UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

The National Survey of Historic Sites and Buildings

Special Report

Fort Mifflin, Pennsylvania

X: The War for Independence

Prepared by
Murray H. Nelligan
Assistant to Regional Director,
Historic Preservation
Northeast Regional Office
March 12, 1969

Fort Mifflin

Location: On the Delaware River, a short distance downstream from the mouth of the Schuylkill, at the end of Fort Mifflin Road, Philadelphia, Pennsylvania. 84 acres (including 42 recently turned over to the City by the Corps of Engineers), bounded on the south by the Philadelphia International Airport (along the Philadelphia-Delaware County Line), to the north by the airport and the Corps of Engineers, on the east by the Corps of Engineers, and on the south by the Delaware River.

Ownership: City of Philadelphia, City Hall, Philadelphia, Pa. Mr. James Crawford, Commissioner for Recreation, Municipal Services Building, Philadelphia, Pa.

Statement of Significance

Fort Mifflin, situated on what was in 1777 Mud Island and is now part of the mainland just below the confluence of the Schuylkill and Delaware Rivers, was one of a series of significant actions and events which frustrated one of the two major British campaigns mounted in 1777 to subdue the main centers of rebel power in the northeast and central colonies.

Both campaigns failed to achieve their purpose. The British plan to sever the colonies in the northeast from those to the west and south by gaining control of the Hudson River Valley was ended by the American victory at Saratoga. The other campaign into Pennsylvania, although superficially successful in capturing the

rebel seat of government at Philadelphia, failed in its main objectives of smashing Washington's army, the government behind it and the rebel cause itself. The loss of an entire army at Saratoga, coupled with the failure of the other major British military force in America in a major campaign in Pennsylvania, brought about a military alliance with France early in the following year. They also caused the British to make a major revision of their strategic approach to the war, to shift their main effort to the southern colonies which were mistakenly presumed to be weaker, a change that was to lead eventually to Yorktown and final victory for the new nation. The revitalized American spirit was also manifest in the adoption of the Articles of Confederation and Perpetual Union a few months later.

In contrast to the events that culminated in the surrender at Saratoga, the British campaign into Pennsylvania was characterized by a series of hard fought actions, all of which they won, yet in the end achieved nothing but the occupation of the rebel capital for a season, after which they retired back to their New York City base. Conversely, the Americans had demonstrated a willingness and capability to take the offense against superior enemy forces, suffer a series of defeats without being disheartened or destroyed, and while gathering strength for another attack, keep the enemy locked within his fortified lines, unable to occupy the interior or gain supplies from it. It is within this context that the spirited defense of Fort Mifflin must be weighed.

The cumulative significance of this series of events towards winning the War for Independence is recognized in all of the major ones having been designated Registered National Historic Landmarks, except the stubborn defense of Fort Mifflin and its adjunct Fort Mercer:

Brandywine in September 1777 where the Americans sought to bar the road to Philadelphia, and out-maneuvered by superior British forces, were forced aside.

Germantown, now memoralized by "Cliveden," where an aggressive American attack came very close to smashing Howe's main forces, before being driven off.

Fort Mercer, on the New Jersey side of the Delaware, across from Fort Mifflin, where a small garrison of colonials beat off a determined British assault, with heavy losses to the enemy.

Fort Mifflin, whose small garrison of Marylanders for days withstood the heaviest bombardment of the war, resisting the combined efforts of vastly superior British land and navy forces until, their last cannon silenced, instead of surrendering, silently stole away.

Valley Forge, where during the hard winter that followed, a new American army, able to meet the professional British army on equal terms, was forged.

History

Underlying the failure of the British campaign in Pennsylvania was the loss of time involved in moving on Philadelphia by a round-about voyage (43 days) from New York City to the north end of Chesapeake Bay, and thence by land to the rebel capital, instead of marching directly across New Jersey (about 90 miles) or, going by ship directly up the Delaware River to a convenient point from which to take the city--all because of the presence of Fort Mifflin and its supporting defenses blocking the river. Likewise, the necessity of opening the Delaware River to British shipping, once the rebel capital had been taken, proved a slow and costly operation that further set the enemy's schedule back. Despite its defeat at Germantown early in October, Washington's army encircled the city, denying the enemy supplies from the interior, with the result that the city was soon feeling the pinch with winter coming on. British survival depended upon supply by sea; hence, it was vital that the river be opened speedily to the fleet of over 250 warships, transports and supply ships that lay downstream.

The British commander, General William Howe, realized that this was no small undertaking. Several miles downstream the river was blocked by a line of chevaux-de-frise, extending from Billings Island across the channel to the New Jersey shore;

a similar barrier stretched just below the city, from Fort Mifflin to Fort Mercer on the Jersey shore. Protected by shore batteries, the chevaux-de-frise were most effective obstacles. Each line was made up of a number of heavy timber crates, filled with rocks and chained together in a row, with a heavy, long timber capped by a barbed iron point projecting from each crate at such an angle as to first pierce the wooden hull of a ship, then rip the planking off it. In addition, a respectable fleet of small galleys, gunboats, and floating batteries lay above the upstream barrier to support the forts.

Unlike Fort Mercer, across the river, an earthwork, Fort Mifflin was of strong masonry construction that predated the war. As originally conceived and built in 1772 by an experienced British military engineer, John Montressor, Fort Mifflin was essentially a water battery built on Mud Island, with its main wall along the river bank constructed in the form of a tenailled trace, a saw-tooth arrangement popular in Europe in the middle of the 18th Century. From the river, it was a formidable work, with high, thick stone walls containing a number of loop-holed casemates for the protection of garrison and stores from both bombardment and landing parties. It had only one grave weakness; having been built only to command the river approach to the city, it was open to the rear or landward side, protected only by a water-filled moat backed by a square redoubt in the middle of the parade.

When the Americans took it over early in the war, an effort to correct this weakness was made by erecting palisades flanked by wooden, two-story blockhouses mounting four guns in each; but, these were more to deter landing parties than protection from hostile artillery. To supplement these works, all open areas that offered a land party a possible toe hold were pitted with hundreds of Trous de Loup or "wolf's holes"--pits dug in the shape of inverted cones, each with a sharp stake implanted at the bottom.

With the British army in possession of the city, and its fleet in overwhelming force at the lower end of the Delaware, the most sensible course for the Americans might have been to abandon the fort on Mud Island and concentrate their defense on Fort Mercer, across the river, defending it as long as possible, then slipping away to rejoin the main body of the army. However, this plan was outweighed by the consideration that the two forts together, supported by the "Delaware Fleet," as it was termed, might be expected to delay the British longer than either could alone; and the longer the enemy was kept from dockside in Philadelphia, the weaker he would find himself during the coming winter. For these reasons Washington decided to hold both forts as long as possible, despite the lack of troops to man them adequately.

After the battle of Germantown, the British first built a line of batteries and redoubts to defend the city, after which they turned to opening the Delaware. First to go was the downriver line of chevaux-de-frise across the channel at Billings Island. With little effort a small force of Americans defending it was driven off and a passage cleared for ships. Batteries were emplaced on the islands and mainland to the rear of Fort Mifflin, ironically in accordance with plans drawn by the military engineer who built the fort originally. Montressor's familiarity with both the terrain and the weaknesses of the fort facilitated siting and construction of the several batteries and lines. Downstream, a small, but powerful squadron was assembled for the assault: Augusta (64), Roebuck (44), Merlin (18), and a number of smaller vessels, plus an East Indiaman converted to a floating battery of 16 heavy guns.

Undismayed by the array of British power closing in on them, the garrisons of the two forts energetically worked at strengthening their defenses. Two Rhode Island regiments, in all about 300 men, labored to complete the earthworks of Fort Mercer, while about the same number of men of two Maryland regiments, under Lt. Colonel Samuel Smith (later famed as the victorious defender of Baltimore in 1814) labored on Fort Mifflin. Out on the river,

above the chevaux-de-frise, the "Delaware Fleet" commanded by Commodore Hazelwood, a force of 47 small vessels, 14 fire ships and a number of fire rafts, also made ready.

The British planned to make a two-pronged assault, with Fort Mercer due to be taken first, then Fort Mifflin. Accordingly, late in the afternoon of October 22, four Hessian battalions, totaling about 1,200 men were in position ready to assault the New Jersey fort. While Fort Mifflin was being heavily bombarded by both ship and shore batteries, several British warships anchored close in to Fort Mercer to support the Hessian assault. Having offered the Americans the conventional choice of surrender or no quarter, and their offer having been declined, the Hessians stormed in from two directions, only to be shot down in windrows and thrown back with great loss by the combined fire of the fort and American gunboats in the river. When the Hessians retired from the field at darkness, they left behind almost 400 dead and wounded, including their commander, Colonel Donap, who died the next day. American losses were very light.

Fort Mifflin had its turn next day, when in the early hours more than 300 cannon opened on the American works in preparation for landing troops. But again the "Delaware Fleet" performed well, harassing the British squadron severely, while the guns of Fort Mifflin repeatedly drove off enemy efforts to move floating

batteries into a side channel behind Mud Island. Finally, frustrated, the British gave up the effort and their ships retired down the river leaving behind Augusta hard aground and in flames, and Merlin blown to pieces by a powder explosion.

While the British set about preparing for an all-out assault, which took almost a fortnight, the garrison of Fort Mifflin took advantage of the breathing space to strengthen their defenses with what little material there was at hand. They knew that they could expect no relief from the main body of the army camped at Whitemarsh, because any move west of the Schuylkill strong enough to relieve the fort might well bring on a general engagement for which Washington was not as yet ready. Sorties on the enemy batteries were not possible, either, because of the skilled way Montressor had sited them in and about easily defended marshes. Washington made a determined effort to get General Gates, most of whose army had been freed for other use by the surrender of Burgoyne, to send reinforcements, but Gates ignored his repeated pleas until it was too late to help the Delaware forts.

There was little that the small garrison of Marylanders could do except watch as the British systematically extended their lines and emplaced battery after battery--fourteen in all--on Province Island and Hog Island, some 500 yards distant from the open rear of the fort. They were also unable to keep the enemy from moving

a large floating battery into a new channel which had been scoured between Hog Island and the mainland by the effect of the chevaux-de-frise on the river current. Their position seemed hopeless when, finally, two sixty-four gun and four forty-gun ships inched in to within 900 yards.

The storm of shot and shell that burst on the fort on the morning of November 10 kept up, night and day, for the six days. Casualties were heavy among the defenders as they fought back. The fort's artillery officer was killed within a few hours and in the afternoon, its commanding officer, Sam Smith, was struck down by flying bricks. A Prussian officer, Colonel DeArandt, was sent in to take charge, but was shortly wounded, and in due course the command devolved on Major Simeon Thayer, of Rhode Island.

As day succeeded day, the American works were battered into ruins. On the 13th, the northwest blockhouse and powder laboratory blew up, and an outlying battery was destroyed. The following night, the British floating battery was moved in even closer until its guns were firing point blank; but, by noon of the following day it lay silent, beaten down by the American guns.

By then the British had learned the real strength of the garrison from a deserter and, heartened, energetically prepared for a final assault. At first light on the 15th, two men-of-war moved in to engage the fort in front, while another war ship and more floating batteries were slipped into the channel behind the fort and several frigates took station to engage Fort Mercer and the American gunboats.

All was still that morning, when at 10 o'clock a British bugle broke the hush with a call to action, and like a crash of thunder every British gun bearing on the fort fired. The Americans fought back desperately to no avail; within an hour their last cannon lay dismounted in the rubble, while British sharpshooters stationed in the fighting tops of their ships, high above both the river and the fort, were shooting down any American who showed himself. By nightfall, the fort was in ruins. According to a survivor of the bitter action, who later served in Virginia, the shelling at Yorktown was no more to be compared with the bombardment of Fort Mifflin "than the sting of the bee is to the bite of a rattlesnake."

With over half its garrison of 450 killed or wounded, it was apparent that the remainder could not hope to fight off the enemy landing parties due to storm ashore with morning. Therefore, as darkness fell, Thayer ferried the wounded and all but forty of his men over to Fort Mercer. At midnight, the latter set fire to everything that would burn, then followed suit. Three days later, with a large British force under Lord Cornwallis rapidly approaching up the Jersey shore, Fort Mercer was also evacuated.

With the Delaware River open at last, Howe's army could now be supplied by sea. Again, as at Brandywine and Germantown, the British had won the battle, but at a cost in men and time lost

which would keep them from their main goals, disruption of the rebel government and destruction of its principal army. The failure of their campaign had far-reaching effects. Within a matter of months every top British commander in America was replaced and an entirely new course of military action adopted.

Hence, the larger victory lay with the Americans, and as they prepared to move to winter quarters, their discouragement from being beaten three times running was balanced by a new assurance that they could take the best the British had to offer. Worn-down and poorly equipped, they were; defeated they were not. With them to Valley Forge they took a renewed confidence in their leadership and an anticipation of ultimate victory. Both would sustain them through the hardships of the severe winter of 1777-1778, and their determined purpose was to be embodied in the trained, hardened American army that took the field when spring came.

Present Condition of the Site

From the time the Americans reoccupied Philadelphia in 1779 until the end of the war, little seems to have been done to restore the defenses of Fort Mifflin. In 1793, the Commonwealth of Pennsylvania engaged Pierre Charles L'Enfant, who later laid out the City of Washington, to draw plans for its reconstruction. Work began in 1798, in the administration of President John Adams, under another French military engineer, Colonel Louis Toussard.

The new fort followed the outline of the earlier one. The old walls of 1772 were cut down to varying heights and new ones faced with brick erected thereon. Some of the extant buildings inside the fort date back to this time; others were erected in subsequent periods of development: in 1814, the 1830's, 1840's and 1860's. Six of the old stone-vaulted casemates under the east bastion housed Confederate prisoners in the Civil War, and some of the wooden, two-tiered bunks survive from that period. Across the moat, on the river side, a demilune was erected shortly after the Civil War on the site of the original eight-gun water battery. Work on a larger, nine-gun battery southwest of the fort was begun about this time, but never finished. In subsequent years, the fort served useful military purposes, but was not important historically. After the Korean War, it was declared surplus and turned back to the Commonwealth, which in turn, in 1962, transferred it to the City of Philadelphia.

In addition to the walls described above, most of the impressive moat, or "wet ditch," all of which is extant, appears to date back to the Revolution, as may an earth-covered structure located against the southeast wall indicated as a magazine on General Samuel Smith's sketch of the fort in 1776. Promising archeological tests made in recent years indicate that remains of other structures figuring in the battle lie beneath the surface. In addition, the Bleakley or "Cannon Ball" House, which still bears the scars of American cannon balls, may be moved from its present location in the middle of a sewage disposal plant to a location near the fort, if present plans materialize. Architecturally, the house is also important as possibly the oldest one in the Delaware Valley, with its original section perhaps dating back to 1641.

To the fort's out-of-the-way location and limited military usefulness may be attributed the remarkable completeness of the surviving structures of this example of late 18th and early 19th Century fortification. Just across the moat is a two-story hospital, one of the very few extant from this period. Inside, an artillery shed of rugged construction, used for storing cannon, is a unique survival. Brick ovens in the casemates, a blacksmith's shop, store house, a two-story officers' quarters, a one-story (with attic) enlisted barracks, and a stately Greek Revival Headquarters building, or Commandant's House, powder magazines and arsenal--all add charm and completeness to the scene. Even some of the great shade trees within the ramparts appear to date back to the early period of the fort.

The historical significance of Fort Mifflin has not been as generally appreciated as the hard-fought action deserves, due in part to the older interpretation of the Pennsylvania campaign in accord with which the tactical successes won by the British very often tend to obscure the larger significance of the strategic reverse they had in reality suffered. Again, in more recent years, it has been customary for writers to play up the more dramatic events at Saratoga and Valley Forge and pass quickly over those that occurred in between.

Nevertheless, there was a persistent interest in preserving the fort. In 1915, the War Department designated it a "national monument" by executive order. Nothing came of repeated efforts in the 1920's to have the fort rehabilitated, but interest was sufficiently strong to justify the Corps of Engineers doing so in 1930.

As stated above, the fort was transferred to the City of Philadelphia in 1962, and since this date the city's Department of Recreation has worked hard to maintain the area and encourage its use for appropriate purposes, despite very limited financial resources. It is anticipated that it will be opened to the general public this spring.

It should be noted that as this presently unattractive section of the city undergoes renewal within the next few years and convenient access to the fort is provided by good, well-marked roads, public

interest in the site is bound to increase markedly. Likewise, the coming Bicentennial Celebration of American Independence will almost certainly generate enthusiastic general, as well as local interest. Fort Mifflin will then come into its own, perhaps in some form of association with Independence National Historical Park, as best exemplifying the military aspect of the grand theme of Independence and Liberty that underlies the preservation and interpretive policies of the greatest of national historical parks.

An especially interesting public use for the fort, among others that suggest themselves, is its utilization as an instruction center for environmental education programs, conducted under the joint auspices of the various school systems and educational institutions of the Delaware Valley. In this connection, appropriate fort structures not needed for historical purposes might be used for classrooms, offices, dormitories, and exhibit and storage areas for classes in environmental education, with field work being done in Tinicum Marsh, a Registered National Natural Landmark, only a mile distant, and the large area abandoned many years ago outside the fort to the southeast, which, in effect, has long been a wildlife refuge. It would appear possible for the fort area, together with the large tract recently acquired by the city outside the immediate historical zone, to be large enough to accommodate a combination of historical, natural and limited recreational use, such as picnicking.

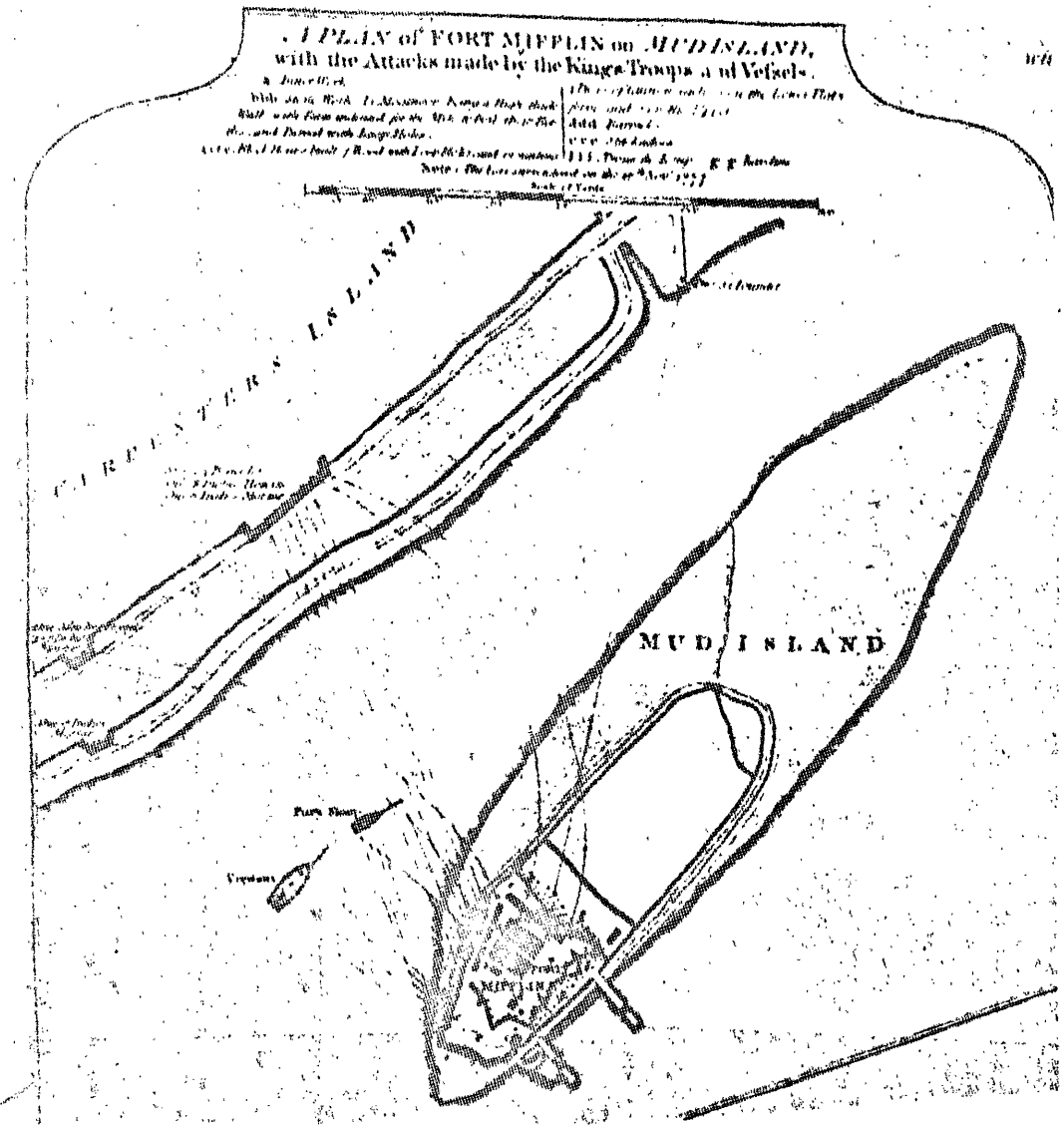
interest in the site is bound to increase markedly. Likewise, the coming Bicentennial Celebration of American Independence will almost certainly generate enthusiastic general, as well as local interest. Fort Mifflin will then come into its own, perhaps in some form of association with Independence National Historical Park, as best exemplifying the military aspect of the grand theme of Independence and Liberty that underlies the preservation and interpretive policies of the greatest of national historical parks.

An especially interesting public use for the fort, among others that suggest themselves, is its utilization as an instruction center for environmental education programs, conducted under the joint auspices of the various school systems and educational institutions of the Delaware Valley. In this connection, appropriate fort structures not needed for historical purposes might be used for classrooms, offices, dormitories, and exhibit and storage areas for classes in environmental education, with field work being done in Tinicum Marsh, a Registered National Natural Landmark, only a mile distant, and the large area abandoned many years ago outside the fort to the southeast, which, in effect, has long been a wildlife refuge. It would appear possible for the fort area, together with the large tract recently acquired by the city outside the immediate historical zone, to be large enough to accommodate a combination of historical, natural and limited recreational use, such as picnicking.

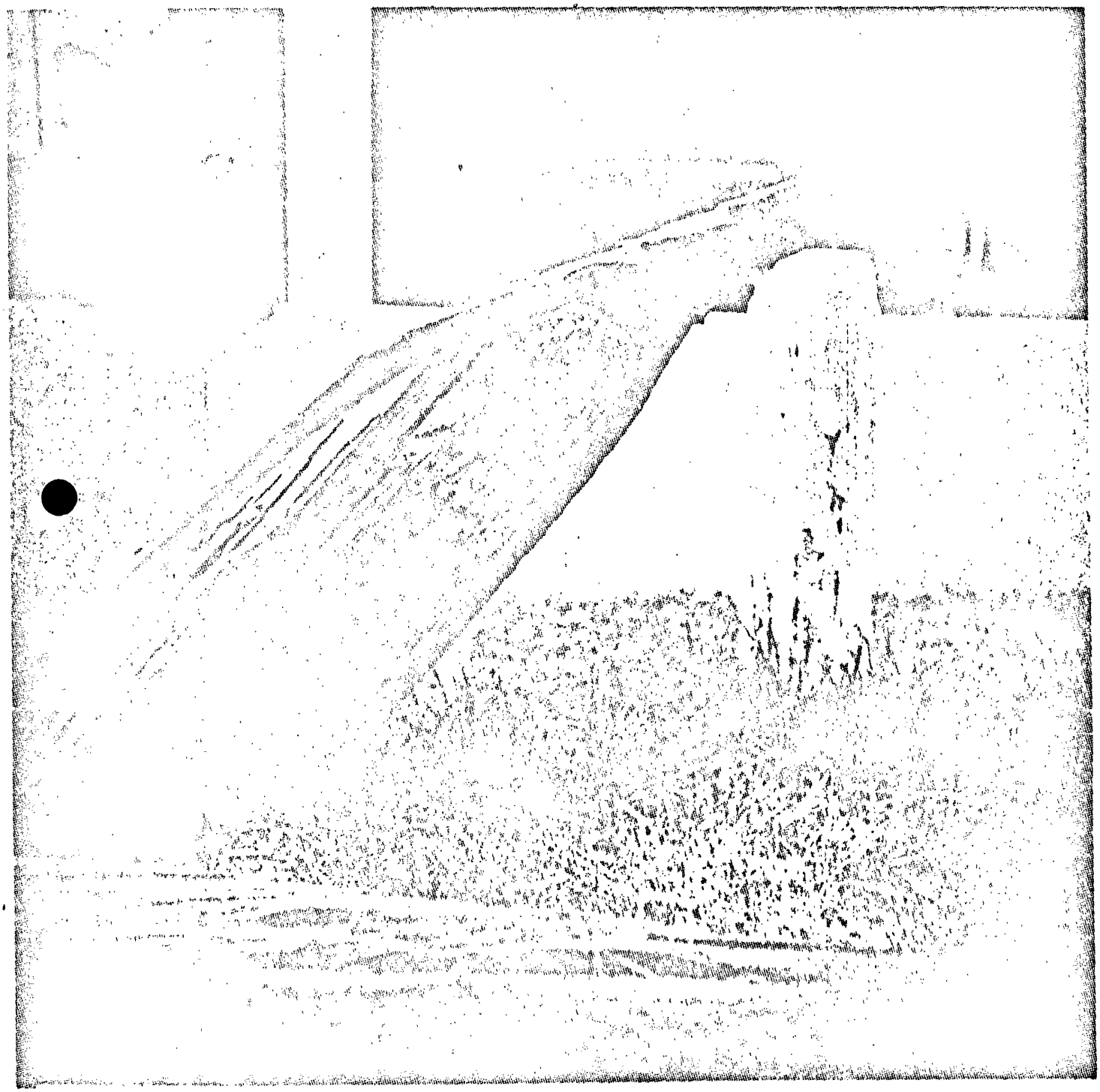
In conclusion, it may be mentioned that there is a possibility, now being explored by the City, of obtaining funds from a foundation with which to have the fort and its related structures records by the HABS.

References: Christopher Ward, the War of the Revolution (N.Y., 1952), I, 376; "The Siege of Fort Mifflin," in Pennsylvania Magazine of History and Biography, XI (1887), 83; J. Thomas Scharf and Thompson Westcott, History of Philadelphia (Phila., 1884), I, 361-364. "Fort Mifflin," Historical Report by Frank Barnes, N.P.S., March 23, 1956. Stanley M. Pargellis, "John Montressor," XIII, 101f, D.A.B. (N.Y., 1934); G. Edward Brumbaugh, "Fort Mifflin," a report on historical aspects and preservation problems to the Greater Philadelphia Movement, 1959.

1. Aerial view, Fort Mifflin.



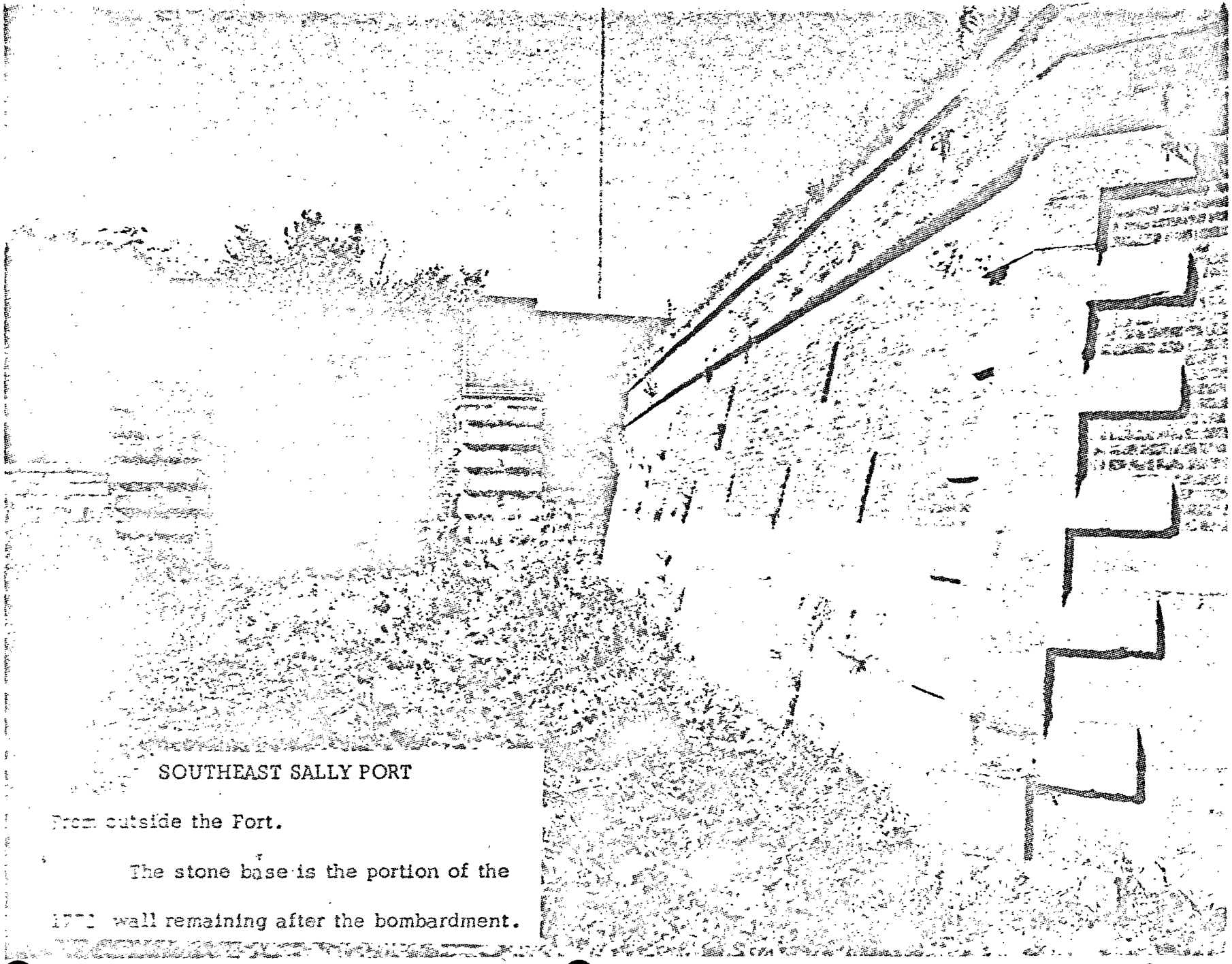
2. Assault on Fort Mifflin. From William Faden; London; 1785



BARBED IRON POINT OF CHEVAUX-

DE-FRISE

Original, preserved at Fort Mercer, Red Bank,

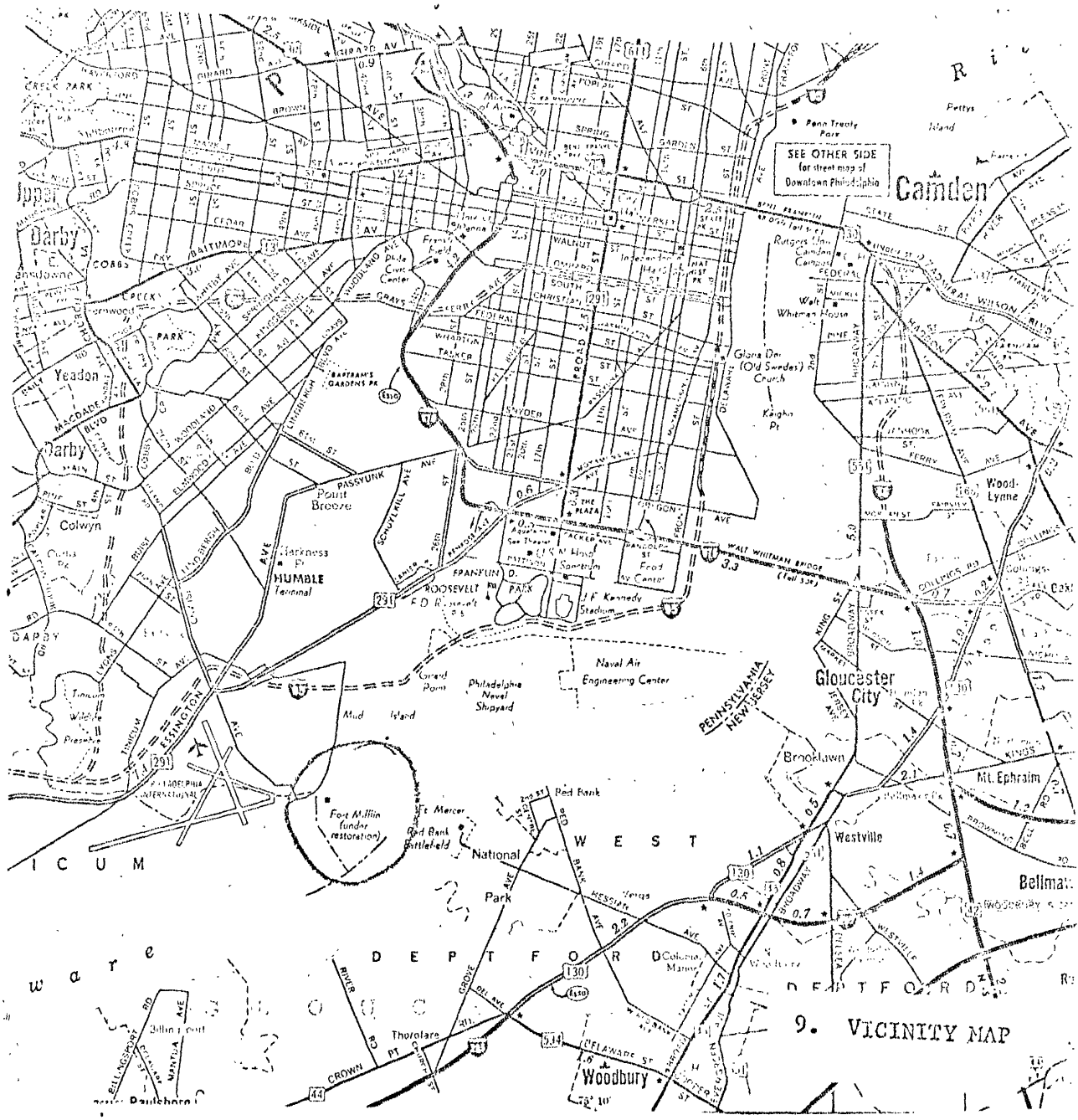


SOUTHEAST SALLY PORT

From outside the Port.

The stone base is the portion of the 1775 wall remaining after the bombardment.

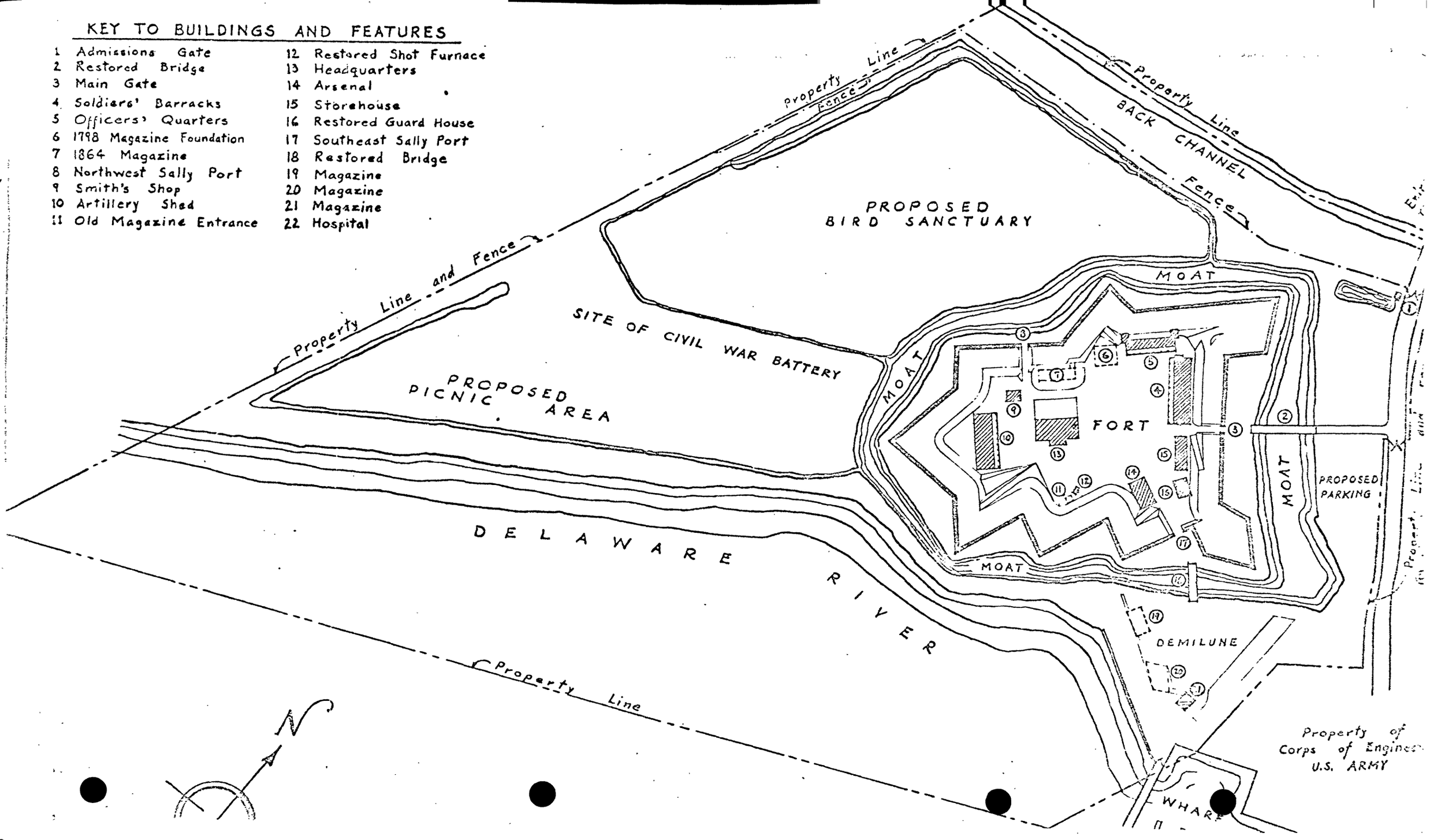
OVERVIEW OF FORT WILLIAM



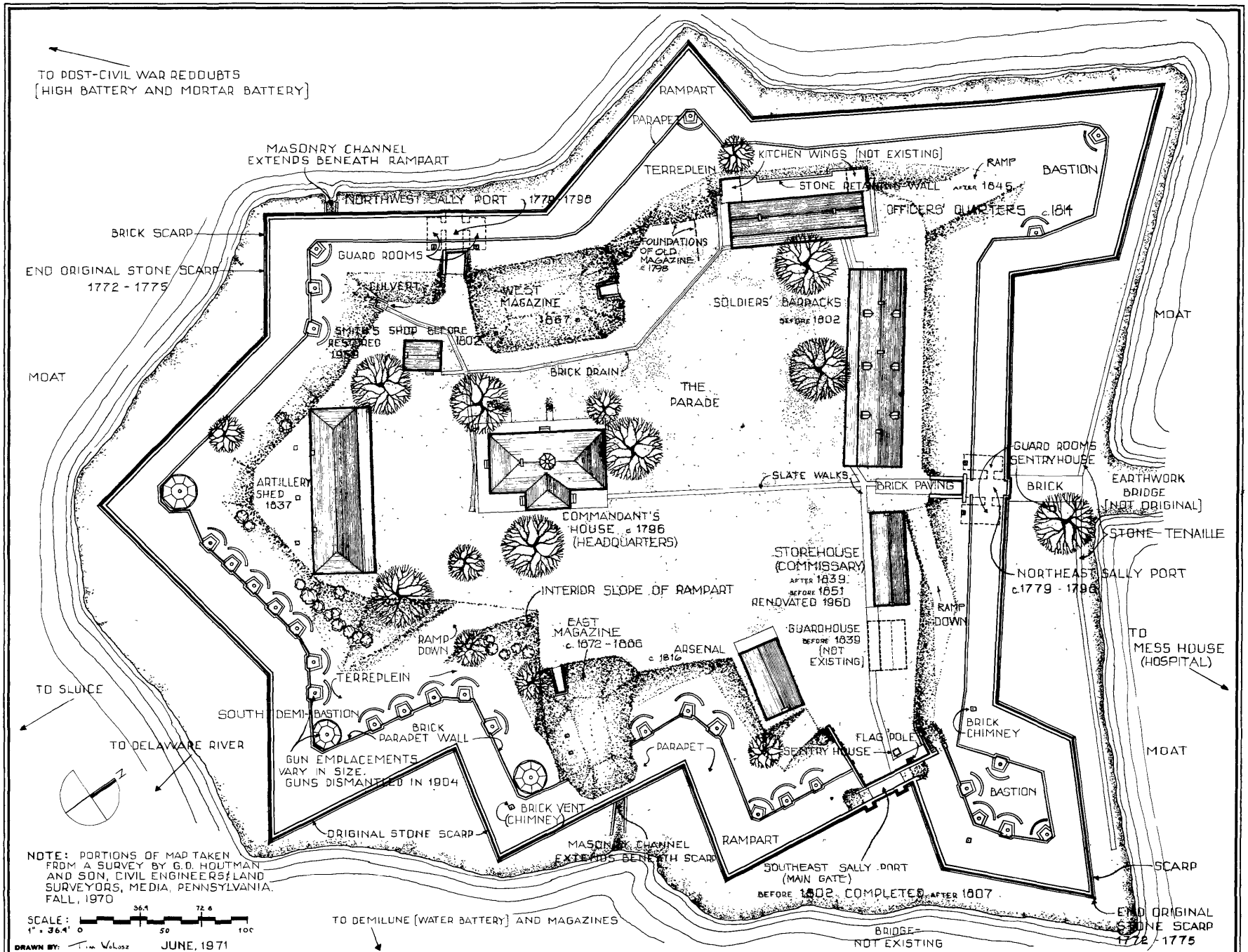
9. VICINITY MAP

KEY TO BUILDINGS AND FEATURES

1 Admissions Gate
2 Restored Bridge
3 Main Gate
4 Soldiers' Barracks
5 Officers' Quarters
6 1798 Magazine Foundation
7 1864 Magazine
8 Northwest Sally Port
9 Smith's Shop
10 Artillery Shed
11 Old Magazine Entrance
12 Restored Shot Furnace
13 Headquarters
14 Arsenal
15 Storehouse
16 Restored Guard House
17 Southeast Sally Port
18 Restored Bridge
19 Magazine
20 Magazine
21 Magazine
22 Hospital



6. COMMANDANT'S HOUSE

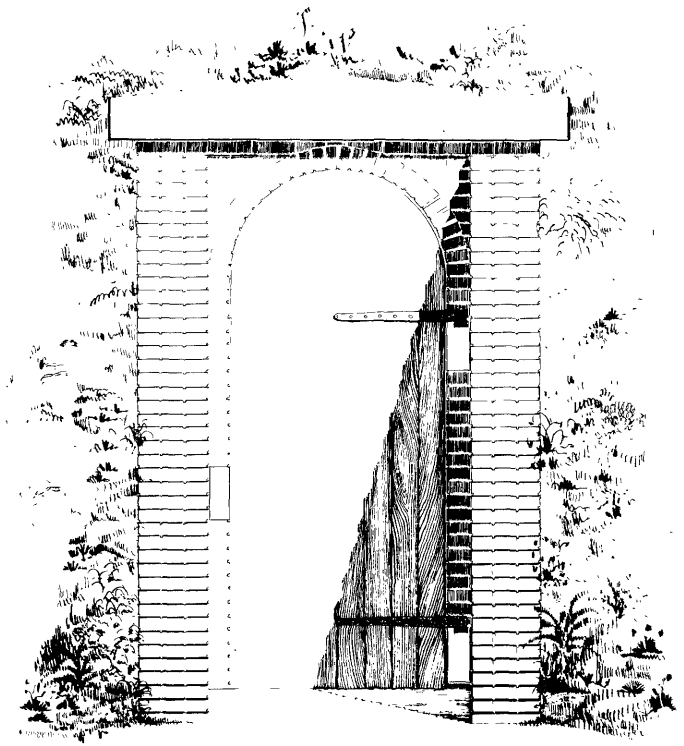


PHILADELPHIA PROJECT II
OFFICE OF ARCHEOLOGY & HISTORIC PRESERVATION
UNDER DIRECTION OF THE NATIONAL PARK SERVICE, UNITED STATES DEPARTMENT OF THE INTERIOR

NAME AND LOCATION OF STRUCTURE
FORT MIFFLIN
MUD ISLAND PHILADELPHIA PHILADELPHIA COUNTY PENNSYLVANIA

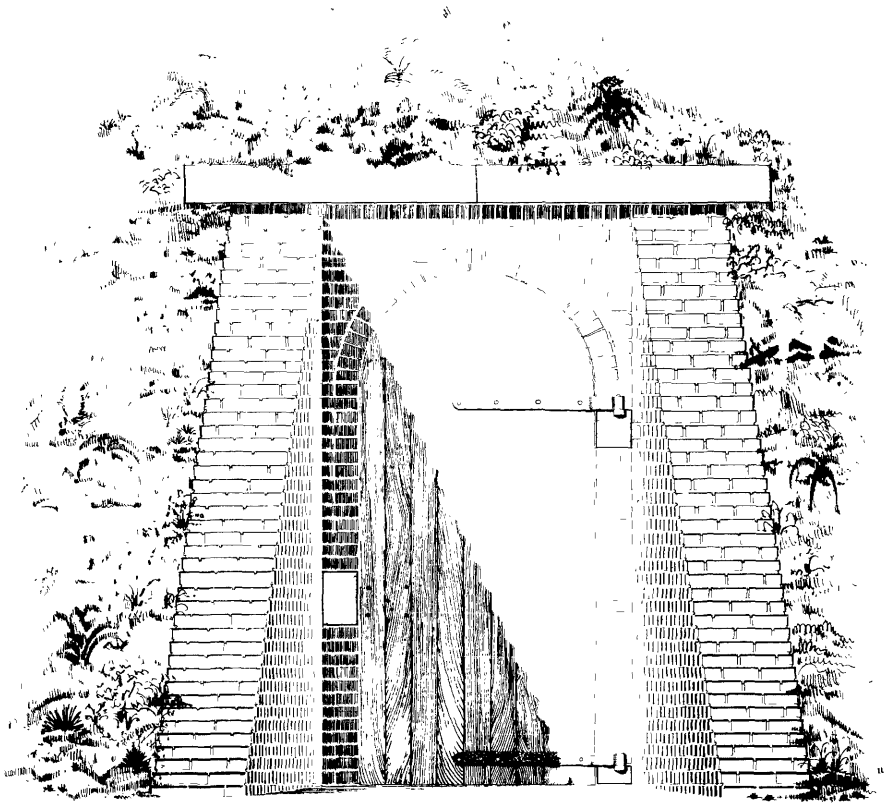
SURVEY NO. PA 1225

HISTORIC AMERICAN BUILDINGS SURVEY
SHEET 3 OF 3 OF 50 SHEETS



EAST MAGAZINE ELEVATION

HABS No PA1225 Gb



WEST MAGAZINE ELEVATION

HABS No PA 1225-Ga

0 3" 6" 1' 0" 2' 0"

SCALE: 3/4" = 1' 0"

DRAWN BY: RONALD B TJERANDSEN JULY 1970

PHILADELPHIA PROJECT II
OFFICE OF ARCHEOLOGY & HISTORIC PRESERVATION
UNDER DIRECTION OF THE NATIONAL PARK SERVICE, UNITED STATES DEPARTMENT OF THE INTERIOR

NAME AND LOCATION OF STRUCTURE

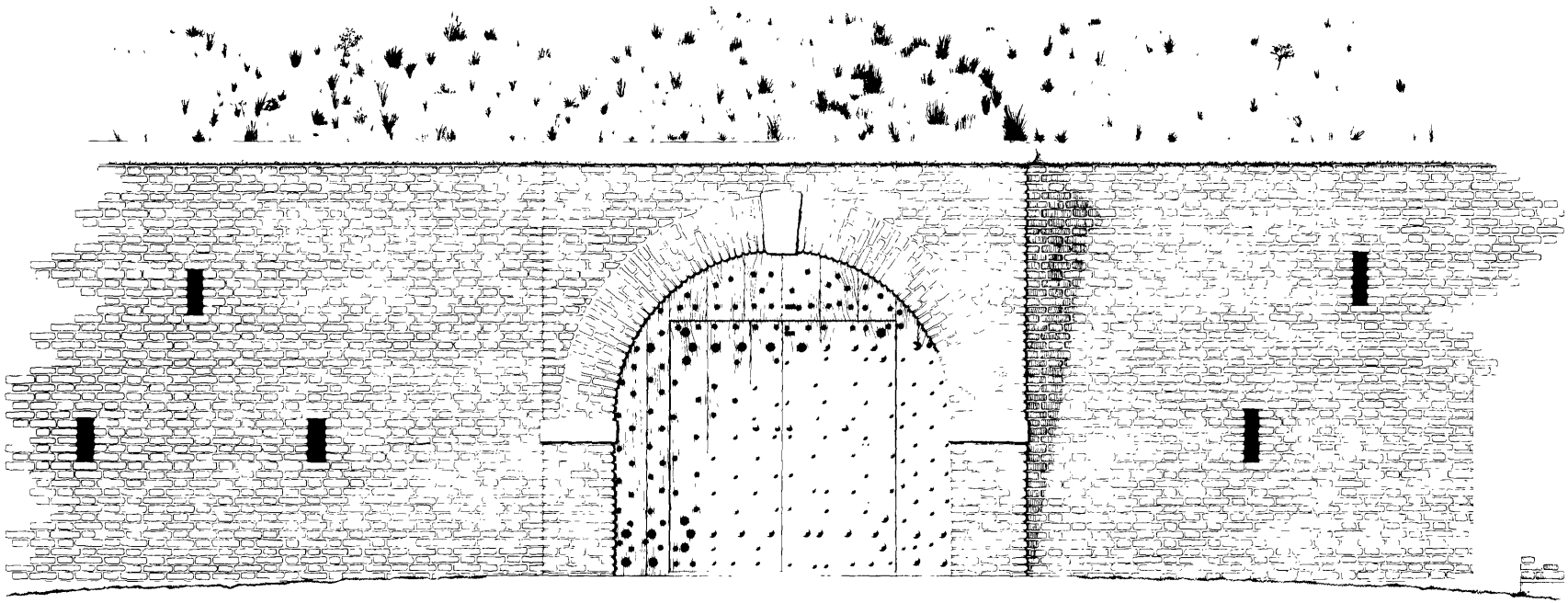
FORT MIFFLIN — POWDER MAGAZINES

MUD ISLAND PHILADELPHIA PHILADELPHIA COUNTY PENNSYLVANIA

SURVEY NO. PA 1225-G

HISTORIC AMERICAN BUILDINGS SURVEY
SHEET 2 OF 3 OF 50 SHEETS

LIBRARY OF CONGRESS INDEX NUMBER



SCARP ELEVATION

SCALE. 1/2" = 1'-0"

DRAWN BY: JOHN T. M. SHU, A.E., AUGUST 1970

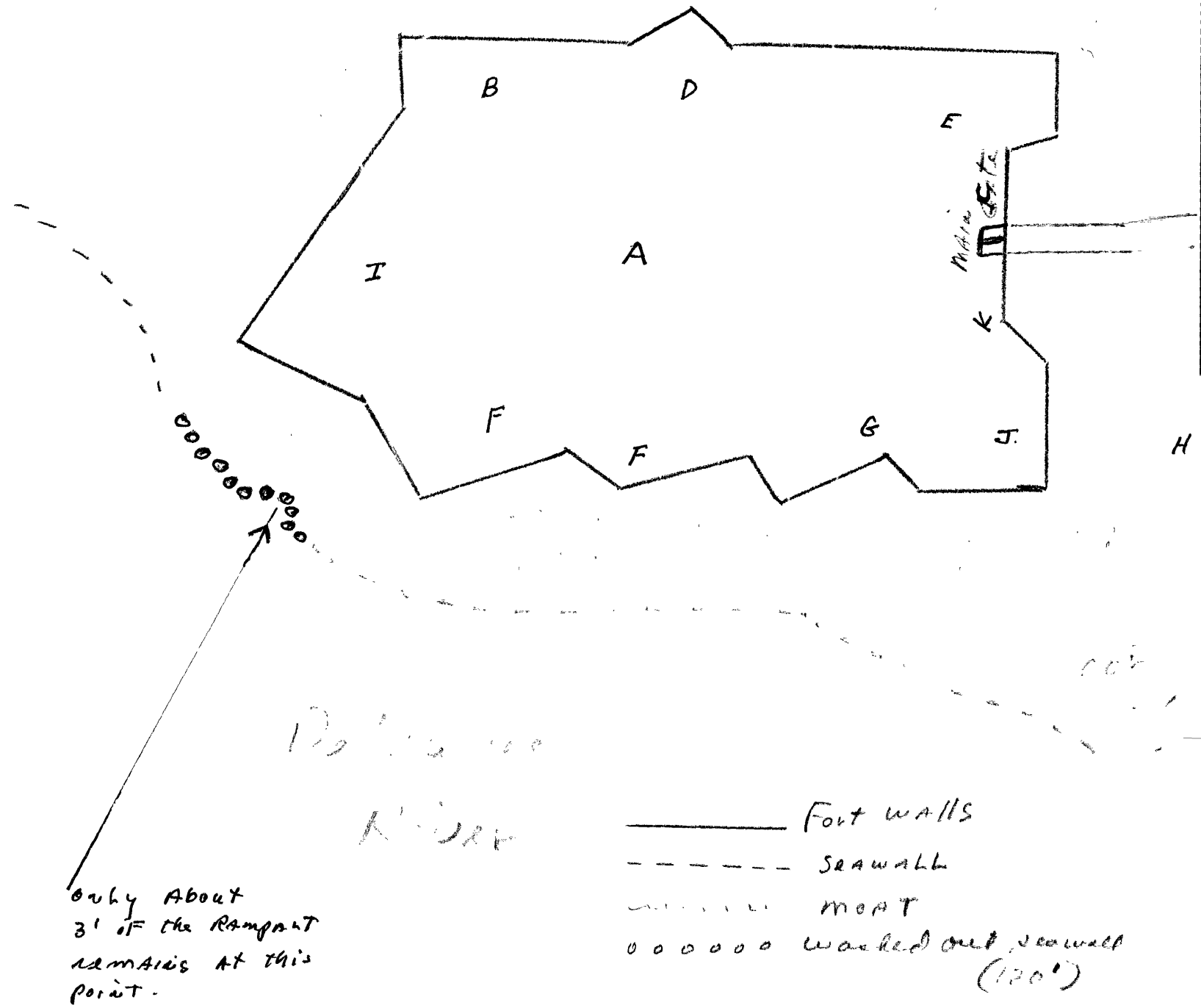
PHILADELPHIA PROJECT II
OFFICE OF ARCHEOLOGY & HISTORIC PRESERVATION
UNDER DIRECTION OF THE NATIONAL PARK SERVICE,
UNITED STATES DEPARTMENT OF THE INTERIOR

NAME AND LOCATION OF STRUCTURE
FORT MIFFLIN-NORTHEAST SALLY PORT
MUD ISLAND PHILADELPHIA PHILADELPHIA COUNTY PENNSYLVANIA

SURVEY NO. PA 1225

HISTORIC AMERICAN BUILDINGS SURVEY
SHEET 2 OF 4 OF 50 SHEETS

A - Commandant's House
B - Blacksmith Shop
C - Soldiers Barracks
D - Magazine
E - Officers Barracks
F - Shot Furnaces
G - Arsenal
H - Hospital & Mess Hall
I - Artillery Shed
J - Guard House
K - Store House



Only About 3' of the Rampart remains at this point.

Fort Walls
Seawall
Moat
Washed out Seawall (120')