the glass requires replacement.

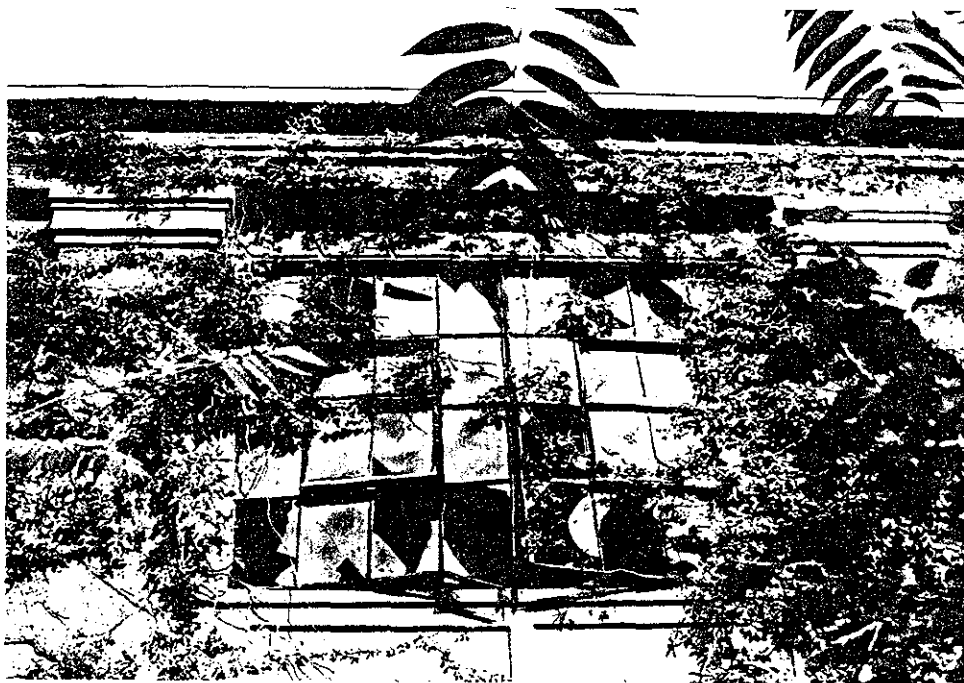
The underside of the roof over section D was not accessible, but gutters are filled with a variety of vegetative forms and bracketed eaves are rotten. The entire north side of the passage is choked with vegetation, fifty percent of the brick on that side has lost the outer surface, and eleven to forty percent of the joints need repointing. On the curved sections, hairline cracks run through the sill panels of the window bays, and on the straight portions the brick foundation wall has bulged in several locations. While the former do not appear to pose an immediate problem, the latter do. Not only is the brick on the ends and middle of each bulge cracked and spalled, but the stucco lip above the brick ledge has cracked and loosened, allowing water to seep in behind the brickwork, where it may freeze and cause further damage.



27.1 Passageway. Standing water on roof adjacent to Powerhouse and Storage Building (#24).



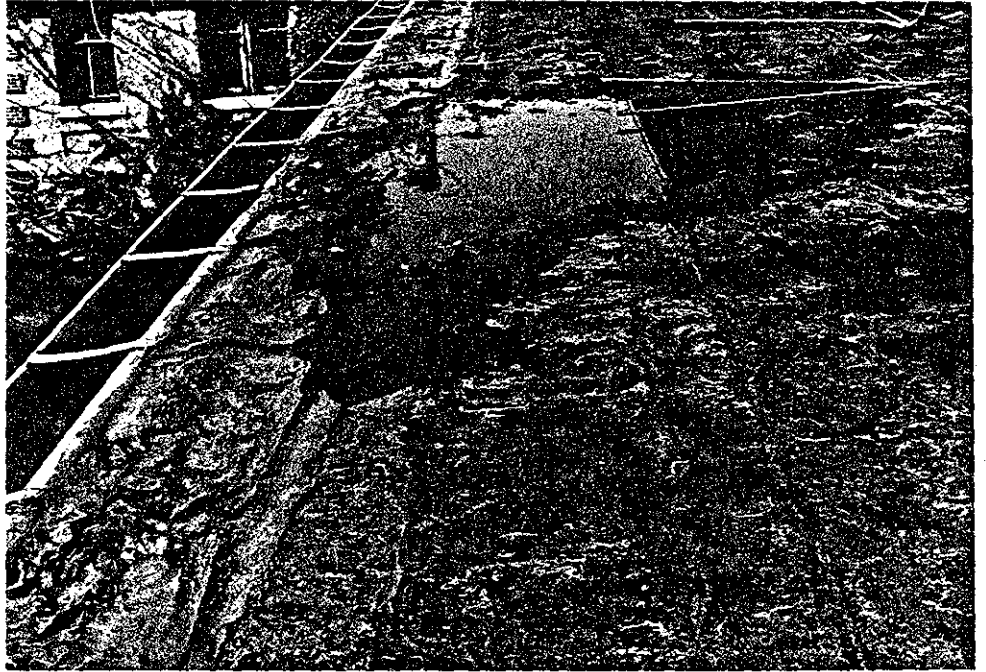
27.2 Passageway. Spalled concrete and corroding lintel on section 27A.



27.3 Passageway. Typical condition of metal sash.



27.4 Passageway. Detail of typical sash showing corroded muntins and frames.



27.5 Passageway. Cracked and bubbled roof over Section 27C.

#28 CONTAGIOUS DISEASE WARDS 11/12

Wards 11/12 are in relatively good condition. Although the underside of the roof was not accessible and ridge tiles, valley flashing, wood brackets, gutters and downspouts require replacement or repair, interior finishes are in excellent condition. The exterior is completely overgrown, but accessible stucco appears to be sound. Metal sash is scaled and corroded and the fire escape is pulling away from the wall.

#29 CONTAGIOUS DISEASE WARDS 13/14

Wards 13/14 are in similar condition to Wards 11/12. The metal sash is corroded and the drainage system requires replacement, but the roofing appears sound.

#30 CONTAGIOUS DISEASE WARDS 15/16

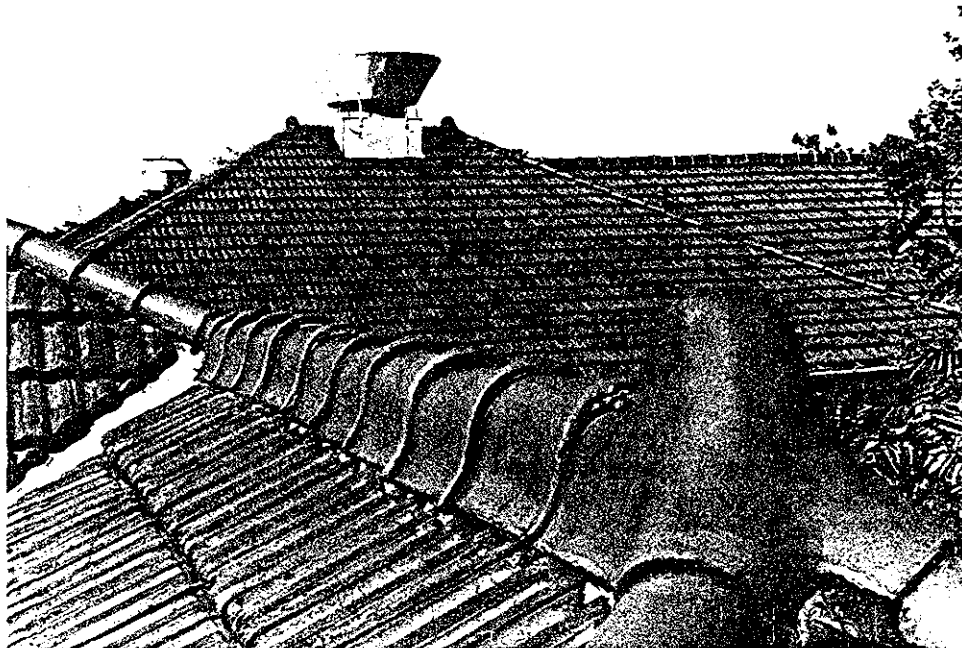
Conditions on Wards 15/16 are the same as those on Wards 11/12, including the existence of thick vine growth. Metal sash is corroded and wood sash is rotted, partly as a result of the high moisture levels included by the vegetation.

#31 CONTAGIOUS DISEASE WARDS 17/18

The roof and drainage system on Ward 17/18 is similar to the buildings previously discussed. Sills and rails of the wood sash are badly split on the south and east sides, and vegetation covers those on the west.



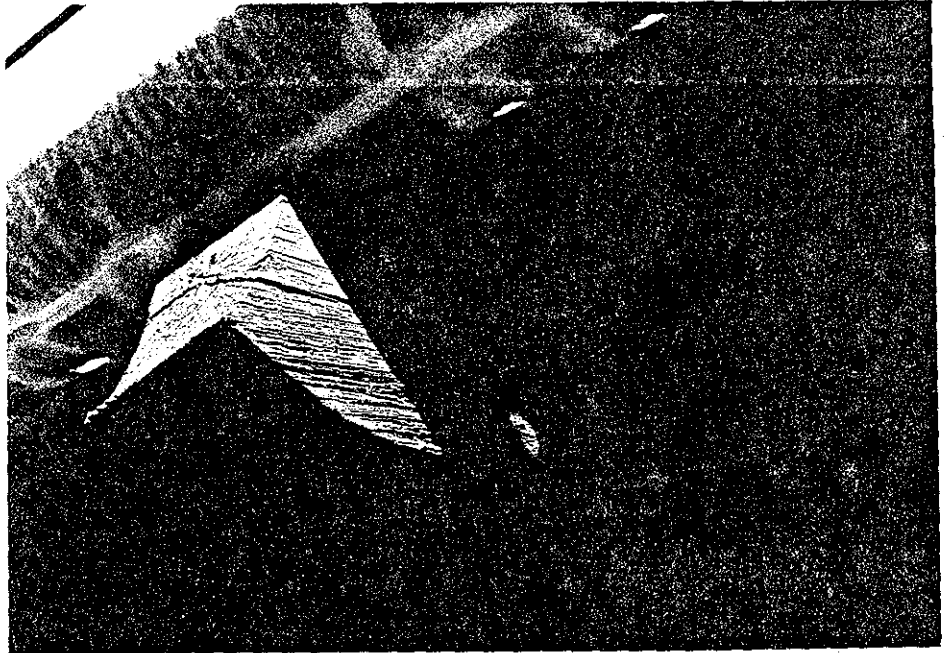
31.1 Wards 17/18.
Valley flashing
typical of all
buildings on
Island 3,
showing worn
spots where
water drains
off roof tiles.



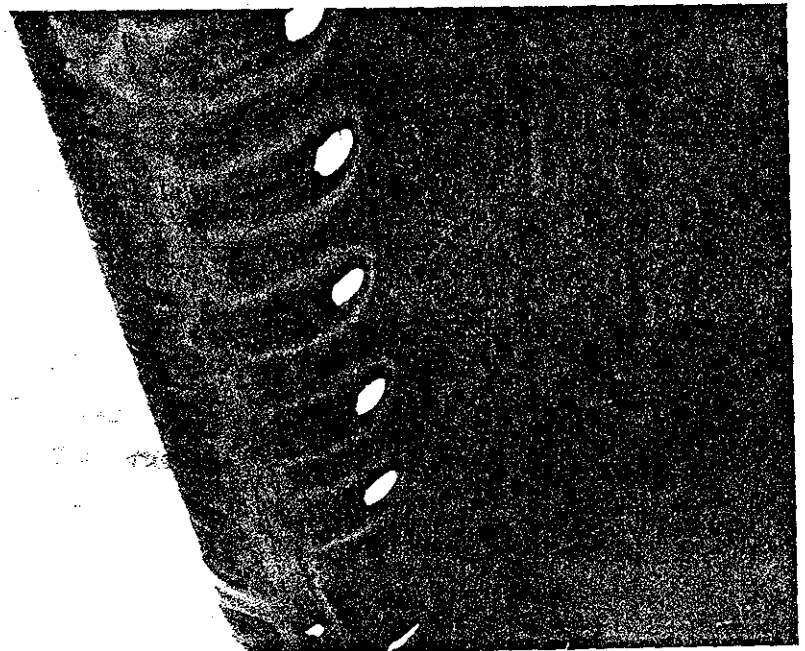
31.2 Wards 17/18.
Ridge tiles.

#32 NURSES QUARTERS

Roof underlayment and dormer framing are made of wood, and leakage through ridge tiles, valley flashing and gutters have caused approximately sixty percent of these wood members to rot. Interior finishes are in poor condition in the northwest corner and the center of the south side. The north elevation is completely obscured by vines, and fifty to seventy-five percent of the east and west elevations are as well causing the adjacent window sash to rot. Joints in the granite foundation and limestone door surround require repointing.



32.1 Nurses Quarters. End of wood bracket supporting eaves, showing splitting and checking found on all buildings of this construction.



32.2 Nurses Quarters. Perforations in copper gutter caused by rainwater draining off tiles. Found on all buildings of similar construction.

#33 KITCHEN

The entire west slope of the roof is covered by plant growth. The ventilator caps and chimney copings, as well as gutters and downspouts, require repair or replacement. Foundation brick is crocked and bulging in the northwest corner where structural members in the adjacent passageway have corroded. The top brick course on the southwest corner has spalled under the missing downspout, but should not require repair at this time. Pipes and flashing left behind from a porch on the east side of the south elevation should be removed, however, to prevent the corroding metal from damaging the masonry walls.



33.1 Kitchen. Roof covered with vegetation.

#34 CONTAGIOUS DISEASE WARDS 19/20

Conditions are the same as in 11/12, although water damage on interior finishes on the southwest corner indicate more serious leakage problems. This parallels foundation problems at the exterior of this corner, where 3/8 inch wide cracks have opened up as the surrounding fill was washed away. The brick foundation is exposed and settlement has occurred.

#35 CONTAGIOUS DISEASE WARDS 21/22

Material conditions are similar to those found elsewhere. Vines cover most of the east, west and north elevations and the resulting high moisture levels have caused frames in thirty-two of the thirty-eight windows to rot. The southwest corner of the foundation wall is bulging and has caused cracks reaching through the brick to the window sill above.

#36 CONTAGIOUS DISEASE WARDS 23/24

Wards 23/24 are generally in good condition despite typical problems with eaves, gutters, valley flashing and drainpipes. Portions of the brick foundation have been exposed by run-off but little settlement has yet occurred. The newer stucco adjacent to the south stairway is cracked but new coverings seem sound.

#37 CONTAGIOUS DISEASE WARDS 25/26

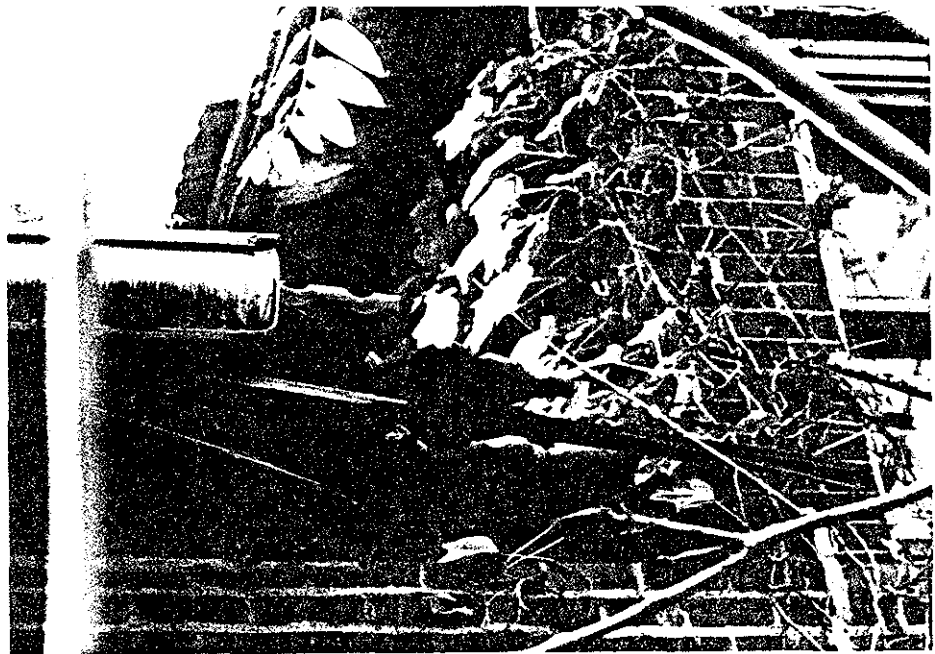
Ridge tiles are missing on the northwest corner and middle of the west side, and gutters, eaves, valley flashing and downspouts require replacement. The granite and brick foundation is cracked on the north end of the west side and near the south end of the east side. Stucco around the lintels of the newer windows and door openings on the north side is cracked, evidence that steel lintels beneath are corroding.

Interior finishes are in very poor condition, particularly on the north and south elevations where the central section meets the flanking wing. On the second floor, wood roof rafters, sheathing and bridging are exposed, wet and rotted. These problems appear to result from two conditions. The first most obvious source is loss of eave flashing and gutters around the dormers. The second, indicated by the concentrations of water and the fact that ridge nails have pulled out $\frac{1}{2}$ inch, is that water is entering behind the ridge caps (see Figure 39.1) and flowing under the ridge tiles. Deteriorated valley flashing also contributes to the problem. Skylight flashing has been torn off, and the adjacent areas show heavy water damage. While most of the roof was not accessible for inspection, the condition of visible areas, as well as those noted on Buildings #21 and #32, which also have wood sheathing, imply that the entire roof underlayment (wood framing) should be replaced.

In addition to these problems, gutters are all full of debris or crumpled by fallen trees and eave soffits are rotted. Brick quoins on the southwest corner of the central section are spalling as a result of the drainage problems, and stucco has spalled on adjacent doors and windows, where iron balustrades and lintels have corroded.



38.1 Wards 27/28. Dormers on north side. Note missing roof tiles, damage to eaves to left of dormer and vegetation growing in gutters.



38.2 Wards 27/28. Detail of damage to north dormer.

#39 CONTAGIOUS DISEASE WARDS 29/30

Conditions on Wards 29/30 are nearly identical to those on Wards 27/28, with water damage concentrated at the corners of the recessed areas on the north and south, though problems do not appear to be as severe. Window sash on the east and west ends require replacement and door panels are loose and split or missing.



39.1 Wards 29/30.
Missing tiles
or open joints
at ridge cap
allow water to
flow in along
ridge battens.



39.2 Wards 29/30.
Damaged eaves
in north
dormer.

#40 CONTAGIOUS DISEASE WARDS 31/32

Roof and drainage problems are the same as those outlined for Wards 27/28. Walls are covered with vines, window springers, keystones and eave lines require repointing, and stucco is cracked around corroded porch railings and window lintels on the south side. All window and door units require replacement.

On the greenhouse, all wood trim is split, joints are open and the entire south gable end is missing. Framing is rotted and the concrete parging and clay blocks have spalled on the south and east sides.

#41 STAFF HEADQUARTERS

Although the tile roof is laid on wood sheathing, it appears to be in good condition. All dormer sash is missing and some dormer framing is split; ridge tiles, chimney flashing, gutters, eaves and downspouts require replacement. The roof over the east porch, now a low-pitched asphalt-covered hip, has a worn covering and gutters so shallow that they drain poorly.

The iron window railings are corroded and stucco is cracking where the railings tie into the wall. The shifting and general deterioration of the passageway is damaging the limestone surround on the east doorway and the passageway should be demolished. Thirteen windows on the first floor north and west elevations require replacement, as do the French doors in the northeast corner.



41.1 Staff Headquarters. Split and checked wood dormer sheathing. Caused by exposure through open windows, this condition is similar to that found in Buildings #26 and #32.

IV. Structural Examination

The following report was prepared by the office of Irwin Cantor, P.C., as consultant to Building Conservation Technology/The Ehrenkrantz Group in response to Item I of the contract scope of work. The report has been included in its entirety and includes the results of a structural examination of the Kitchen and Laundry Building, the Powerhouse and the Hospital Buildings. The purpose of the examination was to determine whether more intensive structural investigation of these buildings is required and to make recommendations for any such further study.

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I INTRODUCTION

IA. Purpose of Report

Continuing the efforts of the National Park Service to Establish a comprehensive program for the rehabilitation of Ellis Island as a National Park, three additional sets of buildings were selected for visual structural examination. The buildings selected are the Restuarant and Laundry Buildings, the Powerhouse on Island #1 and the Hospital Buildings on Island #2.

The purpose of the examination is to:

1. Determine the present structural condition of each building.
2. Determine whether more intensive studies are required, and if so;
3. make recommendations for future studies.

The examination should be as brief as possible and no dismantling of fabric or testing were required. To this end, The Office of Irwin G. Cantor, Consulting Engineers, was retained as a Subcontractor by the Ehrenkrantz Group, P.C. and Building Conservation Technology, Inc., under its Contract #CX-2000-8-0050 with the National Park Service to carry out this visual examination.

IB. Method of Examination

This report is the result of visual examinations carried out on the Powerhouse, Restaurant and Laundry Building and the Hospital Buildings during the month of October 1978.

No tests or physical measurements were carried out on any of the structural elements, and none of the building fabric was removed in order to observe any of the recorded conditions.

Walls and areas adjoining foundations were inspected for cracks deterioration or possible settlement and the presence or absence of same were used as indicators to arrive at conclusions of possible foundation conditions. The other structural elements were inspected for damage, possible water intrusion, corrosion and ultimate failure. Since most of the floor framing members were completely encased actual conditions could not be determined.

-II SUMMARY & RECOMMENDATIONS

IIA. Summary:

This report is the result of a comprehensive preliminary visual examination of the Powerhouse Building, Restaurant and Laundry Building on Island #1 and the Hospital Buildings south of the Ferry Slip on Island #2. No physical measurements or testing of any structural elements was undertaken during this phase of the work.

The examination involved the observation and recording of areas where unusual deterioration has occurred. Photographs were taken in order to document typical and extreme conditions presently existing.

The general level of deterioration is caused by a combination of neglect of essentially abandoned and unheated buildings, together with weather and water damage from broken and leaking drains. The exposure of the structures to a hostile sea-air environment compounds these problems. However, despite this damage it is concluded that the visible areas of the main structural elements of each of the buildings are generally in good condition.

Those localized areas of each building which have suffered considerable deterioration will require additional comprehensive investigation. Detailed recommendations for each building are included in the body of this report.

IIB Recommendations for Future Investigations:

Prior to undertaking the actual physical investigations, representative areas should be chosen which are representative of the varying degrees of deterioration which are apparent in the buildings. In order to carry out the investigations, cutting into the fabric of the building as well as non-destructive ultrasonic testing will be required. Such work should be undertaken only in such locations and manner as to minimize any impact upon the historical appearance of the structures.

The following summarizes the recommendations for each of the buildings. Detailed procedures should be submitted for approval by the National Park Service from the Consultants chosen for this phase of the work:

a. Powerhouse

1. Excavate and examine the foundations and footings in the northwest corner of the buildings, and the chimney stack footings.
2. Carefully cut and chip the masonry at the northwest corner of the building to determine the causes for the failures. Check the stability of the walls.
3. Carry out a complete structural analysis of the stability of the chimney stack including examination and analysis of the mortar.

4. Ultrasonically test, record and analyze representative roof purlins, beams and truss connections as listed in Section IIIB.6.
5. Take samples or "coupons" of structural and reinforcing steel to determine strength and chemical characteristics.

b. Restaurant and Laundry Building

1. Excavate and examine the foundations and footings in the northwest corner of the Laundry Building.
2. Determine the extent and severity of the cracks on the external walls.
3. Cut into floor slabs, examine the conditions, and if necessary test the structural framing at selected areas.
4. Carry out a complete structural investigation of the porch framing system.
5. Determine and locate all observable changes to the original structural framing plans.
6. Locate, record and ultrasonically test selected representative areas experiencing corrosion of the roof framing.

7. Take samples or "coupons" of structural and reinforcing steel to determine strength and chemical characteristics.
8. Demolition of Addition #1 and #2 should be seriously considered; particularly Addition #2 which appears to be very unstable.

c. Hospital Buildings

1. At the corners and other selected representative areas, determine the extent of damage to the walls and floor framing caused by the deteriorated condition of the storm water drainage piping.
2. Cut into all three floor slabs, examine the condition and if necessary test the structural framing at selected areas.
3. Carry out complete investigations on each porch including a stability check.
4. Determine, locate and ultrasonically test representative areas of the roof framing. Specific areas are listed in Section IIIC.5. Extensive testing will be required on purlins and some main members.
5. Take samples or "coupons" of structural and reinforcing steel to determine strength and chemical characteristics.

6. Determine, locate and test damaged areas of stairs.

III. RESULTS OF EXAMINATION

IIIA. General

The results of this visual examination indicate that a comprehensive investigation will be required to determine the complete structural condition of these buildings. While many of the major structural elements were visually inspected, determination of the condition of the floor framing systems was not possible because almost all the beams were completely encased and could not be visually inspected.

The observations recorded in this report emphasize the immediate need to control water intrusion into these buildings to arrest their deterioration.

IIIB. Powerhouse

IIIB.1 Brief Description:

The structural framework of the Powerhouse is comprised of load bearing masonry walls supporting structural steel roof truss and first tier (2nd floor) framing. The south wing of the building between line 1 and 3, Dwg. #1, is two stories high while the rest of the building is generally one story with high ceilings. The height of the trusses provides good access to roof framing.

The building generally appears to be in good condition. However, there are many localized areas of neglect and damage due to water intrusion.

IIIB.2 Foundations

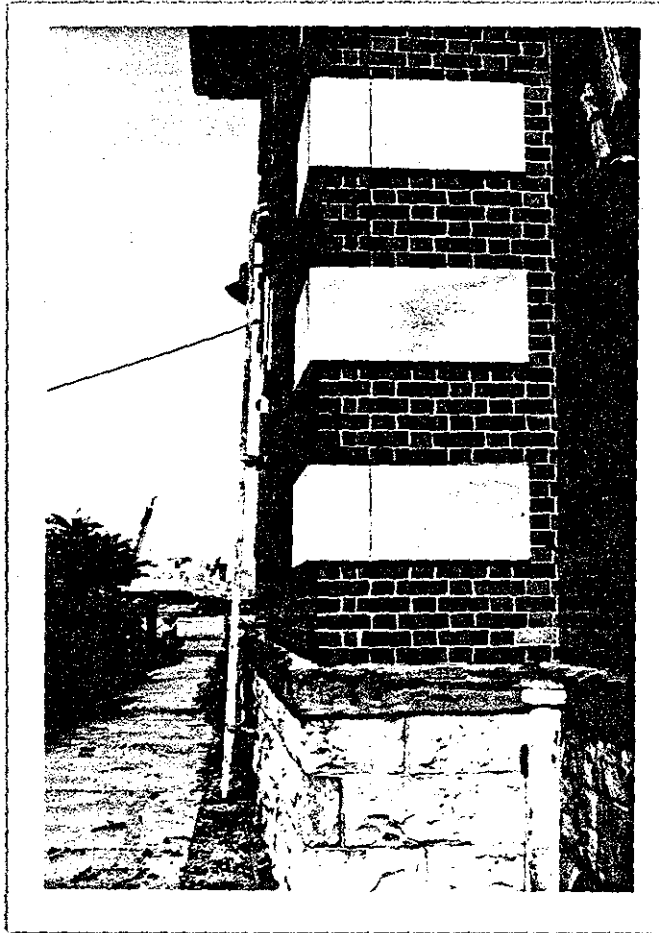
At the northwest corner of grid lines A-12, some cracks were observed on the intersecting walls. While these are not major in size it would be prudent to carry out further foundation investigations at this corner.

All other areas appear to be in good condition, since there are no other cracks which might indicate settlement.

IIIB.3 Walls

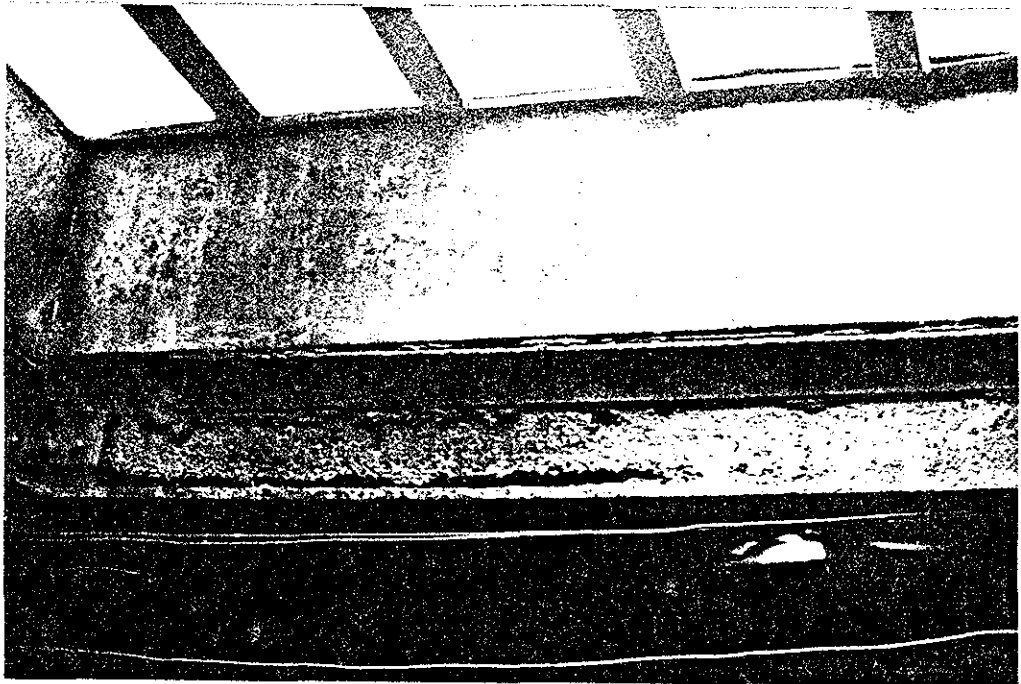
Most of the walls in this building are load bearing masonry walls.

The exterior walls have shown signs of weathering and cracks in certain areas. The slate stones at the pavement and sill elevations show excessive weathering, particularly on the south wall, line 1. Pointing of the stonework is required in these areas, as well as general pointing of the brick masonry walls.



West Wall looking
North from Line 10

#1



Corroded Skylight
Purlin

#2



Corroded Roof Purlin

#3

Cracking and spalling of the limestone has occurred at the southwest corner between line 1-A and 1-B, at the intersection with the corridor. This appears to result from corrosion of the corridor's supporting steel.

The most severe cracks were observed in the west and north exterior walls enclosing the oil tank (from lines A-10 to A-12 and A-12 to D-12 see Dwg. #1). Three major lines of horizontal cracks were observed on both adjoining walls. These appear to be located at elevations where continuous horizontal angles were placed in the walls. Extensive movement of the brickwork as well as the limestone has taken place. The upper cracks extend to the inside face of the walls, and are quite extensive near the roof level. These walls are bent outward horizontally and vertically (see Photo #1), indicating tension on the outside and compression on the inside.

A possible cause for the movement of these walls is the fact that this area was once used for coal storage, coupled with exfoliation of the horizontal angles.

The internal walls appear to be generally in good condition with the exception of the 12" bearing wall between lines E-10 to E-12, which is cracked diagonally from the first tier level to the roof, and the chimney stack.

The chimney stack is rectangular from the base to just above the roof where it becomes circular. The rectangular part of the stack has numerous cracks on all sides from the ground floor to the roof.

IIIB.4 Floors

The ground floor slab is at grade level and appears to be "slab on grade". Some settlement has occurred around the stair entrance near B-2. However all other areas appear to be in good condition.

The visible first tier (2nd floor) beams generally appear to be in good condition. However the beams in the south section from A-1 to A-3 and H-1 to H-3 are all encased and consequently were not inspected.

IIIB.5 Roof

The roof system is generally comprised of a system of trusses supporting purlins and roof tiles.

Generally, the roof trusses are in good condition with the exception of localized areas where water intrusion has caused some purlins to corrode. The corrosion has extended to the truss intersections.

The roof purlins on the south section from lines 1 to 3 are generally in good condition with the exception of some corrosion at the intersection with the valley beam from D-2 to G-3. Water intrusion is evident in this area, damaging the roof tiles and ceiling.

The section of roof from line 3 to line 10, particularly on the east side, has numerous leaks resulting in severe corrosion of some purlins. Purlins P1, P2, P4 and P5 have experienced extremely high corrosion, and presently appear to be in need of repairs. Some

sections of the roof, tiles, skylight and ridge cap are missing and should be replaced immediately if preservation of this building is planned.

The section of roof north of line 10 is generally in good condition except for localized leaks on the north slope, and at the valley beam from B-10 to D-11. Some windows in this area are broken and need to be repaired.

The roof gutters and leaders are in disrepair and missing in several locations.

IIIB.6 Recommended Future Investigations

Most of the structural systems in this building are in good condition. Generally the masonry needs pointing and the structural steel needs cleaning and painting. However, certain specific areas show cause for concern and require further detailed investigation as follows (Refer to Dwg. #2):

- a. Excavate, expose and examine the condition of the foundations of the exterior wall at location 1, lines 12-A, and the chimney stack at location 2, lines 7-D.
- b. Cut into the brickwork at all three levels at location 3 and 4 between lines 12-A to 12-C and A-11 to A-12, to determine the cause of the horizontal movements of the brickwork (possible

corrosion of the horizontal angles). The stability of the walls in their present state should also be checked.

- c. Cut into the brickwork at location 5 and 6 to determine the extent of the cracking and condition of the lintels.
- d. Expose and ultrasonically test the lintels in the stack openings at location 6, above the first tier level. A complete stability check should be carried out on the stack, particularly the rectangular section experiencing severe cracks.
- e. Determine the extent and stability of the diagonal crack above the first tier level at location 7, lines E-10 to E-11.
- f. Ultrasonically test all affected members at the roof valley beams in location 8 and 9.
- g. Investigate and determine the extent of damage to all roof members in the area of location 10, line 3 to line 10, particularly east of line D. Ultrasonic testing of appropriate members should be carried out.
- h. Determine the stability and condition of support for roof members at locations 11 and 12.
- i. Replace all roofing, guttering and leaders.

IIIC Restaurant and Laundry Building

IIIC.1 Brief Description

This building consists of a main building of two stories and a basement, along with a one story walkway. In addition, two one story sections (Addition #1 & #2), one at the first floor and the other at the second floor, were constructed at a later date (Refer to Dwg. #3).

Generally, the structural framework of the main building is comprised of load bearing exterior and interior masonry walls and steel and/or cast iron columns. The floors are generally structural clay tiles (flat tile arch) on structural steel beams. The roof is comprised of systems of trusses and purlins supporting roof tiles.

Some changes in the original framing such as removal of stairs, addition of elevators and removal of load bearing walls were noted. These should be recorded in any future investigations.

The main building is generally in good condition with some localized areas requiring further investigations. The two additions, however, (Addition #1 and #2) appear to be in very bad structural condition and will require extensive rehabilitation or should be removed completely.

IIIC.2 Foundations

Visual inspection of the areas adjacent to the supporting walls of the main building generally show no signs of settlement, with the exception of the corner at lines 11-M. Cracks in the west wall at this location appear to extend down to the foundations and it is wise to carry out further investigation.

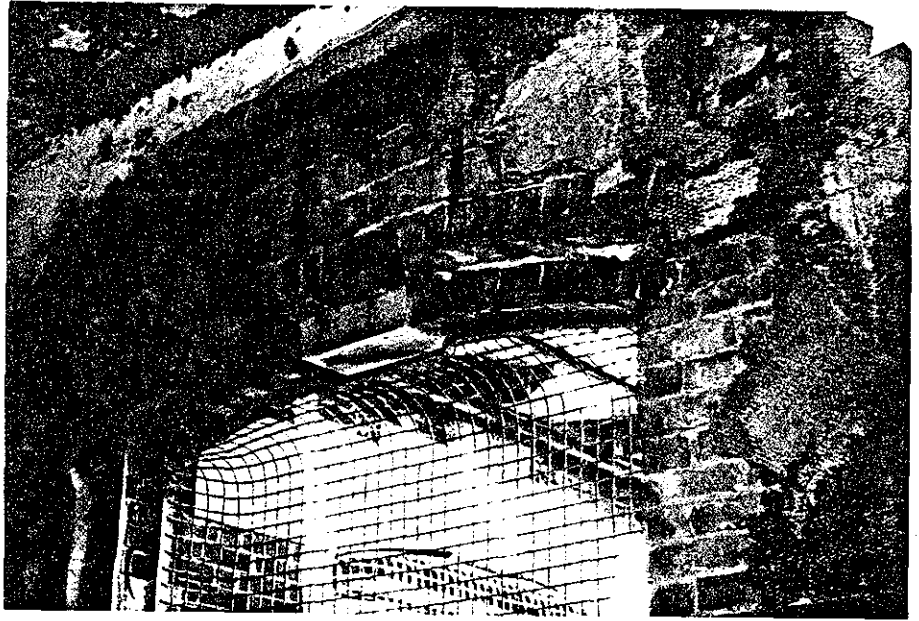
Some vertical cracks are visible on the foundation walls of Addition #1, but no apparent settlement was visible.

IIIC.3 Walls - Main Restuarant & Laundry Building

The interior bearing walls of this building, where visible, appear to be in good condition.

The exterior bearing walls appear to be experiencing localized stresses or deterioration in the areas listed below. With the exception of these locations, the other areas might be considered to be in fair to good condition.

Some cracking and spalling of the limestone has occurred at the screen anchors for the second floor window at lines 1-E. Vertical cracks were noted on both sides below the first floor window at lines 1-C. Severe cracks in the masonry and limestone have developed at locations where Addition #2 steelwork connects to this building, particularly at lines 1-G1 and Lines 3-G1, at both the floor and roof levels. These cracks



Partially Collapsed
2nd Floor Arch over
Window

#4

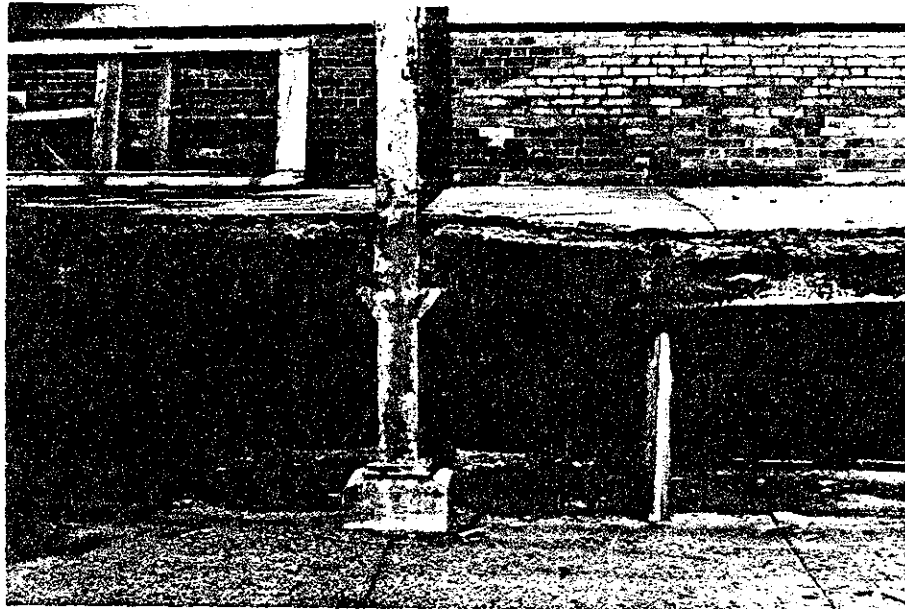
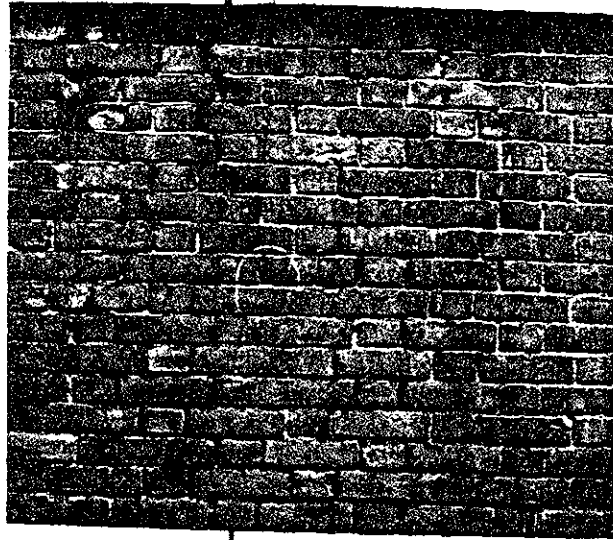


Damaged Wall and
Steel Stack

#5

Cracked First Floor
Wall

#6



Completely Corroded
Porch Spandrel Beam

341

#7

appear to be the result of extreme corrosion of the steel.

Between line 3-A and 3-C, the arch of the second floor window has partially collapsed. Some support is presently being provided by the metal screen, obviously a temporary condition (Refer to Photo #4). The arch over the first floor door, and masonry at the porch roof intersection are damaged and need repair. The porch roof steel is badly corroded at this location.

Extensive pointing of the masonry and limestone between lines 11-A and 11-C is necessary due to water damage from the roof gutters (which are in disrepair and must be replaced).

The masonry at the roof level of the connecting corridor at lines 11-G1 is damaged and needs repairs.

On the north wall of the Laundry Building, the masonry is damaged near the metal chimney (which is severely corroded) at lines 12-M. (Refer to Photo #5.)

The corner of the building at lines 11-M has developed extensive vertical cracks on both the north and south walls starting below the second floor and extending down to the basement slab (Refer to Photo #6). It appears that the vibration of the laundry machines could have created these problems. Intensive investigations should be carried out.

The masonry wall near lines 9-I is damaged and needs repair.

IIIC.4 Floors

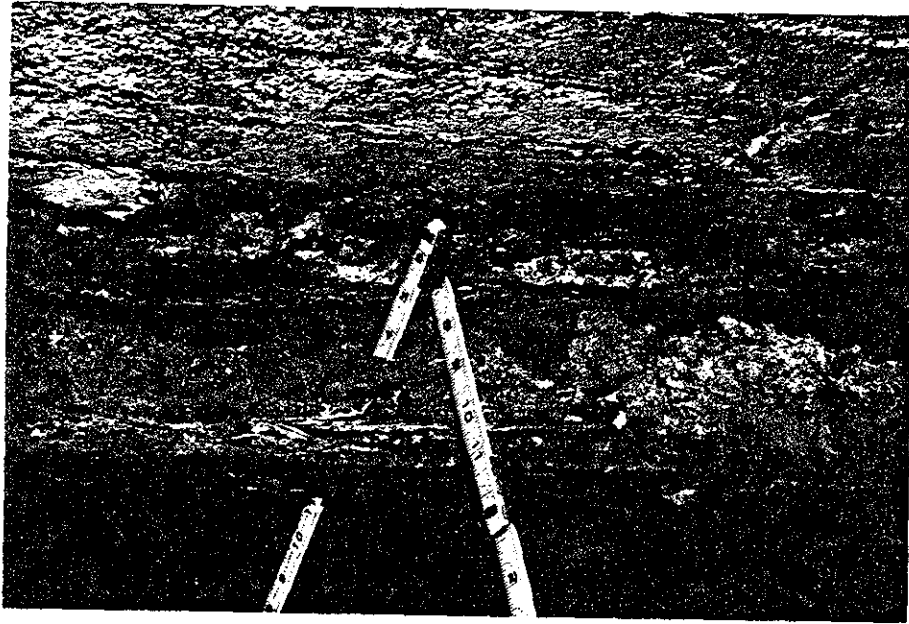
Only minor areas on the first and second floor framing were visible for inspection without removal of some of the fabric of the building. Consequently, it was not possible to determine the exact condition of the framing. However, a visual inspection was carried out and possible problem areas were noted.

First Floor:

Nearly all the beams are enclosed in clay tile fireproofing which is generally in good condition. However, a few beams were exposed and they show some signs of corrosion. Several walk-in refrigerators were located in the basement at one time. There is evidence that some moisture has penetrated into the slab above in these areas and caused some corrosion of the steel and deterioration of the structural clay tiles. Further investigative work is necessary.

The major areas of deterioration are at the porch, between lines 3 and 11. Severe corrosion and frequently complete disintegration of the framing steel have taken place. Along A-3 to A-11 some sections of beams are completely missing (Refer to Photo #7) will have to be replaced. A thorough investigation is required.

Various modifications to the framing were observed and should be located.



Corroded Porch Floor
Beam

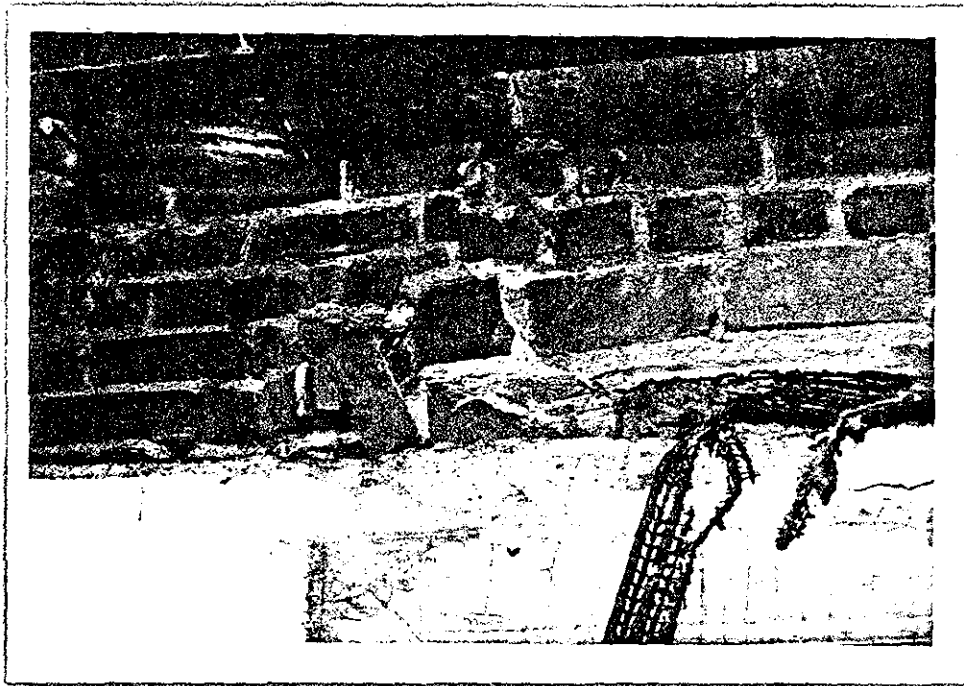
#8



Wood Supporting Second
Floor Beam

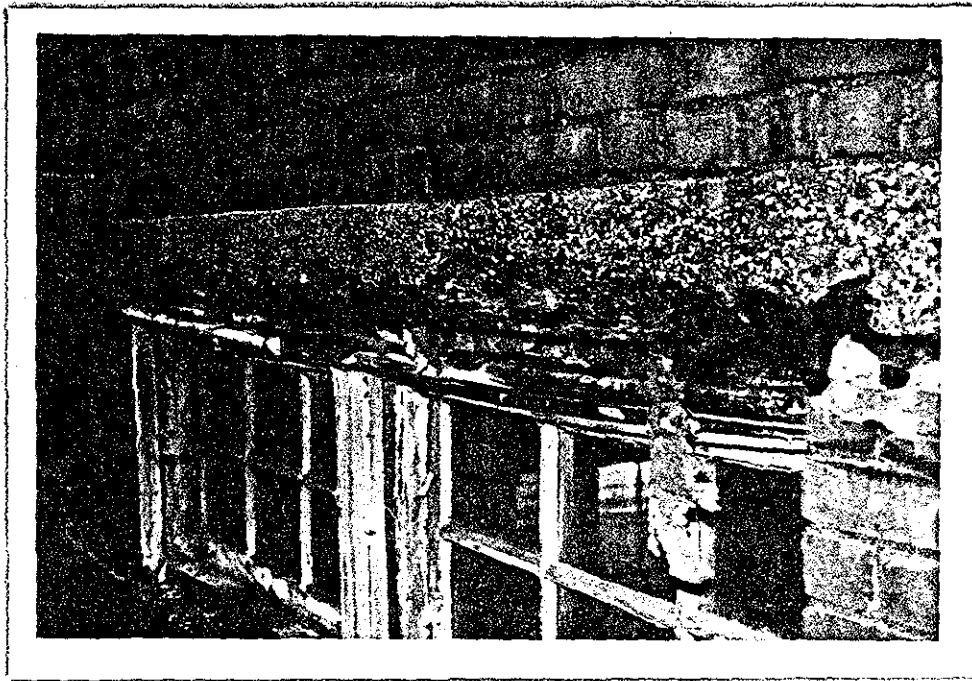
344

#9



Cracked Wall at
Covered Walkway Roof

#10



Addition #1 - Typical
Damaged Lintel

Second Floor:

All second floor beams are enclosed, except for some of the walkway roof beams between lines 9 and 10 and lines G1 and G2. The lintel beams in this area were very seriously corroded and have caused cracks in the walls they support. Temporary wood framing presently support these beams (Refer to Photo # 9 & #10).

Some random cracks between column lines and within the bays were observed on the ceramic tile floors within the area between lines 11 to 17 and lines A to G1.

Water intrusion was visible near lines 3-A to 3-C which has probably caused corrosion of the steel framing in these areas. The porch roof steel shows some signs of corrosion.

Some modifications to the original plans were also observed on this floor.

Further investigation must be carried out.

IIIC.5 Roof

The roof framing was generally in good condition, requiring mainly cleaning and painting except for localized areas where water intrusion has caused some corrosion.

All the dormers and skylight (Refer to Dwg. #3) on the Laundry Building have leaks which have caused corrosion on some of the adjoining framing members. The most severe corrosion has taken place on the purlins by dormer D-3. The corrosion has extended to the top and bottom chord of truss TD2 on line I as well as the "T's" supporting the roof tiles. Dormer D-3 was modified when the adjacent elevator was installed.

The ridge purlin on line 14 between line G2 and line I was also corroded as well as the valley beam from lines 11-G1 to lines 13-E.

A number of modifications have taken place in the roof framing of the Laundry Building including replacing bearing walls with beams and cast iron columns. Some displacement of masonry was visible at lines 11-C, where other modifications were carried out. These modifications should be investigated and recorded.

The gutters and leaders are in almost complete disrepair on both sections of this building. All roofing, gutters and leaders must be replaced.

IIIC.6 Addition #1 and #2:

These additions were probably constructed during the same period.

See Dwg. #3 for location.

Addition #1

Addition #1 appears to be a combination of masonry walls with concrete lintels and capping, and one-way ribbed roof slab infilled with clay tiles. The foundation walls, extending to the first floor, are of concrete.

This building is in very bad condition. The concrete is cracked in several places. The concrete has spalled from the reinforcing steel on almost all lintels (Refer to Photo #11). The roof appears to be completely saturated with water and the bottom of the ribs of the roof slab are spalling. Most of the window jambs have rotted out.

This building appears to be unsafe in its present condition.

Addition #2

This section is supported by the north wall of the Restaurant Building and the south wall of Addition #1 above the covered walkway roof. This section is mainly a ramp from the second floor of the Restaurant Building to the Carpentry Shop.

The main framing is steel with cement plastered walls and concrete floor and roof slab.



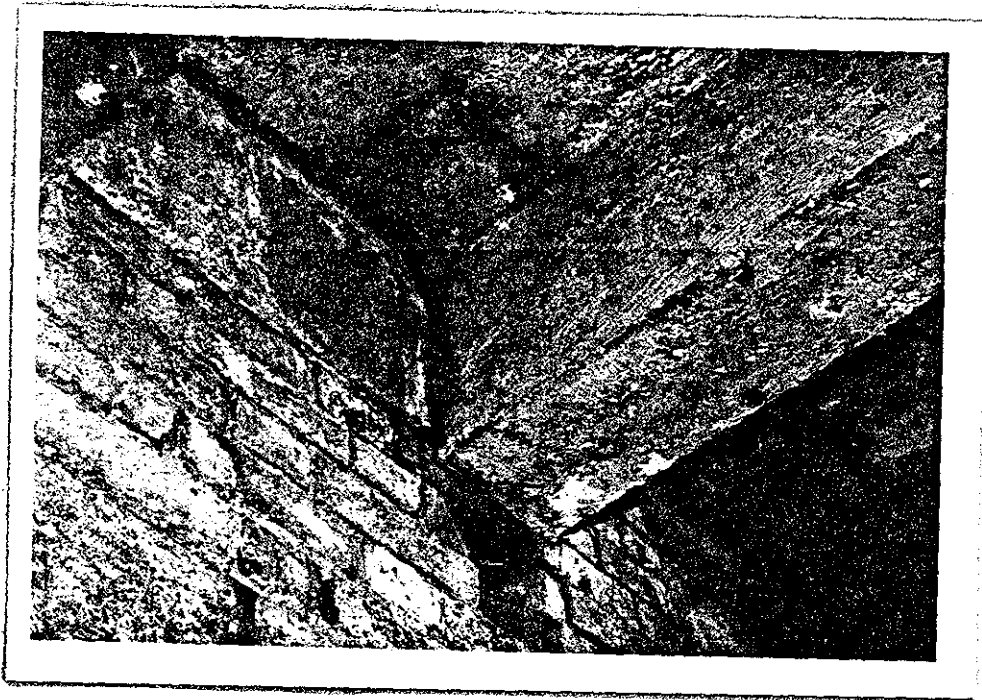
Addition #2 - East
and North Walls

#12



Addition #2 - Corroded
Floor Beam

#13



Addition #2 - Separated
Roof Slab

#14



Addition #2 - Roof
Connection to Restaurant

#15

The steel frame is severely corroded because of the spalling of the plaster and consequent exposure of the steel to the atmosphere (Refer to Photo #12 & #13). Both the floor and roof slabs have separated from the main building by approximately one inch (Refer to Photo #14). The supporting floor and roof beams have experienced extreme corrosion which cracked the masonry wall of the Restaurant Building at their intersection, (Refer to Photo #15), creating severe stresses on the wall. Both the roof and floor slab reinforcing are exposed and corroded. The metal window jambs have completely corroded through and disintegrated in most areas.

This building appears to be a distinct hazard and unless of significance to the historical preservation concept, it should be demolished for safety reasons.

IIIC.7 Recommended Future Investigations

Generally the major visible structural elements of the main Restaurant and Laundry Building appear to be in good condition. However, localized areas need further detailed investigations. The masonry generally needs pointing and the steel needs cleaning and painting. Detailed investigations should be carried out as follows (Refer to Dwg. #4).

- a. Excavate (from within the basement), expose and examine the foundation conditions of the exterior walls at location 1, lines 11-M. It might be prudent to excavate two other locations in order to observe the general condition of the foundations.

- b. Determine the extent and severity of all cracks and deteriorated masonry on the exterior walls, in particular locations 2, 3, 4 and 5.
- c. On the first floor, carry out the following:
 1. Ultrasonic testing of the exposed steel beams.
 2. Locate all areas above walk-in refrigerators, open a 1'-0" diameter hole and examine the condition of steel beams, and structural clay tiles. If necessary carry out any required testing such as ultrasonic testing, etc.
 3. Determine and locate all observable changes to the original structural framing plans.
 4. Carry out a complete investigation of the porch framing system, including all necessary testing.
- d. On the second floor, carry out the following:
 1. Cut a 1'-0" diameter hole at location 6 and examine the condition of the slab and structural steel.
 2. Inspect and ultrasonically test selected framed beams on the porch roof, particularly in the area of location 5.
 3. Cut investigative holes as necessary in the areas of location 7 in order to determine the cause of the various cracks occurring in this area.

4. Determine the extent of damage to the building structure in the area of location 7. Ultrasonically test and record all severely corroded steel framing in this area.
 5. Determine and locate all observable changes to the original structural framing plans, including removal of bearing walls.
- e. Within the roof area the following investigations should be carried out:
1. Record all areas of water intrusion and subsequent steel corrosion.
 2. Locate and record all framing steel showing severe corrosion, and ultrasonically test selected members in order to determine the extent of delamination for possible replacement and/or repairs. Prime areas are the lower horizontal purlins at dormers.
 3. Locate and record all observable changes to the structural framing including replacement of bearing walls with beams and columns.

IIID HOSPITAL BUILDINGS

IIID.1 Brief Description

This group of seven buildings three stories high, connected by two story hyphens forms the south side of the U-shaped grouping around the Ferry Basin directly opposite the Main Building. All sections of the Hospital have connecting cellars.

The exterior walls are load bearing masonry. The interior supports are load bearing masonry walls and steel columns. The floor system is generally structural clay tile (flat tile arch) supported by structural steel beams. The thickness of the floor construction varies, and is as much as twenty-two inches. The sloping roofs are interrupted by section of flat roofs with skylight. The flat roof beams generally frame into the roof trusses. All roof framing is structural steel. Refer to Dwg. Nos. 5, 6, 7 and 8 for general layout plans.

With few exceptions, the dormers on the sloping roofs are experiencing water intrusion. Consequently, many of the purlins below the dormers have experienced some corrosion. The water has penetrated vertically to most of the lower floors. The gutter and leaders have suffered severe deterioration and must be replaced. Some skylights are also missing.

The balconies on the south side of the buildings have suffered severe deterioration and appear hazardous in some areas.

Immediate attention to the roofing system is necessary to prevent further, more serious extensive deterioration.

IIID.2 Foundations

Visual inspection of the areas adjacent to the foundation walls revealed no signs of settlement. The foundation walls appear to be intact and in good condition.

IIID.3 Walls

The exterior load bearing masonry walls appear to be in good condition with the exception of a few locations where cracks have developed due to water intrusion and freeze-thaw cycling. On the exterior, the most visible damage occurs at the corners at lines E-7, E-13 and F-11.

On the interior, corroded leaders are visible at almost all corners of each building, particularly on the first through third floors and a few areas in the cellar. The water intrusion has completely stripped all plaster from the masonry walls near the leaders (Refer to Photo #11). Extremely severe water intrusion at lines H-15 has caused collapse of the first and second floor lintels over the passage door.

Further investigation at all exposed leader locations is necessary.

IIID.4 Floors

The very thick fireproofed floor construction prevented inspection of the framing system, except at occasional locations where water penetration has removed portions of the floor construction and ceiling. This construction is generally in good condition. However, there are visible signs of water intrusion from the roof to the first floor. Consequently, it is presumed that some corrosion of the floor framing might be expected, particularly on the second and third floors, and further investigation at these location is warranted.

Cellar:

The cellar floor generally appears to be dry and in good condition. However, one room east of the stair located in the area between lines E-19, E-20, F-19 and F-20 was flooded due to severe water intrusion from the roof. Other areas experiencing flooding, although not quite as severe, were the areas between lines H-12, H-13, I-12, I-13 and lines H-1, H-2, I-1 and I-2, and the corridor near lines G-11.

It appears that no further investigation will be required provided the roof leaks and leader problems can be arrested.

First Floor:

The actual condition of the framing system for this floor (with the exception of the porches) could not be visibly inspected without removing ceiling and fireproofing. However, areas experiencing severe water intrusion were observed and noted.

The major problems with this floor result from seepage of water from the roof, particularly below dormers and at the corners where leaders are located. Almost every major corner in the building has experienced some water damage to the floor and ceiling, as a result of blocked and damaged leaders. In some sections whole ceilings have collapsed indicating very high water intrusion. Building #1, #4 and #6 have experienced the greatest water intrusion on this floor and extensive investigations should be carried out at all corners and at least in areas indicating severe water intrusion.

All four porches on this floor have experienced severe deterioration, and partial collapse of some members were visible. All major framing appear to be experiencing severe corrosion and the balcony stair on lines A-16 has completely collapsed. All balcony rails have severe cracks caused by the complete corrosion of the enclosed metal.

The stair east of line 1, between line G and line H, was cracked and the lintel on line G was severely corroded.

The other stair structures were generally in good condition, however the landing on the stair between lines 7 and 8 and lines H and I has partially collapsed and needs repair. Most of the stair structure on this floor appears to need only cleaning and painting.

Further investigations should be carried out on this floor, particularly on enclosed structural floor members below areas experiencing water intrusion.

Second Floor:

The condition of the second floor was similar to that of the first floor, except that more extensive areas were affected by the direct flow of water from the roof leaks. Buildings #1, #3, #5 and #7 are generally two story construction, except as noted on Dwg. #7.

Consequently, the corresponding leaks from the roof penetrated the ceilings and spread over the second floor.

Visible inspection of the actual framing system was impossible since all members were fireproofed. A few local areas, such as the area at lines H-15 experienced complete collapse of ceiling and floor slab and very high corrosion was visible on one structural beam (Refer to Photo #17).

All major corners suffered water damage adjoining vertical drain pipes. Noticeably high water intrusion was visible in other localized areas of



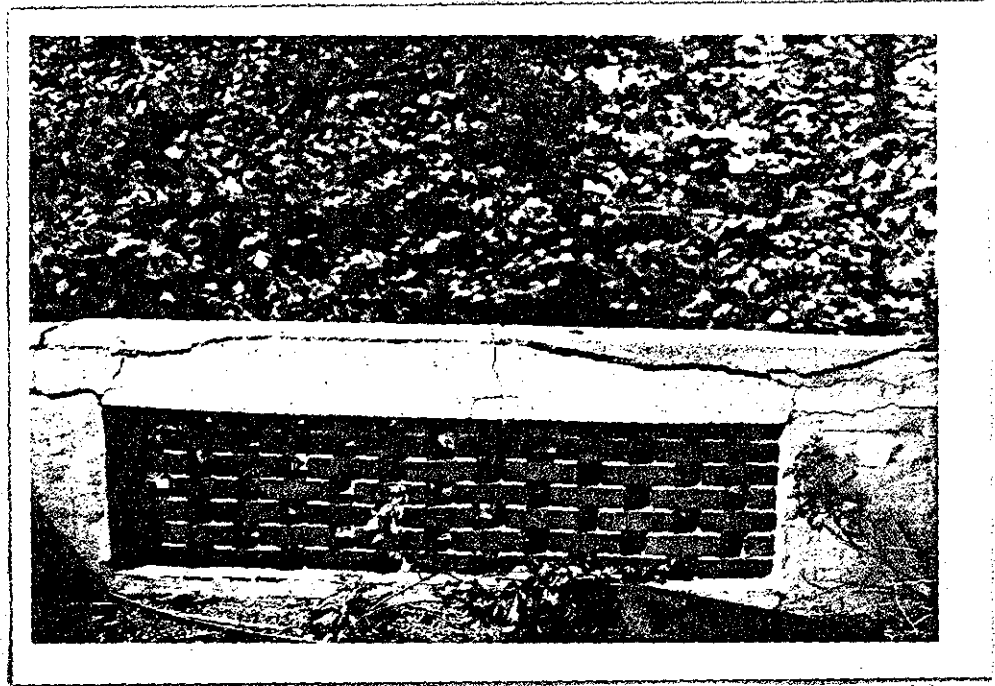
Typical Water Damage -
3rd Floor Leader

#16



Collapsed Ceiling and
Plaster - 3rd Floor

#17



Cracked 2nd Floor
Balcony Parapet

#18



Damaged Column at 2nd
Floor Balcony

#19

all buildings. However, the most severe intrusions were observed in buildings #1, #3, #4, #5 and #6. Specific areas in the vicinity of lines C-2, C-9, C-16, E-13 to E-14, G-15, H-19 to H-20 and in building #7 near lines C-24. These areas need further intensive investigations.

The stair structures were generally in good condition on this floor with the noticeable exception of the intermediate second and third floor landing of the stair between lines 18 and 19. Some corrosion was visible on the steel and additional checks are required.

The porch roofs for building #5 and #6 have experienced severe corrosion of all visible structural members and a complete investigation is required.

The balconies to building #1, #2 and #3 have also experienced very severe corrosion with cracking away of masonry from the columns and balcony rails (Refer to Photo #18, #19 & #20). All structural elements appear to be very badly damaged and need extensive investigations.

Extensive investigations will be required in specific locations on this floor.

Third Floor:

The extent of the third floor is generally confined within buildings #2, #4 and #6 with small transition areas provided by the hyphens and Buildings #1, #3, #5 and #7 (Refer to Dwg. #7).

The major areas of deterioration were again at the corners due to blocked and damaged leaders and leaks from the roof dormers. The areas with flat roofs appeared to be generally in good condition.

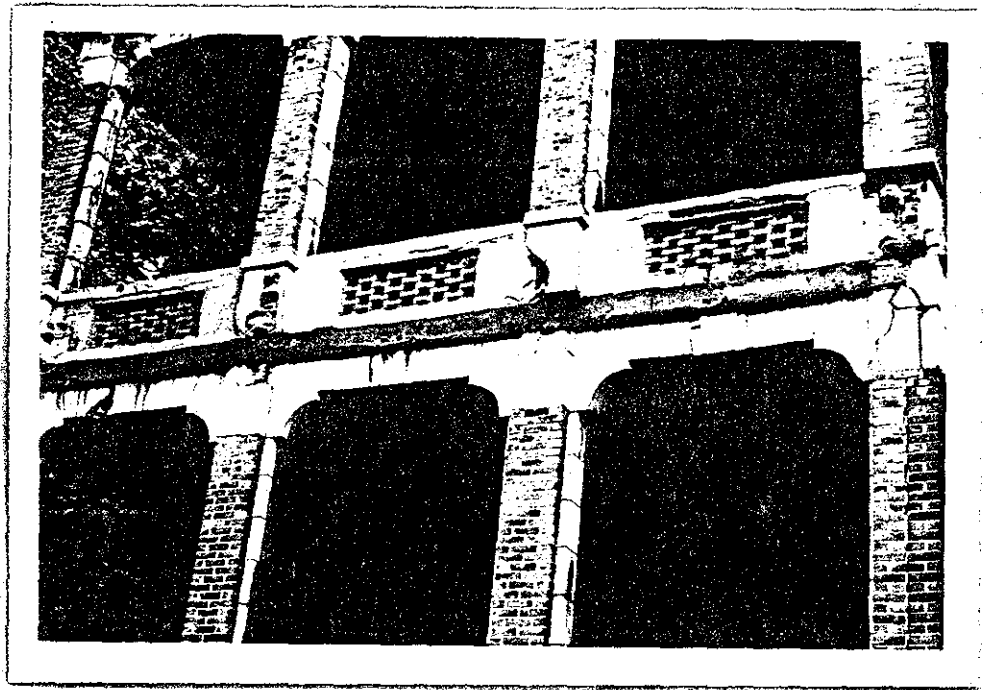
Specific areas other than the corners, experiencing very high water intrusion were in the regions of F-5 to F-6, H-5 to H-6, E-12 to E-14, H-12 to H-13, E-19 to E-20 and H-19 to H-20. These areas have suffered collapse of ceilings and it is possible that some of the floor framing might have experienced some corrosion. Further investigations are required.

The balcony at the third floor of building #2 forms the roof of this porch. Some corrosion was visible on this framing along with some cracking away of the porch from the main building. Further investigations are required.

IIID.5 Roof

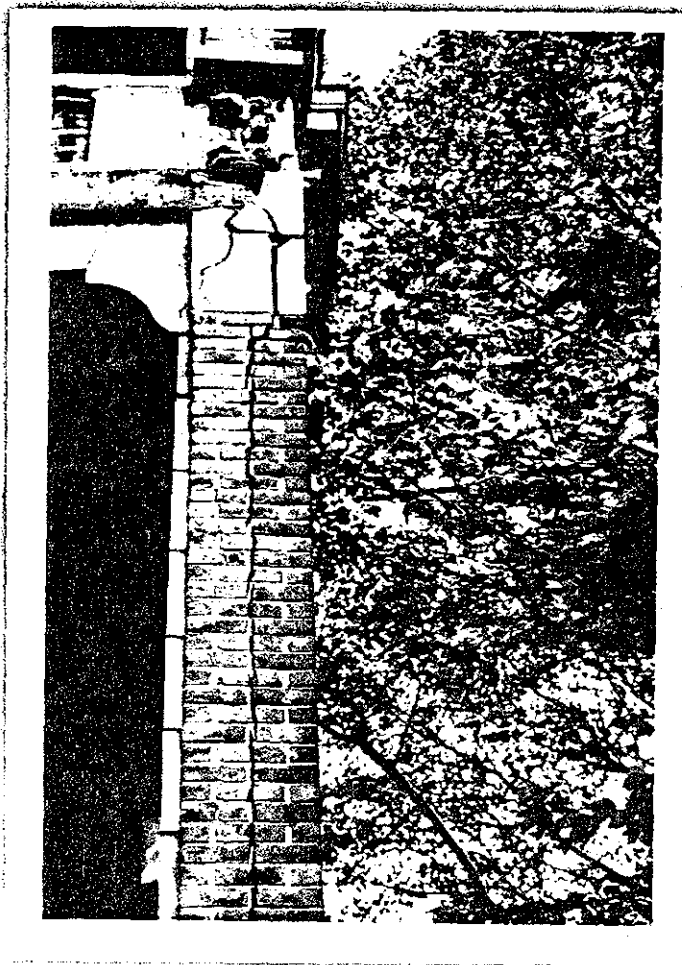
The main buildings which generally have sloping roofs, are connected by both horizontal and sloping links. The main roof framing is an arrangement of series of trusses for each individual building with beams and purlins generally completing the links (Refer to Dwg. #8).

With few exceptions the main supporting structural framing for the various roofs are generally in good condition. Major damage was concentrated on some purlins and to a lesser extent, at the intersection of these purlins with top chords of the trusses.



Damaged 2nd Floor
Balcony

#20

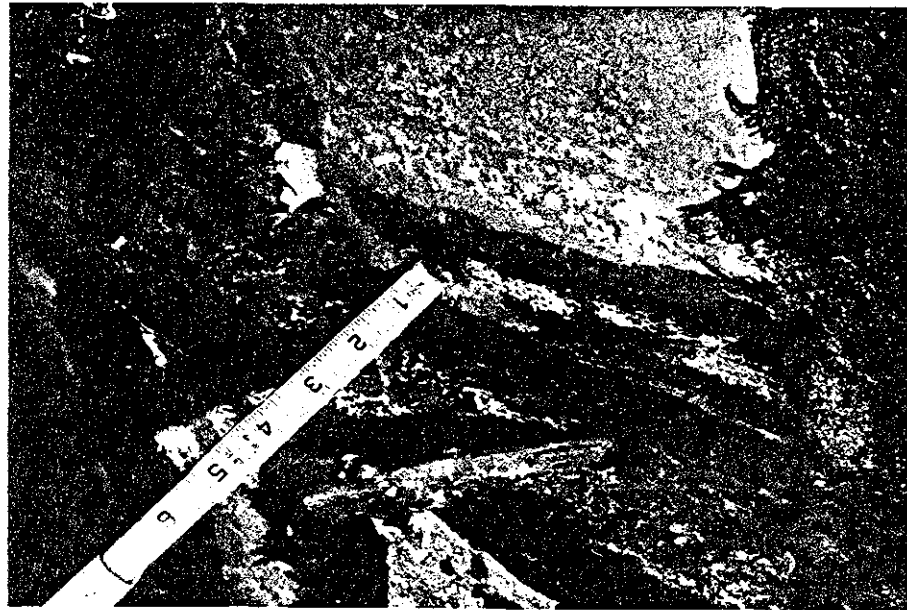
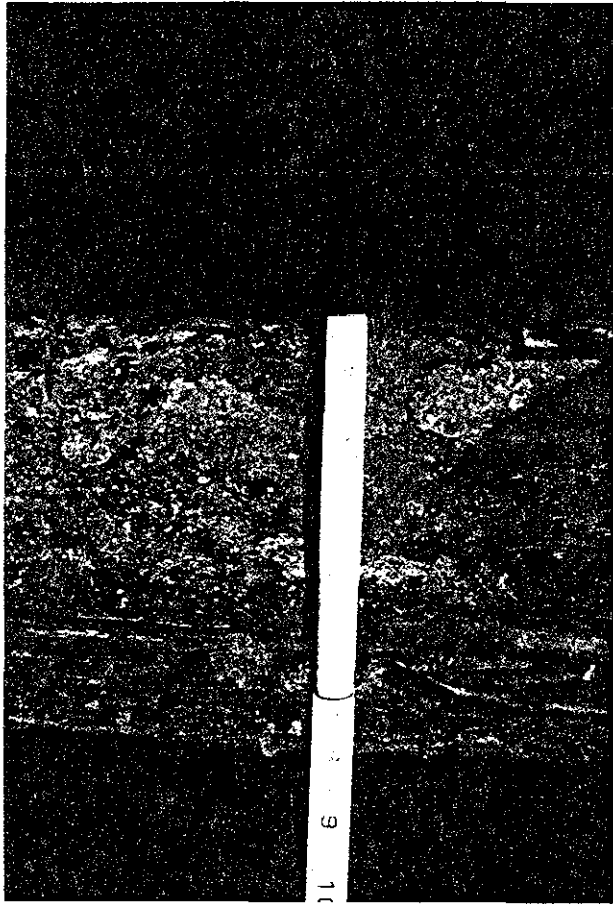


Damaged 1st Floor
Balcony Column

#21

Typical Corroded Lower
Dormer Purlin

#22



Corroded "T" Purlins
Supporting Roof Tiles

#23

The roofing of all seven main sections of buildings have a number of very common problems, namely:

- a. Almost every dormer has leaks and most have missing windows.
- b. These leaks have caused severe corrosion on the lower horizontal purlins in almost every case (Refer to Photo #22). The only noticeable exception was building #4 where only one dormer has experienced any major leak.
- c. The ridge and hip cappings are missing in many areas (Refer to Photo #26).
- d. The guttering and roof drainage system are in complete disrepair.

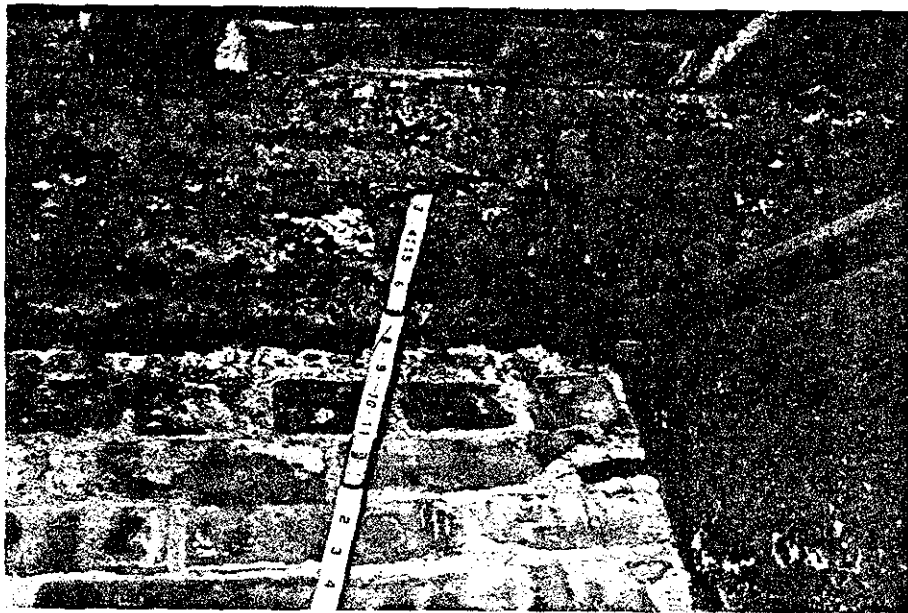
Other specific areas of great concern were observed at the following locations:

- a. The valley beam from H-2 to I-3 has corrosion extending to the bearing plate.
- b. Severe corrosion of the truss top and bottom chords at lines E-2.
- c. Six panes of glass in the skylight at the stair between lines 3 and 4 are missing. Most other skylights on the other links have at least two missing panes of glass.
- d. Both trusses on either side of line 6 experienced corrosion on some web and bottom chord members.
- e. The small skylight roof west of lines H-8 is completely missing.



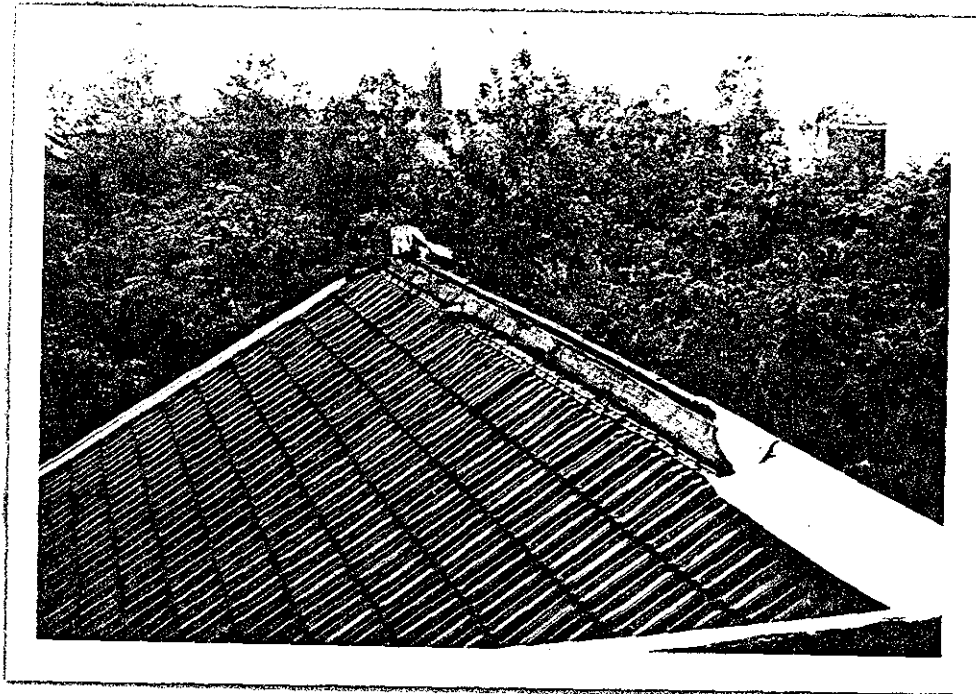
Corroded Horizontal
Purlins at Truss Top
Chord

#24



Corroded Stack Purlin

#25



Missing Ridge Capping

#26

- f. Extremely severe corrosion of the angle spandrel and roof tees near lines H-11 and H-15 (Refer to Photo #23).
- g. Severe corrosion of the truss, roof tees and angles at the support near lines E-13 (Refer to Photo #24).
- h. The lower purlin east of the stack between lines G-18 and G-19 had completely corroded through (Refer to Photo #25).
- i. Missing skylight glass at the stair between lines 21 and 22 caused stripping of the plaster and some corrosion of the exposed structural framing.
- j. Severe corrosion of the top flange of the valley beam from lines H-23 to I-22 was observed along with many of the structural "T's" supporting the roof tiles.

The above observations indicate that a complete investigation of the roof system is required. Immediate repairs are necessary to inhibit continuing deterioration due to weathering.

III.6 Recommended Future Investigations

Most of the visible primary structural elements on the main buildings appear to be in fair condition requiring mainly cleaning and painting of the structural steel. However, many of the secondary framing members particularly some purlins and dormer framing require intensive investigation. The floor framing was not visible but some evidence exists indicating the need to carry out further investigations in certain areas.

Detailed investigations should be carried out as follows (Refer to Dwg. Nos. 9 & 10):

- a. Determine the extent of damage if any, to both walls and floor framing at all areas where damaged or blocked leaders have caused extensive water intrusion, first through third floors. Selected areas should be chosen from location #1 to #28 representing varying degrees of deterioration.
- b. On all three floors carry out the following:
 1. Locate all areas showing signs of major water intrusion. Open a 1'-0" diameter hole and examine the condition of the steel framing and structural clay tiles. If necessary carry out any required testing such as ultrasonic testing, etc. Locations #29 to #39 are some suggested areas.
- c. Complete investigation on each porch is required, including a stability check.
- d. Determine and locate the extent of damage of the roof framing, with particular emphasis on the areas listed in Section IIIC.5. Extensive testing will be required.
- e. Replace roofing, gutters and drainage system.
- f. Determine the extent of damage to the stair east of lines G-1 to H-1.

- g. Determine the extent of damage to the internal stairs as listed in Section IIIC.4.
- h. Determine the conditions of the roof framing in the hyphens which were not visible.

IV. CONCLUSIONS

The following are the general conclusions based upon our visual observations, of each set of buildings:

a. Powerhouse

The main structural fabric of the buildings appears to be in good condition. However certain local failures have occurred and need further investigations.

1. Foundations and footings should be investigated in the northwest corner and for the chimney stack.
2. The exterior walls in the northwest corner need complete investigation, including a stability check.
3. The chimney stack needs complete investigation.
4. Certain roof purlins and trusses need further investigations and testing.
5. The roofing and drainage system are in need of urgent repairs.

b. Restaurant and Laundry Building

The main structural fabric of the main building is generally in good condition but localized failures have occurred. The two additions have suffered excessive deterioration and their present structural integrity are questionable.

Areas requiring further investigations include the following:

1. Foundations and footings should be investigated in the northwest corner of the Laundry Building and possibly two other areas along line A to determine actual condition of the foundations.
2. The exterior walls which have been damaged by corrosion of supporting steel framing for the porch and Addition #2.
3. The northwest corner of the Laundry Building.
4. Certain representative areas of the floor slabs should be opened and the framing investigated. Observed changes to the floor framing plans should be recorded.
5. Certain roof purlins are corroded and need to be checked. Visible structural changes should be noted.
6. The roofing and drainage system are in need of urgent repairs.

The structural conditions of Additions #1 and #2 are very suspect. Consideration should be given towards demolishing these structures.

c. Hospital Buildings

Generally, the main visible structural fabric of each main building forming this complex, is in good condition. However, certain areas of the floor framing, porch and certain secondary structural elements need extensive investigations. These include:

1. Certain areas of the walls, particularly at the corners where damaged leaders were visible.
2. Certain representative areas on each floor slab experiencing high water intrusion.
3. Certain roof purlins and primary members carrying them, particularly those framing dormers having severe corrosion.

The roofing and drainage system are in need of urgent repairs.

V. Stabilization Recommendations

V. STABILIZATION RECOMMENDATIONS AND COST ESTIMATES

The following stabilization recommendations are based upon areas of damage noted during a visual inspection of the major building systems of each structure on Ellis Island (see Section III, Condition Survey). The Main Building, which has previously been studied, was excluded from the present study.

The recommendations by no means cover repair to all damaged fabric of the structures, but are limited to only those work items absolutely necessary to make the buildings reasonably weathertight for a period of five to ten years. The recommendations for most of the structures are limited to repairs to leaky roofs, replacement of damaged or missing drainage systems and the sealing of window and door openings, but some cases also include removal of building fabric which is, or could cause damage to nearby fabric. This includes items such as corroding steel anchors and framing members and unstable building fabric in danger of collapse.

The recommendations were formulated keeping in mind the possibility of eventual restoration of the structures, but at the same time were tempered by the cost of the stabilization repairs, by unknown structural conditions and by the as yet unknown future of the structures. For the most part, it is recommended that the repairs be to restoration standards using the same materials and methodology used for the original construction. In areas where damage is extensive, however, and restoration quality repair costs would be excessive, alternate stabilization standards are recommended. For example, the Baggage and Dormitory Building roof, which encompasses 42,000+ square feet, was originally covered with flat tile but is now coated with tar and asphalt paper. The roof is leaking seriously in all areas, the condition of the steel roof framing is unknown, and the many roof hatches and ventilators in unrepairable condition. Instead of recommending repair or replacement of the original roofing system only to find that extensive repairs are also required to

the steel framing in order to support the new roof--it has been recommended that the roof openings be closed off and new asphalt and roll roofing put in place to make the roof watertight; this at 4 percent of the "restoration" cost. In a like manner, it is recommended that the window, door, skylight, dormer, etc. openings of the structures be closed off and sealed instead of undertaking repair. Damage is extensive and would require the repair or replacement of 70 percent of the frames, sash, etc. Even those windows now in reasonable condition would require new glazing, caulking and painting to remain weathertight for the next ten years. Two systems of closing off and sealing are proposed, one with plywood, the other with plexiglass. Although the plexiglass is slightly more expensive, it is preferable as it requires no painting, will not warp and has the added advantage of allowing light and solar heat into the structures.

Although every effort was made to examine the structural systems of the buildings, roof framing was often inaccessible. Repair items and costs for such were included wherever known, but additional necessary repair work may be encountered once work is underway. The cost estimates for the repair work are based upon 1978 labor and materials costs.

One general stabilization measure which is true for all structures but has not been included on an individual building basis is the removal of vegetation. Vegetation has been allowed to grow unchecked on roofs, in gutters, on and in walls and at the foundations and is causing considerable damage. It should be removed as the first step toward stabilization of the structure.

#2 PASSAGEWAY

<u>Stabilization Recommendations</u>		<u>Cost</u>
1.	Remove existing and replace asphalt shingles 544 SF at \$.91/SF	\$495.00
2.	Relay tile roofing 1237SF at \$30/SF	37,110.00
3.	Replace damaged and missing tile 62 SF at \$45/SF	2,790.00
4.	Remove existing and replace cast iron leader 20 LF at \$50/LF	1,000.00
5.	Remove existing and replace copper flashing 670 LF at \$5.50/LF	3,685.00
6.	Install new 5" copper eave gutter and 3" copper downspout 75 LF at \$3.50/LF 20 LF at \$3.70/LF	263.00 74.00
7.	Close off and seal windows <div style="display: flex; justify-content: space-around; margin-left: 100px;"> <div style="text-align: center;"> $\frac{1}{2}$" aspenite (1.90/SF) 693 SF 210 LF at \$2.10/LF </div> <div style="text-align: center;"> $\frac{1}{4}$" plexiglass (3.60/SF) 2,495.00 </div> </div>	1,317.00 2,495.00 441.00
8.	Remove window grills 10 at \$20/each Remove anchors and fill 55 at \$4.50/each	200.00 248.00
9.	Clean and paint window lintels 5 at \$15/each	75.00
10.	Rebuild brick wall 1 SF at \$8/SF	8.00
11.	Reset stone coping 3 LF at \$5/LF	15.00

12. Rake joints and repoint stone
426 LF at \$5/LF 2,130.00

13. Rake joints and repoint brick
670 SF at \$8/SF 5,360.00

TOTAL \$55,211.00

Add for plexiglass: \$1,178.00

\$56,389.00

#3 BAGGAGE AND DORMITORY BUILDING

<u>Stabilization Recommendations</u>	<u>Cost</u>				
1. Remove existing and install new cast iron leaders and hardware 1744 LF at \$50/LF	\$87,200.00				
2. Remove existing and replace built-in copper gutter lining 561 LF at \$21/LF	11,781.00				
3. Repair built-in copper gutter lining 1123 LF at \$11/LF	12,353.00				
4. Remove existing and replace with asphalt roll roofing 42,417 SF at \$2.20/SF	93,317.00				
5. Cover skylights					
<table border="0" style="display: inline-table;"> <tr> <td style="padding-right: 20px;">$\frac{1}{2}$" aspenite (1.90/SF)</td> <td style="padding-right: 20px;">$\frac{1}{4}$" plexiglass (3.60/SF)</td> </tr> <tr> <td style="text-align: right;">2028 SF 479 LF at \$2.10/LF</td> <td style="text-align: right;">3853.00 7301.00</td> </tr> </table>	$\frac{1}{2}$ " aspenite (1.90/SF)	$\frac{1}{4}$ " plexiglass (3.60/SF)	2028 SF 479 LF at \$2.10/LF	3853.00 7301.00	3,853.00 1,006.00
$\frac{1}{2}$ " aspenite (1.90/SF)	$\frac{1}{4}$ " plexiglass (3.60/SF)				
2028 SF 479 LF at \$2.10/LF	3853.00 7301.00				
6. Remove and close off roof ventilators, hatches and other 27 at \$500/	13,500.00				
7. Close off and seal windows					
<table border="0" style="display: inline-table;"> <tr> <td style="padding-right: 20px;">$\frac{1}{2}$" aspenite (1.90/SF)</td> <td style="padding-right: 20px;">$\frac{1}{4}$" plexiglass (3.60/SF)</td> </tr> <tr> <td style="text-align: right;">14,985 SF 6047 LF at \$2.10/LF</td> <td style="text-align: right;">28,471.00 53,946.00</td> </tr> </table>	$\frac{1}{2}$ " aspenite (1.90/SF)	$\frac{1}{4}$ " plexiglass (3.60/SF)	14,985 SF 6047 LF at \$2.10/LF	28,471.00 53,946.00	28,471.00 12,699.00
$\frac{1}{2}$ " aspenite (1.90/SF)	$\frac{1}{4}$ " plexiglass (3.60/SF)				
14,985 SF 6047 LF at \$2.10/LF	28,471.00 53,946.00				
8. Remove window grills 18 at \$20/ Remove grill anchors and fill 1296 at \$4.50/	360.00 5,832.00				
9. Rake joints and repoint stone 18,390 LF at \$5/LF	91,950.00				
10. Rake joints and caulk terra cotta 1573 LF at \$4.50/LF	7,079.00				

11. Rake joints and repoint brickwork 1965 SF at \$8/SF	15,720.00
12. Remove wooden shed lean-to	200.00

TOTAL	\$385,321.00
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Add for plexiglass: \$28,923.00

\$414,244.00

#4 KITCHEN AND LAUNDRY BUILDING

<u>Stabilization Recommendations</u>	<u>Cost</u>
1. Replace copper gutter and modillion cornice 353 LF at \$55/LF	\$19,415.00
2. Replace copper downspouts 4" round 340 LF at \$4/LF	1,360.00
3. Replace 5% clay roofing tiles and clay sheathing 687 SF at \$60/SF 687 SF at \$45/SF	41,220.00 30,915.00
4. Replace copper valley, dormer and chimney flashing 480 LF at \$5.50/LF	2,640.00
5. Close off and seal windows <div style="display: flex; justify-content: space-around; margin-left: 100px;"> <div style="text-align: center;"> $\frac{1}{2}$" aspenite (1.90/SF) </div> <div style="text-align: center;"> $\frac{1}{4}$" plexiglass (3.60/SF) </div> </div> 3527 SF 2106 LF at \$2.10/LF	6,701.00 12,697.00 4,423.00
6. Remove anchors from stone and fill 9 at \$4.50/each	41.00
7. Repair brickwork 130 SF at \$8/SF	1,040.00
8. Rake joints and repoint stone 3,306 LF at \$5/LF	16,530.00
9. Rake joints and repoint brick 4507 SF at \$8/SF	36,056.00
10. Demolish and rebuild north wing and passage 3586 SF at \$60/SF	215,160.00
11. Document, demolish and rebuild south porch 2160 SF at \$80/SF	172,800.00
<hr/>	
TOTAL	\$548,301.00
Add for plexiglass: \$5,996.00	
	\$554,297.00

#5 POWERHOUSE

Stabilization Recommendations

Cost

1.	Remove existing and replace copper 5" half round gutters and 3" round downspouts			
	645 LF at \$3.50/LF			\$2,258.00
	224 LF at \$3.70/LF			829.00
2.	Replace damaged/missing roof tiles and clay tile sheathing			
	1885 SF at \$60/SF			113,100.00
	1885 SF at \$45/SF			84,825.00
3.	Remove existing and replace copper flashing			
	728 LF at \$5.50/LF			4,004.00
4.	Close off and seal skylights			
		1/2" aspenite	1/4" plexiglass	
		(1.90/SF)	(3.60/SF)	
	624 SF	1,186.00	2,246.00	1,186.00
	302 LF at \$2.10/LF			634.00
5.	Close off and seal windows			
		1/2" aspenite	1/4" plexiglass	
		(1.90/SF)	(3.60/SF)	
	2396 SF	4,552.00	8,626.00	4,552.00
	1526 LF at \$2.10/LF			3,205.00
6.	Remove corroded angles and repair brick			
	80 LF at \$8/LF			640.00
7.	Rake joints and repoint stone			
	4553 LF at \$5/LF			22,765.00
8.	Rake joints and repoint brickwork (includes stack)			
	10979 SF at \$8/SF			87,832.00

TOTAL

\$325,830.00

Add for plexiglass: \$5,134.00

\$330,964.00

#6 STORAGE SHED

Stabilization Recommendations

Cost

1. Removal of entire shed

\$200.00

#7 SHELTER

Stabilization Recommendations

Cost

1.	Remove existing and replace cast iron leaders 36 LF at \$50/LF				\$1,800.00
2.	Rebuild parapet 2 SF at \$8/SF				16.00
3.	Close off and seal window				
		½" aspenite	½" plexiglass		
		(1.90/SF)	(3.60/SF)		
	111 SF	211.00	400.00		211.00
	167 LF at \$2.10/LF				351.00
4.	Rake joints and caulk terra cotta 490 LF at \$4.50/LF				2,205.00
5.	Remove east entryway 24 SF at \$4.70/SF				113.00

TOTAL

\$4,696.00

Add for plexiglass: \$189.00

\$4,885.00

#8 GREENHOUSE

Stabilization Recommendations

Cost

1. Enclose and seal with $\frac{1}{2}$ " aspenite
approximately 6000 SF at \$1.90/SF
approximately 4500 LF at \$2.10/LF

\$11,400.00

9,450.00

\$20,850.00

#9 INCINERATOR

<u>Stabilization Recommendations</u>	<u>Cost</u>
1. Grout and patch cracks 110 LF at \$9.80/LF	\$1,078.00
2. Clean and paint steel 60 SF at \$8.05/SF	483.00
3. Patch stucco 400 SF at \$3.40/SF	1,360.00
4. Remove steel door frame. Close off and seal opening with ½" aspenite. Removal \$40/each 42 SF at \$1.90/SF 33 LF at \$2.10/LF	40.00 80.00 69.00
5. Clean and paint steel stack and ties 900 SF at \$8.05/SF	7,245.00
<hr/>	
TOTAL	\$10,355.00

#10 BAKERY AND CARPENTRY BUILDING

<u>Stabilization Recommendations</u>		<u>Cost</u>
<u>Main Section</u>		
1.	Remove existing and replace built-up roofing 4687 SF at \$2.50/SF	\$11,718.00
2.	Remove existing and replace through parapet copper drains and grates 8 at \$31/each	248.00
3.	Replace 4" round copper downspouts 296 LF at \$4.40/LF	1,302.00
4.	Cover and seal roof ventilators and hatchway with ½" aspenite 140 SF at \$4/SF	560.00
5.	Remove window grills and anchors 6 at \$20/each 32 at \$4.50/each	120.00 144.00
7.	Close off windows and seal ½" aspenite ½" plexiglass (1.90/SF) (3.60/SF) 1892 SF 3,595.00 6,811.00	3,595.00 2,104.00
8.	Clean and paint window lintels 20 at \$15/each	300.00
9.	Repair damaged brick in lintel area 20 SF at \$8/SF	160.00
10.	Rake joints and repoint stone 710 LF at \$5/LF	3,550.00
11.	Rake joints and repoint brick 2476 SF at \$8/SF	19,808.00

South Wing Addition

1.	Remove existing and replace roll roofing 995 SF at \$2.20/SF			\$2,189.00
2.	Remove existing and replace flashing 64 LF at \$5.50/LF			352.00
3.	Close off and seal windows			
		½" aspenite (1.90/SF)	¼" plexiglass (3.60/SF)	
	46 SF	88.00	166.00	88.00
	61 LF at \$2.10/LF			128.00
4.	Clean and paint lintels 5 at \$15/each			75.00
5.	Rake joints and repoint brick 279 SF at \$8/SF			2,232.00

TOTAL \$48,673.00

Add for plexiglass: \$3,298.00

\$51,971.00

#11 SHED

Stabilization Recommendations

Cost

1. Demolition of entire shed
720 SF at \$.48/SF

\$346.00

#12 PASSAGEWAY

<u>Stabilization Recommendations</u>	<u>Cost</u>
1. Remove existing and replace wood roof sheathing 4029 SF at \$1.86/SF	\$7,494.00
2. Relay existing roof tile 4029 SF at \$45/SF	181,305.00
3. Replace roof tile 915 SF at \$60/SF	54,900.00
4. Replace copper flashing 190 LF at \$5.50/LF	1,045.00
5. Replace copper ogee gutters 932 LF at \$4.70/LF	4,380.00
6. Replace copper downspouts 331 LF at \$4.40/LF	1,456.00
7. Remove existing and replace cast iron leaders 32 LF at \$50/LF	1,600.00
8. Close off and seal windows ½" aspenite ½" plexiglass (1.90/SF) (3.60/SF) 875 SF 1,663.00 3,150.00 538 LF at \$2.10/LF	1,663.00 1,130.00
9. Rake joints and repoint brick 1248 SF at \$8/SF	9,984.00
<hr/>	
TOTAL	\$264,957.00
Add for plexiglass: \$1,487.00	
	<hr/>
	\$266,444.00

#13 PASSAGEWAY

<u>Stabilization Recommendations</u>	<u>Cost</u>
1. Remove existing and replace damaged wood roof sheathing 1598 SF at \$1.86/SF	\$2,972.00
2. Relay existing roof tile 500 SF at \$45/SF	22,500.00
3. Replace roof tile 345 SF at \$60/SF	20,700.00
4. Remove existing and replace roll roofing 1500 SF at \$2.20/SF	3,300.00
5. Remove existing and replace flashing 276 LF at \$5.50/LF	1,518.00
6. Replace copper ogee gutters 420 LF at \$4.70/LF	1,974.00
7. Replace copper downspouts 194 LF at \$4.40/LF	854.00
8. Close off and seal windows ½" aspenite ¼" plexiglass (1.90/SF) (3.60/SF) 1670 SF 3,173.00 6,012.00 1460 LF at \$2.10/LF	3,173.00 3,066.00
9. Rake joints and repoint brick 523 SF at \$8/SF	4,184.00
<hr/>	
TOTAL	\$64,241.00
Add for plexiglass: \$2,839.00	
	<hr/>
	\$67,080.00

#14 FERRY BUILDING

<u>Stabilization Recommendations</u>	<u>Cost</u>
1. Repair joints in sheet lead approximately 150 LF at \$11/LF	\$1,650.00
2. Remove existing and replace cast iron leaders 107 LF at \$50/LF	5,350.00
3. Caulk roof flashing 626 LF at \$2.50/LF	1,565.00
4. Close off and seal windows	
½" aspenite ¼" plexiglass (1.90/SF) (3.60/SF)	
1506 SF 2,861.00 5,422.00	2,861.00
702 LF at \$2.10/LF	1,474.00
5. Rake joints and caulk terra cotta 1670 LF at \$4.50/LF	7,515.00
6. Rake joints and repoint stone 826 LF at \$5/LF	4,130.00
7. Reset stone 6 LF at \$5/LF	30.00
8. Clean and paint galvanized iron marquise 370 SF at \$8.05/SF	2,979.00
<hr/>	
TOTAL	\$27,554.00
Add for plexiglass: \$2,561.00	
	<hr/>
	\$30,115.00

#15 IMMIGRATION BUILDING

<u>Stabilization Recommendations</u>		<u>Cost</u>
1.	Remove existing and replace built-up roof 14,288 SF at \$2.50/SF	\$35,720.00
2.	Replace copper flashing 439 LF at \$5.50/LF	2,415.00
3.	Remove existing and replace cast iron leaders 160 LF at \$50/LF	8,000.00
4.	Close off windows and seal $\frac{1}{2}$ " aspenite $\frac{1}{4}$ " plexiglass (1.90/SF) (3.60/SF) 3584 SF 6,810.00 12,902.00 1958 LF at \$2.10/LF	6,810.00 4,112.00
5.	Remove grill anchors 9 at \$4.50/each	41.00
6.	Rake joints and caulk terra cotta 787 LF at \$4.50/LF	3,542.00
7.	Rake joints and repoint brick 2160 SF at \$8/SF	17,280.00
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TOTAL		\$77,920.00
	Add for plexiglass: \$6,092.00	
		<hr/>
		\$84,012.00

#16 PASSAGEWAY

<u>Stabilization Recommendations</u>		<u>Cost</u>
1.	Stabilize and repair foundations (does not include necessary repair of seawall) 280 LF at \$135/LF	\$37,800.00
2.	Remove existing and replace wood roof sheathing 3263 SF at \$1.86/SF	6,069.00
3.	Relay existing roof tiles 3263 SF at \$45/SF	146,835.00
4.	Replace missing or damaged roof tiles 1229 SF at \$60/SF	73,740.00
5.	Replace copper ogee gutter 1541 LF at 4.7/LF	7,243.00
6.	Replace copper downspouts 480 LF at \$4.40/LF	2,112.00
7.	Replace copper flashing 193 LF at \$5.50/LF	1,062.00
8.	Close off and seal windows ½" aspenite ¼" plexiglass (1.90/SF) (3.60/SF) 3056 SF 5,806.00 11,002.00 1945 LF at \$2.10/LF	5,806.00 4,085.00
9.	Repair/rebuild brickwork 50 SF at \$8/SF	400.00
10.	Rake joints and repoint brick 3632 SF at \$8/SF	29,056.00
11.	Grout and fill 100 LF at \$9.80/LF	980.00
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TOTAL		\$315,188.00
	Add for plexiglass: \$5,196.00	
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		\$320,383.00

#17 LAUNDRY

<u>Stabilization Recommendations</u>		<u>Cost</u>
1.	Replace damaged roof tiles 373 SF at \$60/SF	\$22,380.00
2.	Replace half round copper gutters 305 LF at \$3.50/LF	1,068.00
3.	Replace copper downspouts 66 LF at \$3.70/LF	244.00
4.	Replace copper flashing 160 LF at \$5.50/LF	880.00
5.	Replace copper chimney hood 48 SF at \$11.00/SF	528.00
6.	Close off and seal windows ½" aspenite ¼" plexiglass (1.90/SF) (3.60/SF) 1042 1,980.00 3,751.00 834 LF at \$2.10/LF	1,980.00 1,751.00
7.	Rake joints and repoint stone 372 LF at \$5/LF	1,860.00
8.	Rake joints and repoint brick 776 SF at \$8/SF	6,208.00
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TOTAL		\$36,899.00
	Add for plexiglass: \$1,771.00	
		<hr/>
		\$38,670.00

#18 PSYCHIATRIC WARD

<u>Stabilization Recommendations</u>		<u>Cost</u>
1.	Remove existing and replace built-up roof 1643 SF at \$2.50/SF	\$4,108.00
2.	Replace existing roof flashing/copper 168 LF at \$5.50/LF	924.00
3.	Replace copper gutter lining 168 LF at \$11/LF	1,848.00
4.	Replace copper downspouts 129 LF at \$4.40/LF	568.00
5.	Replace cast iron ground drains 24 LF at \$50/LF	1,200.00
6.	Remove window grills and anchors 28 at \$20/each 336 at \$4.50/each	560.00 1,512.00
7.	Close off windows and seal <div style="display: flex; justify-content: space-around; margin-left: 100px;"> <div style="text-align: center;"> $\frac{1}{2}$" aspenite (1.90/SF) 1312 2,493.00 </div> <div style="text-align: center;"> $\frac{1}{4}$" plexiglass (3.60/SF) 4,723.00 </div> </div>	2,493.00 1,928.00
8.	Replace/repair damaged brickwork 5 SF at \$8/SF	40.00
9.	Reset loose terra cotta blocks 3 at \$40/each	120.00
10.	Rake joints and caulk terra cotta 420 LF at \$4.50/LF	1,890.00
11.	Rake joints and point stone 980 LF at \$5/LF	4,900.00
12.	Rake joints and point brick 1928 SF at \$8/SF	15,424.00
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TOTAL		\$37,515.00
Add for plexiglass: \$2,230.00		
		<hr/>
		\$39,745.00

#19 HOSPITAL #1

Stabilization Recommendations

Cost

1.	Replace damaged and missing roof tiles 504 SF at \$60/SF	\$30,240.00
2.	Replace damaged clay sheathing and relay tile 427 SF at \$105/SF	44,835.00
3.	Repair copper gutters 156 LF at \$22/LF	3,432.00
4.	Remove existing and replace copper gutters 260 LF at \$55/LF	14,300.00
5.	Remove existing and replace cast iron leaders 504 LF at \$50/LF	25,200.00
6.	Replace rotted wood ridge battens 176 LF at \$2.40/LF	422.00
7.	Replace copper ridge flashing 186 LF at \$6.50/LF	1,209.00
8.	Replace flat asphalt roof 750 SF at \$2.20/SF	1,650.00
9.	Replace copper valley, chimney and skylight flashing 466 LF at \$5.50/LF	2,563.00
10.	Close off and seal windows, skylights, dormers $\frac{1}{2}$ " aspenite (1.90/SF) 3381 SF 3486 LF at \$2.10/LF $\frac{1}{4}$ " plexiglass (3.60/SF) 12,172.00	6,424.00 7,321.00
11.	Rake joints and repoint stone 4399 LF at \$5/LF	21,995.00
12.	Rake joints and repoint brick 9520 SF at \$8/SF	76,160.00

13. Clean and paint south porch steel
360 SF at \$8.05/SF

2,898.00

TOTAL

\$238,649.00

Add for plexiglass: \$5,748.00

\$244,397.00

#20 ADMINISTRATION BUILDING

Stabilization RecommendationsCost

1.	Replace damaged and missing roof tile 409 at \$60/SF		\$24,540.00
2.	Replace damaged wood sheathing and r�lay tile 6140 at \$46.86/SF		287,720.00
3.	Repair copper gutters 123 LF at \$22/LF		2,706.00
4.	Remove existing and replace copper gutters 190 LF at \$55/LF		10,450.00
5.	Remove existing and replace cast iron leaders 352 LF at \$50/LF		17,600.00
6.	Replace rotted wood ridge battens 289 LF at \$2.40/LF		694.00
7.	Replace copper ridge flashing 289 LF at \$6.5/LF		1,879.00
8.	Replace copper valley, dormer, skylight and chimney flashing 198 LF at \$5.50/LF		1,089.00
9.	Close off and seal windows, skylights, dormers <div style="margin-left: 100px;"> $\frac{1}{2}$" aspenite $\frac{1}{4}$" plexiglass </div> <div style="margin-left: 100px;"> (1.90/SF) (3.60/SF) </div> <div style="margin-left: 100px;"> 2246 SF 4,267.00 8,086.00 </div> <div style="margin-left: 100px;"> 2314 LF at \$2.10/LF </div>		4,267.00 4,859.00
10.	Rake joints and repoint stone 2010 LF at \$5/LF		10,050.00
11.	Rake joints and caulk terra cotta 783 LF at \$4.50/LF		3,524.00
12.	Rake joints and repoint brick 2906 SF at \$8/SF		23,248.00
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TOTAL			\$392,626.00
Add for plexiglass: \$3,819.00			
			<hr/>
			\$396,445.00

#21 HOSPITAL #2

<u>Stabilization Recommendations</u>		<u>Cost</u>																
1.	Replace damaged and missing roof tiles 1281 SF at \$60/SF	\$76,860.00																
2.	Replace damaged sheathing and relay tiles 427 SF at \$46.86/SF	20,009.00																
3.	Repair copper gutters 312 LF at \$22/LF	6,864.00																
4.	Replace copper gutters 208 LF at \$55/LF	11,440.00																
5.	Remove existing and replace cast iron leaders 673 LF at \$50/LF	33,650.00																
6.	Replace rotted wood ridge battens 190 LF at \$2.40/LF	456.00																
7.	Replace copper ridge flashing 190 LF at \$6.50/LF	1,235.00																
8.	Replace flat asphalt roof 750 SF at \$2.20/SF	1,650.00																
9.	Replace copper valley, chimney, skylights, flashing 466 LF at \$5.50/LF	2,563.00																
10.	Close off and seal windows, skylights, dormers <table border="0" style="margin-left: 100px;"> <tr> <td></td> <td style="text-align: center;">½" aspenite</td> <td style="text-align: center;">½" plexiglass</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">(1.90/SF)</td> <td style="text-align: center;">(3.60/SF)</td> <td></td> </tr> <tr> <td>3344 SF</td> <td style="text-align: right;">6,354.00</td> <td style="text-align: right;">12,038.00</td> <td style="text-align: right;">6,354.00</td> </tr> <tr> <td>3460 LF at \$2.10/LF</td> <td></td> <td></td> <td style="text-align: right;">7,266.00</td> </tr> </table>		½" aspenite	½" plexiglass			(1.90/SF)	(3.60/SF)		3344 SF	6,354.00	12,038.00	6,354.00	3460 LF at \$2.10/LF			7,266.00	
	½" aspenite	½" plexiglass																
	(1.90/SF)	(3.60/SF)																
3344 SF	6,354.00	12,038.00	6,354.00															
3460 LF at \$2.10/LF			7,266.00															
11.	Rake joints and repoint stone 4620 LF at \$5/LF	23,100.00																
12.	Rake joints and caulk terra cotta 1300 LF at \$4.50/LF	5,850.00																

13. Document, demolish and rebuild two south porches
1980 SF at \$80/SF 158,400.00

TOTAL \$355,697.00

Add for plexiglass: \$5,684.00

\$361,381.00

#22 RECREATION HALL

<u>Stabilization Recommendations</u>	<u>Cost</u>						
1. Replace damaged and missing roof tile 352 SF at \$60/SF	\$21,120.00						
2. Replace built-up roofing 2391 SF at \$2.50/SF	5,978.00						
3. Replace copper gutters 165 LF at \$4.70/LF	776.00						
4. Replace copper and cast iron leaders 140 LF at \$4.40/LF 180 LF at \$50/LF	616.00 9,000.00						
5. Replace copper parapet and chimney flashing 416 LF at \$5.50/LF	2,288.00						
6. Close off and seal windows							
<table border="0" style="display: inline-table;"> <tr> <td style="padding-right: 20px;">$\frac{1}{2}$" aspenite</td> <td style="padding-right: 20px;">$\frac{1}{4}$" plexiglass</td> </tr> <tr> <td style="padding-right: 20px;">(1.90/SF)</td> <td style="padding-right: 20px;">(3.60/SF)</td> </tr> <tr> <td style="padding-right: 20px;">1,182.00</td> <td style="padding-right: 20px;">2,239.00</td> </tr> </table>	$\frac{1}{2}$ " aspenite	$\frac{1}{4}$ " plexiglass	(1.90/SF)	(3.60/SF)	1,182.00	2,239.00	1,182.00
$\frac{1}{2}$ " aspenite	$\frac{1}{4}$ " plexiglass						
(1.90/SF)	(3.60/SF)						
1,182.00	2,239.00						
622 SF							
524 LF at \$2.10/LF	1,100.00						
7. Rake joints and repoint stone 268 LF at \$5/LF	1,340.00						
8. Rake joints and caulk terra cotta 667 LF at \$4.50/LF	3,002.00						
9. Rake joints and repoint brick 154 SF at \$8/SF	1,232.00						
<hr/>							
TOTAL	\$47,634.00						
Add for plexiglass: \$1,057.00							
	\$48,691.00						

#23 SHELTER

Stabilization Recommendations

Cost

1.	Remove existing and replace copper gutter lining 196 LF at \$11/LF			\$2,156.00
2.	Remove existing and replace cast iron leaders 36 LF at \$50/LF			1,800.00
3.	Close off and seal windows			
		½" aspenite (1.90/SF)	½" plexiglass (3.60/SF)	
	99 SF	188.00	356.00	188.00
	115 LF at \$2.10/LF			242.00

TOTAL \$4,386.00

Add for plexiglass: \$168.00

\$4,554.00

#24 POWERHOUSE AND STORAGE

Stabilization Recommendations

Cost

1.	Replace copper gutters 456 LF at \$3.50/LF			\$1,596.00
2.	Replace copper downspouts 180 LF at \$4.40/LF			792.00
3.	Replace copper valley and chimney flashing 145 LF at \$5.50/LF			798.00
4.	Close off and seal windows and skylights			
		1/2" aspenite (1.90/SF)	1/8" plexiglass (3.60/SF)	
	1912 SF	3,633.00	6,883.00	3,633.00
	2002 LF at \$2.10/LF			4,204.00
5.	Rake joints and repoint stone 416 LF at \$5/LF			2,080.00
6.	Rake joints and repoint brick 267 SF at \$8/SF			2,136.00
7.	Remove steel fire escape			350.00

TOTAL

\$15,589.00

Add for plexiglass: \$3,250.00

\$18,839.00

#25 ANIMAL HOUSE

Stabilization Recommendations

Cost

1.	Replace damaged and missing tile 20 SF at \$60/SF			\$1,200.00
2.	Replace copper gutters 109 LF at \$3.50/LF			382.00
3.	Replace copper downspouts and cast iron drains 26 LF at \$4.40/LF 12 LF at \$50/LF			114.00 600.00
4.	Replace roof vent cap			50.00
5.	Close off and seal windows			
		1/2" aspenite (1.90/SF)	1/4" plexiglass (3.60/SF)	
	120 SF	228.00	432.00	228.00
	128 LF at \$2.10/LF			269.00

TOTAL

\$2,843.00

Add for plexiglass: \$204.00

\$3,047.00

#26 LABORATORY

<u>Stabilization Recommendations</u>	<u>Cost</u>						
1. Replace rotted wood roof sheathing and brackets 2239 SF at \$1.86/SF 50 LF at \$3.05/LF	\$4,165.00 153.00						
2. Replace damaged tiles 1120 SF at \$60/SF	67,200.00						
3. Relay existing tiles 1120 SF at \$45/SF	50,400.00						
4. Replace copper gutter 180 LF at \$3.50/LF	630.00						
5. Replace copper downspouts 128 LF at \$4.40/LF	563.00						
6. Replace copper flashing 75 LF at \$5.50/LF	413.00						
7. Close off and seal windows							
<table border="0" style="display: inline-table; vertical-align: top;"> <tr> <td style="padding-right: 20px;">$\frac{1}{2}$" aspenite (1.90/SF)</td> <td style="padding-right: 20px;">$\frac{1}{4}$" plexiglass (3.60/SF)</td> </tr> <tr> <td style="padding-right: 20px;">654 SF 462 LF at \$2.10/LF</td> <td style="padding-right: 20px;">1,243.00 2,354.00</td> </tr> </table>	$\frac{1}{2}$ " aspenite (1.90/SF)	$\frac{1}{4}$ " plexiglass (3.60/SF)	654 SF 462 LF at \$2.10/LF	1,243.00 2,354.00	<table border="0" style="display: inline-table; vertical-align: top;"> <tr> <td style="padding-right: 20px;">1,243.00</td> <td style="padding-right: 20px;">970.00</td> </tr> </table>	1,243.00	970.00
$\frac{1}{2}$ " aspenite (1.90/SF)	$\frac{1}{4}$ " plexiglass (3.60/SF)						
654 SF 462 LF at \$2.10/LF	1,243.00 2,354.00						
1,243.00	970.00						
8. Rake joints and repoint stone 344 LF at \$5/LF	1,720.00						
9. Rake joints and repoint brick 31 SF at \$8/SF	248.00						
<hr/>							
TOTAL	\$127,705.00						
Add for plexiglass: \$1,111.00							
	\$128,816.00						

#27 PASSAGEWAY

<u>Stabilization Recommendations</u>	<u>Cost</u>
1. Remove existing and replace built-up roofing 2897 SF at \$2.50/SF	\$7,243.00
2. Replace rotted wood eaves 1152 LF at \$3.05/LF	3,514.00
3. Replace copper half-round gutters 659 LF at \$3.50/LF	2,307.00
4. Remove existing and replace copper downspouts and cast iron leaders 203 LF at \$4.40/LF 77 LF at \$50/LF	893.00 3,850.00
5. Replace copper flashing 210 LF at \$5.50/LF	1,155.00
6. Close off and seal windows ½" aspenite ½" plexiglass (1.90/SF) (3.60/SF) 10,374 SF 19,711.00 37,346.00 7140 LF at \$2.10	19,711.00 14,994.00
7. Repair spalled concrete (includes cleaning and painting of steel lintels) 178 CF at \$47/CF	8,366.00
8. Rake joints and repoint brick 405 SF at \$8/SF	3,240.00
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TOTAL	\$65,273.00
Add for plexiglass: \$17,635.00	
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	\$82,908.00

Stabilization Recommendations

Cost

1.	Replace damaged and missing roof tiles 50 at \$60/SF			\$3,000.00
2.	Replace rotted wood eaves 540 SF at \$3.05/SF			1,647.00
3.	Replace copper half-round gutters 270 LF at \$3.50/LF			945.00
4.	Replace copper downspouts 120 LF at \$4.40/LF			528.00
5.	Replace copper flashing 98 LF at \$5.50/LF			539.00
6.	Close off and seal windows			
		½" aspenite (1.90/SF)	¼" plexiglass (3.60/SF)	
	1324 SF	2,516.00	4,766.00	2,516.00
	1060 LF at \$2.10/LF			2,226.00
7.	Rake joints and repoint brick 32 SF at \$8/SF			256.00
<hr/>				
	TOTAL			\$11,657.00
	Add for plexiglass:	\$2,250.00		
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				\$13,907.00

#29 CONTAGIOUS DISEASE WARDS 13/14

<u>Stabilization Recommendations</u>	<u>Cost</u>
1. Replace rotted wood eaves 540 SF at \$3.05/SF	\$1,647.00
2. Replace copper half-round gutters 270 LF at \$3.50/LF	945.00
3. Replace copper downspouts 120 LF at \$4.40/LF	528.00
4. Replace copper flashing 98 LF at \$5.50/LF	539.00
5. Close off and seal windows	
1324 SF	2,516.00
1060 LF at \$2.10/LF	2,226.00
$\frac{1}{2}$ " aspenite (1.90/SF)	4,766.00
$\frac{1}{4}$ " plexiglass (3.60/SF)	2,516.00
<hr/>	
TOTAL	\$8,401.00
Add for plexiglass: \$2,250.00	
	\$10,651.00

#30 CONTAGIOUS DISEASE WARDS 15/16

<u>Stabilization Recommendations</u>	<u>Cost</u>
1. Replace rotted wood eaves 540 SF at \$3.05/SF	\$1,647.00
2. Replace copper half-round gutters 270 LF at \$3.50/LF	945.00
3. Replace copper downspouts 120 LF at \$4.40/LF	528.00
4. Replace copper flashing 98 LF at \$5.50/LF	539.00
5. Close off and seal windows	
868 SF	1,649.00
365 LF at \$2.10/LF	767.00
$\frac{1}{2}$ " aspenite (1.90/SF)	1,649.00
$\frac{1}{4}$ " plexiglass (3.60/SF)	3,125.00
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TOTAL	\$6,075.00
Add for plexiglass: \$1,476.00	
	\$7,551.00

#31 CONTAGIOUS DISEASE WARDS 17/18

Stabilization Recommendations

Cost

1.	Replace rotted wood eaves 540 LF at \$3.05/LF			\$1,647.00
2.	Replace copper half-round gutters 270 LF at \$3.50/LF			945.00
3.	Replace copper downspouts 120 LF at \$4.40/LF			528.00
4.	Replace copper flashing 98 LF at \$5.50/LF			539.00
5.	Close off and seal windows			
		½" aspenite (1.90/SF)	¼" plexiglass (3.60/SF)	
	930 SF	1,767.00	3,348.00	1,767.00
	734 LF at \$2.10/LF			1,541.00

TOTAL \$6,967.00

Add for plexiglass: \$1,581.00

\$8,548.00

#32 NURSES QUARTERS

<u>Stabilization Recommendations</u>	<u>Cost</u>
1. Replace rotted wood roof sheathing and relay tile 4541 SF at \$46.86/SF	\$212,791.00
2. Replace damaged and missing roof tiles 390 SF at \$60/SF	23,400.00
3. Replace rotted wood eaves 653 LF at \$3.05/LF	1,992.00
4. Replace copper half-round gutters 326 LF at \$3.50/LF	1,141.00
5. Replace copper downspouts 140 LF at \$4.40/LF	616.00
6. Replace copper vent covers 24 SF at \$11/SF	264.00
7. Repair copper dormers 1321 SF at \$8.50/SF	11,229.00
8. Close off and seal windows	
1710 SF	3,249.00
1562 LF at \$2.10/LF	3,280.00
<div style="display: flex; justify-content: space-around;"> ½" aspenite (1.90/SF) ¼" plexiglass (3.60/SF) </div>	6,156.00
9. Rake joints and repoint stone 507 LF at \$5/LF	2,535.00
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TOTAL	\$260,497.00
Add for plexiglass: \$2,907.00	
	\$263,404.00

#33 KITCHEN

Stabilization Recommendations

Cost

1.	Replace flat area asphalt roof covering 147 SF at \$2.20/SF			\$323.00
2.	Replace copper flashing 33 LF at \$5.50/LF			182.00
3.	Replace copper half-round gutters 74 LF at \$3.50/LF			259.00
4.	Replace copper downspouts 60 LF at \$4.40/LF			264.00
5.	Close off and seal windows			
		½" aspenite (1.90/SF)	¼" plexiglass (3.60/SF)	
	296 SF	562.00	1,066.00	562.00
	211 LF at \$2.10/LF			443.00
6.	Remove pipe and flashing from south elevation and patch stucco			75.00

TOTAL \$2,108.00

Add for plexiglass: \$504.00

\$2,612.00

#34 CONTAGIOUS DISEASE WARDS 19/20

<u>Stabilization Recommendations</u>	<u>Cost</u>						
1. Replace damaged and missing roof tiles 265 SF at \$60/SF	\$15,900.00						
2. Replace rotted wood eaves 540 LF at \$3.05/LF	1,647.00						
3. Replace copper half-round gutters 270 LF at \$3.50/LF	945.00						
4. Replace copper downspouts 120 LF at \$4.40/LF	528.00						
5. Replace copper flashing 98 LF at \$5.50/LF	539.00						
6. Close off and seal windows							
<table border="0" style="display: inline-table;"> <tr> <td style="padding-right: 20px;">$\frac{1}{2}$" aspenite</td> <td style="padding-right: 20px;">$\frac{1}{4}$" plexiglass</td> </tr> <tr> <td style="padding-right: 20px;">(1.90/SF)</td> <td style="padding-right: 20px;">(3.60/SF)</td> </tr> <tr> <td style="padding-right: 20px;">1,649.00</td> <td style="padding-right: 20px;">3,125.00</td> </tr> </table>	$\frac{1}{2}$ " aspenite	$\frac{1}{4}$ " plexiglass	(1.90/SF)	(3.60/SF)	1,649.00	3,125.00	1,649.00
$\frac{1}{2}$ " aspenite	$\frac{1}{4}$ " plexiglass						
(1.90/SF)	(3.60/SF)						
1,649.00	3,125.00						
868 SF	767.00						
365 LF at \$2.10/LF							
7. Rake joints and repoint stone 147 LF at \$5/LF	735.00						
8. Regrade at south to cover brick foundation	50.00						
<hr/>							
TOTAL	\$22,760.00						
Add for plexiglass: \$1,476.00							
	<hr/> \$24,236.00						

#35 CONTAGIOUS DISEASE WARDS 21/22

<u>Stabilization Recommendations</u>	<u>Cost</u>
1. Replace rotted wood eaves 540 LF at \$3.05/LF	\$1,647.00
2. Replace copper half-round gutters 270 LF at \$3.50/LF	945.00
3. Replace copper downspouts 120 LF at \$4.40/LF	528.00
4. Replace copper flashing 98 LF at \$5.50/LF	539.00
5. Close off and seal windows	
	½" aspenite ½" plexiglass
	(1.90/SF) (3.60/SF)
1364 SF	2,592.00 4,910.00
1075 LF at \$2.10/LF	2,258.00
6. Rake joints and repoint brick 32 SF at \$8/SF	256.00
<hr/>	
TOTAL	\$8,765.00
Add for plexiglass: \$2,318.00	
	<hr/>
	\$11,083.00

#36 CONTAGIOUS DISEASE WARDS 23/24

<u>Stabilization Recommendations</u>	<u>Cost</u>
1. Replace damaged and missing roof tiles 100 SF at \$60/SF	\$6,000.00
2. Replace rotted wood eaves 540 LF at \$3.05/LF	1,647.00
3. Replace copper half-round gutters 270 LF at \$3.50/LF	945.00
4. Replace copper downspouts 120 LF at \$4.40/LF	528.00
5. Replace copper flashing 98 LF at \$5.50/LF	539.00
6. Close off and seal windows	
<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;"> $\frac{1}{2}$" aspenite (1.90/SF) 1521 SF 1216 LF at \$2.10/LF </div> <div style="text-align: center;"> $\frac{1}{4}$" plexiglass (3.60/SF) 5,476.00 </div> </div>	2,890.00 2,554.00
7. Rake joints and repoint stone 521 LF at \$5/LF	2,605.00
8. Regrade soil at south to cover foundation	75.00
<hr/>	
TOTAL	\$17,783.00
Add for plexiglass: \$2,586.00	
	<hr/> \$20,369.00

#37 CONTAGIOUS DISEASE WARDS 25/26

<u>Stabilization Recommendations</u>	<u>Cost</u>
1. Replace damaged and missing roof tiles 100 SF at \$60/SF	\$6,000.00
2. Replace rotted wood eaves 540 LF at \$3.05/LF	1,647.00
3. Replace copper half-round gutters 270 LF at \$3.50/LF	945.00
4. Replace copper downspouts 120 LF at \$4.40/LF	528.00
5. Replace copper flashing 98 LF at \$5.50/LF	539.00
6. Clean and paint steel lintels 3 at \$15/each	45.00
7. Close off and seal windows	
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> $\frac{1}{2}$" aspenite (1.90/SF) </div> <div style="text-align: center;"> $\frac{1}{4}$" plexiglass (3.60/SF) </div> </div>	
1324 SF	2,516.00
1059 LF at \$2.10/LF	2,224.00
8. Replace damaged brick 2 SF at \$8/SF	16.00
9. Repair damaged stucco 3 SF at \$3.25/SF	10.00
<hr/>	
TOTAL	\$14,470.00
Add for plexiglass: \$2,250.00	
	<hr/> \$16,720.00

<u>Stabilization Recommendations</u>	<u>Cost</u>				
1. Replace rotted wood roof sheathing and framing 4863 SF at \$1.86/SF 7200 LF at \$3.05/LF	\$9,045.00 21,960.00				
2. Relay existing roof tiles 4863 SF at \$45/SF	218,835.00				
3. Replace damaged and missing roof tiles 324 SF at \$60/SF	19,440.00				
4. Replace wood eaves 675 LF at \$3.05/LF	2,059.00				
5. Replace half-round copper gutters 296 LF at \$3.50/LF	1,036.00				
6. Replace copper downspouts 84 LF at \$4.40/LF	370.00				
7. Replace copper flashing 265 LF at \$5.50/LF	1,458.00				
8. Close off and seal windows					
<table border="0" style="display: inline-table;"> <tr> <td style="padding-right: 20px;">$\frac{1}{2}$" aspenite (1.90/SF)</td> <td style="padding-right: 20px;">$\frac{1}{4}$" plexiglass (3.60/SF)</td> </tr> <tr> <td style="text-align: right;">2,516.00</td> <td style="text-align: right;">4,766.00</td> </tr> </table>	$\frac{1}{2}$ " aspenite (1.90/SF)	$\frac{1}{4}$ " plexiglass (3.60/SF)	2,516.00	4,766.00	2,516.00
$\frac{1}{2}$ " aspenite (1.90/SF)	$\frac{1}{4}$ " plexiglass (3.60/SF)				
2,516.00	4,766.00				
1324 SF	2,224.00				
1059 LF at \$2.10/LF					
9. Clean and paint iron railing 200 SF at \$8.05/SF	1,610.00				
10. Repair damaged stucco 2 SF at \$3.24/SF	7.00				
11. Rake joints and repoint stone 463 LF at \$5/LF	2,315.00				
<hr/>					
TOTAL	\$282,875.00				
Add for plexiglass: \$2,250.00					
	\$285,125.00				

<u>Stabilization Recommendations</u>	<u>Cost</u>
1. Replace rotted wood roof sheathing and relay tiles 3242 SF at \$46.86/SF	\$151,920.00
2. Replace rotted wood eaves 675 LF at \$3.05/LF	2,059.00
3. Replace damaged and missing roof tiles 324 SF at \$60/SF	19,440.00
4. Replace copper half-round gutters 296 LF at \$3.50/LF	1,036.00
5. Replace copper downspouts 70 LF at \$4.40/LF	308.00
6. Replace copper flashing 265 LF at \$5.50/LF	1,458.00
7. Close off and seal windows	
<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;"> $\frac{1}{2}$" aspenite (1.90/SF) 1324 SF 1059 LF at \$2.10/LF </div> <div style="text-align: center;"> $\frac{1}{4}$" plexiglass (3.60/SF) 4,766.00 </div> </div>	<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">2,516.00</div> <div style="text-align: center;">4,766.00</div> </div>
8. Rake joints and repaint brick 62 SF at \$8/SF	496.00
9. Clean and paint iron railing 200 SF at \$8.05/SF	1,610.00
<hr/>	
TOTAL	\$183,067.00
Add for plexiglass: \$2,250.00	
	\$185,317.00

#40 CONTAGIOUS DISEASE WARDS 31/32

<u>Stabilization Recommendations</u>		<u>Cost</u>
1.	Replace rotted wood roof sheathing and relay tiles 973 SF at \$46.86/SF	\$45,595.00
2.	Replace rotted wood eaves 675 SF at \$3.05/SF	2,059.00
3.	Replace damaged and missing roof tiles 324 SF at \$60/SF	19,440.00
4.	Replace copper half-round gutters 296 LF at \$3.50/LF	1,036.00
5.	Replace copper downspouts 84 LF at \$4.40/LF	370.00
6.	Replace copper flashing 265 LF at \$5.50/LF	1,458.00
7.	Close off and seal windows <div style="display: flex; justify-content: space-around; margin-left: 100px;"> <div style="text-align: center;"> $\frac{1}{2}$" aspenite (1.90/SF) 1324 SF 1059 LF at \$2.10/LF </div> <div style="text-align: center;"> $\frac{1}{4}$" plexiglass (3.60/SF) 4,766.00 </div> </div>	2,516.00 2,224.00
8.	Rake joints and repoint stone 276 LF at \$5/LF	1,380.00
9.	Rake joints and repoint brick 62 SF at \$8/SF	496.00
10.	Clean and paint iron railings 200 SF at \$8.05/SF	1,610.00
11.	Regrade soil to cover brick foundation	75.00
12.	Demolish greenhouse approximately 1300 SF at \$2.80/SF	3,640.00
<hr/> TOTAL		\$81,899.00
	Add for plexiglass: \$2,250.00	<hr/> \$84,149.00

#41 STAFF HEADQUARTERS

Stabilization Recommendations

Cost

1.	Replace rotted wood eaves 510 LF at \$3.05/LF			\$1,556.00
2.	Replace damaged and missing roof tiles 658 SF at \$60/SF			39,480.00
3.	Replace copper half-round gutters 273 LF at \$3.50/LF			956.00
4.	Replace copper downspouts 130 LF at \$4.40/LF			572.00
5.	Replace copper flashing 22 LF at \$5.50/LF			121.00
6.	Close off and seal windows			
		1/2" aspenite (1.90/SF)	1/4" plexiglass (3.60/SF)	
	1940 SF	3,686.00	6,984.00	3,686.00
	1552 LF at \$2.10/LF			3,259.00
7.	Clean and paint iron balconies 125 SF at \$8.05/SF			1,006.00

TOTAL \$50,636.00

Add for plexiglass: \$3,298.00

\$53,934.00

VI. Cost Summary

COST SUMMARY

1.	Main Building	not included
2.	Passageway	\$56,389.00
3.	Baggage and Dormitory Building	414,244.00
4.	Kitchen and Laundry Building	554,297.00
5.	Powerhouse	330,964.00
6.	Storage Shed	200.00
7.	Shelter	4,885.00
8.	Greenhouse	20,850.00
9.	Incinerator	10,355.00
10.	Bakery and Carpentry Building	51,971.00
11.	Shed	346.00
12.	Passageway	266,444.00
13.	Passageway	67,080.00
14.	Ferry Building	30,115.00
15.	Immigration Building	84,012.00
16.	Passageway	320,383.00
17.	Laundry	38,670.00
18.	Psychiatric Ward	39,745.00
19.	Hospital #1	244,397.00
20.	Administration Building	396,445.00
21.	Hospital #2	361,381.00
22.	Recreation Hall	48,691.00
23.	Shelter	4,554.00
24.	Powerhouse and Storage	18,839.00

25.	Animal House	3,047.00
26.	Laboratory	128,816.00
27.	Passageway	82,908.00
28.	Contagious Disease Wards 11/12	13,907.00
29.	Contagious Disease Wards 13/14	10,651.00
30.	Contagious Disease Wards 15/16	7,551.00
31.	Contagious Disease Wards 17/18	8,548.00
32.	Nurses Quarters	263,404.00
33.	Kitchen	2,612.00
34.	Contagious Disease Wards 19/20	24,236.00
35.	Contagious Disease Wards 21/22	11,083.00
36.	Contagious Disease Wards 23/24	20,369.00
37.	Contagious Disease Wards 25/26	16,720.00
39.	Contagious Disease Wards 27/28	285,125.00
39.	Contagious Disease Wards 29/30	185,317.00
40.	Contagious Disease Wards 31/32	84,149.00
41.	Staff Headquarters	53,934.00

TOTAL

\$4,567,634.00

VII. Suggestions for Further Study

VII. RECOMMENDATIONS FOR FURTHER STUDY

Of primary importance is the development of a definitive plan for the future use of Ellis Island and its structures. Study should be undertaken to determine feasible use alternatives based upon evaluation of the island as a whole in terms of accessibility, services, climate and sociological needs and a building-by-building evaluation weighing architectural and historical value against rehabilitation, restoration and maintenance costs and potential for reuse.

Until such a plan is developed, it must be assumed that a viable use will be found for all of the structures and that all of the structures at present must be stabilized and maintained. Based upon this assumption, further study is required to determine the structural conditions and stability of those structures which have suffered the greatest damage. Guidelines for detailed investigation of the Powerhouse, Kitchen and Laundry, and the Hospital Buildings have been prepared by the Office of Irwin G. Cantor, P.C., and are included in Section IV of this report. In addition to these areas of examination, study should be made of the structural condition of all of the passageways which connect the buildings, of the Baggage and Dormitory Building (#3), the Bakery and Carpentry Building (#10), the Immigration Building (#15), the Recreation Hall (#22), the Laboratory (#26), the Nurses Quarters (#32), the Contagious Disease Wards (#38, 39, 40) and the Staff Headquarters (#41).

Appendices

APPENDIX A

COPPER TOWER ROOF REMOVAL

Gerald Karr, Project Architect, National Park Service

The four tower domes of the Main Building were originally covered with ornamental copper cladding comprised of machine-formed and hand-beaten sections attached to a wooden framework over the brick domes and base. Photographs dating as early as c. 1924 show damage to the copper section. An inspection of the towers in 1977 revealed that the original workmanship was inferior in several ways: many of the seams joining preassembled copper components were incompletely soldered, rivets were poorly placed and spaced too widely, nailing to the wood framework was not frequent enough to adequately secure the copper, and many seams were left open, permitting water to penetrate the dome surface. The substandard workmanship encouraged the rapid deterioration of the domes long before the facility fell into general disrepair.

By 1977, much of the copper had been blown off the towers, exposing the brick domes to the weather and creating a hazard to visitors and staff below. Funds were not available at that time for the restoration of the domes. It was therefore decided that the remaining copper cladding should be removed, and the domes covered with a waterproof coating until their complete restoration could be undertaken.

In the fall of 1977, the work of copper removal began as part of a contract to repair the roof and storm drainage systems. All work was carried out under the supervision of National Park Service project supervisors and periodic inspection by the project architect. Copper was removed in the largest possible sections, braced to prevent deformation in handling, and lowered to the roof, where each part was painted with a catalogued number keyed to a disassembly diagram. The parts were then lowered to the ground and placed in storage rooms in the east wing of

the Main Building.

The remaining copper dome parts do not make even one complete reconstructed dome. However, because the four sides of each dome are identical, it is possible to use the salvaged parts to make a prototype or model upon which replacement domes could be based.

After the copper removal, the brick domes and pendentives were inspected for structural integrity. Although mortar was missing in several places, and radial cracks were found near the apex of the southeast and northeast domes, their general condition, and that of the pendentives, which support part of the domes, was judged to be stable. Reinforcement is advisable when they are restored.

Waterproofing the masonry was accomplished by applying stucco on furred wire lath to the entire dome above the pediment (the volume covered originally by copper) and then coating the stucco with an elastomeric membrane. The completed assembly is a temporary solution, designed for a useful life of approximately five years. The performance of the coating and stucco after that time is uncertain.

The following sketches indicate those sections of copper which were removed, catalogued and stored during the roofing repair contract.

Contract No. CX-1600-7-9010
 Rehabilitation of Roofing, Main Building
 Statue of Liberty National Monument
 Ellis Island

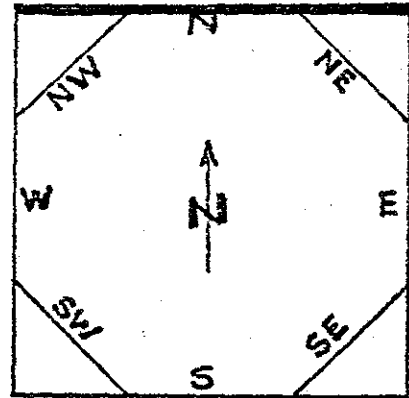
TI.F.01

TI.F.02

TI.F.03

TI.F.04

TI.F.05
 TI.F.06



TI.NE.C1

TI.NW.C1

TI.NE.C2

TI.NW.C2

TI.N.C1

Patches

TI.N.C2

TI.NW.C3

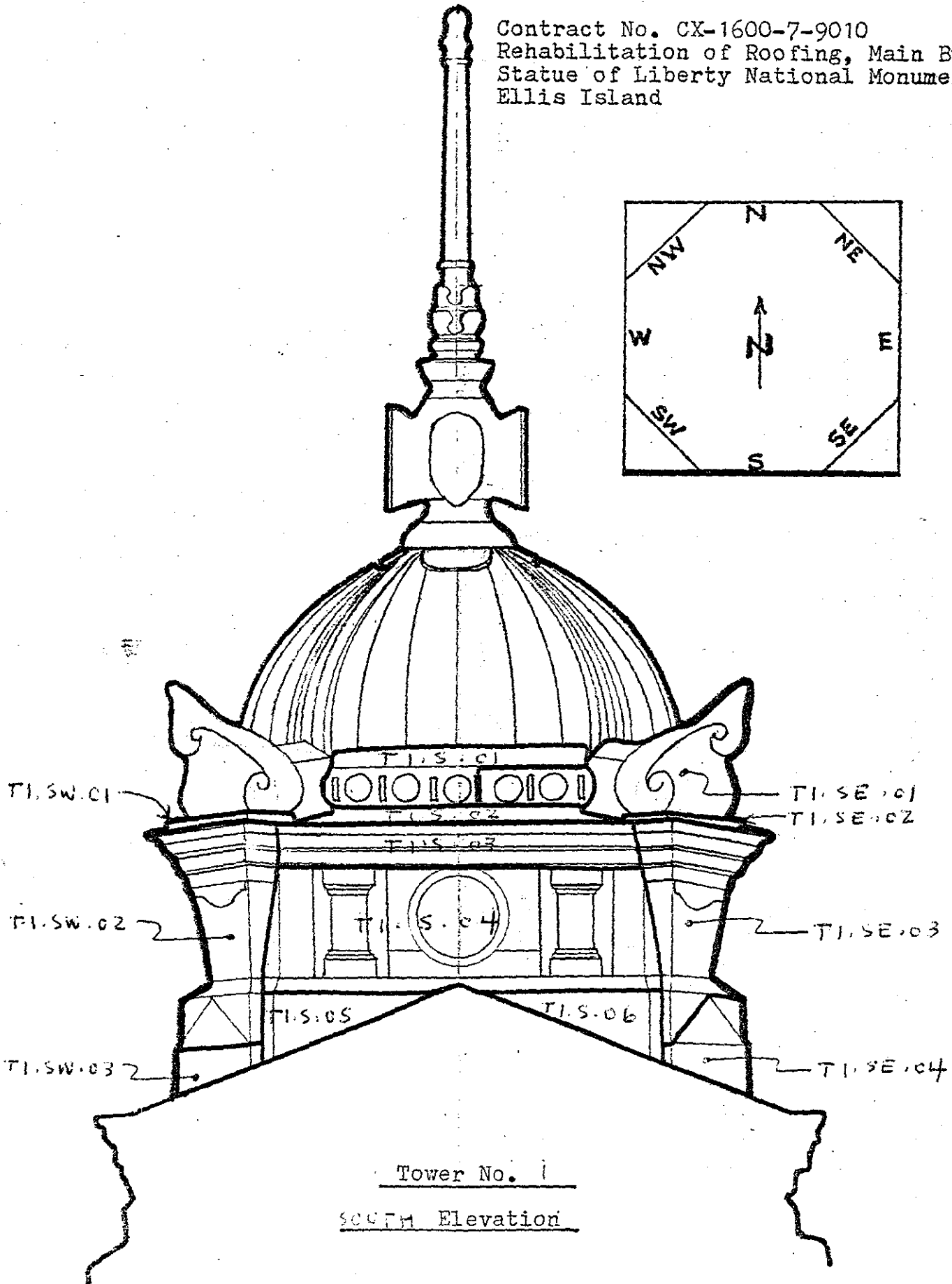
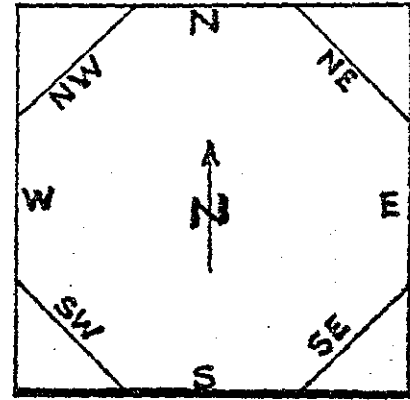
TI.NE.C3

TI.NW.C4

Tower No. 1

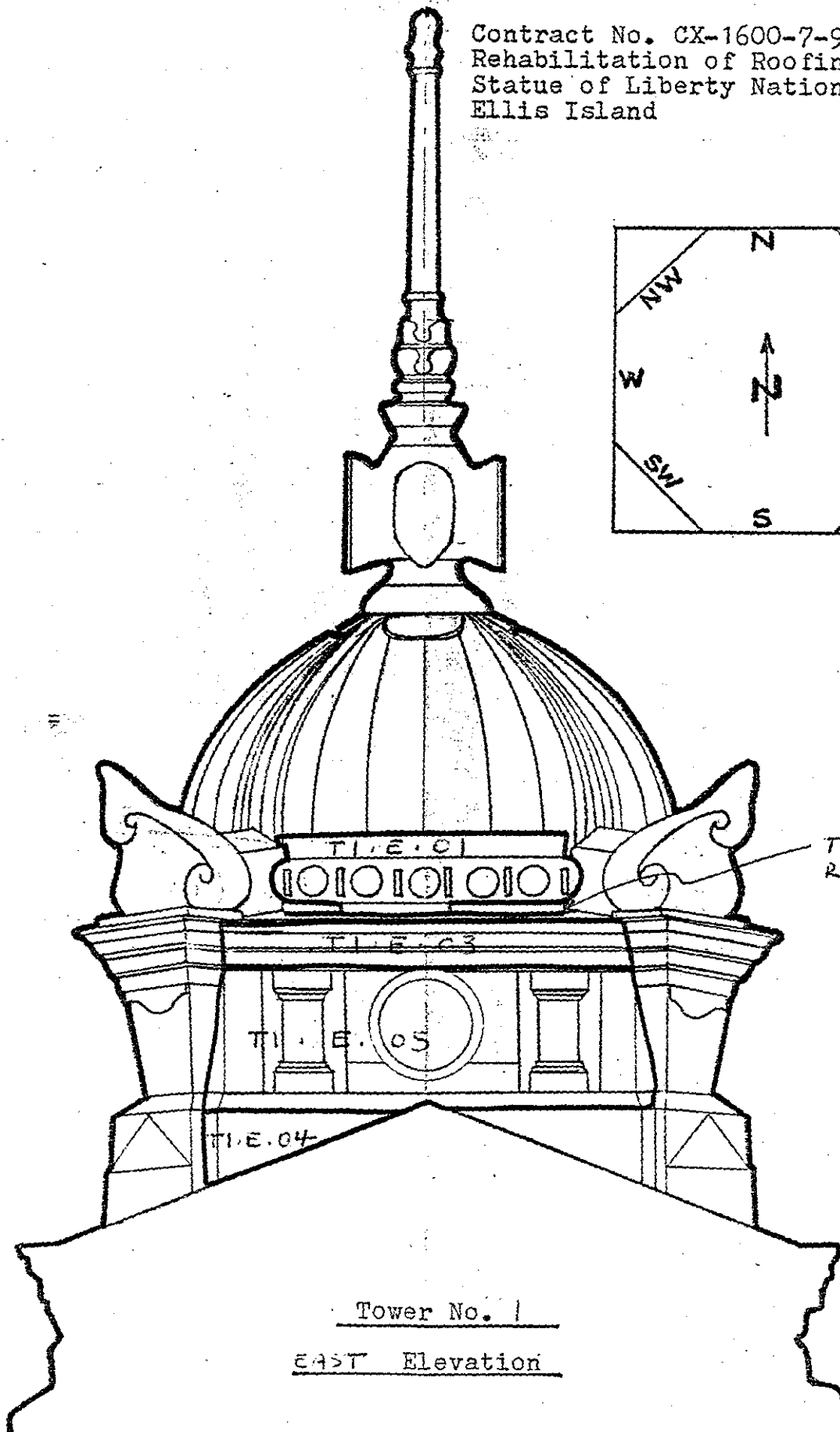
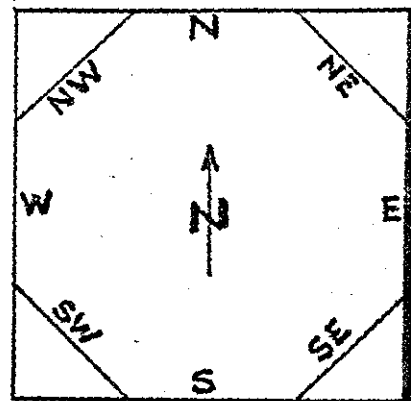
NORTH Elevation

Contract No. CX-1600-7-9010
Rehabilitation of Roofing, Main Building
Statue of Liberty National Monument
Ellis Island



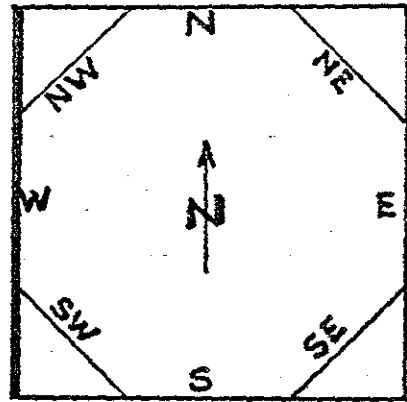
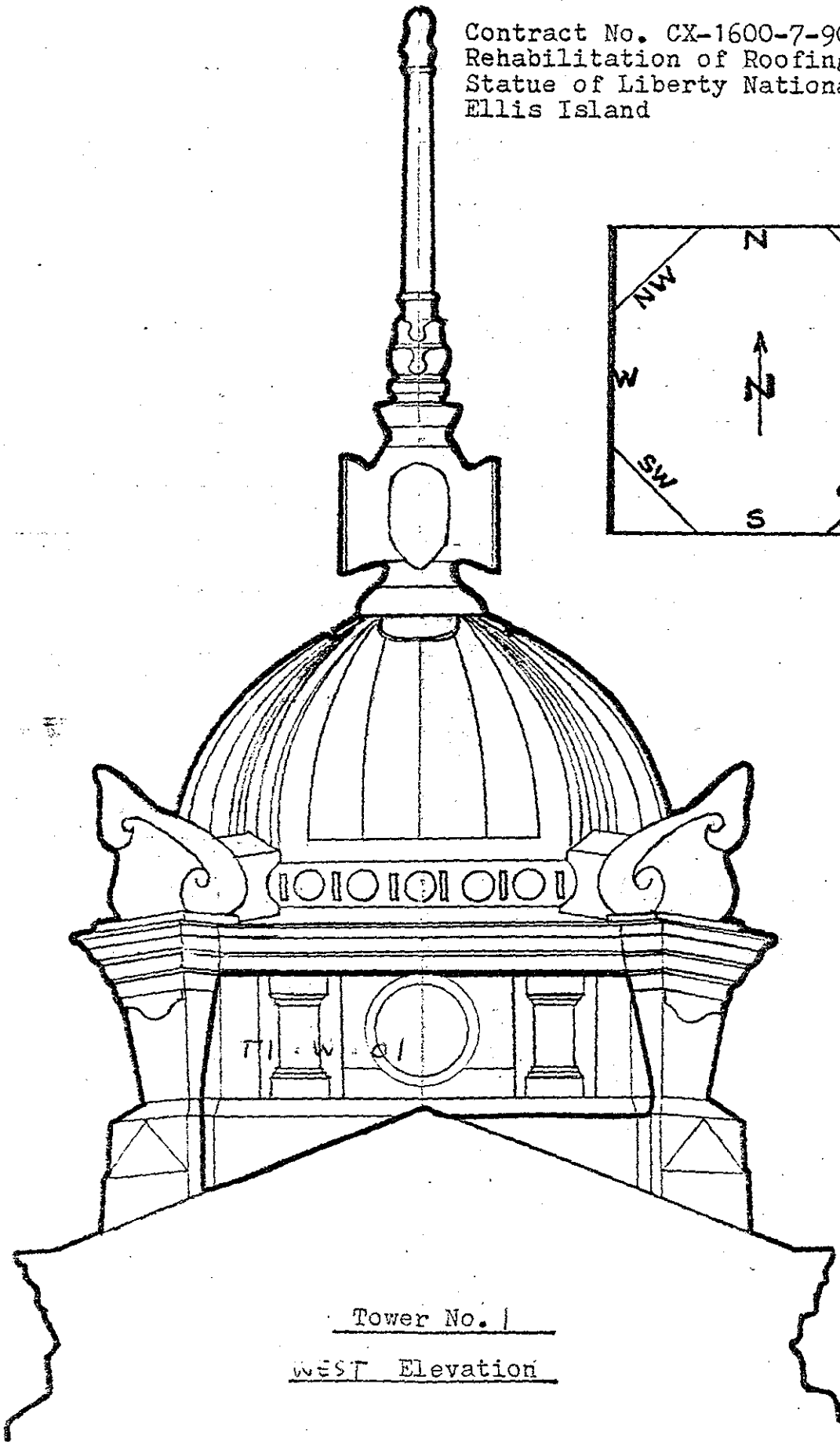
Tower No. 1
SOUTH Elevation

Contract No. CX-1600-7-9010
Rehabilitation of Roofing, Main Building
Statue of Liberty National Monument
Ellis Island



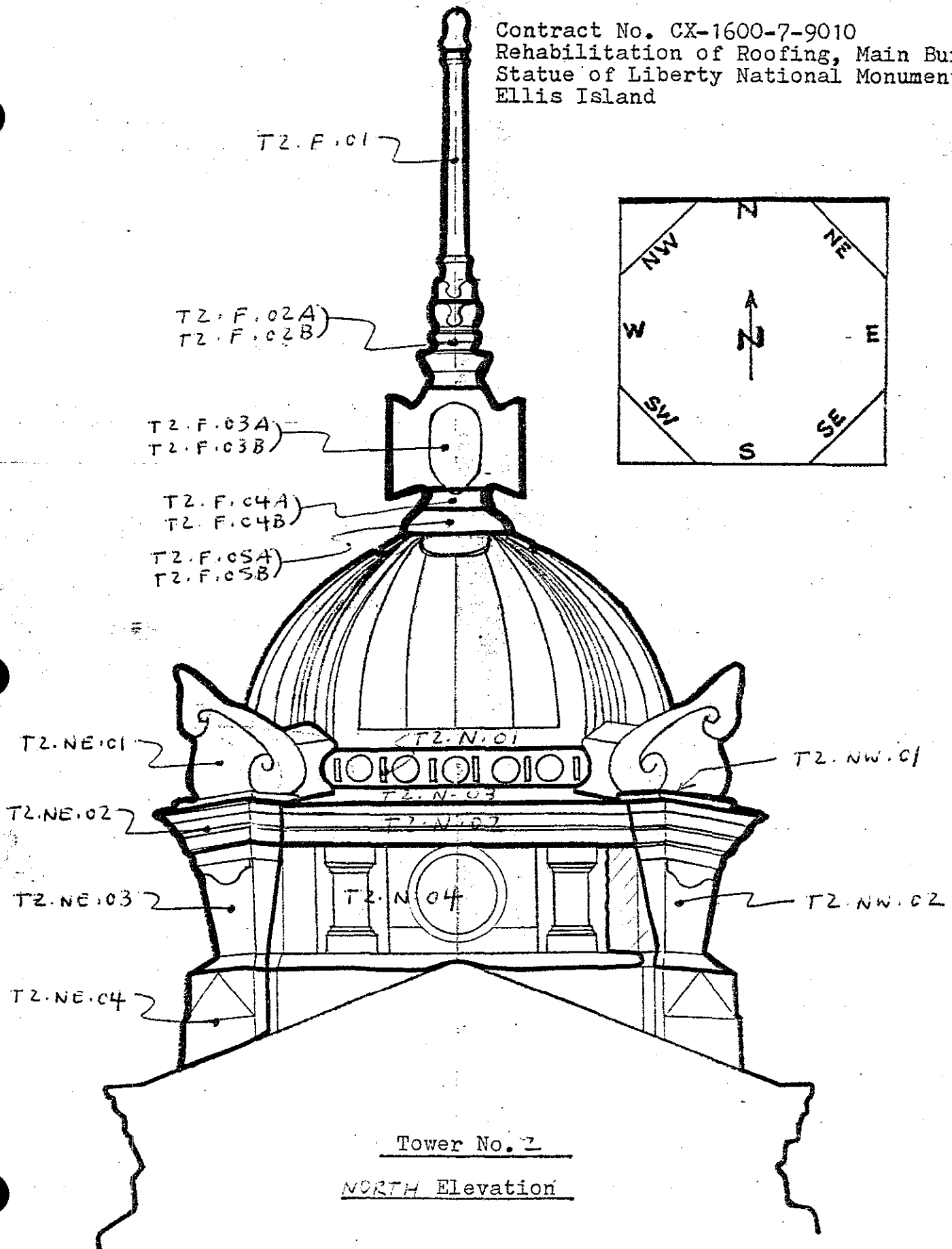
Tower No. 1
East Elevation

Contract No. CX-1600-7-9010
Rehabilitation of Roofing, Main Building
Statue of Liberty National Monument
Ellis Island



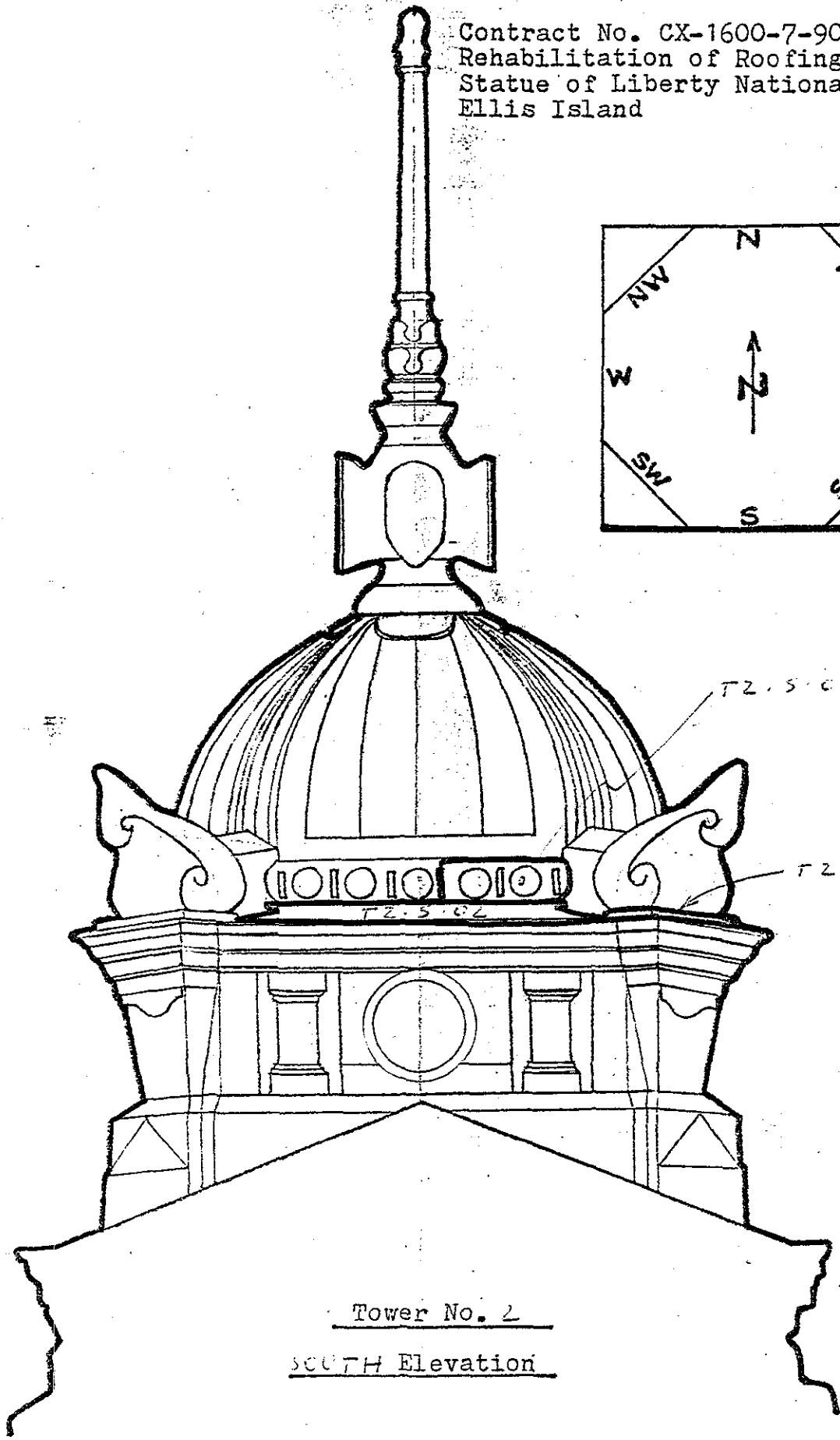
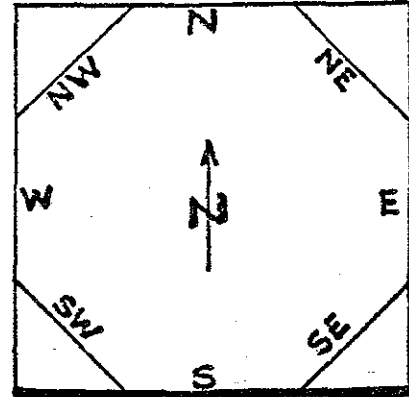
Tower No. 1
WEST Elevation

Contract No. CX-1600-7-9010
 Rehabilitation of Roofing, Main Building
 Statue of Liberty National Monument
 Ellis Island



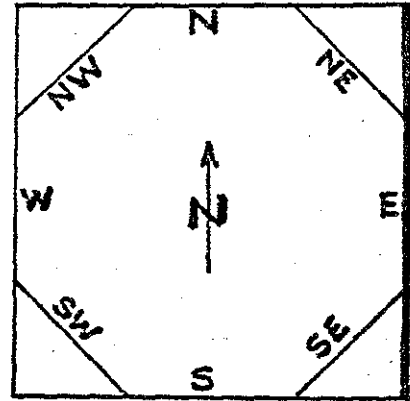
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NORTH Elevation

Contract No. CX-1600-7-9010
Rehabilitation of Roofing, Main Building
Statue of Liberty National Monument
Ellis Island



Tower No. 2
SOUTH Elevation

Contract No. CX-1600-7-9010
Rehabilitation of Roofing, Main Building
Statue of Liberty National Monument
Ellis Island



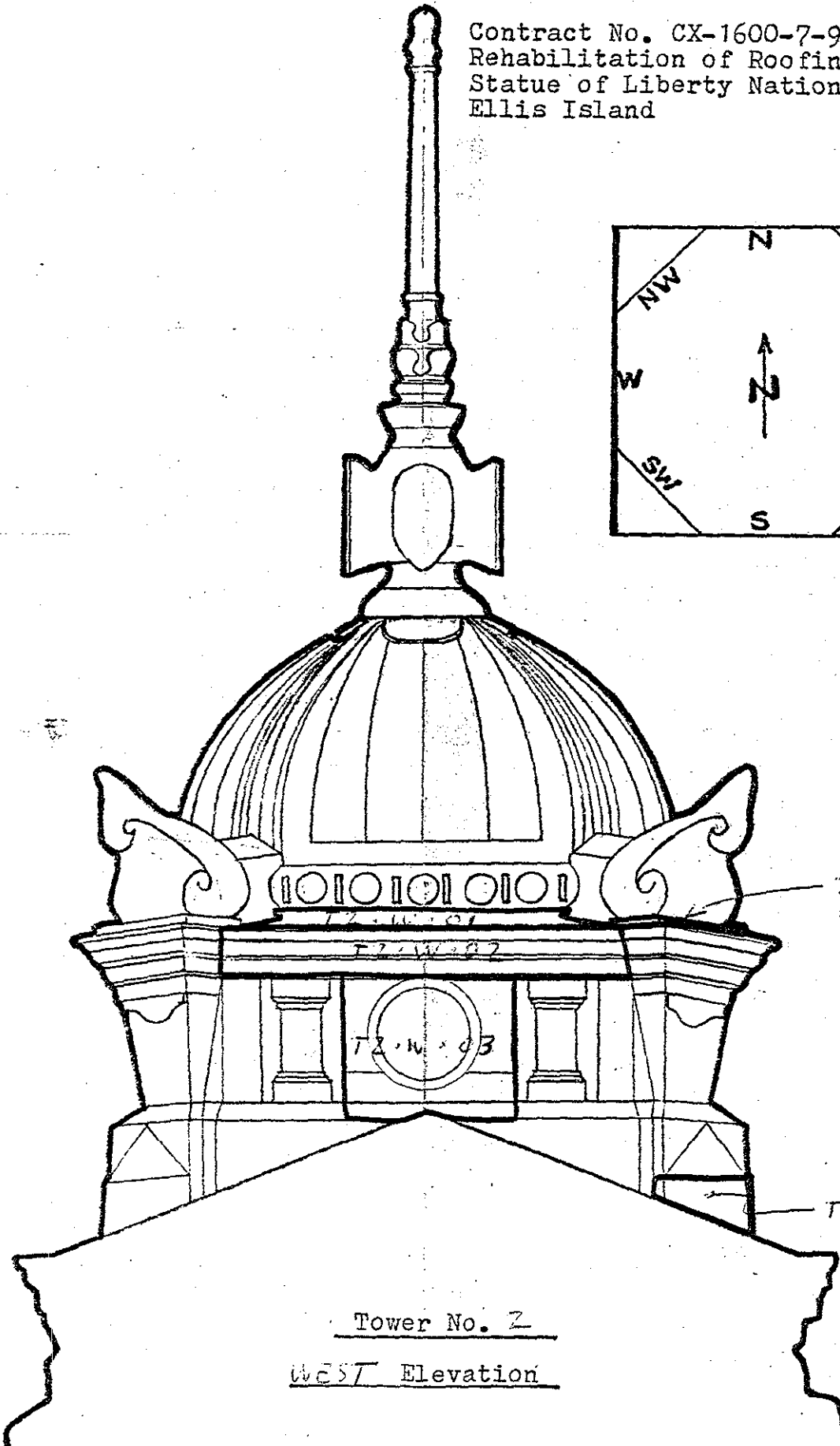
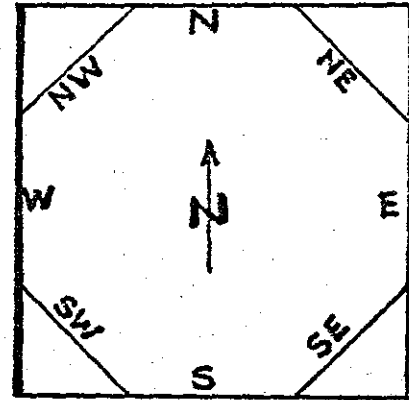
T2-SE-01

T2-E-01

T2-E-02

Tower No. 2
EAST Elevation

Contract No. CX-1600-7-9010
Rehabilitation of Roofing, Main Building
Statue of Liberty National Monument
Ellis Island

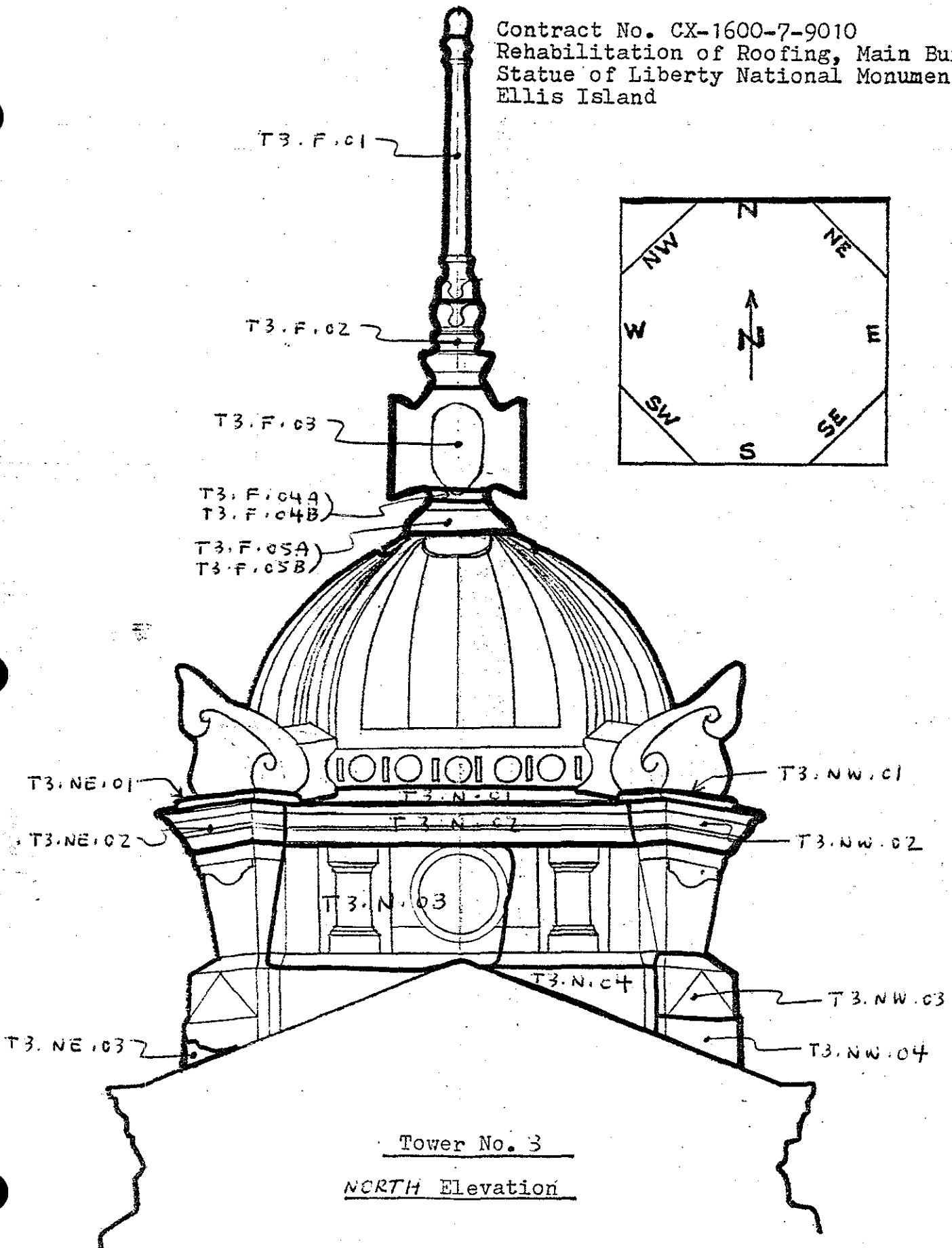


T2-SW-01
ROOF PANEL

T2-SW-02

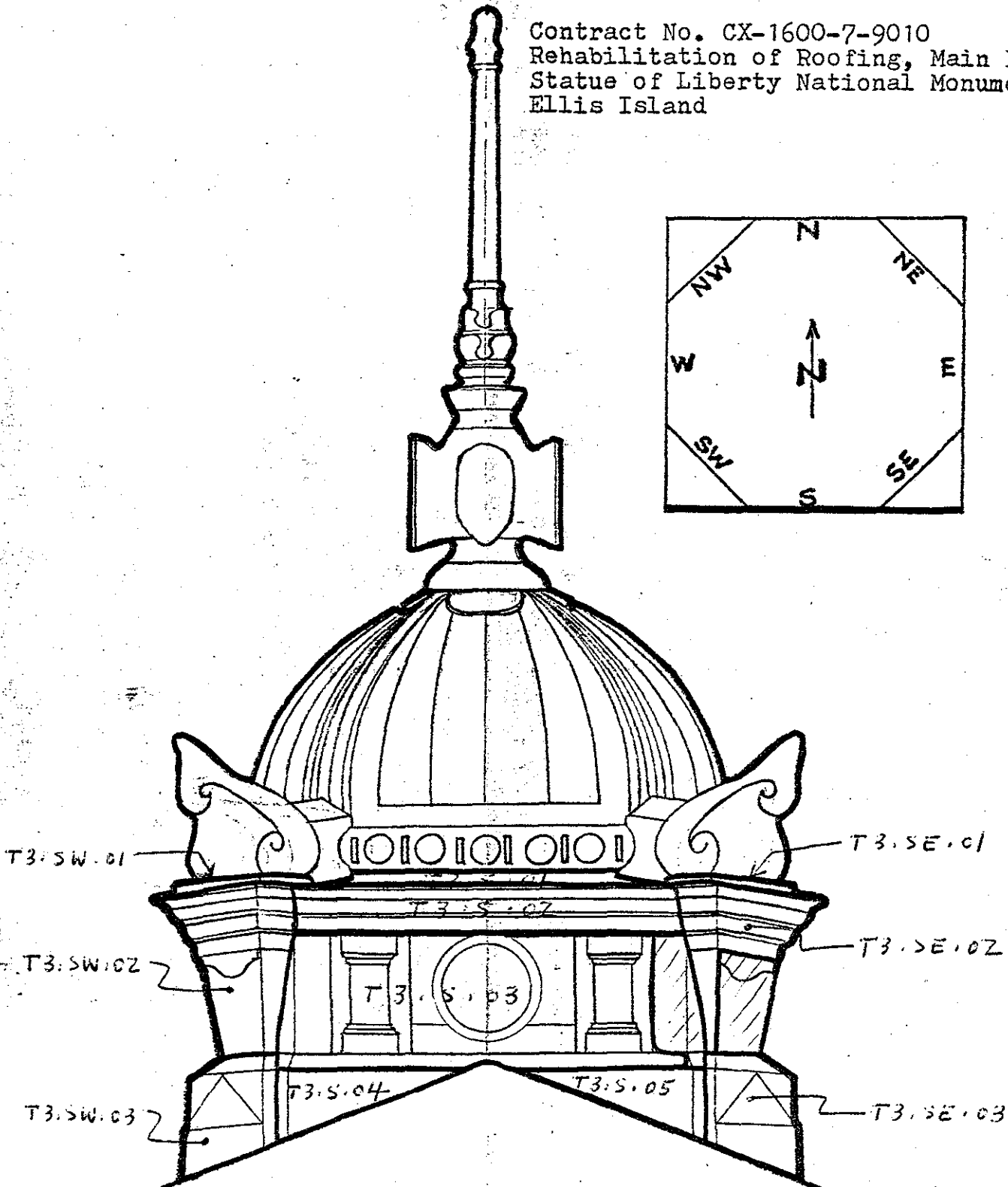
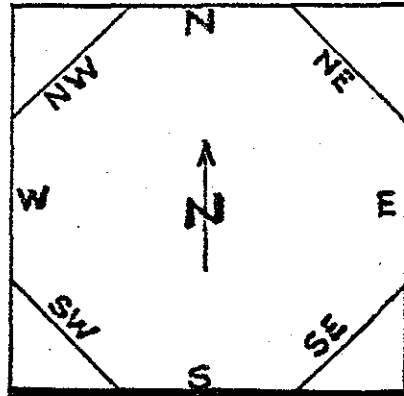
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WEST Elevation

Contract No. CX-1600-7-9010
 Rehabilitation of Roofing, Main Building
 Statue of Liberty National Monument
 Ellis Island



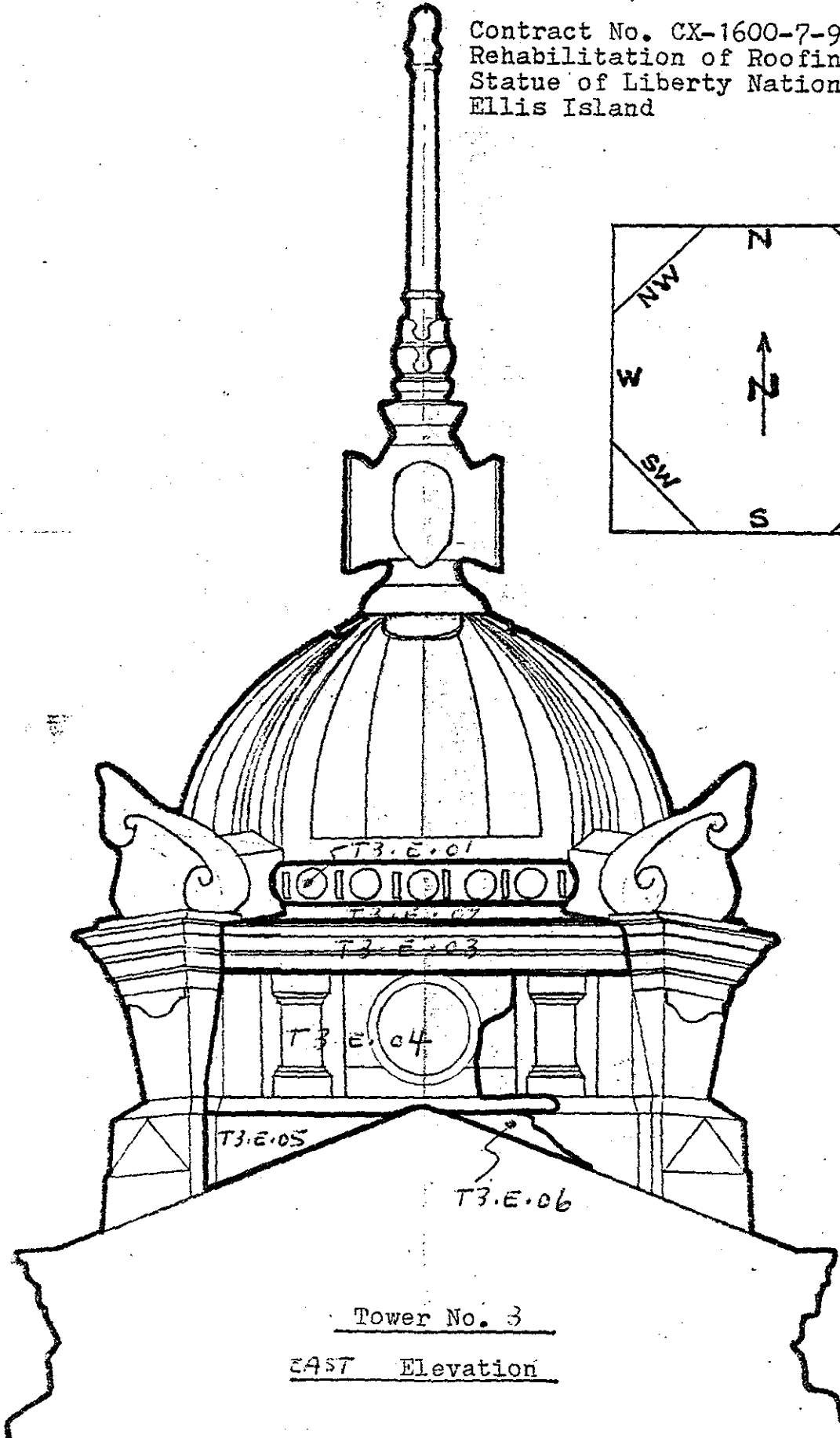
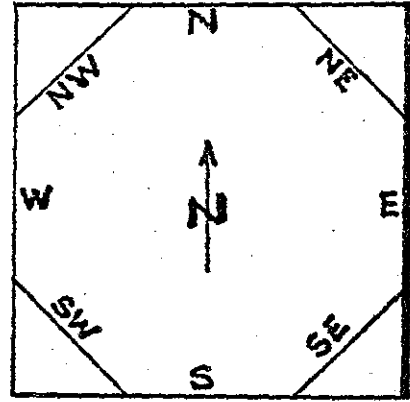
Tower No. 3
NORTH Elevation

Contract No. CX-1600-7-9010
Rehabilitation of Roofing, Main Building
Statue of Liberty National Monument
Ellis Island



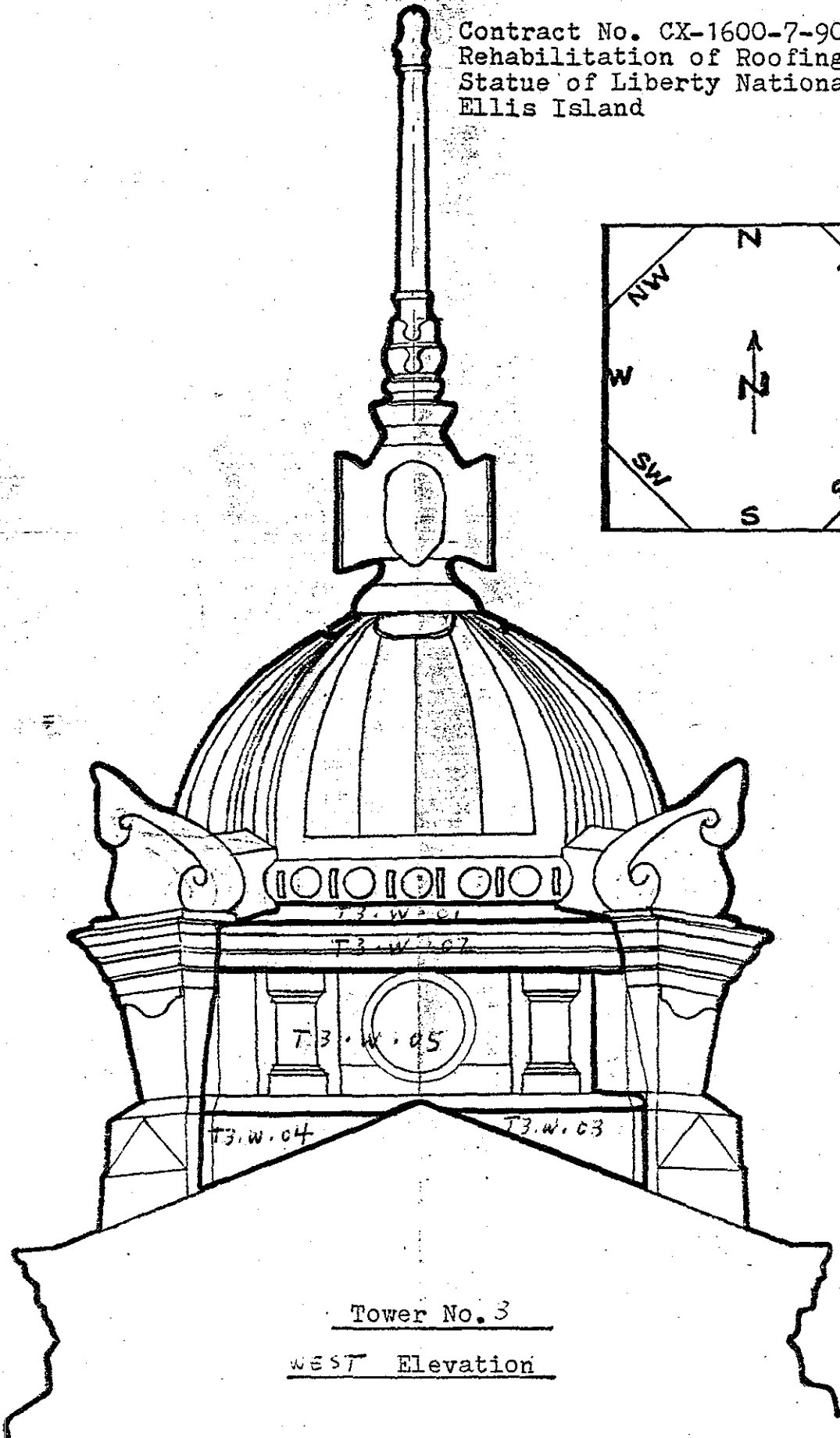
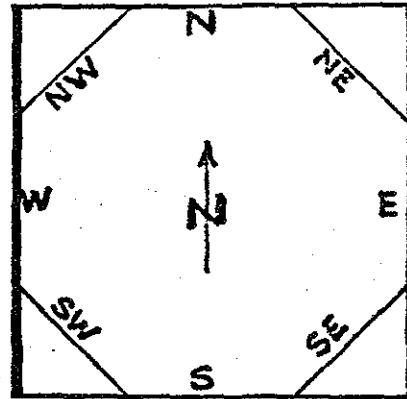
Tower No. 3
SOUTH Elevation

Contract No. CX-1600-7-9010
Rehabilitation of Roofing, Main Building
Statue of Liberty National Monument
Ellis Island



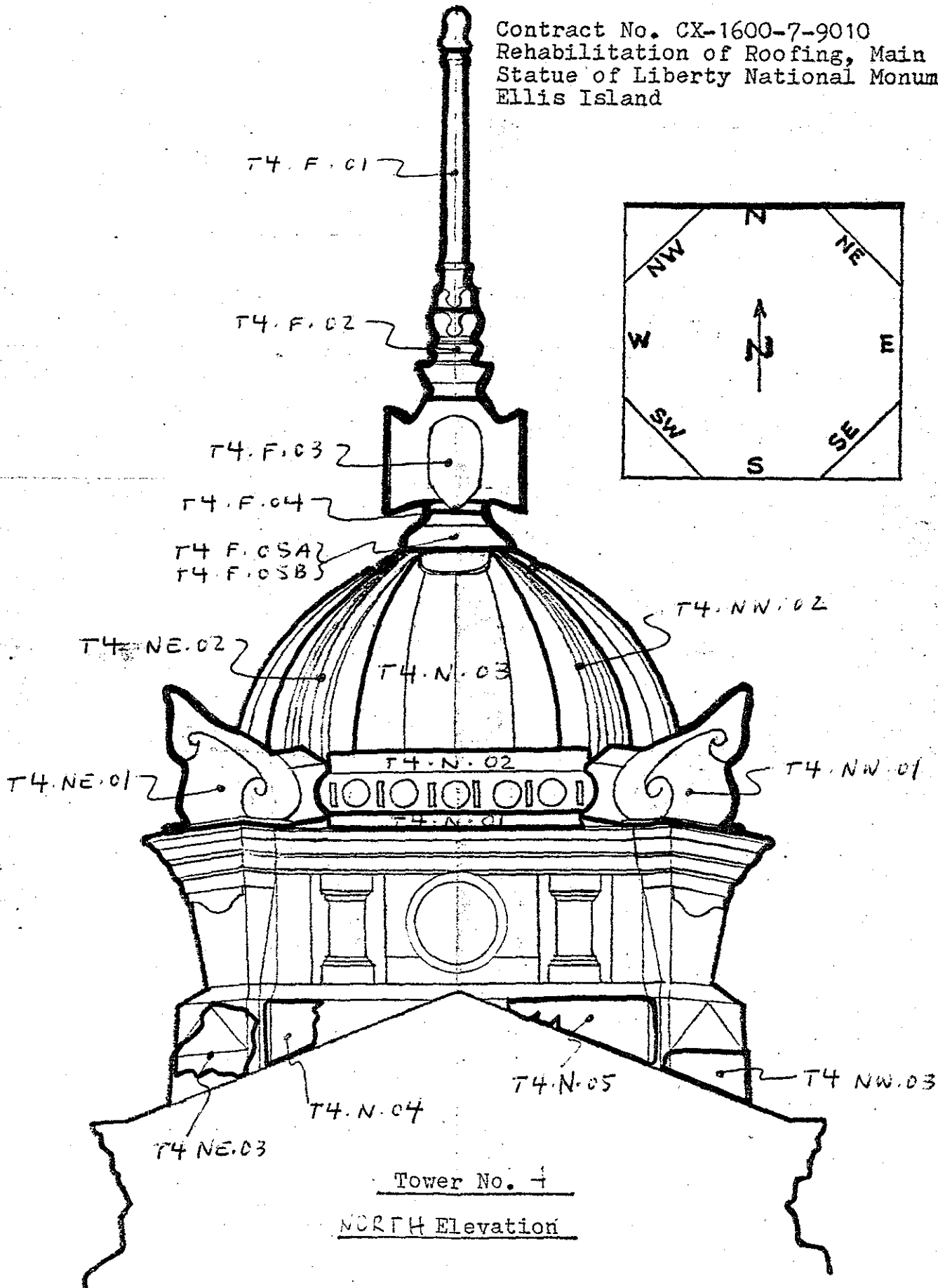
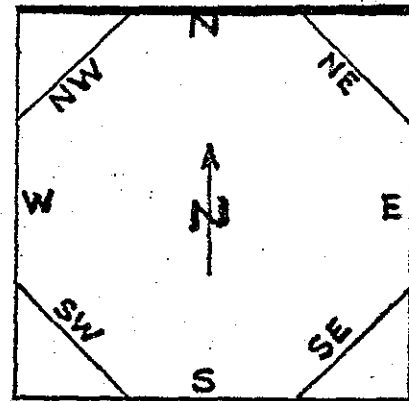
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EAST Elevation

Contract No. CX-1600-7-9010
Rehabilitation of Roofing, Main Building
Statue of Liberty National Monument
Ellis Island



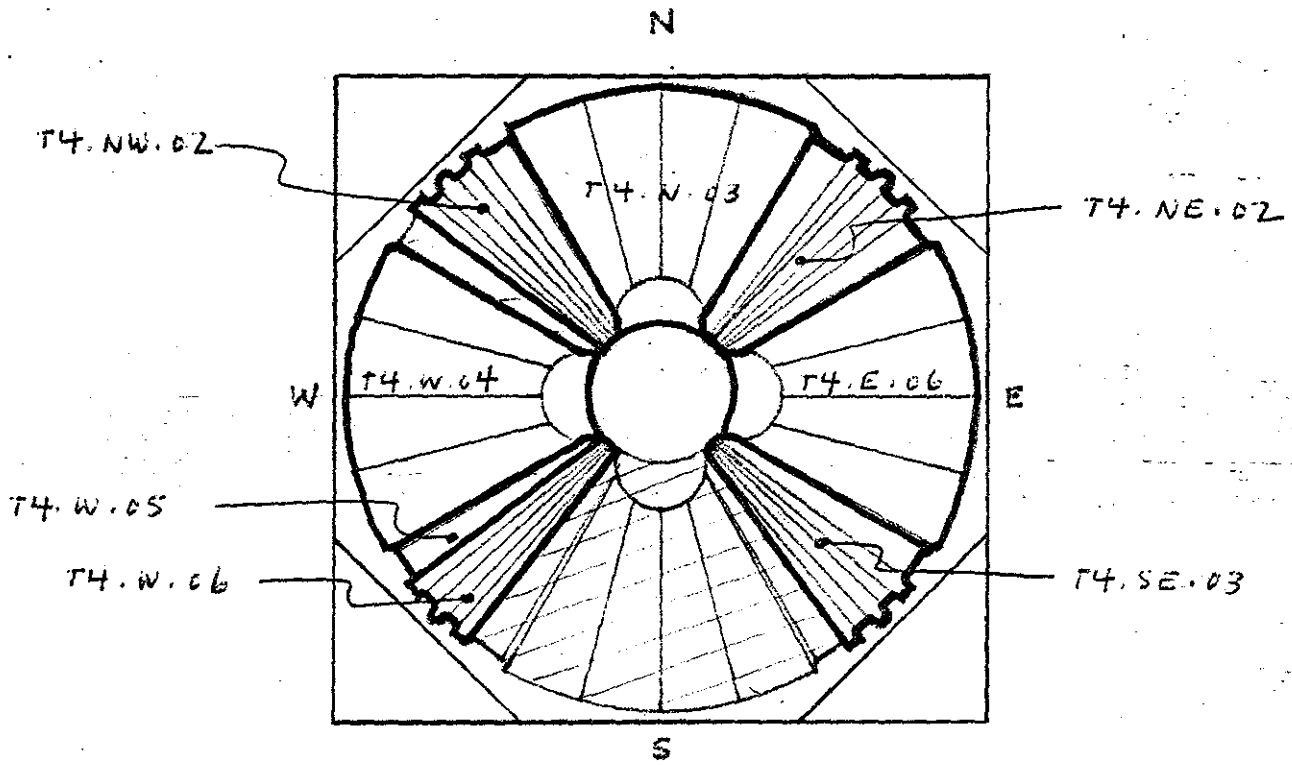
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WEST Elevation

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 Rehabilitation of Roofing, Main Building
 Statue of Liberty National Monument
 Ellis Island



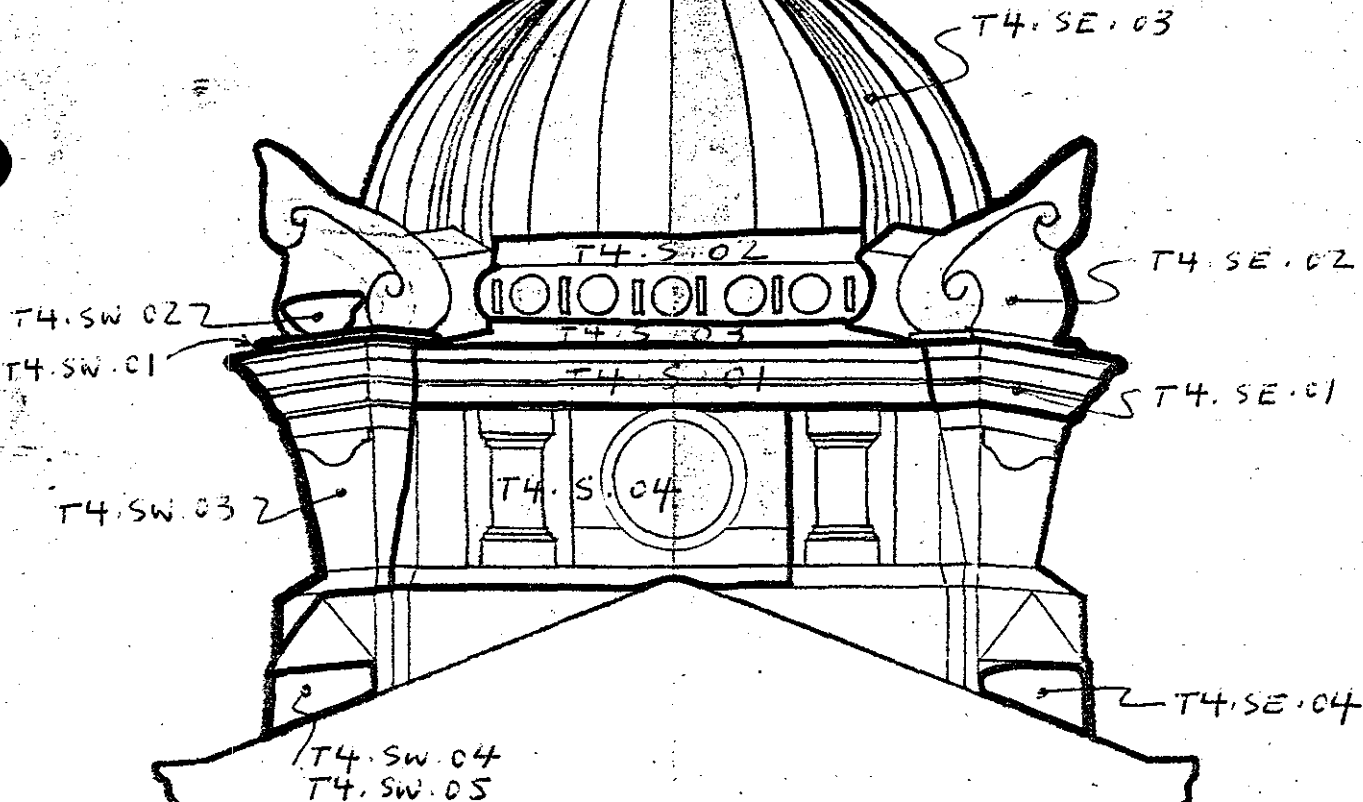
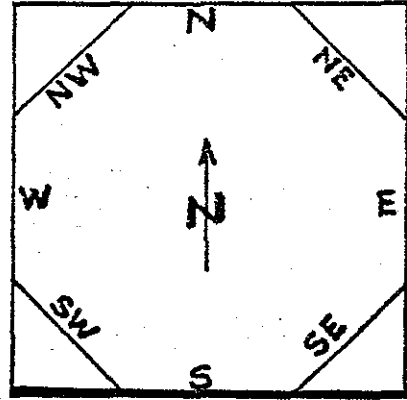
Tower No. 4
NORTH Elevation

Date: DEC. 9, 1977



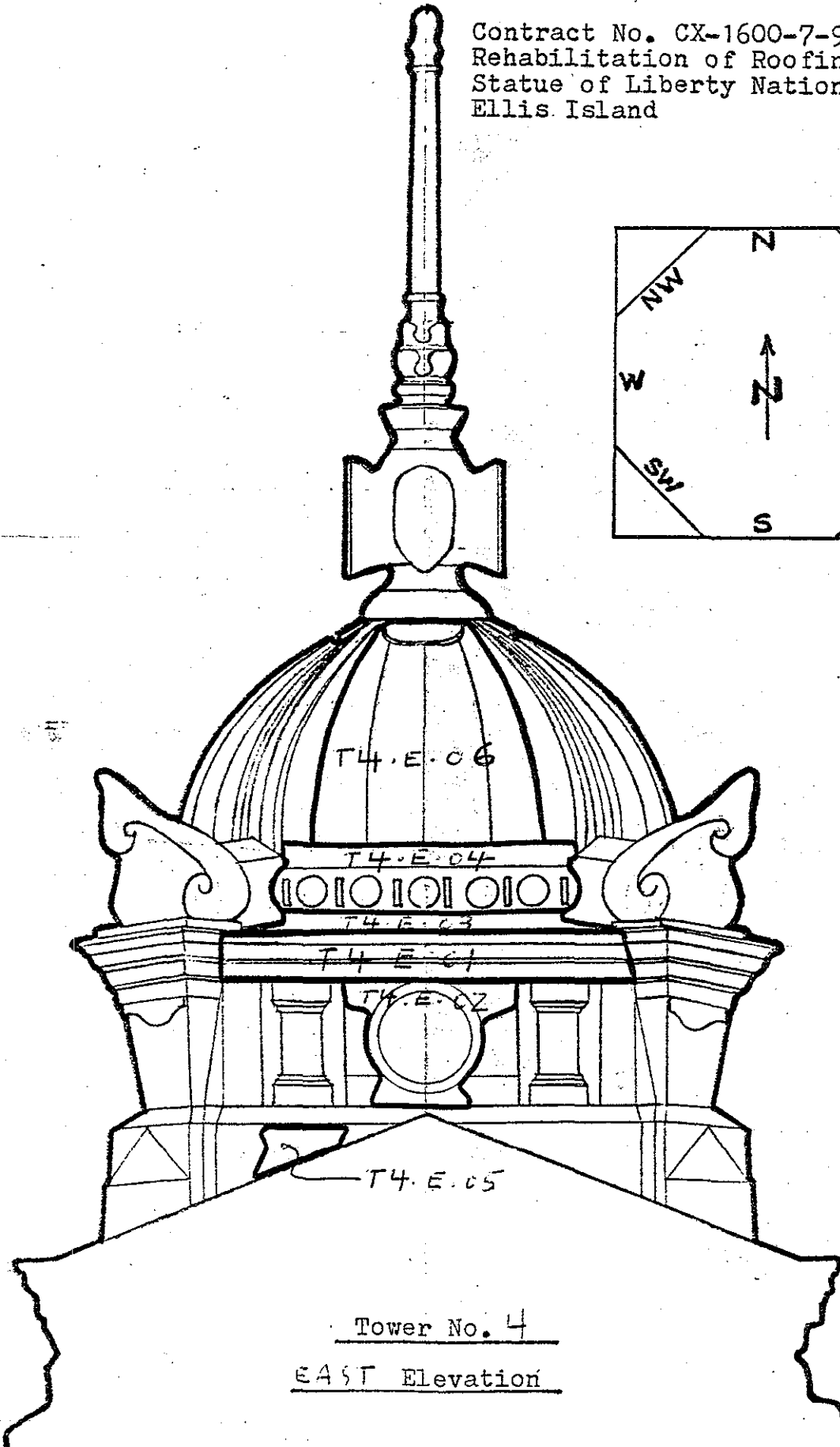
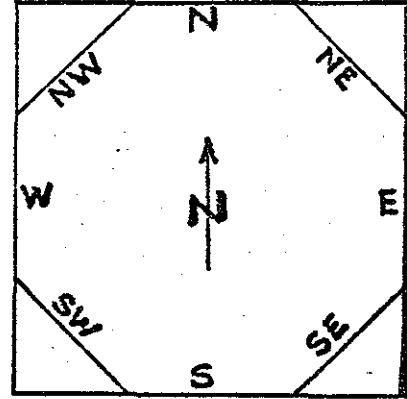
TOP VIEW OF COPPER SECTIONS
COVERING THE DOME OF TOWER #11
NOT TO SCALE

Contract No. CX-1600-7-9010
Rehabilitation of Roofing, Main Building
Statue of Liberty National Monument
Ellis Island

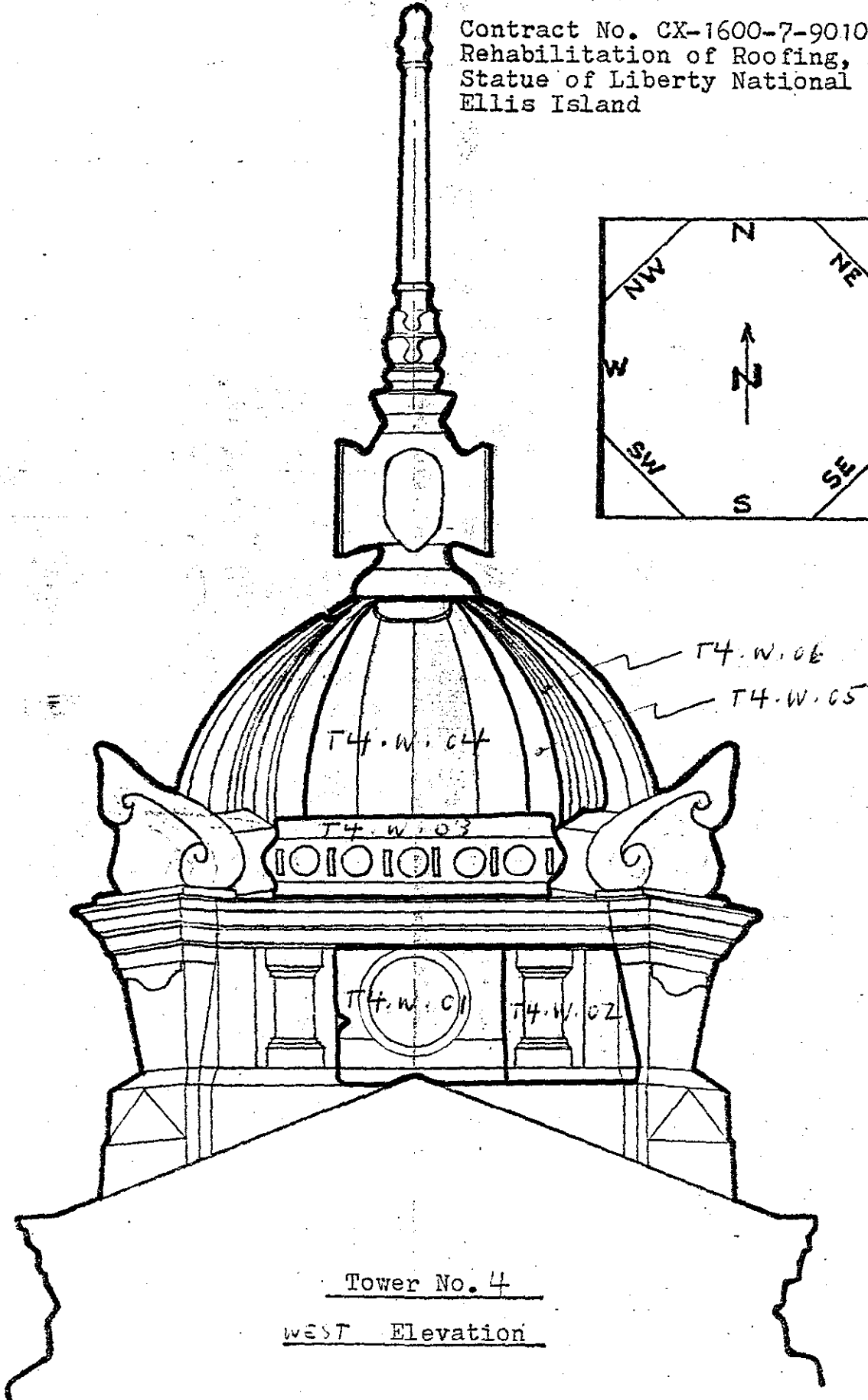
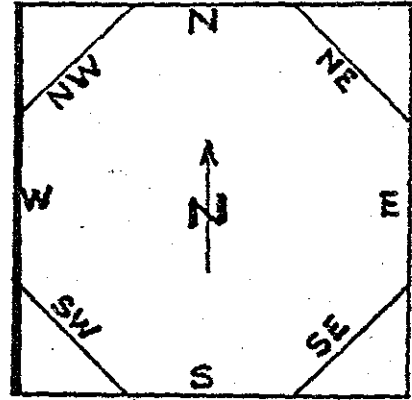


Tower No. 4
SOUTH Elevation

Contract No. CX-1600-7-9010
Rehabilitation of Roofing, Main Building
Statue of Liberty National Monument
Ellis Island



Contract No. CX-1600-7-9010
Rehabilitation of Roofing, Main Building
Statue of Liberty National Monument
Ellis Island



Tower No. 4
WEST Elevation

APPENDIX B

TREASURY DEPARTMENT

Office of the Supervising Architect,

Washington, D.C. September 9, 1897.

PROGRAMME of a competition for the selection of a design for buildings for the United States Immigrant Station, ELLIS ISLAND, NEW YORK HARBOR, in compliance with the Act approved February 20, 1893, and under the regulations approved by the Secretary of the Treasury July 3, 1897, copies of which are hereto attached.

The members of the commission to pass upon the merits of the designs submitted and the architects invited to compete will be designated in the letters of invitation.

The site for the buildings is an island of about twenty acres in New York Harbor, situated about one-half mile from the New Jersey shore. The island is low-lying, nearly level, rising three to six feet above high water, bearing no trees or shrubbery.

The buildings included in this competition are two in number, that is, a main building with annexes, and a hospital building, to be located approximately as indicated on the sketch plan I hereto attached. The first floors of all these buildings should be on the same level, that is, six inches above the level of the plank walk which remains in front of the former buildings. This plank walk is two feet six inches above ordinary high water.

The cost of the two buildings and annexes, including plumbing and gas piping, electric conduits and wiring, heating and ventilating apparatus, within the buildings, and the architect's fee, must not exceed five hundred and seventy thousand dollars, (\$570,000.00).

Steam, electric current and water will be brought to the buildings by the Government, and the plants, piping, sewers, wiring, etc., outside the buildings are not to be included in the estimates submitted under this competition.

Competitors will estimate for pile foundations, piles to be cut off eight feet below first floor line, and to average twenty feet penetration below first floor line.

The buildings are required, by the provisions of the Act of Congress, approved July 19, 1897, to be of "fireproof materials, and the large building for the reception and examination of immigrants, and the building used as a dormitory, are to have such openings from the main floor, so many doors swinging outward, and to be surrounded by spacious outside balconies made of iron with iron staircases leading therefrom, as to afford speedy exit in case of fire."

The buildings are to be of brick with stone trimmings. The finish is to exhibit as small an amount of combustible material as possible, and it is to be plain but substantial and durable.

It is thought that space approximating closely to that indicated on sketch plans II and VII inclusive hereto attached can be obtained within the amount hereinbefore stated.

The demands for convenient administration being peculiar, the tentative plans suggest an arrangement of the various offices, etc. in relation to each other, but each competitor is requested and desired to make such variations in the arrangement of interiors or in the grouping of the main building and annexes as his judgement dictates.

The principal front of the Main Building and Annexes is to be toward the southwest.

Each design submitted shall consist of the following drawings only, and shall be enclosed in a portfolio or between stiff cardboards:

Block plan, to the scale of the plan of site hereto attached;

Plan of each of the floors of each building and annex, one-eighth scale;

TWO elevations of the Main Building (II), one-eighth scale.

TWO elevations of one annex, one-eighth scale.

TWO elevations of the Hospital (VII), one-eighth scale.

Cross section of Main Building showing annexes in elevation of section as preferred, one-eighth scale.

Birdseye view of the Main Building and annexes taken from the south, one-eighth scale.

All the drawings shall be on Whatman paper 24" x 36", unmounted. The plans and elevations to be plain line drawings; elevations to have accurately cast shadows in India ink wash at 45° but no scenic effects; the sectional portions and openings to be in light gray tint; the birdseye view to be finished simply in sepia or ink wash.

Each drawing shall bear the title, U.S. Immigrant Station, Ellis Island, "and only such other words or figures as may be necessary to properly designate drawings, their parts or scales; all words or figures to as may be necessary to properly designate drawings, their parts or scales; all words or figures to be in simple lettering, and not in script or writing.

The description to be a typewritten statement on plain white legal cap paper with estimate as per form hereto attached, (paragraph 7 of the Regulations).

Should more detailed information be found necessary by any competitor, request may be made by letter to this office; and any answer made or additional information given will be simultaneously communicated by mail to each competitor; but no such information will be given after October 21st, 1897.

The designs must be delivered to the Secretary of the Treasury not later than 2:00 P.M., Thursday November 4th, 1897.

Acting Supervising Architect

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