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UNITED STATES  
DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE  
FORT MCHENRY NATIONAL MONUMENT  
AND HISTORIC SHRINE  
BALTIMORE 30, MARYLAND

Archeological Explorations  
at Fort McHenry, 1958

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## Errata

- p. 7, line 26. "catogory" should read "category."
- p. 23, line 1. "plaftorm" should read "platform."
- p. 35, line 21. "batter" should read "battery."
- p. 53, line 12. "exe" should read "axe."
- p. 62, line 12. "deposit" should read "deposits."
- p. 68, line 7. "crouch" should read "Crouch."
- p. 68, line 8. "coutside" should read "outside."

## Foreword

This report presents data obtained in archeological excavations made at Fort McHenry National Monument and Historic Shrine during the period from March through August, 1958, as a part of the work of the Historical and Archeological Research Project (MISSION 66) for the Monument (S. Sydney Bradford, Supervising Park Historian). These excavations were made under the direction of the writer, loaned for the purpose to the National Park Service by the Missouri Basin Project, Smithsonian Institution (Lincoln, Nebraska), by a group of W.A.E. laborers, varying in number from two to six men. Not including the writer's time, approximately 420 man-days were expended on excavation during the period referred to, including refilling of pits and replacement of disturbed features. In addition to the manual labor, mechanical equipment was also used for excavating and back-filling, for a total of 56 hours. Weather conditions were favorable for excavation except during July, when frequent heavy rains materially impeded work. Ground water (seepage) was an equally troublesome factor in some instances.

Excavations were made in consultation with Project historians and in cooperation with a summer team of the Historic American Buildings Survey, under the direction of Lee H. Nelson, Architect, National Park Service. This H.A.B.S. team prepared

measured drawings of selected buildings at the fort, and the excavations permitted the architects to make more complete records of these buildings than would otherwise have been possible. On their part, the H.A.B.S. team assisted the writer from time to time, and the frequent discussion of mutual problems with project historians and the H.A.B.S. team was most helpful.

In the following report citations are made to certain documentary source materials available in photo-copy in project files. Although the writer has systematically reviewed parts of these sources, as time permitted--both pertinent topical and chronological files (the latter especially for certain periods, such as that from 1794 to 1814)--the documentary materials available in project files cannot have been exhausted, even for present purposes. With respect to citation of documentary sources, the following report should therefore be considered tentative; it is hoped that project historians may later be able to supplement references given here, from documents not known to the writer, or to revise statements made in the light of other documentation.

So far as is known, no archeological investigations had been made at the site of Fort McHenry prior to the present work. Several statements and records found have, however, been specially helpful in doing this work; these are cited in their proper place.

## I. Purpose and Method

The primary purpose of the archeological work of 1958 was that of providing further information on Fort McHenry, especially for the period of 1814, beyond that preserved in documentary sources, and supplementing those records. Data on certain parts of the entire establishment and on the physical appearance of the post at that period were specially sought, particularly additional materials for interpretive planning, including restorations or reconstructions.

It was believed that additional physical evidences of parts of the whole installation would be found, beyond those visible above ground or of documentary record (in plans, descriptive accounts, pictures, and the like), which would extend or clarify knowledge of the historic physical development of the fortification--material evidence that might also be useful in museum exhibits or exhibits in place. Former military structures such as buildings and outworks now demolished or no longer visible were specially considered in planning excavations, and consideration was given matters other than strictly architectural, such as changes in the topography of the area (See Appendix A).

From the outset, portable objects and specimens were encountered in excavation, and these were in large part preserved, regardless of probable age or historical significance,

especially those found in meaningful contexts or of intrinsic interest in themselves as potential study or exhibit materials. A field specimen inventory of these objects accompanies this report (Appendix B). Specimens were, however, considered secondary in importance to the primary purpose of obtaining information concerning former structures no longer visible, and although carefully watched for and preserved, such objects were not specially sought during the present work. No screening of earth was attempted. If at a later time additional specimen materials are needed for exhibition there are ample opportunities for making collections of this nature, especially from certain disposal areas known. Some of these areas may, of course, provide important study materials as well.

In view of the purposes of, and time available for, archeological field work and in view of the size and historical complexity of Fort McHenry, which reached its present state and physical character over a period of nearly two centuries of time, it was clear that truly comprehensive, really extensive excavations would not be feasible at the outset. It seemed unwise, furthermore, to hurry excavations in view of the unique historical significance of the site and the irrevocable nature of excavation. The large size of the historic older area of military occupation--approximately twenty acres, or one-half the entire monument area--the known (though not yet fully traced) successive periods of construc-

tion and demolition of buildings and other facilities, followed by periods of extensive recent alteration of the previous terrain through new grading and landscaping, all suggested cautious initial work with a small labor force, if useful knowledge were to be gained, and damage to remains through exposure kept to a minimum.

Since it was not feasible or at present desirable to conduct extensive, continuous excavations over broad areas, according to grids, which would allow for systematic stripping of overburden, it was therefore necessary to conduct explorations by linear trenches across larger areas and, in smaller areas, by rectangular or polygonal units adjusted to known features such as buildings. These trenches, rectangles, and polygons were designated excavation units (XU's), for reference, and were given Roman numerals. In the course of excavation, some units were made to include groups of discontinuous or interrupted but related excavations, as in the case of XU II (containing trenches 1 to 8) and XU I (trenches 9 to 12).

Field notes were made by the writer during excavations, and archeological observations deemed to be of permanent value have been incorporated in the following report. A photograph file was made, of negatives and black and white prints and Kodachrome transparencies (record of which appears in Appendix C). Welcome assistance in instrument recording was given the writer by Messrs. E. P. Crouch and J. Monkoski, July 14-16,

record of whose transit survey appears on a plan "Location of Archeological Diggings; Outside of Star Fort" (2 sheets) July 24, 1958, a copy of which is attached herewith. Similar assistance was also given the writer by the H.A.B.S. team, especially with record of excavations within the Star Fort; reference should also be made to measured drawings prepared by this team for further data relating to surviving buildings measured, at which limited excavations were made as reported below.

Upon completion of archeological investigations and related studies, all excavation units were again closed by back-filling with one exception, that of the immediate area of the stonepaved platform and section of adjacent rubble footing of the Boundary Wall of ca. 1819 (a part of XU I), which was left open as a sample of long-hidden physical remains available for study through archeology. The refilling of other excavations was deemed necessary in view of the heavy visitor-use of the monument as a whole, and the hazards and inconvenience of open excavations.

The decision to again cover, after excavation, remains of relative permanence such as brick masonry might, perhaps, be questioned inasmuch as certain of these architectural remains, once opened, enhanced the historical interest of the monument for certain visitors, and could be utilized in the monument interpretive program. It should, however, be pointed out that stabilization measures--in some instances complete

reconstruction of masonry in new mortar--would have been required if parts were to be left exposed; extensive alterations in the terrain, to provide essential drainage, would have been required elsewhere, since all excavated remains, of course, lie below existing grades.

The footing or lowermost portion of the traverse of the Powder Magazine (XU VIII) illustrates the practical problem of leaving excavations open. Although in this instance the mortar of the brick masonry is, even today, rock-like in hardness (the masonry having of necessity been of the best possible quality originally, in order to carry the great mass of the brickwork above) and although no extensive stabilization would here be required, for exhibit, the proper drainage of the masonry, the uppermost surface of which is approximately six inches below the elevation of the court at this point, well below that of the adjacent brick-paved walk, if left exposed, would have required extensive and troublesome drainage ditching or tiling. To have left the traverse remains exposed would also have required the relocation of long sections of electric conduits, one of which actually passes over the early masonry; they were therefore temporarily recovered with earth, together with the masonry, until final plans for development of historic remains at the monument have been approved.

From the archeological point of view there is, in addition, a reasonable question whether anything in the category of ruins are desired or should be left exposed (more than

temporarily) at Fort McHenry, especially in more congested areas such as the interior of the Star Fort. Ruins would probably enhance the interest of the monument for relatively few visitors; furthermore, there are ample structural and architectural remains, in original or reconstructed form, for his study--indeed, probably more than the ordinary visitor can assimilate without close study. It is suggested that ruins have little place in the interpretive program for Fort McHenry, and that ultimate reconstruction of missing parts of the whole establishment is a preferable use of such archeological evidence as has been or may be obtained.

## II. Sites and Areas Investigated

Excavations were made at several separate locations within the historic area of the present monument, as described below. (fig. 1) These locations or excavation units lie either in the immediate area of surviving buildings, or at the sites of former buildings and facilities of the post. The excavation units were of varying size and character and excavation had various purposes, as explained. In general, explorations of 1958 were confined to problems directly suggested by previous documentary studies; no general search was undertaken for unrecorded remains.

### 1. Boundary Wall (ca.1819) and Tavern (XU I)

The acquisition of title by the United States to lands on Whetstone Point for military purposes appears to have been initiated in 1795, and legal documents of that year (cited below) provide the earliest known data on the original landward boundary of the military reservation (subsequently named Fort McHenry)--a boundary (differing from the present monument boundary) of considerable historic interest in view of the fact that it was that in use in 1814. Excavation of the site of a wall and gate, erected either prior to, or soon after 1814 on this boundary alignment, was therefore an initial archeological effort in 1958, together with study of the site of an adjacent group of tavern buildings of even earlier con-

struction. These excavations were designated at XU I.

The earliest known reference, of 1794, to a "star fort" on Whetstone Point shows that the fort soon to become known as Fort McHenry had not then been completed as intended earlier.<sup>1</sup> The same source reveals the fact that the whole installation, including Upper and Lower Batteries, was exposed on the west or town side at this period, in part because of the fact that a precise boundary for the military reservation had not yet been fixed.

The earliest known transfer to the United States of land for military purposes was by deed from Alexander Furnival, July 20, 1795, of Lots 73, 74, 75, and 76 of a plat of Whetstone Point, lots previously the property of the Principio (Iron) Company and, as British, confiscated and sold on June 9, 1795.<sup>2</sup> The deed of July 20 describes the bounds of the property as beginning at Lot 73, "at a stone standing at the intersection of the main road and a road running across Whetstone Point," thus revealing the existence in 1795 of a recognized legal landmark near the fort. This boundary stone may have been placed by the Province or State of Maryland, or may have been merely a native stone, first used in 1795 with legal significance. The alignment of these lots with

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<sup>1</sup> Rivardi to [Knox], April 13, 1794; American State Papers, Vol. XVI, pp. 88-89.

<sup>2</sup> National Archives, Office of Chief of Engineers, Land Papers.

respect to this stone presumably determined the alignment of the boundary wall sought in excavation, and the stone was presumably the landmark upon which subsequent surveys were also based, directly or indirectly.

A statement of 1797 reveals that cattle (doubtless from adjacent farms) had "free intercourse" with barracks that had been erected at the fort (perhaps those adjacent to the Water Batteries), and that there was "no defense" against them; it was then thought that the Secretary of War planned to have a proper fence and powder house erected.<sup>3</sup> By inference, no fence or other barrier had yet been erected on the military boundary, though the boundary had been fixed in part at least by 1795, as has been noted.

The plans of Fort McHenry dated November 9, 1803, and ca. 1806, show no fence or wall, but suggest the boundary in question, and two private (tavern) buildings immediately adjacent to it, on privately owned land.<sup>4</sup>

No clear record is known of the wall immediately prior to or during the War of 1812, or of any part it may have played in the events of September, 1814. A detail of the aquatint

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<sup>3</sup>. Samuel Smith, in Annals of Congress, Vol. VI, p. 2220, Feb. [ ], 1797.

<sup>4</sup>. National Archives, Record Group 77, Records of the War Department, Office of the Chief of Engineers (hereafter cited as NA RG77 OCE); Drawer 51, Sheet 1; New York Historical Society, United States Military Philosophical Paper.

by J. Bower (believed to have been made soon after the bombardment) suggests that a short section north of the Star Fort was then in existence, but the literal accuracy of various details of this view cannot be established.

It was stated in 1816 that a wall to enclose the public property was needed, together with a sea-wall to prevent encroachment of the water upon the Point.<sup>5</sup> This work was subsequently performed at least in part, but no specific details are known relating to the construction of the enclosing wall on the landward side of the fort other than a statement that, pending information on the land title and on access for a public road (then in use), the wall should not be built at this point.<sup>6</sup> Work had been ordered on the enclosing wall prior to November 6, 1816, the wall to be 1 1/2 brick in thickness and nine or ten feet in height.<sup>7</sup> When this work was begun is not known, but in 1817 it was stated that it had been finished.<sup>8</sup> Subsequent records suggest that it was not actually finished until later.<sup>9</sup>

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<sup>5</sup>•T.W. Maurice to W. K. Armistead, Nov. 6, 1816, NA RG77 OCE, Reports, July, 1812 - October, 1823, I.

<sup>6</sup>•Maurice, loc. cit.

<sup>7</sup>•Maurice, loc. cit.

<sup>8</sup>•G. Armistead to J. G. Swift, Dec. 31, 1817; National Archives, Record Group 107, Records of the War Department, Office of the Chief of Engineers, Selected Correspondence Relating to Fort McHenry, 1811-37.

<sup>9</sup>•E. G., [G. Blaney] to J. Hindman, July 3, 1818; National Archives, RG77, OCE, Selected pages from Letters to Officers of Engineers, July 4, 1812 - Feb. 20, 1869.

The plan of Fort McHenry by W. T. Poussin, 1819, shows a barrier, presumably of masonry (brickwork) crossing the entire peninsula, and having several angles and a rather elaborate gate, with three openings.<sup>10</sup> It is not known whether this is intended to represent the wall as planned or as completed, but the latter seems the more probable. A plan made after November 31, 1834 also shows the boundary wall (lacking detail) and identifies buildings on the reservation then situated along its alignment, northeasterly from the gate: a Gunhouse and storehouse for provisions, a Storehouse for ordnance, a Hospital, a Stable (adjacent to which is a Woodyard), and a Bake house and Smith shop.<sup>11</sup>

A visitor to Fort McHenry of 1825 or 1826 mentions that the fort was then separated from the land (i.e., to the west) by a wall, which he thought "might rather prove injurious than advantageous."<sup>12</sup> It is possible that the wall was subsequently demolished for such a reason as this, that it interfered with security of the post in the opinion of the authorities.

In 1836, at which time additional lands west of the previous boundary were added to the original military reservation,

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<sup>10</sup>.NA, RG77, OCE, Drawer 51, Sheet 2.

<sup>11</sup>.NA, RG77, OCE, Drawer 51, Sheet 5.

<sup>12</sup>.Karl Bernhard, Duke of Saxe-Weimar Eisenach, Travels through North America during the years 1825 and 1826, (Philadelphia, 1828), p. 194.

it was proposed that the boundary wall previously in use be demolished.<sup>13</sup> This was done in 1837, bricks from the earlier wall being cleaned and re-used in the new wall (surviving in 1958).<sup>14</sup> The demolition of the Tavern buildings probably took place about this time also, since they are not shown on the various Civil War lithographs or other late views known.

The earliest known plan of the fort showing clearly the alignment of the Boundary Wall in question and something of its nature (but not the Tavern buildings, then still privately owned), is the Poussin Plan of 1819. The two previous plans, of 1803 and 1806, do not specifically show the entire alignment of the boundary, though they do reveal the location of Tavern buildings and a part of the property line at this point--an alignment which had prevented the completion of the ditch and outer glacis here.

The Poussin Plan shows what appears to be masonry construction (probably brick), a narrow band extending across the entire Point and having several angles, probably conforming to the legal lot lines. The Plan of 1819 also shows the character of the Gate (probably of stone), having a central

<sup>13</sup> H.A. Thompson to C. Gratiot, Nov. 10, 1836, NA, RG77, OCE, Letters Received, T2766.

<sup>14</sup> Thompson to F. A. Smith, March 2, 1840, NA, RG77, OCE, Letters Received, S1028.

Glacis  
? slope slide

opening (probably for vehicles) and a smaller opening (probably for pedestrians) on either side, and adjacent to the wall northeast of the Gate, various unidentified military buildings (identifiable from documents and plan of 1834 cited above). In the immediate vicinity, (then private property and not shown on the Plan of 1819) were the Tavern buildings.

To further complicate the history of the development of, and changes in, this area, certain other buildings had subsequently been built (and later demolished), which are referred to below--one imposed directly upon the site of the refilled cellar of the demolished Tavern.

The identification and study of at least a portion of the sites of this Boundary Wall and Gate, and the adjacent Tavern buildings by excavation was selected in the belief that this work would provide general orientation on the entire site and, it was hoped, additional points of reference for future investigations outside the Star Fort. Little more than sampling operations could be accomplished in the limited time available for this unit.

This excavation unit was begun with an exploratory trench three feet in width, extending outward (northward) from the point of the bastion nearest the Boundary Wall sought, on a line that was an extension of the west face of the bastion. (This point shows as "Corner #8," and the trench as #9, a part of XU I, on the plan, "Location of Archeological Diggings.")

July 24, 1958, accompanying this report.) The trench was oriented in this direction in order to cross the alignment of the original Boundary Wall at a point that could later be directly measured from and referred to the ramparts of the Star Fort--presumably fixed points of reference unchanged since about 1794. At a distance of approximately 75 feet from the corner of the bastion, along the exploratory trench, the footing of the Boundary Wall sought was encountered. At this point the first trench (#9) was discontinued, and a new trench (#10) begun, conforming to the alignment of the footing and somewhat wider, sufficient to expose the masonry completely.

The excavation of the initial trench (#9) of this unit was carried down to undisturbed soil throughout, and outward for a distance of 75 feet, as mentioned, before encountering structural remains (the footings sought); the deposits out were themselves of interest, however, in demonstrating that grades, in both the ditch and on the surrounding slopes (or glacis) had been materially raised at recent periods--probably by the U. S. Corps of Engineers in 1929-30.

The ditch at this point was found to have been filled with railway or industrial cinders to an average depth below the present grade of 2 feet 6 inches. These cinders had been well compacted (perhaps artificially), probably to improve the drainage of the ditch and to eliminate standing water and thus improve the appearance of the ditch as well as to elimi-

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nate seasonal insect infestation. The cinders were almost sterile of object materials except near the point of the bastion, where very recent debris was encountered (F.S. #1). Necessary repointing and care of the brick masonry of the ramparts in recent years, such as work performed during the W.P.A. period, when it is said to have been exposed as far as the footing, explain the occurrence of these modern objects here. In the excavation of the trench crossing the ditch, and in the cinder deposit, the base of two decayed timbers (probably pine or spruce) were also encountered--probably remnants of power or telephone poles in use about 1918. (Similar remains are said to have been found in recent years elsewhere at the monument, in excavations for other purposes.)

Beyond the ditch (northward), as the exploratory trench crossed the adjacent slope, it soon became clear that surface grades (sloping gently downward and outward from a crest next to the ditch) here also had been materially raised, probably also about 1929-30. The evidence for this was primarily the character of the earth fill, which like the previous section contained soil foreign in origin and mechanically redeposited (as with a motor patrol or blade), and with plentiful recent object-materials, some of them clearly foreign in origin to the military reservation. Thus among the fragments found were random sherds from many different earthenware vessels, some unglazed (i.e., broken and discarded before finishing), together with pottery and glass slag--objects probably from

a pottery and glass works elsewhere in Baltimore, and obtained with other random fill in 1929-30.

This late fill forming the present surface grades also contained large quantities of miscellaneous fragmentary building debris, having a definite lensing or horizontal structure as if the fill had been mechanically leveled--bits of broken common bricks of modern sizes, of cement mortar, of hollow building tile (known to have been used in great quantities in the hospital buildings of 1918) and the like, much of which was clearly referable to the period of World War I.

The work of 1929-30 accomplished in this area is referred to in a "Grading and Seeding Contract" completed December 10, 1929.<sup>15</sup> In addition to other work, including filling and grading of certain areas shown on contract plans (not now available), the contract provided for "the building of a musketry embankment around the North side of the Star Fort enclosure walls," together with grading, harrowing, and seeding of 21.3 acres, as shown on contract plans.

This reference is clearly to the reconstruction of the slope or glacis beyond the ditch in this sector (originally intended less for musketry cover than to provide slopes that

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<sup>15</sup>Cited in a Report of the Corps of Engineers, Sept. 13, 1930; Fort McHenry National Monument and Historic Shrine, Superintendent's Files.

would expose any attacking force to cannon fire from the fort). It does not appear to have been realized during the reconstruction and landscaping of 1929-30 that the outer slopes beyond the ditch at this point were probably never raised to full intended height, perhaps because of the private property infringing upon this sector until about 1837; the materials added in 1929-30 had, however, apparently been shaped and sloped with care, to conform to other parts of the surviving original slopes beyond the Star Fort.

The section of footing of the early wall referred to, encountered at a distance of approximately 75 feet from the bastion, was oriented approximately northwest--southeast, approximately as shown on the Plan of 1819 for one section of the wall in question. The footing was approximately 2 feet 6 inches in width and of shallow thickness (approximately 6 inches, though this varied materially, as did the width), the remains being most irregular on upper surfaces as well as at either margin. The matrix of the footing remaining appeared in this section to have been poured sandy lime mortar, now much decayed, into which fragments of broken bricks had been carelessly pressed or tossed at random, the whole crudely constructed, to serve as the footing for a brick wall formerly resting upon it.

At no point along the parts of the alignment of this footing opened (subsequently extended, as shown on the accompanying plan) were remains found of brick masonry in regular

courses, resting upon the footing, or smooth upper surfaces to receive masonry, and the entire wall previously in use here must upon its demolition (about 1837) have been completely removed, perhaps with parts of the footing also, since it preserved no level upper surfaces. Subsequently, the ground surface near the site of the wall appears to have been again smoothed, and remaining parts of the footing recovered, for an irregular humus line had been reestablished, which was found on profiles to cross the buried remains of the disused footing, approximately 18 inches below the present grade (this grade, as noted, apparently established about 1929-30.) The obliteration of the site of the Boundary Wall had probably occurred, as mentioned, about the year 1837, when the reservation boundary itself was removed to its present alignment.

The orientation and character of a portion of the alignment of the rubble footing marking the course of the former Boundary Wall having been learnt, an attempt was made to determine the extent of the section by interrupted excavations, in line with that already opened (as shown on the accompanying plan). It was hoped that angles in the alignment (corresponding to corners of the original wall) could be located for reference and comparison with plans such as that of 1819. This attempt was, however, unsuccessful; additional lengths of the footing were exposed, northwest and southeast of that previously exposed, but these sections eventually disappeared

and were lost without having revealed changes of direction, in angles or at corners. Toward the northwest in this trench (#10), it is probable that the original footing may have been destroyed by the grading and landscaping operations of 1929-30.

Toward the southeast, in the same excavation trench (#10), a different development had taken place. Beneath the modern fill of 1929-30 the remains of the rubble footing of the early wall could be traced for a short distance, when they were found to have been interrupted (and probably destroyed) by the construction in 1918 of a two-story hospital building, remains of which were encountered in massive footings of poured concrete aggregate, still rock-like in hardness, and which it had been impractical in the early 1920's to remove, upon the demolition of the hospital building.<sup>16</sup>

One unexpected structure was encountered in exposing sections of the rubble footing of the early Boundary Wall. This was a stone platform located immediately adjacent to the southwest side of the footing and in contact with it. (Shown on accompanying plan and Plates II, III). This platform, approximately level and sub-rectangular in plan, measures approximately 8 feet northeast - southwest (i.e., at

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<sup>16</sup>. This building, an Officers' Quarters, No. 54, is shown on a plan, "General Hospital No. 2--Fort McHenry--Topographical Map," ca. 1918, with manuscript revisions to December 20, 1926; Fort McHenry National Monument and Historic Shrine, Superintendent's Files, #P6 - F1. The building is described as 25 by 157 feet, and is shown by symbol as having been built of tile.

right angles to the course of the footing) and approximately 10 feet northwest - southeast (parallel with the footing). The platform is formed of large, roughly rectangular slabs, nine in number, carefully dressed at their margins and dry-laid in regular arrangement; the greatest length of any of these larger slabs is approximately 4 feet 2 inches, the greatest width 2 feet 10 inches. One of the large slabs had at some time in the past been removed, and the opening thus left permitted measurement of the thickness of adjacent slabs; the thickest is approximately 5 inches. Outlining these larger slabs is a border of smaller stones, of material, each also sub-rectangular but somewhat less carefully shaped, but the border is less perfect than it once was because of the removal and displacement of some of the individual stones.

No reference to such a stone platform has yet been found in documents known, and no convincing explanation of the original purpose or use of this structure can yet be offered. No wear or damage on the upper surface of the stones is now observable, which might afford a clue to original use, nor were revealing artifacts or debris found in immediate association with it, with the possible exception of broken fragments of common red brick and brick dust, probably derived from demolition of the adjacent Boundary Wall. The platform is small - perhaps too small to have served as a base for a building.

It is, however, worthy of mention that the platform is inside the original wall alignment, on the area of the early reservation, and there is therefore no doubt that it is of military rather than civilian origin, and presumably had some unrecognized military use. It is presumably early in date, since it is in alignment with the Wall, probably demolished about 1837.

Three objects found in this portion of the excavations are of special interest in themselves, though they are too few to throw any clear light on the structural remains near which they were found; they may indeed have been accidentally deposited there at a relatively late period and by accident. They are a one-cent U.S. coin dated 1803 (F.S. #6), a die-stamped brass uniform button, bearing the seal and motto of the State of New York (F.S. #5), and a cast brass belt buckle lettered "N.Y." (F.S. #7). A coin of 1803 such as this, in common currency, may have been deposited here as much as a half century after its date of issue, and is therefore of little aid. The button and buckle, on the other hand, appear to be of the general period of the Civil War, at which time New York volunteer regiments are believed to have served at Fort McHenry.

The remains of the rubble footing found, and believed to be that of a section of the Boundary Wall, have an alignment comparable to that of a section of this wall as shown on the Poussin Plan of 1819; the section found extends for a distance of at least 100 feet (no more having been found) whereas

the Plan referred to shows the equivalent section as something over 150 feet. Since the ends of this section are apparently lost, and were not found on excavation, trial trenches were made (#11, #12) crossing and following the alignment of the concrete footing of the hospital building of 1918, in an attempt to locate other sections of the older footing, comparable with sections of the wall shown on the Plan of 1819. No additional sections of early wall or related footing were, however, found.

The remains of the foundation of the Officers' Quarters of 1918 are not of special interest here, and no special attention was given them in excavation, with the exception of exposing and recording the location of one corner (that to the northeast), for future reference. Toward this corner, it was observed that the upper surfaces of the surviving concrete footing had been roughly broken away (perhaps by use of a bulldozer), probably to bring the upper surface, originally horizontal, below the level of the new and gently-sloping grade established in 1929-30.

The excavations of 1958 here were known to be approaching the general site of the Tavern buildings inexistence at least from 1803 to ca. 1837. Near the exposed corner of the concrete footing of the hospital building of 1918 mentioned it was observed that the recent footing rested not upon undisturbed subsoil, as elsewhere, but upon unconsolidated fill of an earlier period, containing construction debris

(broken common red brick with lime mortar) and object materials clearly of a period preceding 1918. Near this corner, therefore, an extension was made at right angles to the trench (#12). This excavation soon revealed the fact that this was a filled cellar area of early date, probably that of the larger of the two Tavern buildings known from early plans.

Within the section of this cellar opened (a section measuring only approximately 10 by 20 feet), fill encountered was densely-packed construction debris--common red brick and brick fragments, with ample lime mortar, plaster fragments (some with painted surfaces), and the like, together with abundant household and kitchen debris (F.S. #8), probably refuse added upon the refilling of the disused cellar. In addition to the construction materials probably from the demolition of the Tavern (about 1837) there were also in the cellar section opened a large number of carefully cut and dressed stones, and a few coping and paving bricks, probably derived not from the demolished Tavern itself but from the adjacent Gate and Boundary Wall, which had also been demolished about the same time. (Plate VIII). All measurable or reusable brick from this excavation (approximately 500), the coping and paving brick, and the cut and dressed stone were stockpiled within the Civil War Powder Magazine for future reference. Among the lot are a few marked bricks (F.S. #8); these are fire-resistant bricks (some of which have been scorched in use), bearing the name of one "Berry," an early

brick manufacturer of Baltimore. It is believed that these specimens of special brick had been in use prior to 1837, probably in fireplaces about the Tavern.

Unexpected among the construction and household debris encountered in the refilled cellar was a fragment of bomb shell, comparable to specimens of the period of the War of 1812 (F. S. #9). Even if it could be shown that this were a specimen surviving from the attack upon Fort McHenry in 1814, it would not be necessary to suppose that the fragment was found in place; it seems much more probable that it was deposited here with other refuse collected from the surface of the ground, where it had originally come to rest on exploding.

The complete excavation even of the small section of the refilled Tavern cellar opened was not possible because of abundant ground-water, and the fact that the original cellar floor lay below the present water-table. By pumping the excavation frequently, it was however seen that the floor surface was not masonry, but the native clay. It was not possible to determine the original height of the cellar above this floor because of the extensive alterations in the present surface grades in 1929-30 and the deposit of new fill and topsoil upon the site of the ruined earlier structure; it must however be supposed that such a cellar would have had a height of 5 or 6 feet.

The single section of collar-wall remnant observed, visible in the excavation for a length of at least 20 feet, but surviving in place to a height of no more than 2 feet at any point, in the exposed section, was found to be a dark-colored igneous rock, used in slabs and random irregular shapes, not dressed or coursed, but with flat surfaces toward the inner surface of the wall; it appeared to have been sparingly laid in lime mortar, much of which may have been leached away over the passage of time by percolating ground water. The wall appeared to be approximately 18 inches in thickness. Unfortunately, it was not possible in the time available to locate a corner of the cellar wall, for future reference. That to the west end of the exposed section was buried beyond sight, somewhere beneath the concrete footing of 1918, if it had not been completely removed at that late date. That to the east lay beyond the point at which excavation had to be terminated.

The size of the larger of the two Tavern buildings, as shown on the Plan of 1803, is approximately 5 by 9 toises (i.e., approximately 30 by 54 feet, if the toise is taken as 6 feet, as was frequently the case). The location of the larger structure of the two, on the Plan of 1803, appears to be approximately that of the filled cellar encountered, and there can be little reasonable doubt that this is the site of one of the two Tavern buildings, probably the larger.

Old French unit of length  
TOISE equal to 6.395 ft or 1.949 meters  
Opposite equal to outshook arms

Several problems arise in connection with the study of the site of the Tavern--problems not yet answerable on the basis of the limited excavations. There is, first, no conclusive proof (lacking information on the complete dimensions of the cellar encountered, for comparison with documentary information on the location, size, and construction of the Tavern buildings) that the cellar lay directly beneath, rather than in the immediate vicinity of the superstructure of the Tavern, though the walls, found in ruinous condition, would originally have been wholly adequate to carry a two-story brick building, which the Tavern property is said to have included.<sup>17</sup>

Another matter not yet determinable is the precise location of the Tavern buildings with respect to the numbered city lots referred to in 1795; the significance of this problem is clear when it is recalled that the boundary stone referred to in the Furnival deed of July 20, 1795, lay at Lot 73. If it were possible to demonstrate, by comprehensive archeological excavation and study of pertinent legal documents and plats, which lot the Tavern buildings once occupied, it might then be possible to relocate the original boundary stone, an object of primary legal and historical interest.

Finally, no data have yet been found from which the date of construction of the Tavern buildings can be determined.

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17. Newspaper advertisement [no date], accompanying Thompson to Gratiot, Dec. 24, 1835; NA, RG77, OCE, Letters Received, T2573.

It has been suggested above that these buildings were probably in existence prior to 1794, when the construction of Fort McHenry proper was begun, and perhaps even during the Colonial period. No hints were obtained in the limited excavations bearing on this matter; the writer's impression from a study of the structural remains, including bricks, found in the cellar fill, as well as of other specimens there recovered, is that these pertain to late 18th or early 19th century, and it is probable that none pertain to a period subsequent to ca. 1837, when the building was probably demolished. Complete excavation of the site of the Tavern buildings, together with architectural research on them offers hope of answering these and other problems suggested by this interesting group. Further research seems desirable also in view of the possibility of reconstruction offered here, beyond the Star Fort, of buildings standing in 1814, but of non-military origin. Complete excavation of the adjacent Gate area and search for additional sections of the Boundary Wall of which it was a part is also desirable, since they may also have been a part of the historic setting of 1814.

#### IV. Conclusion

The general accomplishments of the archeological explorations of 1958 may now be stated. It should be reiterated that these excavations were necessarily limited in scope, and must be regarded as no more than initial efforts, to be followed by more extensive excavations when further work of the kind is possible. (Specific recommendations for further work are presented in another section.)

Despite the limited--and in some instances relatively uninformative--character of the work of 1958, these excavations have again demonstrated the applicability of the archeological approach to historic sites, including those of such relative recency as the 18th and 19th Century, specifically by excavations at carefully chosen areas--in this instance, areas of a large site, from which it might perhaps be thought that little of importance could at this late date be learnt by such methods. Visitors to these excavations frequently expressed surprise, on seeing the excavations, at realizing that anything remained, structural or artifactual, to be learnt from excavation. No site of human occupation and use is, however, completely devoid of all remains, hidden away from sight--noteven a well-policed military site after long use. (A current parallel example is the work at Custer Battlefield National Monument, Montana;

after three quarters of a century of exhaustive research on the battle, and, probably, continuous souvenir-collecting from it, fresh data have been added through archeological work during the month of July, 1958, the first of its kind at that site). Only those unfamiliar with archeological investigation are likely to be surprised by results sometimes achieved by excavations.

As suggested elsewhere, the present explorations--the preliminary sampling of a relatively vast site, having a complicated physical history--clearly indicate, furthermore, the desirability of additional similar excavations and related documentary investigations on a more intensive basis, in the near future and with reconstruction or restoration in mind. Further knowledge of buildings and structures of Fort McHenry as they were in 1814 will certainly be forthcoming with further work, and the site itself merits the best possible care and study--historical, architectural, and archeological--in view of the unique historical events associated with it, as well as of its own intrinsic interest.

The more immediate results of the archeological work thus far accomplished may be restated as follows. Of most general interest, perhaps, is the verification of the site of a flagstaff of 1803 (and perhaps previous as well as later use), from which timber remains were recovered that shed light on the actual design and construction of an early staff--in

a location different from the steel pole now in use and presented to the public as the location of 1814. The timber remains themselves are noteworthy additions to objects available for exhibit from Fort McHenry itself, and have an intrinsic interest as specimens of older woodworking, of undoubted association with the fort and used at an early date, whether or not remains specifically in use in the year 1814.

The area of the Powder Magazine of the Star Fort, upon excavation, produced new data on the historical development of this somewhat complicated structure, particularly important to the architectural research on the building; these data would not have been available apart from careful exposure of parts of the immediate exterior and interior, below grade and floor. Similar additions, of lesser note, were made to knowledge of Buildings D and E, and the Sally Port of the Star Fort, where more limited excavations suffice for the present.

Further knowledge of the course of the original Boundary Wall and Gate (probably in existence in 1819) and of the adjacent Tavern--all probably demolished in the extensive changes made at the fort about 1837--were also added by excavation, and the fact was clearly established that (as anticipated) despite demolition evidence of these structures had not been completely obliterated. Indeed, with respect to the Gate, although it may have been completely removed, the recovery of many of the individual dressed-stone members (and the probability that others still remain in the fill of the Tavern

cellar, where they were disposed of) offers the interesting possibility that the complete Gate could be reconstructed in drawings, stone by stone--much as Old World temples have sometimes been reconstructed--or even re-erected.

The Tavern site itself merits special attention also--  
even though originally a private dwelling and objectionable  
to the military command at Fort McHenry--inasmuch as the con-  
struction of this building may antedate that of Fort McHenry  
itself, and since the Tavern like the fort survived the bom-  
bardment of 1814, though it is not known to have played any  
part in the defense.

The investigation of the area of the great Lower and Upper Water Batteries, of special importance during the defense of the fort in September, 1814, while producing no clear evidence of the batteries themselves in physical remains, contributed to knowledge as well. In the first place, it was essential that special attention be given this area, with future development in mind and the matter of planning for reconstruction of these historic structures of special interest. Any reconstruction of now-missing essential parts of Fort McHenry as it appeared in 1814 would require early decision on the matter of these batteries. Fortunately for history, remarkably detailed knowledge of the general appearance and character of these structures is preserved in various documents and plans--notably on the Poussin Plan of 1819 which, remarkably enough, provides two profile sections through these bat-

teries (as well as two other profiles through the moat surrounding the Star Fort), together with plans, on scales adequate to reveal much detail.

Excavation revealed that the sites and areas of these batteries had been extensively damaged at various times since 1814 by successive construction and demolition work, and it is probable that primary dependence, for reconstruction purposes, must ultimately rest upon the documentary sources rather than upon any buried surviving physical remains. Indeed, though further search has been recommended elsewhere in this report for such physical remains, it is not probable that major additions to knowledge of these batteries are likely at this late date to be derived from further exploratory excavations. Yet this opinion could not itself have had any authority until explorations were made in search of physical remains. In this sense, therefore, the explorations have contributed to planning future development at the monument, since they clarify somewhat the problem of source data for any reconstruction, and provide additional orientation to the problem. Finally, the explorations completed suggest the desirability of further research of the kind on this part of the present monument, since physical remains may actually survive in this large area though sampling excavations failed to reveal them.

Certain observations concerning natural and artificial

changes in the topography of the area since 1814 have been made in an appendix (A)--observations suggested in part by the excavations, in part by certain historic documents. Some of these observations are more positive as a result of the excavations than they might otherwise have been, and the archeological work has thus contributed in a small way also to overall planning for restoration of the historic scene at Fort McHenry.

Finally, as a part of the archeological work, a limited collection of documented field specimens of certain association and provenience is now available for study and exhibit, illustrating various aspects of the history of Fort McHenry, notably the nature of everyday life at the post at different times in the past. Among these, the strictly military specimens are of special interest and exhibit usefulness, and there are at least two (the bomb fragments) that may originally have been deposited (if later redeposited) during the defense of the fort on September 13 and 14, 1814. Such excavated specimens have a relatively high historical value for any museum program as well as for study purposes since they are not mere typical historic objects, drawn from other times or places, or merely said to have been used at the post, but actual used objects from it. In this regard, the two timbers from the site of the flagstaff of 1803 also take a high place, since they may be parts of the bracing for the staff that

carried the Stars and Stripes seen by Francis Scott Key, and thus directly associated with writing of the national anthem.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE  
FORT MCHENRY NATIONAL MONUMENT AND  
HISTORIC SHRINE  
BALTIMORE 30, MARYLAND

The Outworks of Fort McHenry,  
September 12-14, 1814

Prepared by:

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Supervising Park Historian  
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Fort McHenry National Monument  
and Historic Shrine

November 7, 1958

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#### IV

### Exterior Buildings, 1814

The exterior scene at Fort McHenry in 1814 was completed by several buildings. Unfortunately, it is almost impossible to give other than general information regarding most of those structures.

The Poussin plan of 1819 shows a number of buildings outside the fort, and of them we can only be positive that the hospital stood in September, 1814 (see figure 14, p.57).<sup>1</sup> In 1811 an old house at or near the fort was used as the hospital; and perhaps the hospital was moved to an end of a stable in the same year.<sup>2</sup> In July, 1813, it was recommended that a hospital be built for the post, which led to an order

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1. An 1834 plan of Fort McHenry (Fort McHenry, Drawn in obedience to a circular...November 13, 1834, by Lt. Thos. S. Lee, O.C.E.--hereafter cited as the Lee Plan) names and locates this hospital. Since the location and measurements of this building are generally similar on the preceding and Poussin plans, the hospital's location on the latter plan was established. The purpose of the enclosed area on the Poussin plan is unknown.

2. Colonel J.B. Walbach to the Secretary of War, June 19, 1811, Selected documents of letters received, 1807-1812, O.S.W.

There is no available material that shows that the buildings marked W, X, Y, and Z in figure 14 were standing during the bombardment. Building W was probably the building referred to in 1831 as a boat house, in which horses were kept.<sup>29</sup> It was evidently torn down subsequently and a new stable was erected there.<sup>30</sup> Nothing is known about building X; building Y was probably erected as a laboratory in 1816.<sup>31</sup> Building Z is noted as being a bake house in Lee's 1834 map, but there is nothing to indicate its date of construction or its possible use in September, 1814.

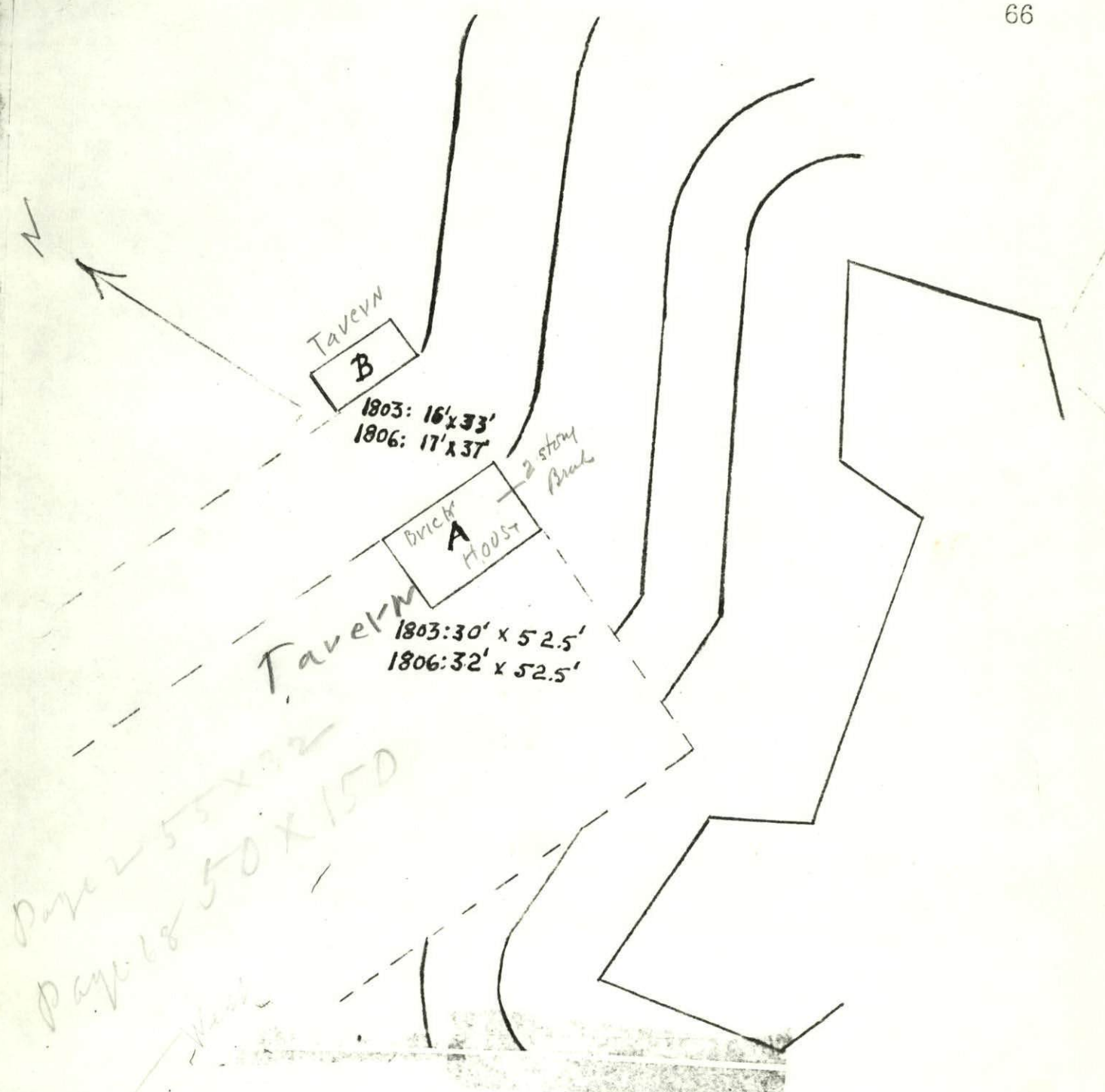
There were two other buildings standing in 1814 that we know about. A brick tavern and a frame house stood just a short distance north of the fort (A and B, figure 16, p. 66). These buildings had been there since at least 1797, if not

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29. Major M.M. Payne to General T.S. Jesup, April 20, 1831, and Captain J.W. Ripley to General T.S. Jesup, May 11, 1831, Con. Corres. File, Q.M.G.

30. Payne to Jesup, January 9, 1832, ibid.; and Poussin Plan.

31. Lt. Colonel G. Armistead to Lt. Baden, December 12, 1816, Selected Letters Received, 1801-1820, O.C.A. A laboratory might have been erected at Fort McHenry in 1812; and there was apparently one there in 1814, but where it was is unknown ([Inspector's Office] to Capt. L. Beall, June 10 and 15, 1812, Selected pages from Letters sent, 1809-1816, O.S.W.; and Armistead to Col. Wadsworth, July 15 and 28, and August 4, 1808, Selected Letters Received, 1801-1820, O.C.A.).



Page 255 x 32  
 Page 68 50 x 150

Figure 16  
 The Tavern (based on Ft. Mifflin, 1803,  
*supra*, §n. 35, p. 27 ).

Palto

earlier.<sup>32</sup> They were the property of Philip Swartzauer, who died in 1811 and left that property, including about five and a half acres of ground, to his wife.<sup>33</sup> As can be seen from figure 16, the ground and buildings intruded seriously upon the defenses at the fort. Because of this and the detriment of having a drinking place so available to the garrison, many suggestions were made between 1817 and 1833 that that property be purchased.<sup>34</sup> In the latter part of 1833 the buildings were leased for two years; and in October, 1835, the lease was extended, with the rent of the structures to be continued until they were sold.<sup>35</sup> Finally, on September 12, 1836, the Swartzauer

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32. Register of Warrants, January 24, 1800, 1800 to 1802, Accountant's Office, G.A.O. This lists a sum due Philip "Shwartzhouer," the owner of the tavern, for a room rented to J. Foncin, an engineer at the fort, for five months.

33. Will of Philip Swartzauer, November 1, 1811, Con. Corres. File, Q.M.G.

34. Lt. Col. G. Armistead to Gen. J.G. Swift, December 31, 1817, and Col. J. Hindman to Col. G. Armistead, March 17, 1819, Selected Correspondence Relating to Fort McHenry, Maryland, 1811-1837, O.C.E.; and Col. J.B. Walbach to Maj. Gen. T.S. Jesup, May 7, 1833, Con. Corres. File, Q.M.G.

35. Lt. S. B. Dusenbery to Gen. Thos. S. Jesup, October 30, 1833, and Capt. Geo. Peter to Lt. R. Archer, October 15, 1835, Con. Corres. File, Q.M.G.

property was purchased for \$12,001 and by 1844, apparently, the buildings had been torn down.<sup>36</sup>

Tavern Building A on figure 16, page 66, was a two story brick building. By 1836, the time of its sale, it had evidently been added to, since it was fifty feet wide and 150 feet deep.<sup>37</sup> There was a hall in the structure, with two rooms on each floor in the front.<sup>38</sup> An extensive back building had a kitchen on the first floor and several rooms on the second.<sup>39</sup> The frame building across from the Tavern, (B), was twenty-five feet wide and fifty feet deep in 1836.<sup>40</sup> It was of two stories, with two rooms on each floor and an attached kitchen.<sup>41</sup> Nothing is known about the appointments or furnishings of these buildings.

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36. Capt. H.A. Thompson to Gen. Gratiot, September 12, 1836, Letters Received, O.C.E.; and Lt. G.T. Beauregard to Col. J.G. Totten, December 17, 1814, Letters Received, 1838-1866, O.C.E.

37. From an advertisement for the sale of the Swartzauer property enclosed in a letter of Lt. H.A. Thompson to [Gen. Gratiot], December 24, 1835, Letters Received, O.C.E.

38. Ibid.; and Maj. T. Cross to Gen. T. S. Jesup, June 27, 1833, Con. Corres. File, Q.M.G.

39. Advertisement, Thompson to [Gratiot], December 24, 1835, Letters Received, O.C.E.; and ibid.

40. Ibid.

41. Cross to Jesup, June 27, 1833, Con. Corres. File, Q.M.G.

Through archeological investigation, what was probably a portion of the cellar of the tavern was discovered.<sup>42</sup> The cellar wall was of rock, about eighteen inches wide.<sup>43</sup>

It is clear that our knowledge of the exterior buildings in 1814 is very general. Except for the hospital, we can only deduct that an outside wooden barrack, three small magazines for the exterior batteries, and a gun shed and an ordnance storehouse stood during the bombardment. Details concerning appointments, furnishings, and interior arrangements are almost non-existent.

There was a wharf at Fort McHenry.<sup>44</sup> Since there is nothing to indicate its disappearance before the bombardment, we can assume a wharf stood in September, 1814. Its exact location is not known, although it probably was just beyond building W in figure 14, where a wharf is shown on the Poussin map.

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<sup>42</sup>. G. Hubert Smith, Archeological Explorations at Fort McHenry, 1958, History File, Fort McHenry N.M. and H.S.

<sup>43</sup>. Ibid.

<sup>44</sup>. Samuel L. Dyson to Wm. Linnard, June 6, 1802, Con. Corres. File, Q.M.G.; and Bill for Hands' Time at Fort McHenry, April 3 to 24, 1813, no. 675, Box 21, B.C.A.

H2215

May 18, 1966

Memorandum

To: Superintendent, Fort McHenry N.M.  
From: Regional Archeologist  
Subject: Transmittal of Archeological Report on Grounds Development

Herewith transmitted is a rough draft of the above subject report.

It has not been possible to finish this report at this time. I am leaving today (May 18) for three weeks Annual Leave. I shall return June 6th.

However, it is thought advisable to send a draft to the Area while the Architect's services are available there.

John L. Cotter  
Regional Archeologist

In duplicate

Attachments: Narrative with 4 Plans

*Letter 4 Pages*

*Encl 1 to 29 done OK  
70 to 77 MISSING  
77 to 83 + Drawing of the Fort OK*

*Outwork 56 OK  
65 to 69 OK  
70 to 77 missing  
77 to 83 OK*