HISTORIC STRUCTURES REPORT

PART II (PORTION)

ARCHITECTURAL DATA SECTION

ON

RESTORATION OF BASEMENT KITCHEN

ENLISTED MENS' BARRACKS "E"

Fort McHenry National Monument

Prepared by
Norman M. Souder
Architect
July 1966

for

Philadelphia Planning and Service Center, Design and Construction, National Park Service, Division of Architecture

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A P P R O V A L S H E E T

RECOMMENDED

_____ Date_____
Superintendent

H Reese Smith _____ Date 9-28-66
Chief, Design and Construction

_____ Date_____
Regional Director, Northeast Region

APPROVED

_____ Date_____
Director

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I. INTRODUCTION

The Basement Kitchen in Barracks "E" at Fort McHenry which had been filled-in, circa 1837, was re-discovered by Architect Lee H. Nelson in 1958, at which time the area in front of the fireplace was excavated, recorded, and again filled-in.

Former Superintendent McKenzie prepared a PCP for the restoration of the Kitchen. The removal of the fill was accomplished by contract in the early spring months of 1966 under the supervision of Regional Archeologist John L. Cotter.

It is probable that the high water conditions, which exist at the present time, were the cause of the abandonment and filling-in in 1837. The problem of the standing water has been dealt with in the Archeological section of this report.

The cost of eliminating the ever-present water in the area will exceed the amount of the present PCP for the restoration of the Kitchen. An administrative decision will be required on the advisability of proceeding with the restoration of the Kitchen under the present conditions.

It should be noted that the cost of the elimination of the water problem as shown in the estimate is for the drainage of the Kitchen alone. An ideal solution would be the complete drainage of the area within the fort. An analysis of the water condition should be made by an engineer for the entire fort area in order to determine the best means of draining the area.

This Part II (Portion) of the Architectural Data Section of the Historic Structures Report was preceeded by a comprehensive report by Architect Lee H. Nelson entitled, "Historic American Buildings Survey, an Architectural Study of Fort McHenry, issued in January, 1961.

Norman M. Souder
Architect
July 1966

II. EXISTING CONDITIONS

A. Floor

The Kitchen which measures 17'-11-1/2" by 29'-6" originally had a brick floor. A portion of the brick flooring which remains on the left of the fireplace and extends into the hearth area indicates a flat running pattern. Another floor brick remains in place on the northwest wall. There appears to have been no differentiation between the bricks in the flooring and the hearth. The old bricks measure 4" x 8-1/2" x 2-1/8". It seems obvious that the old flooring was removed when the room was filled-in in 1837.

The archeological exploration which took place concurrently with the removal of the earth fill in the room took the excavation to the lower level of the former brick floor. The account of the encounter with the standing water is included in the archeologist's report. The water problem remains. A few inches of water remains covering the mud even when the sump pump is in operation. The pit in the south corner of the room appears to be an old one, but it is unable to carry away the water by gravity. A sump pump must be connected at all times to keep the water under control.

B. Walls

The walls are constructed of exposed rubble field stone and were whitewashed. There are three layers of whitewash indicating that the room was not used a great deal before it was filled-in. This is borne out by the small amount of burning evidence on the rear wall of the fireplace.

The masonry appears to be in good condition. A concrete channel is attached to the upper part of the two long walls for the piping to the first floor heating convectors. In addition to the pipe channels there is a 1'-6" x 3'-10" concrete enclosure in the west corner which houses the condensate pump. The concrete enclosures, which are in front of the window openings are late, dating from the installation of the present heating system, and in order to complete the architectural investigation and affect a restoration they will have to be removed.

The greater thickness of the stone foundation wall results in a ledge at the juncture of the brick walls of the building and the top of the stone masonry. The ledge at the side walls provided bearing for the first floor joists in the original building.

C. Ceiling

As a result of the brick first floor resting on earth fill since 1837 there is no ceiling or evidence of a ceiling remaining. A few joist pockets remain in the northwest wall suggesting a wood floor similar to that on the second floor. The joist pockets appear to have provided ridgity to the joists which rested on the stone ledge.

The ceiling of the Basement Kitchen would most probably have consisted of the exposed joists, summer beam and the underside of the first floor wood flooring.

The distance between the marks on the first floor, indicating the floor line, and the basement flooring are 7'-4" apart. Allowing approximately ten inches for the first floor construction, the clear

height of the Basement Kitchen would have been 6'-6". The center at the location of the summer beam the clear height would have been only 5'-9".

D. Windows and Door

The two window openings on the northwest wall and the two on the southwest wall have been filled-in with brick. The window area wells on the exterior are also closed in but the walls of the window wells remain in place.

All traces of the original frames and sash have disappeared. The heads of the former windows are presently concealed behind the concrete pipe channels. To make an accurate measurement of the former window heights the concrete will have to be removed. The widths of the rough openings vary from 3'-9-1/2" to 3'-10-1/2".

The whitewash on the stone walls stops short of the stone window jambs. The sharp line on the bare stone measures three inches. It is evident that the windows were wood encased with a 4-1/2" or 5" trim. The trim would probably have been the typical single architrave type with an ovolo moulding on the outer edge.

More research will be necessary to determine the sash and frame types.

The door to the exterior extends in height from the floor to the indication of a former lintel on the exterior which is five brick courses above the stone foundation walls.

The whitewashed walls return on the stone door jambs. It appears that the former door frame was a solid plank frame without interior trim.

E. Fireplace

The brick fireplace and chimney breast are exposed and covered with whitewash. The fireplace structure projects 17-1/2" into the room from approximately the center of the southwest wall. The fireplace opening is spanned by a brick arch which in turn is supported on a curved wrought iron band. The opening is 54-1/2" wide and 43" high to the spring of the arch. A tapering smoke throat is centered on the back wall with the flue slanting off to the right.

A pair of wrought iron crane pintles are still in place on the left jamb. The crane, however, is missing.

As has been noted the back wall of the fireplace shows very little use. The hearth bricks are in almost original condition, also showing little use.

The chimney breast shows no indication of a mantle shelf or surround. The bricks on the breast wall are smooth and unmarked by nails or pegs for hanging utensils or fireplace equipment.

An opening, assumed to be for the insertion of a stove pipe, is located near the top of the basement chimney breast. The hole is in a location which would lead into the chimney flue.

III. RECOMMENDATIONS

In order that the Kitchen may be restored remedial work will be required to eliminate the present water problem. The recommendations listed below include the drainage and waterproofing necessary to prevent water damage to the room after restoration.

A. Provide new drainage lines from the floor area to the outer perimeter of the fort's earthworks.

B. Excavate the earth below the floor to a sufficient depth to permit the installation of perforated drainage tile over a curshed stone base.

C. The installation of a membrane waterproofing and concrete slab, over which the brick flooring will be installed.

D. Waterproof exterior of foundation walls by pressure method to eliminate ground water seepage.

E. Reopen window wells and exterior basement stair well.

F. Install new first floor framing and wood flooring.

G. Restore room to period appearance by the restoration of period door, trim and window sash.

H. Redesign existing heating system to provide new lines to heat both basement and first floor rooms, including the removal of the concrete pipe channels and relocation of the condensate pump pit.

I. Extend present electrical service to provide for adequate lighting and exhibits on first floor and basement.

IV. COST ESTIMATE

A. ELIMINATION OF WATER CONDITION

Excavation, stone, drainage tile for new drain.....	$ 6,500.00
Excavation, drainage and concreting of basement floor area.....	2,320.00
Waterproofing of foundation walls.....	2,000.00
Sub total	$10,820.00

B. RESTORATION OF BASEMENT KITCHEN

Masonry Work:		
Labor.....	$3,000.00	
Material.....	850.00	$ 3,850.00
Carpentry:		
Labor.....	2,640.00	
Material.....	1,350.00	3,990.00
Painting:		
Labor.....	600.00	
Material.....	60.00	660.00
Heating Alterations:		
Labor.....	2,500.00	
Material.....	1,000.00	3,500.00
Electrical Additions:		
Labor.....	1,200.00	
Material.....	950.00	2,150.00
	Total	$14,150.00
	GRAND TOTAL	$24,970.00

ILLUSTRATION NO. 1

This photograph was taken during the excavation of the Basement Kitchen. The recess in the southeast wall is one of the windows which was bricked-in when the basement was originally filled, circa 1837. The concrete ledge on top of the stone foundation wall was a channel for the supply and return pipes to the convectors. The clearly defined line above the ledge is the former first floor line.

Photo: William A. Harris
February 1966

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ILLUSTRATION NO. 2

The southwest end of the Kitchen after excavation revealing the fireplace. Note the muddy condition of the floor area. The brick fireplace walls and the stone walls of the basement were covered with three layers of whitewash which is not clearly visible in this photograph due to the mud clinging to the wall surfaces. A sump pit is located at the corner of the room (at the white hose) to keep the water level under control.

Photo: William A. Harris
February 1966

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URA-FLO

ILLUSTRATION NO. 3

This photograph shows the bricked-in doorway at the northeast end of the room. Note the standing water in front of the wall. The stairs on the exterior of the building which led from this level to the grade level have also been filled-in and covered by a brick walkway.

Photo: William A. Harris
February 1966

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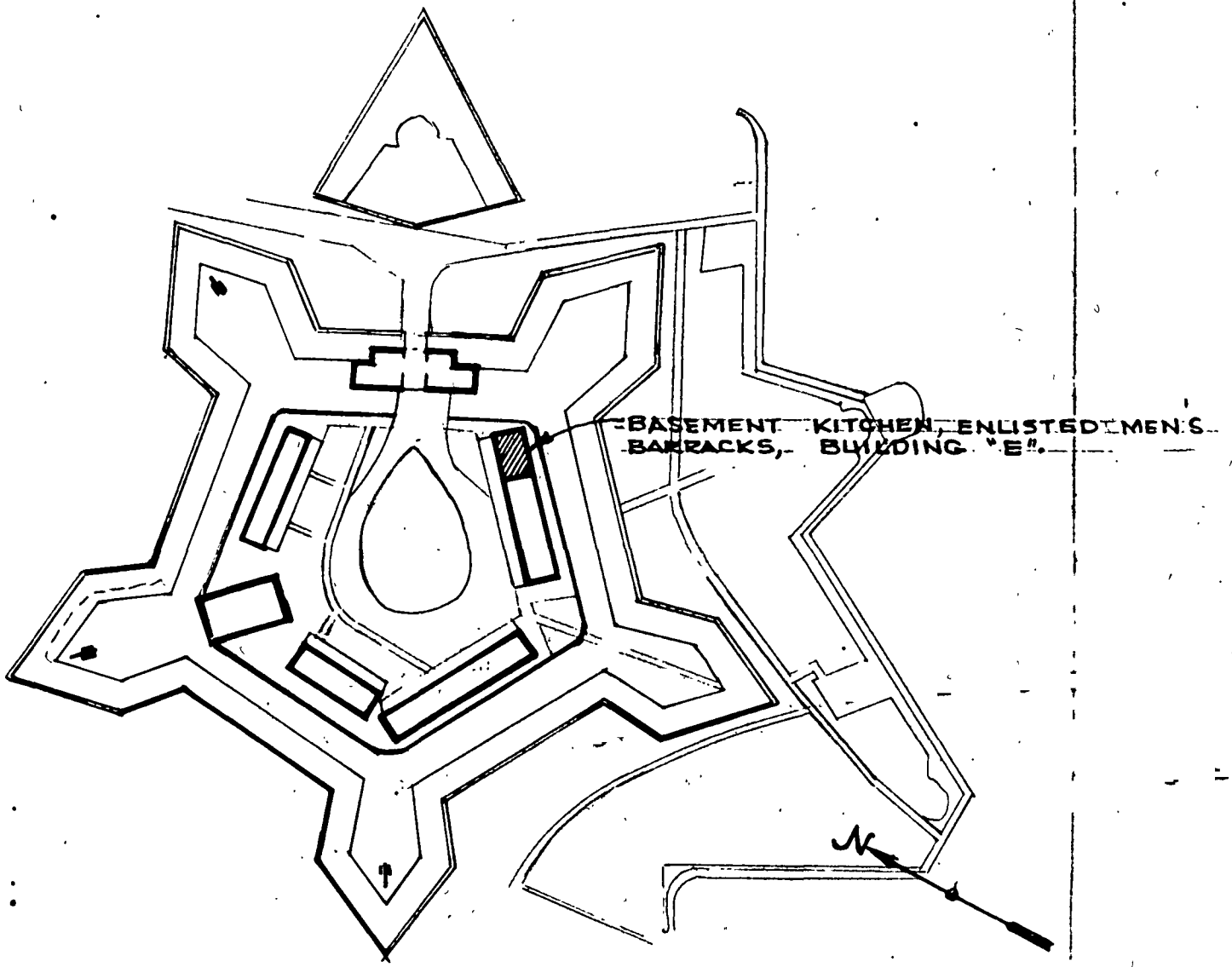
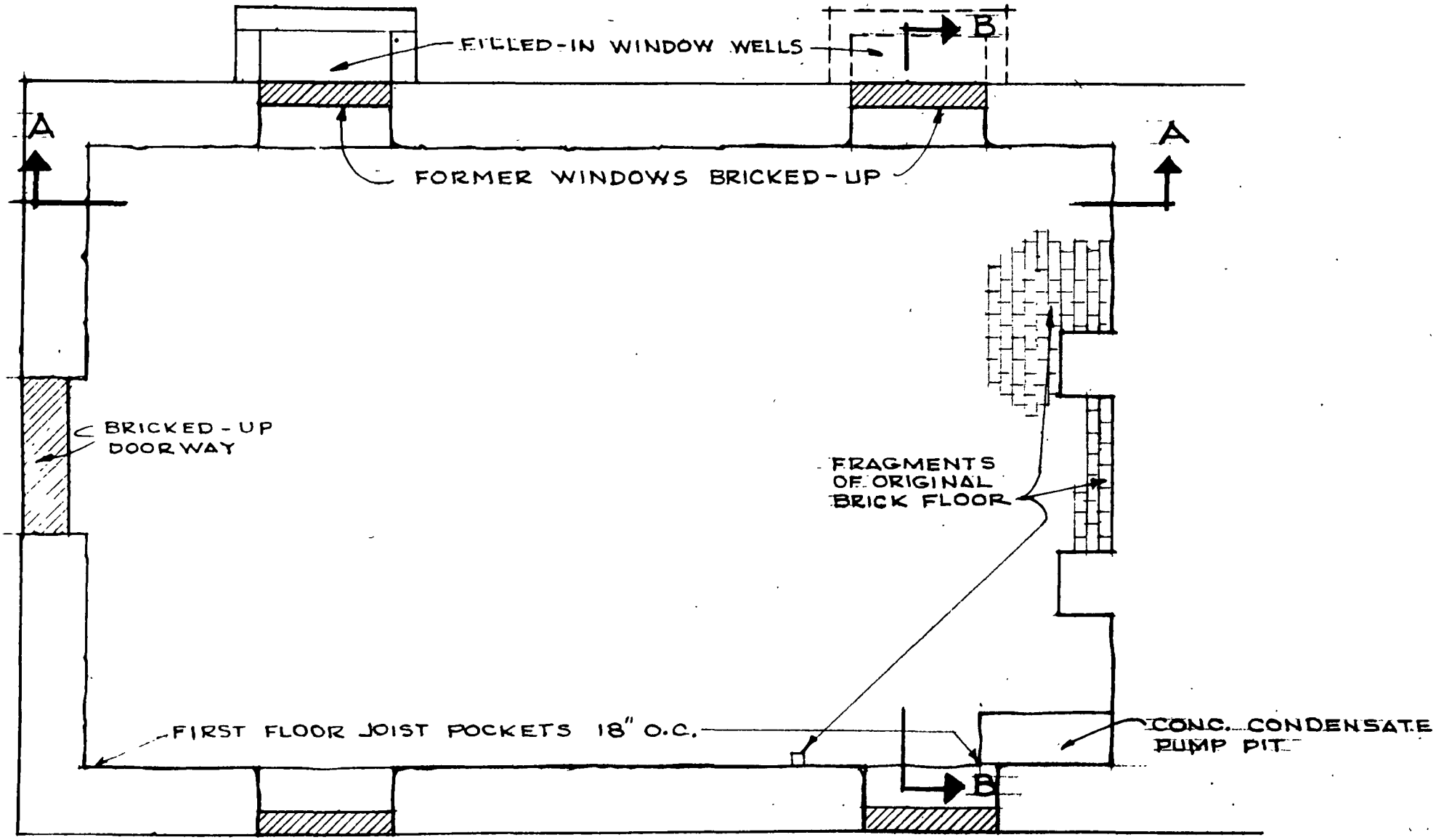


SITE PLAN
FORT McHENRY N.M.
SCALE - 1" = 100'

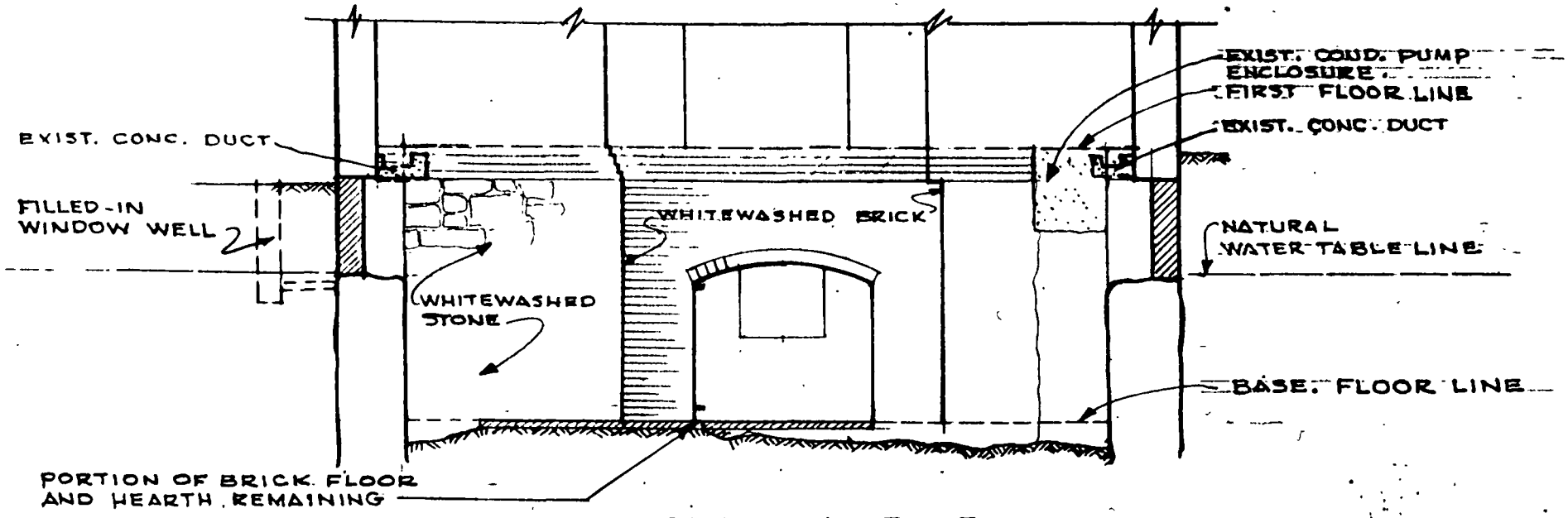
SK-1



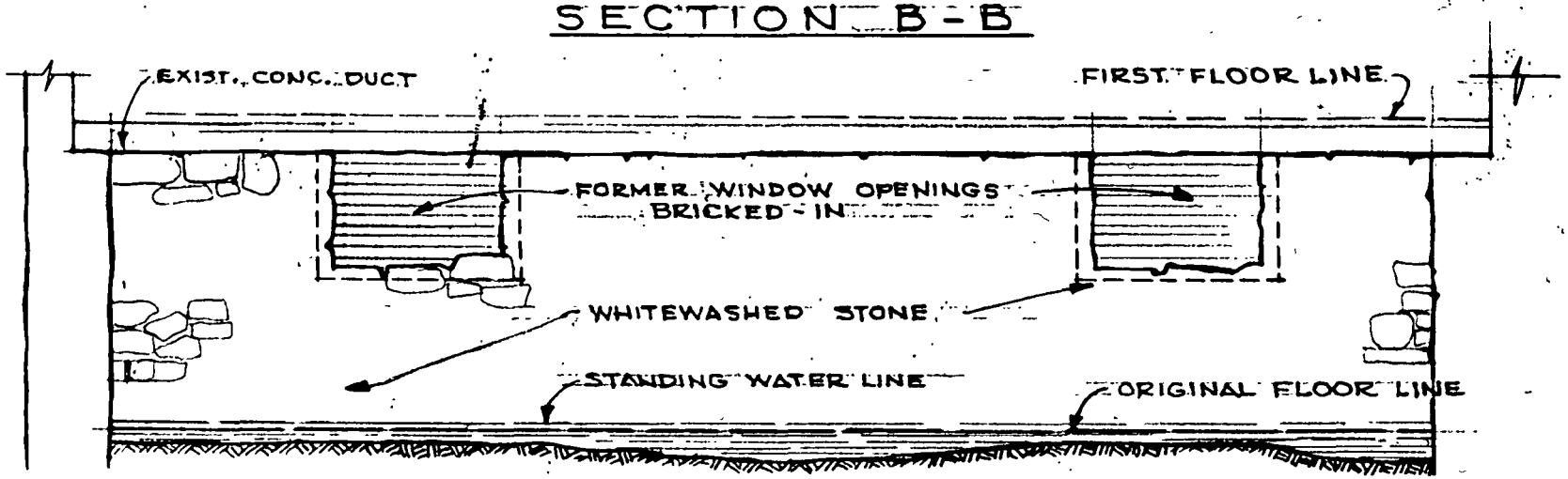
FLOOR PLAN – EXISTING CONDITIONS

SCALE – 1/4" = 1'-0"

SK-2



SECTION B-B

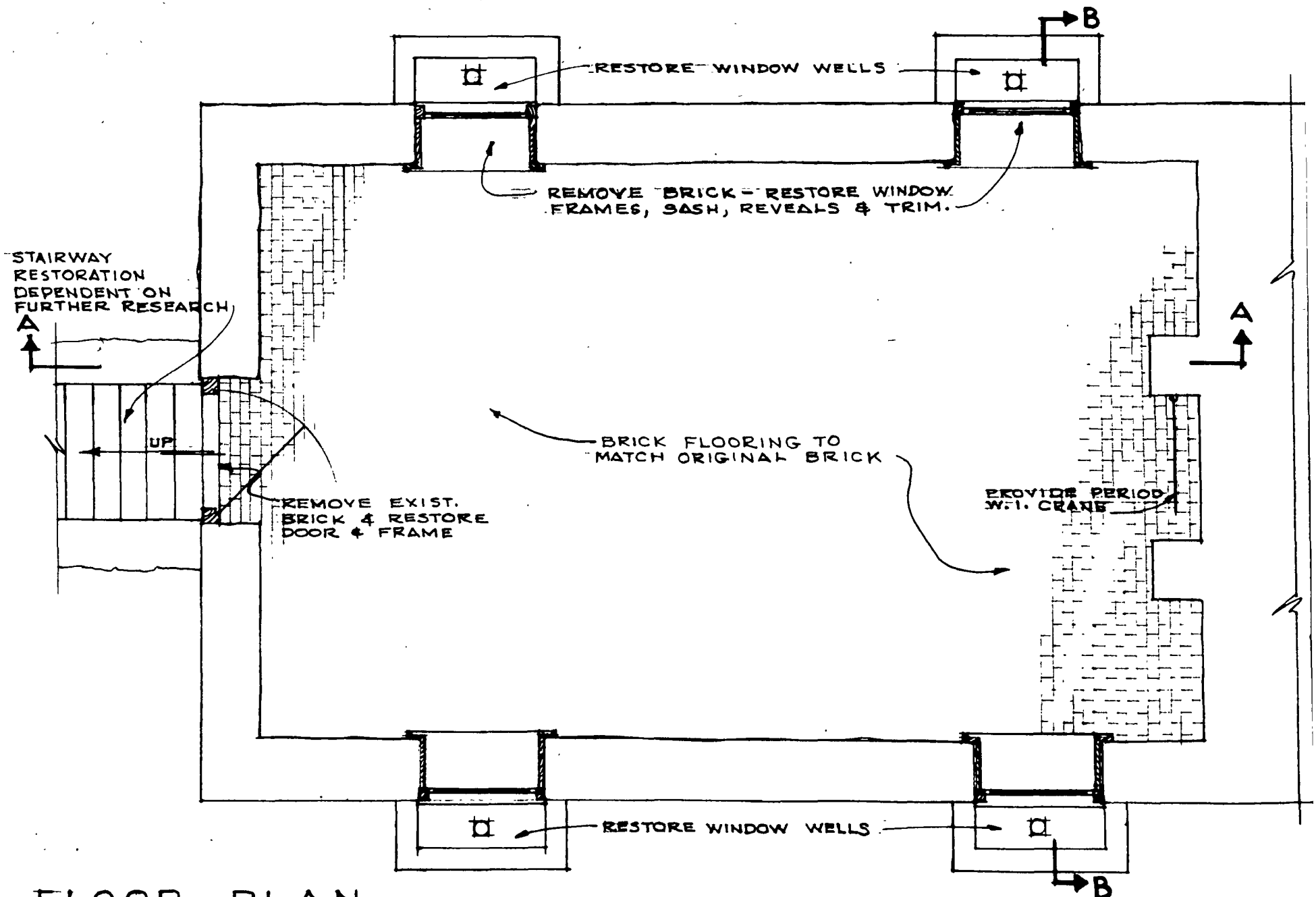


SECTION A-A

SECTIONS - EXISTING CONDITIONS

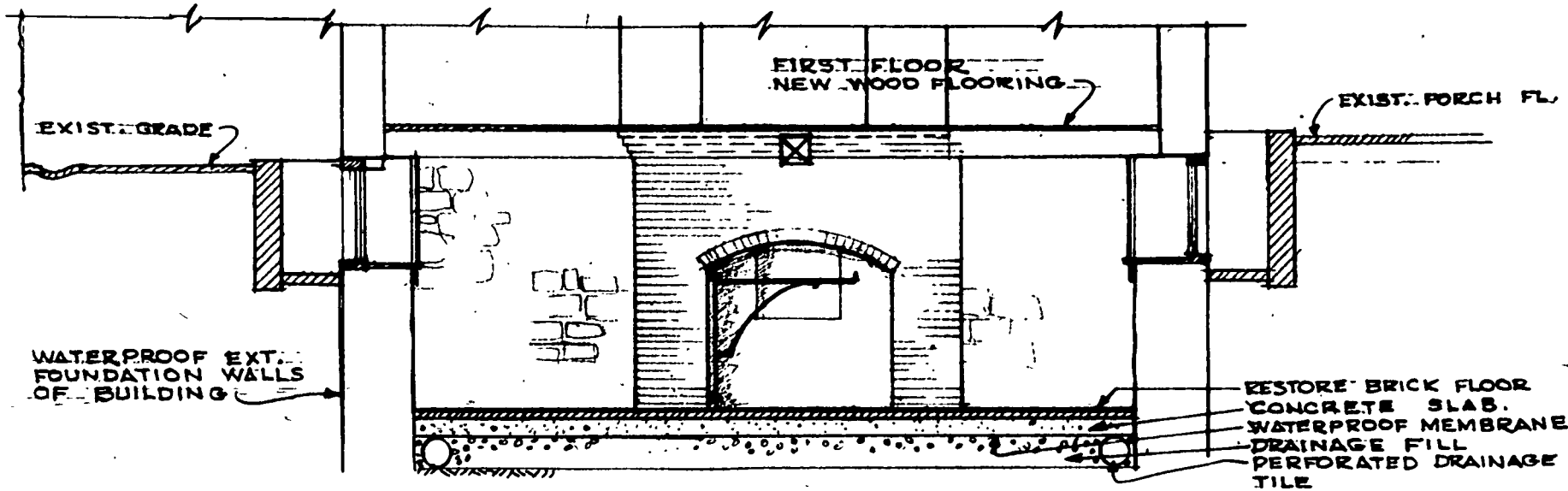
SCALE - 1/4" = 1'-0"

SK-3



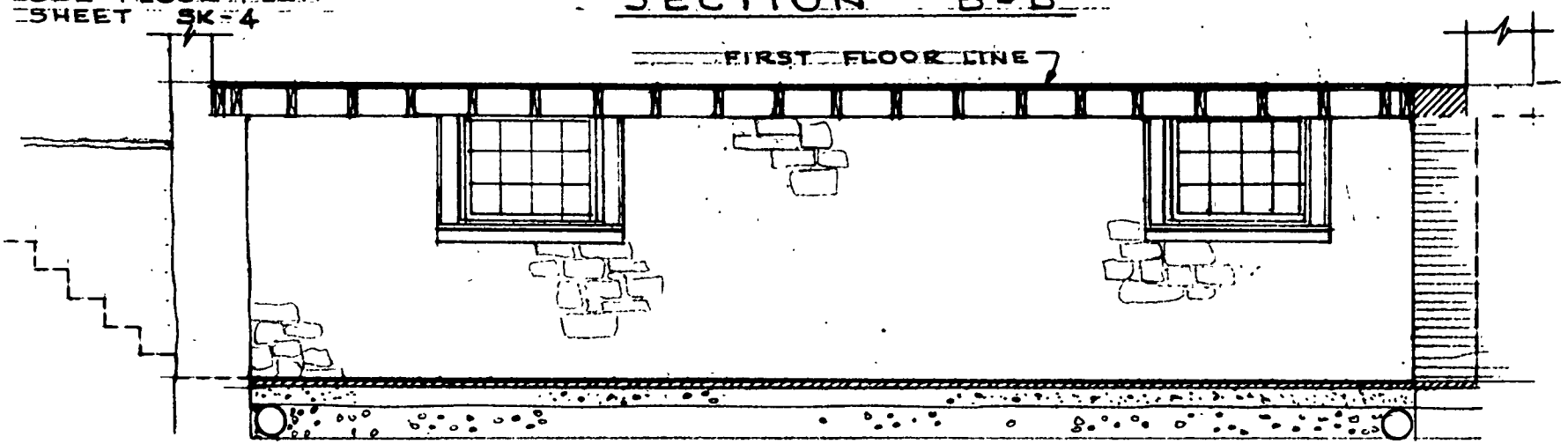
FLOOR PLAN
PROPOSED RESTORATION OF KITCHEN
SCALE - 1/4" = 1'-0"

SK-4



SECTION B-B

SEE FLOOR PLAN
SHEET SK-4



SECTION A-A

PROPOSED RESTORATION OF KITCHEN

SCALE - 1/4" = 1'-0"

SK-5