

THE ARCHEOLOGY

OF

FRANKLIN COURT

Independence National Historical Park

Philadelphia, Pennsylvania

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INTRODUCTION

Charged by the Congress of the United States with "...preserving for the benefit of the American people...the site of the residence of Benjamin Franklin, and related grounds...",¹ the National Park Service undertook extensive research into the history of Franklin's home to determine how the intent of Congress might best be carried out.

Park planners were quick to realize that definitive research must include archeological exploration of the house site in addition to historical and architectural study of documentary sources.

The archeological program fell into two phases: preliminary exploratory excavations in 1953 and 1955; and a large-scale definitive excavation in 1960-1961.

This report will consider the results of all the excavations and will relate the subsurface finds to the physical history of the house and grounds.

The site of Franklin's home lies in what is now South Orianna Street, in the block bounded by Market, Chestnut, Third, and Fourth Streets in downtown Philadelphia (Illustration No. 1).

Construction of the house began sometime in 1763 and was completed in 1766. It was a handsome three story brick structure with a richly embellished interior. Here Franklin's family lived and here the old man returned, after many years abroad, to spend the last five years of his life. Upon his homecoming, in 1785, he decided to enlarge his house and so built an addition on its east end. After his death in 1790, the house stood only twenty-two

years: it was demolished in 1812, the street was put in, and the court was soon filled with small homes and shops.²

In 1953, when excavations began, the property was split by the stone-paved street. Lined on both sides by small businesses and factories (Illustration No. 2), the street was in daily commercial use. Preliminary explorations were, of course, severely limited.

THE ARCHEOLOGICAL EXCAVATIONS

The 1953 Excavations

Preliminary excavations in the Franklin site were conducted by Paul J. F. Schumacher, then Archeologist, Independence National Historical Park. The American Philosophical Society generously donated funds for the labor force. Schumacher worked from early May to late June and concentrated his efforts in two areas: in the interior of building remains at Nos. 17, 19, 21, and 23 South Orianna Street; and beneath the east sidewalk of the street from N62.3 to N121.0 (Illustration No. 1. For an explanation of the location notation, see page 6.).

No remains associated with Franklin were found inside the buildings although the trench at the rear (east) of the property produced "... great quantities of eighteenth and nineteenth century artifacts...." (Schumacher 1956: 7) in mixed and unrecorded depth provenience.

In Schumacher's Trench 2, beneath the sidewalk (1956: 6), his excavation was more productive. He found, in addition to artifacts, portions of the foundations of the north and south walls of the house as well as an areaway retaining wall; the only intact section of cellar floor remaining; and parts of Franklin's two "necessaries"³ or privies. His work materially aided in the planning and execution of the definitive excavations undertaken seven years later.

The 1955 Excavations

In July 1955, Schumacher was able, following demolition of four buildings by Park personnel, to excavate in the interiors of the remains

of No. 25 and 27 South Orianna Street. He trenched in the basement of No. 29 and obtained permission from neighboring property owners to do some limited testing east of the Independence National Historical Park property line behind Lots No. 21, 23, and 27 (Illustration No. 1).

With the exception of the northeast corner of No. 25, the tests inside building lines were again productive only of negative results. Beneath the party wall of No. 23 and 25, Schumacher excavated a brick-lined privy pit which "...contained late 18th century artifacts including one purple and blue Dutch fireplace tile...." (1956: 16). He believed this pit to have been part of a privy associated with Franklin's house. I concur in that interpretation. Subsequent developments indicate it was in use from 1763 to 1786.

In regard to the excavations east of the Park boundary, Schumacher reported "...part [of Franklin's east property-line wall] may have been uncovered...in the courtyard of 25-27 S. Orianna Street...." (1956: 44).

The 1960-1961 Excavations

After 1955, no further archeological work was undertaken in the Franklin site until 1960. In the meantime, Independence National Historical Park completed acquisition of the property. All buildings south of the Market Street houses were demolished, all utilities in the street were abandoned, and the area was closed to vehicular traffic. Those things were accomplished in line with archeological planning recommendations developed in 1958 (Powell 1958). The buildings near, or over, the Franklin house remains were demolished to grade and the cellars left intact and clear. Those further removed from the home site were demolished in line with usual procedures and cellars were backfilled.

Staffing for the program included the additional professional help of Archeologist Jackson W. Moore, Jr., a temporary clerk-typist, and a crew of unskilled laborers with no previous archeological experience. The crew varied in size from three to eleven men, but averaged approximately six men over both the 1960 and 1961 seasons. A total of twenty-four different laborers were employed.

As Schumacher's work demonstrated, development of the Franklin property in the early nineteenth century caused almost total destruction of eighteenth century evidence beyond building lines on each side of the street. In almost every case, the later buildings, constructed in a solid row on each side, had deeper cellars and foundations than did Franklin's structures. The only real opportunity, then, for recovering structural remains associated with Franklin lay under the street and sidewalks. Even there, utility lines of various kinds had wrought considerable disturbance, the deepest penetration extending some five feet below surface.

In view of these conditions, the excavations in the period from July 11 to December 9, 1960, were concentrated in the area of the house and beneath South Orianna Street from the house to the southern boundary of Franklin's property (Illustration No. 1). In the 1961 season, April 17 to September 19, we completed work in the southern end of the court, checked the existence of a wall foundation on the east side, and excavated beneath the street from just north of Franklin's house northward until we encountered underground vaults associated with 316-318 Market Street beneath the street. We also put test pits inside the remains of buildings at No. 6 and No. 11 South Orianna, confirming our expectations that the

modern buildings on these sites had cellars deeper than the historic structures.

As a part of the overall exploration of Franklin Court, the cellars of 314, 316, 318, 320, and 322 Market Street were excavated.

For the final excavations, we laid out a north-south line through the site from a spot near the middle of the street at its southern boundary to a point one foot west of the southeast corner of the original east wall of 318 Market Street (Illustration No. 42). All measurements are related to their distance northward along this line and their distance east or west of it. For example, the center of Feature 38, the 1786 privy pit, lies 60.5 feet north of the zero point at the southern boundary and 3.1 feet east of the north-south line. This point would be described as N60.5:E3.1.

All elevations herein are related to the Philadelphia City Datum, "...an established horizontal plane which is 2.25 feet above mean high water and 7.50 feet above mean low water in the Delaware River at Philadelphia." City Datum is 5.7 feet above the sea level datum used by the U. S. Corps of Engineers (Anonymous 1955: 398). Illustration No. 1 shows elevations along the center of South Orianna Street before excavation.

After removal of street paving (in this case Belgian blocks--shaped blocks of granite approximately 12 x 6 x 6 inches) and a layer of cinder bedding, we immediately began encountering disturbed soil and utility lines. Although they were recorded in field notes, utilities will not be considered in this report except when they have a direct bearing on an historic feature or on the identification or dating of questionable ones. As a matter of general interest, of the 147 recorded features, 92 were utilities of one sort or another.

We began our excavation in Schumacher's 1953 trench beneath the east sidewalk and expanded the operations from there. All the house features found by Schumacher, with one exception, were relocated and completely exposed. In addition, many new features were found (see Appendices A and B).

In 1960, structural remains uncovered were mainly those directly associated with the house itself. The north wall foundation (Feature 36) was exposed under the street as far as the building line on the west side, where it has been destroyed by later construction.

Only a small portion of the south wall foundation (Feature 37) remains, the major portion having been removed at some previous time.

5.2 feet south of the house foundations is another stone wall (Feature 39) which completely spans the space between modern building lines on each side of the street. I believe this wall to represent the retaining wall of an areaway on the south side of Franklin's house. It probably provided light to Franklin's cellar windows. There was no evidence of a floor between this wall and the foundation wall to the north.

A very short portion of the east foundation of Franklin's 1786 addition (Feature 68) was uncovered east of the nineteenth century building line on the east side of the street. Fortunately, the modern cellar at this spot had not been deep enough to destroy this portion of the foundations of the house.

Other wall or wall traces found include portions of the stone foundation and the construction trench of the original (1765) east wall of the house (Feature 65). This feature lies 5.5 feet east of the modern building line on the west side of Orianna. Running westward from Feature

65 is another stone foundation (Feature 66) which extends to the building line on the west. It lies 15 feet south of the north wall of the house. Apparently an interior partition wall, this feature indicates that the original cellar had at least two rooms.

The small piece of the brick floor of Franklin's cellar which Schumacher uncovered in 1953 is the only intact piece of the floor remaining. West of the bricks is a large rectangular area, 9.5 feet by 18.5 feet, of poor grade lime mortar bearing brick impressions. This mortar, Feature 42, covers the southern two-thirds of the 1786 addition to the house. The bricks which formerly rested on this base were set on edge with their long axes east and west. North of Feature 42 lies another smaller patch of mortar sub-flooring (Feature 43) upon which the brick were set on edge with their long axes running north-south.

Just west of the 1765 east wall trench and north of the south wall line there is another small patch of brick and mortar cellar floor (Feature 67). No complete bricks remain, but brick impressions can be seen in the mortar. This feature is approximately 4 feet long (north-south) and 2-1/2 feet wide.

All of the sub-floor mortar is soft and of uneven thickness. It is very fragile.

The privy (Feature 38) is represented by a brick-lined pit, 4 feet in inside diameter, which abuts the south side of the light-well wall. The pit, excavated to its bottom at 13 feet below the top of the light-well wall, was formerly domed over with a brick roof. Its top had been broken open during the laying of a sewer line beneath Orianna Street. Immediately

north of the pit, on the north side of the light-well wall is a rectangular brick structure (Feature 45) whose top contains two square holes. The southernmost hole communicates with the privy pit, through the light-well wall, by means of a sloping stone slab.

In what had been the western part of the house, we found a portion of Franklin's ice storage pit (Feature 63). It was originally a stone-lined pit some 10 feet in diameter and 11.5 feet in depth below the cellar floor. Approximately two-thirds of the pit has been destroyed by the intrusion of a massive reinforced concrete foundation of the modern building which stood at 18 South Orianna Street.

Exploratory trenching at the south end of Franklin's property uncovered portions of the stone foundation for his south boundary-line wall.

No trace of outbuildings was found beneath Orianna Street south of Franklin's house.

A resume of the results of most of the 1960 excavations have been reported in Chapter III, "Archeological Data," of an interim historic structures report on the site (National Park Service 1960).

The 1961 season began with a completion of the excavations at the extreme south end of Franklin's land and in an undisturbed area on the east side. In both locations stone foundation walls were found which are probably the remnants of Franklin's property-line walls. Beneath Orianna Street, and extending 0.9 foot south beyond the actual property line, a large stone foundation (Figure 89) runs all the way across the street.

In the rear of No. 27 South Orianna Street, we found another stone foundation wall (Feature 91) slightly in excess of 4 feet in length which we

interpret as the foundations of Franklin's east boundary line wall. It is less massive and not so deep as the wall on the southern line.

In the area north of the north wall of the house, the first historic feature encountered was the remains of a wooden cask of about a tun in capacity (Feature 97). This cask is believed to date from before Franklin's occupancy of the court.

89.5 feet north of the house, we uncovered a thick east-west stone wall which ran from the east building line west 11.2 feet (Feature 114). At that point it turned a corner and became a narrower wall (Feature 130) which ran northward 49.6 feet. At its north end, it abutted a second east-west wall (Feature 136), this one running from the east wall of modern 316 Market Street eastward to line up with Feature 130. Feature 136 turned a corner northward and ran north as Feature 138 until it became incorporated into the east wall of the 1786 portion of 318 Market Street. Features 130 and 139, then, lie in a line with the east foundation wall of Franklin's tenement at 318 Market Street.

Between the southern ends of modern 316 and 318 Market Street, we located an area 23 feet long which included two brick footings, running east-west across the south end of the area (Feature 144) and, north of them, a large area of burned clay which was circular in plan at its north end (Feature 145). Together these features constitute the remains of a pottery kiln dating from the second quarter of the eighteenth century and operated by the first husband of Benjamin Franklin's wife. A great deal of kiln furniture and kiln waste was recovered over and around these features.

In the north end of the excavation, from N254.6 to N265, where excavation ceased, we uncovered the top of part of a series of underground brick vaults constructed as part of the cellars of 316 and 318 Market Street. These vaults constitute the final archeological feature, No. 147.

Schumacher described one wall of which we failed to find any evidence. It was "...of massive stones with lime mortar 3.5 feet wide and protruding 3.5 feet west of Wall U [Feature 1]. Its top...lay directly underneath the bottom marble step of Steps No. 2 [Feature 3], while its base...was on yellow clay." He further stated that this wall "...may very well be part of the foundation for the chimney which was on the east side of the home in the center." Unfortunately, "due to heavy rains this wall disintegrated while it was exposed" (Schumacher 1956: 23). I am unable to identify this feature. The chimney described by Schumacher was on the 1765 east wall, and there is, as yet, no evidence one was built on the east wall of 1786 (Illustration No. 42, N87:E9).

INTERPRETATION OF THE ARCHEOLOGICAL EVIDENCE

This section will consider in detail the historical remains recovered in the archeological study of Franklin Court. As far as possible, they will be treated as units: the house and associated features; the grounds; and the artifactual material.

The House Remains

Portions of Franklin's house which were uncovered beneath the soil included exterior wall foundations, interior wall foundations, remnants of cellar flooring, sub-cellar features, and the remains of the two necessities.

The exterior and interior wall foundations are of rough field stone well laid up in lime mortar. The north and south walls lie 33.9 feet apart (exterior dimensions), while the 1786 east wall is 17.0 feet from the 1765 east wall (exterior dimensions). If the original building were square, as it is described in an insurance survey of 1766,⁴ then the west wall, now completely destroyed, lay 50.9 feet west of the 1786 east wall remnant (exterior dimensions).

The north wall foundation, Feature 36, lies between N100.2-103.4 and W8.5-E5.3. The top of the wall is at elevation 16.9 feet: its bottom lies below 11 feet on the west and at 13.1 feet elevation near its east end. Feature 36 stretches from the modern building line on the west side of the street 13.4 feet eastward. Its maximum width, 3.2 feet in plan, obtains because part of the wall has been knocked inward (southward) and is lying partially on its side (Illustration No. 3).

4.4 feet from its remaining west end, at N102:W4.1, Feature 36 abruptly widens southward from 1.5 to 2.5 feet in width. This probably represents the point where the north wall and the 1765 east wall joined. It also marks the dividing point between the two different bottom elevations (Illustration No. 4).

Feature 68, a short length of fieldstone foundation, is the only portion of the 1786 east wall remaining in the site. Feature 68 is 4.2 feet long, 1.5 feet wide, and its center lies at N96:E13.3. The piece of wall was found east of the nineteenth century building line on the east side of Orianna Street in one of the spots just missed by Schumacher's Trench 4. Fortunately, the modern cellar floor at this spot was not deep enough to have destroyed the Franklin house evidence. The top of Feature 68 lies at elevation 14.4 feet; its base elevation was not measured.

Feature 37 is the south wall foundation. Its top is at 15.7 and its base at 13.7 feet elevation. It is 1.5 feet wide and runs from just east of the modern building line on the east side of the street westward 5.8 feet. Its center lies at N80.2:E14.5 (Illustration No. 5).

The final exterior wall foundation recovered is Feature 39. With a total length of 19.5 feet, it is the largest wall remnant remaining. Feature 39 completely spans the space between the modern building lines on either side of the street. The foundation is 1.5 feet wide with a maximum top elevation of 16.4 feet and a minimum base elevation of 13.8 feet (Illustration No. 6).

This feature formed an areaway to admit light and air to the cellar windows. The areaway formed between this feature and the rear wall

of the house was 5.2 feet wide and probably had a brick floor at the level of the interior cellar floor. No bricks remained here, but an identical construction in 318 Market Street was found to be completely brick-paved.

Feature 39 completely spans, without a break, the 1786 addition and the east portion of the 1765 house, so it appears to have been built during the 1786 construction. It probably ran nearly the length of the house on the south side.

This feature is centered at N63.5 and extends from W9.2 to E10.3. As noted below (page 19), this wall is associated with Franklin's 1786 necessary.

Against the north face of Feature 39, we found a shallow rectangular pit (Feature 64) in the sterile soil. It measured 1.2 x 1.3 feet and contained several tumbled bricks and nine fragments of a dark green glass wine bottle with a base diameter of 4-3/8 inches (Field Specimen No. 62). I cannot explain the purpose of this pit.

Besides exterior wall foundations, several interior features of Franklin's house were found. These included wall foundations, cellar flooring, and the remains of a sub-cellar ice storage pit.

One of the wall foundations, Feature 65, had been the original east wall of the house. After the 1786 construction, of course, it became an interior north-south partition wall. Little remains of it: one stone, a trench, and a short section bonded to an east-west partition wall are the only physical evidences we found (Illustration No. 7). The course of the wall, however, could be delineated from these portions. It ran between the north and south walls of the house and is centered at W3.7.

At N86.6 an east-west partition wall 1.2 feet wide runs from Feature 65 west to the modern building line on the west side of Orianna Street (Illustration No. 8). This wall, Feature 66, split the 1765 cellar and formed two areas (rooms?), each 15 feet wide north to south. The cellar floor level south of Feature 66 was 4 feet higher than the floor north of the wall. It is not possible to say, due to later construction, whether this situation obtained all the way to the west wall of the building. The top of Feature 66 lies at an elevation of 14 feet and its base lies somewhere below 11 feet.

As noted above, the east end of Feature 66 is bonded into a remnant of Feature 65. The two features form a T, with the top being formed by Feature 65.

Four cellar floor remnants were found. The largest, and the only one with any appreciable amount of brick remaining, was discovered by Schumacher in 1953.

Franklin's cellar floors were of brick, laid on edge in a very soft lime mortar. The lime was probably spread and leveled and the bricks set while the mortar was dry, a practice which is still adhered to today in setting brick floors or walks. The long axes of the bricks lie in different directions in different areas, undoubtedly indicating separate cellar rooms. Three of the brick or mortar floor areas lie at an elevation of approximately 14.6 feet. The fourth, in the northeast corner of the 1765 cellar, is 4 feet deeper; there was a sub-cellar in that area.

In the 1786 portion of the cellar, the largest area of flooring, Feature 42, covers approximately two-thirds of the floor area. It extends

from N72 to N90.5 and from E10.5 to W2.5. The only remaining portion of actual brick paving lies in the area bounded by N75.4, N82.3, E6.8, and E10.5; the rest is mortar with brick impressions and, occasionally, brick fragments (Illustration No. 9). The bricks are laid with their long dimensions running east-west.

Feature 43, still in the 1786 part of the house, is a smaller patch of floor at N94.5 to N100.0 and E2.5 to W3.5. Only three whole bricks remained here, but they are at the west end and appear to mark the west edge of the 1786 floor (Feature 44). The bricks in Feature 43 were laid with their long axes running north-south (Illustration No. 10).

Although the different brick patterns in Features 42 and 43 indicate two rooms in the cellar of the 1786 addition, no wall foundation was found between them.

In the original part of the house two small patches of flooring remain, separated by a stone foundation, Feature 66.

The southern patch, Feature 67, at N73.5 to N77.2 and W4.2 to W6.5, held no complete bricks, but the impressions indicate the bricks, on their thin sides, ran east and west (Illustration No. 11).

The northern portion (Feature 95) nearly fills the area between the east-west stone partition wall and the north wall of the house. It lies between N87.5 and N101.5, 5 to 8.5 feet west of the zero line. Feature 95, consisting only of brick-impressed mortar, lies 4 feet below the other three floor remnants. The bricks here ran north-south.

The only other interior feature found was Feature 63, the remains of a circular, sub-cellar pit in the extreme southwest corner of the house.

This is also the only structural evidence found west of the modern building line on the west side of Orianna Street.

The presence of an icehouse under Franklin's cellar was described by Colonel Robert Carr (1868: 59) who was familiar with the house and grounds in his youth. Feature 63 is undoubtedly Franklin's icehouse.

It was a large pit with an inside diameter of 10 feet and walls of shaped stone 1 foot thick. Its center lay at N78.3:W29.6. The pit's dish-shaped bottom, of natural sand, lies 11.5 feet below the upper cellar floor level (at an elevation of 3.5 feet).

Very little of the original icehouse remains: the construction of an eight story reinforced concrete building on the site in 1911 destroyed most of the structure. Approximately the western two-thirds of the pit was filled by an immense block of reinforced concrete 6.8 feet deep and in excess of 8 feet in width. It runs completely across the building. Approximately 5 feet of the top of the pit was lost in the cellar of the 1911 building. In addition, most of the stone walls of the pit itself were removed. The top of the remaining course is at an elevation of 5.6 feet while the base of the walls lies at 4.45 feet elevation (Illustration No. 12).

When found, Feature 63 had a cribbing of field stones in its south end piled from the top of the concrete block to the bottom of the feature. They had no apparent relation to the ice pit and were probably stacked there when the concrete foundation was poured (Illustration No. 13).

Outside the house, in addition to the areaway wall discussed above, two features associated with Franklin's house were discovered. These are the two brick-lined privy pits, Features 38-45 and 69.

Feature 69, probably the earlier of the two, is centered 18.5 feet southeast of the southeast corner as it stood in 1765 (N58.5:E12.1). The pit was discovered by Schumacher in 1953, but was not excavated until 1955.

The walls of Feature 69 are of dry laid brick stretchers, the pit has a 5.5 feet inside diameter, its top lies at 14.0 feet elevation, and its base at 1.1 feet elevation. Its walls are broken by Feature 1, the early nineteenth century foundation walls of Nos. 23-25 South Orianna Street which intrude 0.6 foot below the highest remaining brick course. Schumacher's only report on this feature states that it contained late eighteenth century artifacts which "...could very well have come from Benjamin Franklin's home" (1956:16).

Since Feature 69 is older than the early nineteenth century walls and since a second pit was found a few feet west, associated with construction accomplished in 1786, it undoubtedly represents the pit which served the Franklin residence between 1765 and 1786. It was a free-standing structure, without plumbing.

Features 38-45 are part of a somewhat more modern plumbing system. It consists of a dry-laid brick pit (Feature 38), similar to Feature 69, but with the further refinement of a sewage inlet (Feature 45).

In essence, the new arrangement has a pit connected by a sloping stone slab to a drop inlet located on the opposite (north) side of the area-way wall. The inlet, of brick, abuts the wall on one side, the pit on the other. The stone chute between the two passes under the wall.

The brick inlet is composed of a rectangular structure 2.2 x 1.1 feet and, when found, extending from elevation 15.0 to 12.0 feet. In the top of the inlet are two holes, each 0.5 foot square. The southernmost connects with the pit via the stone slab. The northern hole now has a solid bottom. It probably contained a flush pipe, as the arrangement is such that flushing would have been an absolute necessity (Illustrations Nos. 14 and 15).

Feature 38, the pit, is 4 feet in inside diameter. Its base lies at 3.2 feet elevation. It had a domed brick roof which had been broken open during the installation of a 12 inch terra cotta sewer line beneath Orianna Street (Illustrations Nos. 16, 17, and 18).

Excavation of the Franklin house remains (Illustration No. 19) enables us to make some definite statements about the construction of the house. From them we are able to draw some conjectural conclusions.

The house was 33.9 feet wide north to south. As noted above (page 12) the building was described as square in an early insurance survey. The addition, in 1786, 17 feet wide on the east end of the building, gives the house, as completed, exterior dimensions of 50.9 feet x 33.9 feet.

The cellar was divided into at least four rooms, as evidenced by floor patches and interior partitions. The deep portion of the cellar probably did not extend all the way across the north side of the 1765 building, but most likely formed a fifth room in the cellar. The presence of the cellar stairs in the northeast corner of the 1765 structure (National Park Service 1961a: Chapter II, Section 1, p. 7) lends strong support to this supposition since it is unlikely stairs from the first floor would have gone

down into a subcellar. This would have necessitated climbing up out of the subcellar to reach the rest of the main cellar level.

The cellar may have been farther subdivided. The 1766 insurance survey describes a 9-inch brick partition reaching up the house to the garret floor (National Park Service 1961a: Chapter II, Section 1, p. 4). It probably began at cellar floor level. Architectural evaluation has placed this partition some 14 feet east of the west wall of the house. Illustration No. 20 is a plan of the cellar based on archeological and documentary evidence. It is, of course, partly conjectural.

Beneath the cellar floor in the southwest corner of the building lay the ice pit. It may have been in a separate room formed by the main east-west stone partition and the brick partition noted above.

Although the top of Franklin's ice pit has been destroyed, it may have been similar to a pit discovered on the site of the nearby home of Judge Richard Peters, now a vacant lot at 307 Market Street. The Peters house, built sometime before 1793,⁵ had a subcellar ice pit, of brick, which was revealed during grading operations on the site in 1957. Of similar inside dimensions, Peters' pit was circular, had a wall two stretchers thick, and was capped by a brick barrel vault. Entrance was through a doorway in the curved portion of the roof (Illustration No. 21). An interesting feature of this structure was the presence of a stone shelf 1 foot wide and 0.15 foot thick which ran around the pit 3 feet below the apex of the roof (Illustration No. 22). It made an ideal storage shelf for items which needed to be kept cool.

Behind (south) of the Franklin house, at least on the east half, there was an areaway 5.2 feet wide. Although no flooring remained, it is safe to assume the areaway was paved with brick, as were similar features behind at least two of Franklin's Market Street houses (see page 46, below). The exact east-west dimension is impossible to determine, but I believe the areaway extended from the southeast corner of the house up to, or nearly to, the back porch (Illustration No. 20). West of the porch, I would expect to find a cellar entrance typical of the period. An entrance there would be very convenient for filling the icehouse, but less convenient for bringing in firewood. In a letter to his sister, Jane Mecom, dated May 30, 1787, Franklin notes that he has "...gain'd a large Cellar for Wood..." by his new construction (National Park Service 1961a: Chapter II, Section 1, p. 11). After 1786, then, it appears firewood was stored in the new cellar at the east end of the house.

Franklin's 1786 necessary presents an interesting problem. From its construction, it needs a flushing system to operate. It is tempting to suppose that Franklin brought back with him from France ideas for inside plumbing, but the location of the necessary pit--across the areaway from the house--seems to me to preclude such an arrangement.

The positioning of the privy inlet and pit, together with the physical arrangement of the inlet, lead me to conclude that Franklin's necessary was a free standing building, probably of brick, and probably in the form of an octagon with an 8-foot outside diameter and 9-inch walls. The door would probably have been in the south face, and the interior would have contained a single wooden seat with solid riser, facing south. Figure 23 is a plan and sketch of the necessary as I visualize it.

The earlier privy, some 9 feet west of the late one, was probably an ordinary open drop privy of the usual type.

The Grounds

Only two features which can be directly associated with the Franklin period were found south of the house. Both are stone foundations of Franklin's property line walls--one of the southern and one on the eastern boundary line.

The south foundation, Feature 89, is a massive stone feature 1.75 feet thick. It extends from base elevation of 10.0 feet up to 16.8 feet elevation at its present highest point. This is 1.1 feet below present street level. The wall completely spans the street between modern building lines from W13 to E10. Its top is uneven, of course, since it has been broken down in several places to allow passage of modern utility lines. I suggest that this wall's extreme depth occurs because the southern end of Franklin's property, before improvement, was quite low due to the presence nearby of an arm of Dock Creek. Illustration No. 24 shows the western portion of Feature 89.

The boundary wall foundation remaining on the east side of the court (Feature 91) is not quite so large as the south wall. Only 4.8 feet long when found, this stone foundation had been destroyed on its south end (N31) by a nineteenth century brick wall and on its north end (N35.8) by a modern concrete wall. This small portion was spared only because the area over it has remained an open court through the years. The foundation's base lies at an elevation of 16.0 feet, its top at 19.9 feet, and it is

1.8 feet thick. Its western face is 44.1 feet east of base line (Illustration No. 25).

Beginning 59.8 feet north of Franklin's house (at N163.2), and extending northward to the south end of Franklin's tenement at 318 Market Street (at N252), there is a complex of stone wall foundations which is not readily explainable on the basis of present documentary evidence.

From the position of some of the walls with relation to the changing property pattern, it is apparent the complex dates from the period of construction of the Market Street houses in 1786. After a description of the archeological features, I shall attempt the reconstruction of one possible arrangement of the north end of Franklin's grounds and known out-buildings.

Feature 114-130 is a stone wall foundation which runs from the east building line of Orianna Street (E11.3) west 13 feet, then turns and runs north 49.6 feet. The south face of the east-west portion, Feature 114, lies at N163.2, and this foundation is 1.8 feet thick. Its base lies at an elevation of 16.9 feet, its highest point at elevation 21.6 feet. One brick course, later inadvertently destroyed, was present when the feature was first uncovered (Illustration No. 26).

The north-south portion of the foundation, Feature 130, is 1.5 feet wide. It runs north 26.7 feet, at which point there is a gap 3.8 feet long. The base elevation gradually rises until, at the gap, the bottom of the foundation is at elevation 18.1 feet (Illustration No. 27). Beyond the break, Feature 130 continues north to N213.2 where it meets Features 136-139.

Feature 136, the east-west portion of another stone foundation wall, runs from the east wall of modern 318 Market Street, at W3.2, eastward to E1.5 where it turns (becoming Feature 139) and runs north until it merges with the east wall of 318 Market Street at N241. The elevation of the top of Feature 136 is 21.4 feet, of Feature 139 is variable between 19.2 and 21.0 feet, while the base of both walls lies at the approximate elevation of 18.0 feet.

One more feature occurred in relation to this complex of foundations. Between N225 and N231.5, west of Feature 139, there was what appeared to be a small patch of mortar flooring at an elevation of 20.6 feet. I doubt that this really represents a floor, however, because it is not deep enough to be a cellar nor high enough for a first floor level (Illustration No. 28). This was recorded as Feature 138.

The relationship of these features to each other and to the Market Street houses can be seen on the Archeological Base Map (Illustration No. 42).

Unfortunately, no eighteenth century walls are present on the east side of Orianna Street. There modern construction has destroyed all traces of Franklin's structures north of Feature 114.

Feature 114 lies in the location of the early fence across the north end of Franklin's yard, when entrance was through the vacant lot at 322 Market Street (National Park Service 1961a: Chapter II, Illustration No. 3). It is reasonable to assume the fence remained in this location after the construction of his Market Street houses, since he never acquired the lot at 320 Market Street (140 feet deep) and could not have erected his fence any farther north.

Features 130-139, which line up with the east wall of 318 Market Street, represent, I believe, a wall or fence foundation separating the alley from the rear yard of 318 Market Street and, as noted below, from the printing shop yard. I believe a similar wall existed, at least as far south as the printing shop, on the east side of the street.

The two story printing shop, through which the alley passed (Carr 1868: 59-60), could not have abutted directly on the rear of 316-318 as the presence of an areaway and privy at the rear of 318 shows. I suggest, therefore, that Feature 136 represents a portion of the north wall of the printing shop and that the area from Feature 136 to Feature 114 was taken up with the printing shop (20 feet deep) and its yard (29 feet deep). Illustration No. 29 shows this conjectural plan as I visualize it. Note that the location of Feature 114 would necessitate an eastward curve in the alley. I also suggest that Franklin's property south of 318 Market Street would have been a reasonable location for his carriage house and stabling, as shown in Illustration No. 29.

In addition to the buildings associated with Franklin's tenure in Franklin Court, remains of two features which antedate construction of the Franklin home were found.

Some 31 feet from the north wall of the house and approximately on a line with the 1765 east wall (N135.2:W9.2), we found the remains of a buried wooden cask of about a tun capacity (Feature 97). No wood remained, but four wrought iron hoops were still in place in the soil. Although at first we thought we had discovered a stacked-barrel well, only one cask had been placed in the soil. It measured 4.5 feet in height, 3.2 feet in

diameter, and had relatively straight sides (Illustration No. 30). Its top was a little over 2 feet below modern surface. Artifacts in the fill of the cask indicate this feature predates construction of the house. I cannot explain its significance.

Farther north, between N196.5 and 219.5, lies a complex of features of considerable interest in the early history of the area. Now located under Orianna Street, the features, when built, were in the rear of a brick and frame building constructed about 1711 by John Read, a carpenter. Read's daughter later became the wife of Benjamin Franklin. The story of the property is ably told in the Historic Structures Report, Part I, on 318 Market Street (National Park Service 1961b).

The features, Nos. 144 and 145, are the remains of a potter's kiln. Associated were a great many items of kiln furniture and pottery wasters.

The whole structure, or more properly the evidence remaining in the soil, indicated the kiln was 23 feet long and 12 feet wide. It was rectangular, square on the south end but rounded on the north. Two parallel brick foundations, 1.5 feet wide, mark the south end. The southernmost foundation is 6.4 feet long; the other is 3.8 feet in length. The walls are 4 feet apart. From the north edge of the north brick wall to the end of the feature at N219.5, the extent of the kiln is marked by the natural yellow clay having been burned a brick red (Illustration No. 42).

Dating of the complex could not be done on internal evidence, so we turned to documentary research to supply the missing pieces of information. No known tenant of the Read house had been identified as a potter, and it was known that none of Franklin's tenants on Market Street were such

craftsmen. For some time, the potter remained unknown. It was Franklin himself who finally furnished the clue.

In his autobiography, Franklin wrote "...I should have been... much ashamed at seeing Miss [Deborah] Read, had not her friends...persuaded her to marry another, one Rogers, a potter, which was done in my absence. With him, however, she was never happy, and soon parted from him, refusing to cohabit with him or bear his name, it being now said that he had another wife. He was a worthless fellow, tho' an excellent workman....He got into debt, ran away in 1727 or 1728, went to the West Indies, and died there." (Van Doren 1945: 253).

John Rogers married Deborah Read in Christ Church, Philadelphia, on August 5, 1725 (Riley 1951: 239). According to a notice in the American Weekly Mercury for May 9, 1728, he left the city in December 1727, taking with him a "likely young negro lad about 18 years of age..." who belonged to someone else.

John Rogers, "worthless fellow" though he was, is undoubtedly responsible for the kiln behind the Read house. He was manufacturing lead-glazed redware pottery of a general utility type as well as some slip decorated redware. A list of the Field Specimen Numbers containing artifacts found in association with the kiln will be found in Appendix C.

No further historic structural features were found in Franklin Court.

Of some interest and of considerable importance is the identification of historic grades in the Franklin Court area. The grades of the modern street, shown in Illustration No. 1, rise from 20.4 feet at the

Market Street building line to a maximum of 22.6 feet elevation at N163. From that point the grade trends downward until a minimum of 18.5 feet is reached at the south end of Franklin's property.

The only documentary reference to grade levels during the historic period is contained in a fragmentary letter from Mrs. Franklin to her husband, written in April of 1767. Mrs. Franklin wrote: "...I must tell you that our Gardin that is to be is a fenensing of but I have two Cartes a bringing durte to rais it as the desente must come from the wall to go to the street...."⁶

While Mrs. Franklin's orthography leaves much to be desired, it appears that she is saying the garden is being either fenced or finished, and that she is raising its grade so that it will drain from the wall to the street.

One would think the wall she mentioned was the one on the south boundary of the property and the street was Market Street. But that is difficult to reconcile with existing conditions.

Evidences on the Market Street buildings indicate the street levels there have changed little, if any, since the Franklin houses were constructed in 1786. I believe we can safely take the present alley level from about N190 to N307 to be within a few tenths of a foot of what it was in 1786. The 1767 levels were probably similar. The drainage in this area is toward Market Street. The high point of the alley, at N163, is within a foot of the location of Feature 114, the east-west stone foundation. As discussed above, this wall fragment lies in the location of the 1765-1786 fence across the north edge of Franklin's yard. South of the fence position,

drainage is to the south. If Mrs. Franklin had, in fact, been filling the southern portion of the yard to arrange drainage of the whole area to Market Street, and if she maintained the same gradient as found between N163 and the street, she would have had to make the level at the south edge of the property 4.75 feet above present level.

I doubt this was done. The levels of the early nineteenth century houses built after demolition of Franklin's home were not 4 feet above present grade, but were approximately on a level with the present street. There is no evidence of nearly 5 feet of fill having been removed when the street was first laid out.

I believe the ground level of Franklin's yard was approximately the same as present levels in the area. Some filling was done over the original grades, but not as much as would have been necessary under the conditions noted above. Original (pre-Franklin) surfaces were found in two spots: at N107-110 (Feature 26) and at N15.7-20 (Feature 83) under the west sidewalk of Orianna Street. Feature 26 was a dark topsoil zone 2.5 feet below surface while Feature 83 was a layer of rotted schist at a depth of 2.3 feet. Both lay under badly mixed fill and above sterile yellow clay. The original surface, then, probably lay a couple of feet under Franklin's surface throughout most of Franklin Court, and Mrs. Franklin's filling operations brought the overall surface up to its approximate present location. Her statement to her husband must, I fear, remain unexplained until more documentary evidence is found.

The Artifacts

Of the many many artifacts recovered during the archeological exploration of Franklin Court, the great majority came from badly disturbed areas of mixed fill. These, of course, cannot be directly associated with Franklin's household. Others, however, were recovered in such areas as can be identified positively with the Franklins. Only the latter will be considered here.

For convenience, I have divided the artifacts into two classes: Architectural, or those associated with the structure of the house itself; and Personal and Household, those used by the occupants of the house in their everyday living.

The architectural artifacts cover a wide range of materials and offer some information about construction details in the house.

Brick and tile. Five whole glazed bricks were saved, as were forty glazed brick bats. The collections contain seventeen whole unglazed bricks and thirty-four unglazed fragments.

The glazed brick range in size from one $8\frac{7}{16} \times 4\frac{1}{6} \times 2\frac{3}{16}$ inches to one $8\frac{1}{8} \times 3\frac{7}{8} \times 2\frac{1}{8}$ inches. The coverage of glaze is various: one brick is nearly 75% covered, another has only 10% of its surface glazed. The glaze color varies from light gray through gray-green to a greenish black. All these bricks are somewhat misshapen. Some are cracked and one has a very rough surface texture. The body color varies from dark red to a rust-brown.

The unglazed brick range in size from one $8\frac{7}{8} \times 3\frac{15}{16} \times 2\frac{1}{8}$ inches to one $7\frac{3}{4} \times 3\frac{11}{16} \times 2\frac{1}{8}$ inches. The body color variation is

about the same as of the glazed bricks, and most of the bricks are warped, cracked, or show extremely rough surfaces. Bricks in Field Specimen Nos. 15-3, 109, and 200 were taken from the cellar floor of the Franklin house and remain imbedded in the sub-floor grout.

Three square floor tile were also found. Two of them are salmon colored and one is dark red. All are within a few 16ths-inch of being $5\frac{1}{2} \times 5\frac{1}{8} \times 1\frac{7}{8}$ inches. There is no indication of where these tile were used in the house. Two were found in the rubble at the north end of the house and one in the upper level of the ice pit fill.

Stone. Stone recovered from the excavations include fieldstone from the foundation walls, slate, marble, and a small fragment of mica.

Of the fifteen slate fragments found, fourteen appear to be roofing slate while one is a worked piece 1 inch thick with flat sides and sharp edges. It is 4 inches long and 3 inches wide.

The marble is white, worked into flat slabs. One is $6\frac{3}{4} \times 3\frac{1}{2} \times 2$ inches. The other is $6 \times 5\frac{1}{2} \times 1\frac{1}{4}$ inches. Its top is finished smooth, the bottom is rough and contains the remains of an iron pin imbedded in it. One edge is beveled. I believe this piece came from a mantle.

Mortar. All the eighteenth century mortar recovered is lime mortar. One type, white or gray in color, appears to be largely lime with a little sand mixed in. A second type appears to have earth mixed with it giving it a definite brown cast. The white type is the most prevalent. Three pieces of mortar show pointing with a rounded tool (Field Specimen Nos. 12 and 26). One has both vertical and horizontal pointing.

Plaster. A great deal of interior wall plaster was recovered and most of it was painted, often with several coats of paint. Of the 298 specimens in the collections, the uppermost color coat occurs as follows: 104 yellow (35%); 97 white (33%); 80 red (27%); 5 black; 3 blue-gray; 2 cream; 7 indeterminant (5%) (Illustration No. 31).

The plaster was applied to stone, brick, and split lath backing. Of those which could be positively identified as to backing, 16 were on lath (13 white and 3 yellow), 10 were on stone (3 white, 3 red, and 4 yellow), and 6 were on brick (5 yellow and 1 red).

From a consideration of impressions on the back of the plaster, Franklin's lathing was 1-5/16 inches wide and 7/16 inch thick. The laths were 5/16 inch apart. One piece shows a brick joint 7/16 inch wide. Another piece of plaster, a corner, has one white face and one red face.

After Schumacher's 1953 excavations, several pieces of painted plaster were studied by Mr. L. F. Wagner, Chief Chemist of The Glidden Company, Reading, Pennsylvania. His report is included here as Appendix D.

Wood. Of the 95 pieces of worked wood recovered during the excavations, most are small and in a badly preserved state. Sixteen pieces, however, recovered from the 1786 privy (Feature 38) may possibly relate to the construction of that structure. These pieces are 1 x 2 inches (one is a 1 x 2-1/2 inch), up to 12 inches long, and show a slight bow. The wide sides are the concave and convex sides. It was Mr. Moore's opinion that these may have related to the framing of the privy seats. I believe it is more likely they are part of the cover of the pit itself. A large semi-circular piece of wood from the privy (29 x 11-1/2 x 1 inch) appears to me to have been a part of the cover also.

The rest of the wood gives little or no clue as to its structural use.

Ceramics. The only structural ceramics found were fragments of Delft wall or fireplace tile. Twenty-four sherds were recovered and they represent at least four different types.

Fourteen of the sherds are from undecorated tiles, two (one tile) are decorated in blue and purple, two (one tile) are decorated in purple, and two are decorated in blue. Four recorded sherds could not be located in the collections.

The blue and purple decorated tile shows the head and shoulders of a shepherd as the central motif. The corner of the tile contains a stylized flower. These are in blue. Surrounding both the center panel and the corner decoration is a band of manganese purple. This tile has been identified by Mr. George B. Jackson, a specialist in fireplaces and fireplace furniture, as unquestionably Dutch, eighteenth century.⁷

The purple decorated tile, which also depicts a shepherd, consists of nearly one-half a tile. The central picture and the corner medallion are in purple. The tile is 5-1/8 inches tall.

The two blue decorated sherds, both very small, have a series of parallel blue lines.

All the tile has a buff body and a blue-gray tin enamel glaze. The blue decorated, the purple decorated, and the undecorated tiles are probably also of eighteenth century Dutch manufacture (Illustration No. 32).

Glass. Window glass from the Franklin House is represented by about six hundred fragments. In general, it is characterized by a slight

green tint and the presence of small bubbles. It ranges in thickness from a little under two millimeters to a little less than one millimeter. About 80% of the pieces fall in the middle of the range between these two extremes. The largest piece found was 6 inches long, indicating the panes in Franklin's windows were somewhat larger than that. I am unable to say with any conviction whether this glass is crown glass or cast plate glass, but the presence of a few pieces with thickened, rounded edges makes me suspect this is cast window glass.

Metal. Structural materials of metal were found in iron, copper, brass, and lead. The most numerous type of artifact, of course, is nails. Of 196 nails, 160 cannot be identified as to manner of manufacture. 23 nails are wrought and 13 are cut. Other wrought iron items include 4 spikes, 1 staple, 1 hook, 1 probably pintle, and 1 holdfast. There are several pieces of strap iron of unknown use and 3 iron bars or rods.

One brass bibcock was found as was a piece of a lead bar. Copper articles include a piece of bar and three pieces of sheet copper. One of these, 4 x 3-3/4 inches, has been hammered to fit a wooden (?) member 2-1/2 inches wide, 1/4 inch thick, and of unknown length. The copper has two nail holes, 1-3/4 inches apart, 3/8 inch from the top end (Illustration No. 33).

Personal and Household Artifacts, numerically, comprise the bulk of the collection. Since the house was occupied for twenty-two years following Franklin's death, it is not always possible to say definitely whether a specific relic was used by Franklin. Those artifacts, however, which were pretty definitely used by occupants of the house can be separated from those which probably came from elsewhere (see Appendix E).

I shall discuss this group of artifacts under the following headings:

- Furnishings
 - Ceramics
 - Glass
 - Metal
 - Bone, Wood, and Leather

- Items of Personal Adornment, Amusement, and Transportation

- Smoking and Snuff Accessories

- Food

In the Franklin Site, as in most other historic sites, ceramic furnishings comprise the greatest number of artifacts. Those from the Franklin House include almost every type of ceramic ware in use during the mid to late eighteenth century and the opening years of the nineteenth century. A total of 3189 sherds were recovered. Of these, about half (50.7%) are locally made earthenwares. The rest are European (mostly English) and Far Eastern earthenwares, stonewares, and porcelains.

The locally made earthenwares are of two general types, both of which have a soft red body. The majority (1337 sherds) is undecorated lead glazed redware. Glaze color is a rich brown or, from the addition of manganese oxides, a shiny black. 188 sherds are from slip decorated redware, and there are 93 sherds without glaze (Illustration No. 34).

The undecorated lead glazed redware is general utility or kitchen pottery. It occurs in shapes and forms associated with cooking and storage. Deep pots, wide-mouth jugs, mugs, jars, pitchers, and large heavy platters are the most common forms.

The pots range in size from small ones with a base diameter of 3 or 4 inches to massive ones with base diameter of 7 inches, mouth diameter of 11 inches, and height of about 1 foot. These are usually glazed on the interior only and have lug handles. Rims are typically folded on the exterior to form a thickened rim up to 1-1/2 inches deep. One pot has a flat rim as if to support a cover. Another of the deep pots has script writing on the exterior, but I am unable to decipher it.

The jugs, jars, and pitchers are glazed on both interior and exterior and usually have everted rims and strap handles. One wide-mouth jug, with bulbous body and flaring rim, has a rim diameter of 3-3/4 inches and a base diameter of 4-1/2 inches.

The mugs are straight sided, glazed inside and out, have strap handles, and usually have several raised decorative bands encircling the body a little below the rim. Cup bases of 1-3/4 inches and 3 inches diameters are in the collections.

The remains of an interesting three-legged pot were found in the 1953 excavations. The pot has a base diameter of 4-3/4 inches. The legs are 1-1/4 inches long and about 1 inch wide. Glazed on the interior only, the inside is stringly ridged from the potters fingers.

The slip decorated wares occur either as platters or as pie plates. They are glazed on the interior only, and the decoration consists of a trailed or combed slip or of sgraffito technique reminiscent of the Pennsylvania Dutch potters. Trailed slip pieces are most numerous. The platters are wide, shallow dishes with nearly horizontal lines in most cases. A few pieces have everted, grooved rims and a very few have folded rims.

Trailed decorations are usually closely spaced lines of white slip (showing yellow through the clear glaze) and in some cases are embellished with splotches of green from copper salts. The combed decorations, consisting of large areas of slip combed or feathered into abstract designs, tend to be overall patterns. In sgraffito decoration, the design is scratched through the overall slip, allowing the dark body color to show through. Some stylized flowers or plants appear in this technique.

The pie plates are shallow bowls with curving sides and notched rims. They are decorated in both trailed and combed slip.

The 93 unglazed sherds seem to be mostly from originally glazed vessels. There are a few flower pot fragments, however, and one unglazed sherd from a flat plate with vertical sides 1-3/4 inches high. This piece has a flat-topped rim with wide notches on the outside edge.

There are 187 sherds of slip decorated buff-body wares from England. These are usually completely covered with a light slip which shows yellow through the clear glaze and decorated with trailed lines or dots of dark brown slip. Some pieces combine the light and dark slips in combed designs (Illustration No. 35).

Slip decorated buffware occurs as small cups with flaring rims, deep bulbous bowls, pie plates, flat platters, and mugs. The cups, bowls, and mugs are glazed inside and out while the pie plates and platters are glazed on the interior only. The small cups are invariably spotted, while the other forms tend to be combed or have a combination of combing and spotting decoration.

Tin enamelled earthenware, better known as delftware, accounted for 117 of the ceramic sherds. Most of the vessels in this collection are probably English rather than Dutch. The fragile nature of the ware left us only very small sherds and little can be said about shapes except that most appear to be from saucers or shallow bowls. One sherd has a foot ring. The delftware is decorated in underglaze blue painting, usually in Chinoiserie style. A very few sherds also have overglaze red enamel decoration and two have a red rim.

The second most common type of pottery is that which is usually called creamware. It is characterized by a medium-hard cream colored body. There are 653 sherds of creamware (20.5% of the ceramic artifacts). Of these, 48 are of the type having colored, indented edges. This is now known as "feathered" edge (Towner n.d.: 38) and occurs here in blue or green. The Franklins preferred green over blue in a ratio of about 5 to 3. Feathered edge plates, saucers, and cups are represented (Illustration No. 36).

Other types of creamware include Queensware, cream glazed ware with either plain or gadrooned edges and no painted decoration, enamel decorated creamwares, and some early transfer printed wares.

Two marked pieces were found. One, marked with "WEDGEWOOD" impressed, is the base of a Queensware gravy boat or similar article. A small undecorated sherd of a creamware plate is marked $\overset{I}{\underset{6}{\circ}} H$. This is identified as the mark of Joshua Heath, who worked in Shelton, Staffordshire, between 1740 and 1780 (Chaffers 1947: 289).

There are 217 sherds of stoneware, all but six of which are salt-glazed (Illustration No. 37). The six unglazed sherds are portions of one(?)

teapot in "Egyptian black stoneware," a fine hard stoneware developed in Staffordshire in the mid-1760's (Hughes 1961: 80). Mr. Franklin's example has founded sides, a straight spout, and molded decoration.

Of the saltglazed stoneware, about 65% of the sherds are English white saltglaze in mugs, cups, pitchers, plates, and saucers. Nine sherds are a variant of white stoneware, known as "scratch blue," in which patterns were cut into the unfired ware with a sharp point. The lines were accented with cobalt-stained clay slip or by powdered zaffre dusted on before firing. After firing, the designs showed dark blue fading into a lighter blue against the white background. Scratch blue is an early type, having gone out of production in the early 1760's (Hughes 1961: 52-53). The remaining 26% is made up of the common gray or tan glazed utility stonewares, probably mostly English, together with a few sherds of Nottingham Ware, a russet-brown saltglaze with a slightly metallic luster produced by a wash of ferruginous slip (Hughes 1961: 37).

The third largest, and final, group of ceramics from the Franklin house is porcelain, with 397 sherds (12.4% of total sherd count). Of these, 370 are Chinese, 10 are Japanese, 1 is French, and 16 are from unidentified European sources (Illustration No. 38).

Most of the Chinese porcelain (284 sherds) is blue and white ware decorated in the "Canton" style (Hyde 1954: 70-71). This decoration includes the familiar landscape scenes with islands, boats, bridge, willow trees, and eloping lovers. Thirteen sherds are blue and white Canton ware with overglaze enamel decoration in red. There are two sherds from small cups with blue and white interiors and an overall brown glaze on the

exterior. The Franklins also had some pieces with floral patterns in underglaze blue. Forms represented are small plates, saucers, bowls, and cups.

Seventy-one Chinese sherds are from overglaze enamel decorated porcelain which has a slightly grayer glaze than does the blue and white wares. The overglaze colors found are red, blue, gold, silver, and green, either singly or in polychrome combination. I suspect this enamel decorated porcelain was a little more expensive than the commoner blue and white ware. Besides cups, saucers, plates, bowls, and cups; there is a large sherd from a straight sided tea caddy which apparently had an American eagle decorative motif.

The sixteen sherds identified as European are all very small and have an extremely white glaze. Most are undecorated. The French porcelain sherd is from a small saucer. It has a gilt edge and a sprig of leaves in gilt. The glaze and body are a brilliant white.

Two of the Japanese sherds are from one small blue and white saucer with a floral sprig decoration. One sherd was found by Schumacher in 1953, and the matching one was uncovered nearby in 1960. The other Japanese sherds, from small plates or saucers, are underglaze blue and white with red and gilt overglaze enamel decoration in the "Old Imari" style (Garner n.d.: 63).

In the collection of glasswares, there are 408 specimens which can be identified reasonably, in time and space, as having come from the Franklin household. Of these, 311 are from bottles, 56 from drinking vessels, 4 are from decanters, 5 are from glass tubes, 3 are from lamps, 1 is from a salt, and 28 cannot be identified as to use.

279 bottle sherds (43 base, 205 body, and 28 neck fragments) are from the typical heavy green blown glass wine bottles of the mid to late eighteenth century. 13 fragments are from square sided, flat based case or gin bottles.

Fifteen sherds (representing four vessels) are from bottles which probably contained medicine. There were medium sized bottles of thin blown white or faintly green glass with slightly tapering sides, restricted necks and everted lips. Standing about 4-1/2 inches high, these bottles were about 1-3/4 inches wide at the shoulder, had a neck diameter of 5/8 to 11/16 inch, and a rim diameter of 1 to 1-1/4 inches. The mouth was 1/2 inch wide. From the Franklin house we have three bases, two rims, and eleven body fragments from three different bottles.

The same type of bottle on a smaller scale, usually called a scent bottle, is also present in the collection. One whole specimen of this type is of hand blown white glass, 3-3/8 inches long and 3/4 inch in diameter. It has a restricted neck and everted lip 13/16 inch in diameter. There are also two bases and one body fragment from similar bottles, all light green (Illustration No. 39).

The Franklin stemmed drinking vessels are represented by fifty-three fragments. All are hand blown. There are six bases. Their diameters are as follows: one is 2 inches; three are 2-1/2 inches; one is 2-13/16 inches; and one is 3-1/3 inches. There are nine stem fragments: four are undecorated; four have flutes running up the stem (one has nine flutes, the others have seven); and one has a pattern of flat diamond-shaped facets. Of the thirty-eight bowl fragments, twenty-four are plain while fourteen

have fine vertically fluted horizontal bands with tiny engraved flowers above each pair of flutes. The bands are just below the rim.

The decorated bowls were cup-shaped, I believe, and were on fluted stems. The diamond-decorated stem, very massive, had a drawn or trumpet-shaped bowl and occurred on the 3-1/4 inches diameter base.

There are three tumbler fragments. One is a large base sherd from a blown white glass tumbler with ribbed sides. The base diameter is 2-3/4 inches. One other base sherd is very small. There is one rim fragment with vertical fluting above a raised band encircling the glass one inch below the rim (Illustration No. 40).

Two body fragments from a white blown glass decanter were found. Both have a decorative band of vertical flutings and seem to match the decorated wine glass bowls. There is also a glass decanter stopper top. It is a five-sided, flattened polygon with fluted edges and diagonal fluting on the flat sides. It is 1-1/2 inches long and 1-1/4 inches wide. There is also a ground glass bottle or decanter stopper base 1 inch long and 11/16 inch wide.

Three very thin curved glass fragments may be from a French Argand lamp.

There is glass tubing. One piece, 4-3/8 inches long is 3/8 inch in diameter. The hole is 5/16 inch wide. Four other tube fragment, with very thin walls, are 3/4 inch in diameter. The largest piece is 2 inches in length.

One of the most interesting glass relics is the foot, stem, and partial bowl of what was probably a salt. It is rather crudely fashioned.

The foot, with lobed edges, is lop-sided and has unevenly spaced flutes on its upper surface. The stem is composed of a short fluted collar ($5/16$ inch high), and the bowl has faint ridges spiraling upward in a counterclockwise direction. The total height of the artifact is $1-11/16$ inches (Illustration No. 40).

There are also 28 fragments of glass too small or otherwise impossible to identify as to use.

Metal furnishings were not too numerous, but a few were found. Seven pieces of tableware include a bone knife or fork handle enclosing an iron stem, an iron knife blade, an iron fork shaft, the remains of two three-tine forks, and two spoon fragments (Illustration No. 41).

The bone handle is $3-1/8$ inches long. It tapers from $5/8$ inch at the butt to $7/16$ inch at the front end. The butt is slightly concave. The iron fork stem is 3 inches long but rather badly deteriorated. The other two fork fragments are in somewhat better shape. One, with a complete bone handle, is 9 inches long overall. The handle is $3-3/4$ inches long, the iron stem is $2-3/4$ inches long, and the head end is $2-1/2$ inches long. The center tine is present but the two outer ones are missing. The handle tapers toward the front end and the butt, slightly concave, is cut at a 45 degree angle. A second three-tine iron fork without handle was probably identical to the one just described. It is 6 inches overall and in a good state of preservation.

Spoons are represented by an iron handle and a badly deteriorated pewter fragment. The iron handle is 3 inches long and $5/8$ inch wide at its widest part. The pewter fragment, a mashed bowl and part of the stem, is $2-3/4$ inches overall. The bowl is $1-3/8$ inches long and $3/4$ inch wide.

The iron knife blade, from a heavy kitchen knife, is 5-1/2 inches long. Parts of both the tang and the blade are present.

The rest of the metal furnishings are rather miscellaneous. There is an iron coil spring, three small parts of a cast iron stove, six small brass and iron pieces of furniture hardware, three wires for holding corks in wine bottles, one lead bale seal, several straight pins, a fragment of an iron hand sickle, and a badly rusted piece of horseshoe.

Non-metallic furnishings include seventeen pieces of flattened horn, probably used in lanterns. There is an iron shafted wooden pulley 1-1/2 inches in diameter and 3/8 inch wide. Around the rim is a groove 1/8 inch wide and 1/8 inch deep. Finally, there is a rectangular piece of bone 2-9/16 inches long and 3/8 inch wide. Its top is scored into two rows of 1/8 inch squares in which are inscribed numbers or letters. This piece of bone has been fastened to some object by tiny steel pins or rivets near its end. I do not know its use.

Items of personal adornment or amusement include six copper buttons, three stone "marbles," six small pieces of leather which probably came from children's or women's shoes, a very fragmentary clasp knife, and an English penny minted in 1720.

Smoking accessories include 114 clay pipe stem fragments and 23 pipe bowl fragments. There is also a small piece of what may be a papier-maché snuff box cover. It is flat, circular, originally approximately 2-1/2 inches in diameter. On the top surface are several decorative bands of dots and hatchures.

The final artifact category, foodstuffs, is made up of an estimated 2600 bone fragments from food animals, some shell, bone and scales from seafood, and a few nut remains.

Of the food animals, about 83% are from large mammals, 16% from fowl, and 1% from turtles.

Of the large mammal bone, an estimated 84% are from beef cattle, 15% are from sheep or goat, and 1% are from swine. There are also a very few deer bones.

Shell fish are represented in abundance, and average three oyster shells for every clam shell.

There is one coconut shell fragment, one small peach stone, one pecan shell fragment, and five pieces of butternut shells.

THE MARKET STREET HOUSES

Introduction

As a part of the archeological investigation of Franklin Court, excavations were undertaken in the cellars of five standing structures at the Market Street front of the property. Three of the buildings contain elements of tenements constructed by Franklin in 1786-1788 (National Park Service 1961b, 1961c, 1961d). The other two, while not built by Franklin, were surrounded by his property and were a part of the eighteenth century scene (National Park Service 1961e, 1961f). The buildings now numbered 316, 318, and 322 Market Street are those once owned by Franklin, and 314 and 320 are those not on his property. The present archway passing between and under 316-318 was built by Franklin to provide an entrance to his property (National Park Service 1961b: Chapter II, Section 1, pp. 16-18).

316 Market Street

Extensive excavations in the north half of the present building at 316 Market Street failed to reveal any underground structural features which can be identified with Franklin's construction.

Two round brick lined pits were located 40 and 43.5 feet from the north wall. One was, however, entered by cast iron sewage pipes and had obviously been used as a cesspool so recently that I decided not to attempt to excavate it. I do not know whether this feature dates from Franklin's time or from the nineteenth century. The second pit was not excavated and so remains undated (Illustration No. 42).

318 Market Street

318 Market Street was the first of the Market Street houses to be investigated. Results of the first year's work were reported in Chapter IV of the historic structures report on the building (National Park Service 1961b). Subsequent investigations enlarged and clarified the previous ones (Illustration No. 42).

Excavations were very successful in this building. Four transverse brick wall foundations were located. One wall divided the stairwell from a north room. A second separated the stairwell from the kitchen on the south. A third is the original rear wall of the house, and the last is an areaway wall like that of Franklin's own home.

The north room still has an original mortar floor with indications of random wooden flooring which once rested on it. On the west wall of this room is a pair of fireplace cheeks only 1.9 feet apart. Archeologist Moore, who conducted most of the research on this house, felt the fireplace contained a Franklin stove (National Park Service 1961b: Chapter IV, Section 1, p. 2).

Doorways into the stairhall are delimited by plaster indications on the two walls separating it from the other rooms.

On the west wall of the kitchen, south of the stairwell, is another fireplace, this one 4.3 feet wide (interior dimensions). One in situ brick indicates the hearth level.

Between the south wall of the house and the areaway wall is a brick pavement set directly on the native clay. The areaway is completely paved except for a small square in the southwest corner. This unpaved

portion proved to be a sloping stone slab leading downward into a privy pit abutting the areaway wall on the south. The situation here is similar to that in Franklin's house.

The privy pit itself has a domed roof and dry laid brick walls. For a depth of 7.9 feet it has an inside diameter of 4.2 feet. At the 7.9 feet level, the pit has a brick floor in which is a smaller pit 2.8 feet wide and extending 1.5 feet deeper. The base of the smaller pit rests on natural sandy clay.

On the other (east) side of the house and 5 feet south of the areaway wall is a brick-lined well with a 3 feet interior diameter. We excavated this well to a depth of 13-1/2 feet where we were forced to suspend operations without reaching the bottom. A pump in this location is shown on the 1812 deed of partition of Franklin's property (Riley 1950: 47 and Fig. 10).

At the east wall of the kitchen, but associated with a nineteenth century chimney, is an ashpit. It is brick-lined, 12.7 feet deep, and 3 feet in inside diameter.

322 Market Street

The cellar of 322 Market Street, like that of 318, was very productive of sub-floor archeological remains. The cellars had many of the same elements, but the arrangement is very different.

The cellar of 322 contains a front (north) room, a stairwell, a kitchen, and an areaway south of the house with two associated privy pits. In addition, there was probably a hall along the west side of the cellar

north of the kitchen. The meaning and relationship of some of the interior foundations are obscure; perhaps architectural study of the whole structure will clarify the situation (Illustration No. 42).

The areaway and privies lie just outside the south wall of the original building. The areaway is 6.4 feet wide. One line of brick (Feature 12) near the east wall of the house is probably a remnant of the areaway paving. Centered 6.1 feet from the east wall of the present building and 3.3 feet south of the areaway wall (Feature 3) lies a brick-lined privy pit 4.3 feet in inside diameter and 7.6 feet deep (Feature 2). It is connected to Feature 3 by the remnants of a brick inlet chute.

Inside the areaway, centered 3.3 feet from the west wall of the building, is a second brick privy pit (Feature 1). This pit is smaller (3.2 feet inside diameter) but deeper (8.7 feet) than Feature 2. It, too, has the remains of an inlet. The inlet runs along the north side of Feature 3 for a distance of 1.7 feet, then turns 45 degrees north and enters the pit 2.0 feet away.

I doubt both these pits were operative at the same time. It is logical to assume that Feature 2 is the earlier since its location most closely resembles that of the privies in 318 Market Street and in Franklin's house. The artifactual evidence, while by no means definite, seems to bear this out. Neither pit contained organic soil, that is, both were cleaned of human waste before being filled in. A comparison, however, of artifacts from the lowest level of both pits suggests that Feature 2 was filled earlier than Feature 1. In Feature 2 (Field Specimen No. 27) the ceramic collection was composed mainly of queensware, Chinese blue and white export porcelain,

and a few sherds of English white saltglazed stoneware. The lowest level of Feature 1, on the other hand, contained some queensware, pearlware, blue transfer printed creamware, hand painted creamware, and mocha ware (Feature No. 35). No porcelain nor stoneware was present. The pearlware and decorated creamwares suggest to me that Feature 2 was filled some twenty to thirty years earlier than Feature 1. I would estimate the filling of Feature 2 took place by 1800 or perhaps a few years earlier. Feature 1 was filled in 1820 to 1830.

North of the rear wall of the 1788 house (Feature 4) and against the west wall of the cellar is a brick pier 1.8 feet wide and 3.5 feet long (east-west). I cannot identify this structure.

Fifteen feet north of the rear wall of the house is a transverse wall foundation (Feature 5) separating the kitchen, on the south, from the stairwell-hall. Centered on the south side of this wall is a great fireplace foundation 7 feet wide. The fireplace projected 1.8 feet into the kitchen. Its cheeks tapered so that the fireplace, from a width (inside) of 5 feet at the outer edge, reduced to 4 feet against the back wall.

Separated from the cheeks of the kitchen fireplace only 2.7 feet is an east-west foundation running from the east wall of the cellar 13.9 feet west (Feature 10). This "wall" is made of some whole brick, some brick bats, and some large pebbles. Its outline and height are very irregular and there is no readily apparent explanation for its presence. Perhaps it is from a later addition or interior change.

The kitchen was probably entered by a door in the wall just west of the fireplace.

North of the north wall of the kitchen there is a stairwell enclosed by an east-west wall (Feature 6) 12.5 feet long located 9 feet north of the kitchen partition. There is a north-south wall (Feature 11) on its west end. A short partition (?) wall (Feature 13) projects 5.5 feet northward from the kitchen partition 7.4 feet west of the east wall of the building. This may indicate that the lowest flight of stairs from the first floor was on the north side of the stairwell.

On the north side, west end of Feature 6, there are two northward projecting piers 1.4 feet wide and 1.4 feet long. They are 2.2 feet apart. The westernmost one comprised the north end of Feature 11. These piers probably are a chimney breast. A sub-floor brick pit 2.5 feet long and 1.2 feet wide abuts both the eastern pier and Feature 6. The two piers and the pit were numbered Feature 7.

Feature 14, a brick wall, extends 3.9 feet north from the north end of Feature 11, delimiting the north room from the hall on the west. Features 14 and 11, then, form the east wall of the north-south hallway.

A patch of brick and mortar north of Feature 7 and east of Feature 14 may be a floor remnant.

There is a good collection of artifacts from the cellar of 322 Market Street. Bones from food animals are present as are glass, ceramic, and iron items associated with the late eighteenth and early nineteenth centuries. Perhaps the most notable class of artifacts are many small "pins" or "wedges" carved from antler tines (some unaltered tines were also found). The "pins" are up to 1-1/4 inches or so in length and have one tapered end with four or five flat sides. The other end may be unshaped or carved round.

I do not know what these small objects are, but possibly they were associated with the Bache-Duane newspaper enterprise (National Park Service 1961d: Chapter II, Section 2). There are also some rings and small hollow barrel shaped objects much like modern Boy Scout neckerchief slides.

314 Market Street

A test trench 49.8 feet long and 5.5 feet wide along the west wall of the 314 Market Street cellar failed to reveal the remains of any historic structures (Illustration No. 42).

320 Market Street

Most of the cellar of 320 Market Street was excavated, but only two historic features were found. A portion of the east wall of the kitchen wing, dating from the mid-eighteenth century (National Park Service 1961f: Chapter II, Section 1, p. 1), still remains beneath the soil as does a brick-lined well 16.7 feet deep (Illustration No. 42).

NOTES

1. Public Law 795--80th Congress.
2. For a complete history of the site, see National Park Service (1961), especially Chapter II, Sections 1 and 2.
3. Necessary or Necessary House are terms, recorded as early as 1396 (Pudney 1959: 31-32), frequently used in eighteenth century Philadelphia to refer to the dependency we would be apt today to call a privy, outhouse, or latrine.
4. Philadelphia Contributionship for the Insurance of Houses from Loss by Fire, Survey No. 1148, August 5, 1766. Microfilm copy in files of Independence National Historical Park, Philadelphia.
5. Peters is listed at 85 Walnut Street (now 307) in the Philadelphia directory of 1793.
6. B/F85-BA, Franklin Papers--Bache Collection, American Philosophical Society, Philadelphia.
7. Personal communication.

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APPENDIX A

Comparative designation of archeological features in Schumacher's "Preliminary Exploration of Franklin Court. Archeological Project No. 4. May-September 1953" and in this report.

<u>Present Designation</u>	<u>Schumacher's Designation</u>	<u>Description</u>
Feature 1	Walls T ₂ ; T ₃ ; U ₁ ; U ₂ ; U ₃	Early 19th century walls, east side of S. Orianna Street.
Feature 2	Steps 1	Dressed marble steps, possibly from Franklin's house.
Feature 3	Steps 2	Dressed marble steps, possibly from Franklin's house.
Feature 36	Wall Z ₁	North wall foundation, 1765 & 1786.
Feature 37	Wall Y	South wall foundation, 1786.
Feature 39	Wall X	Areaway wall foundation.
Feature 45	Wall V	Privy inlet, 1786.
Feature 69	Wall J (Pit J)	Privy pit, 1765.

APPENDIX B

Archeological Features, Franklin Court. Modern utilities are excluded.
Locations are given to the approximate center of the feature.

No.	Description	Location
1	Early 19th century walls. Contain materials salvaged from Franklin house.	East building line, S. Orianna
2	Dressed marble steps, possibly from Franklin house.	N68.5:E9.1
3	Dressed marble steps, possibly from Franklin house.	N84:E10
21	Line of solid rubble. Associated with Feature 66.	N88.6:W5
25	"Line of stones." Field records incomplete.	
26	Possible pre-Franklin surface.	N107:W5
36	North wall foundation, Franklin house, 1765 & 1786.	N102:W2.5
37	South wall foundation, Franklin house, 1786.	N70.5:E9
38	Privy pit, Franklin house, 1786.	N61:E3
39	Areaway wall foundation, Franklin house, 1786.	N65.4:E1.6
40	Rubble area north of Feature 39.	N67:0
42	Cellar floor, Franklin house, 1786. Bricks oriented east-west.	N80:E4
43	Cellar floor, Franklin house, 1786. Bricks oriented north-south.	N97:0
44	Bonded bricks at west edge of Feature 43.	N96.5:W33
45	Privy inlet, Franklin house, 1786.	N65.5:E3
49	Cellar door foundation, 27 S. Orianna St., 19th century	N40:E9
55	Square zone of yellow clay.	N60:E7
56	Reinforced concrete foundation, 18 S. Orianna St., 20th century.	N77:W33
57	Row of large stones on top of Feature 59.	N77:W17
58	Rhomboidal cement stairway foundation on top of Feature 59.	N68:W16
59	Reinforced concrete foundation, 18 S. Orianna St., 20th century.	N77:W14
60	Uneven, lowered portion of Feature 59, east side.	N77:W14
61	Brick-lined pit, 19th century.	N83:W22
62	Concrete and wood-form portion of Feature 59	N77:W14
63	Ice storage pit, Franklin house, 1765.	N79:W26
64	Pit in sterile soil at north face of Feature 39.	N64.7:W6.2
65	East wall foundation, Franklin house, 1765.	N74.5:W4
66	Interior east-west wall foundation, Franklin house, 1765.	N87:W6
67	Cellar floor, Franklin house, 1765. Bricks oriented east-west.	N75:W5.5
68	East wall foundation, Franklin house, 1786.	N96:E13
69	Privy pit, Franklin house, 1765.	N59:E12
70	Small pit containing stone rubble & 18th century artifacts	N34:W8

<u>No.</u>	<u>Description</u>	<u>Location</u>
82	Wall foundation, 28 S. Orianna St., 19th century	N10:W11.5
83	Area rotted schist--old surface (?).	N16:W10
89	South property line wall foundation, Franklin lots.	O:O
91	East property line wall foundation, Franklin lots.	N34:E45
95	Subcellar floor, Franklin house, 1765. Bricks oriented north-south	N95:W7
96	Remains of 8 x 8 inch wood post. Probably used in laying curbstone.	N129:W7.6
97	Cask-lined pit, pre-Franklin.	N115:W9
98	Remains of 8 x 8 inch wood post. Probably used in laying curbstone.	N137:W8
114	East-west stone wall foundation, Franklin wall, 1786.	N164:E6
125	Cellar door foundation, 11 S. Orianna St., 19th century.	N155:E10
126	Post hole	N154:E7.2
130	North-south stone wall foundation, Franklin wall, 1786.	N177:E1
133	Wall foundation, 6 S. Orianna St., 20th century	N172:W8
135	Cellar wall foundation, 9 S. Orianna St., 19th century.	N163.5:E15
136	East-west stone foundation wall. Printing shop (?), 1786.	N214:W1
138	Mortar floor (?)	N226:W1
139	North-south stone foundation wall, Franklin wall, 1786.	N230:O
141	Brick vaults between cellars of 316 and 318 Market Street, 1786.	N260:E6
143	Area concentrated kiln wastes, 1725-27.	N210:E5
144	Two brick foundations, kiln, 1725-27.	N198 & 203:E5
145	Area burned clay, kiln, 1725-27.	N210:E5
146	Ditch in Feature 145.	N201:E5
147	Mortar floor (?)	N250:E10

APPENDIX C

Field Specimen Numbers containing artifacts associated with the John Rogers pottery kiln in Franklin Court.

Field Specimen No. 143

144

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Field Specimen No. 175

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APPENDIX D

NOTES ON THE PROBABLY COLOR AND TYPE OF PAINT USED IN SOME AREAS OF BENJAMIN FRANKLIN'S ORIGINAL HOME - PLASTER SURFACES ONLY

It has been well established that Benjamin Franklin started erection of his home in Philadelphia in the Fall of 1764, while Mr. Franklin was either leaving for or in England, as the representative of the province of Pennsylvania to the English government. The original plot of ground, on which the home was built, was bounded by High (Market Street), Third, and Fourth Streets and extended to Chestnut Street. Orianna Street, which now practically divides Mr. Franklin's original lawn, was not on the original plan and did not exist at the time. In 1786, while Mr. Franklin was in France, the family had outgrown the original house and plans were made for an addition to be applied to the east side of the original dwelling. For a very interesting and complete detail on the available information concerning both the original house and the addition, the reader is referred to Edward M. Riley's brochure on "Franklin's Home" published in TRANSACTIONS OF THE AMERICAN PHILOSOPHICAL SOCIETY, New Series, Volume 43, Part I, March 1953.

In the above account of the building, there are references quoted from letters indicating that much of the interior decoration of the walls of the more important rooms was in the form of wallpaper. Wood wainscoting, of which there are many references, undoubtedly was painted or varnished.

Since the house was originally erected in 1764, just about 1 year following the Stamp Act, it can be presumed that most of the wallpaper and a number of the pigments used in the various paints were imported. Up to this time, there was little encouragement for American industry to produce not only these paint materials, but other materials as well. Therefore, it can be safely assumed that most of the pigments used in the paints were procured from abroad. However, it is also true that at this time and even earlier, such common and natural earth pigments as red iron oxide, yellow ochre, (iron oxide), and limestone or chalk whiting were not only imported but were produced locally and were the first pigments produced in this country. These were used in paints from the early eighteenth century forward. However at this time, there were imported also a number of better grade iron oxides such as Spanish red, Persian and Indian red, all being finer in color and more expensive than their domestic counterparts. We can only conjecture that the pigments in the early part of the painting in Mr. Franklin's home were imported and later were domestic. Knowing Mr. Franklin's reputation for economy, and his patriotism, we are sure he reverted to or used domestic materials wherever possible.

Since the fragments or the artifacts which we describe below are concerned with plaster surfaces only, we can not make any more than general comments regarding the probable nature of paints used on other surfaces of Mr. Franklin's home. Numerous references are made in correspondence to the wood

wainscoting and those types of surfaces in colonial times were generally finished with paints composed of various types of pigments and oil. The oil was generally linseed oil which was both imported and domestically produced, a large part of the domestic supply coming from Berks County in Pennsylvania. Linseed oil paints made with imported pigments (white lead was generally used both inside and outside) were very expensive and only the more wealthy could afford them. When considering plaster surfaces only, it is generally true that during colonial times, paints for these surfaces were not composed of linseed oil as a binder, but consisted of water types of binders, such as glue, casein, milk, etc.

Not only were paints used on plaster surfaces, but wallpaper was used as well, particularly in the more important rooms. There is a comment on page 154 of Mr. Riley's brochure which indicates that "the blue room" was not only painted blue but papered the same color. Mr. Franklin makes the comment, "I suppose the blue Room is too blue, the Wood being of the same Colour with the Paper, and so looks too dark." He further instructs her that she should have it re-finished and have "the Wainscot a dead white" which would be a flat white. He further makes the comment that "If the Paper is not equal Coloured when pasted on, let it be brush'd over again with the same colour;" indicating that some paint may have been applied over the wallpaper to give a more even finish, particularly if this paper was of a rather inferior quality, and this was probably the case since we quote from page 152 of Mr. Riley's brochure, "for I think the paper has lost much of the bloom by pasting of it up, therefore, I thought best to leave it till you came home." Evidently, Mr. Franklin did not have it painted over as Mr. Franklin suggested. This might have been done at a future date.

From the above, it is evident that some of the walls of Mr. Franklin's original home were finished with wallpaper and the wood wainscoting was also painted and the paint was probably linseed oil. The pigments, if they were blue or some other color other than yellow, red, or white, were undoubtedly imported.

The home that Mr. Franklin lived in only 7 years of his life was torn down in 1812 because a new street was to be put through which would go through part of the house that was standing. From that time to the present, much of the evidence revealing how Mr. Franklin's house looked and how it was painted has lain buried and forgotten.

During the archaeological excavations conducted by the Independence National Historical Park Project Engineers, a number of artifacts were found and a great number of these were in the form of pieces of plaster to which various shades of paints were adhering. (No fragments with wallpaper attached were found.) These were sorted and the writer in consultation with Mr. Paul J. Schumacher and Mr. Dennis C. Kurjack choose 5 different pieces of plaster samples that examination indicated might have a bearing on how some of the plaster walls of Mr. Franklin's home were finished. Therefore, it may be that in the description listed below, we may be describing the color and the

type of paint used in 4 or 5 different rooms. These rooms were undoubtedly those that may have been located in the path of the street which was put through Franklin's property in 1812. We will list below the comments as 1, 2, 3, 4, and 5, and we will assume that each of the painted plaster fragments came from a different room. This may not have been the case since there may have been a dado which would presuppose 2 different colors in 1 room.

Artifact #1 was a bare plaster fragment and whether this was bare plaster by design or accident we do not know. It is of course quite possible that some rooms, particularly storage rooms, may never have been painted and this would not have been unusual. Therefore, we might assume in some storage areas or closets the white plaster remained unpainted.

Artifact #2 showed a red face, in other words when the building was torn down, this particular room represented by this artifact was painted red. However, when examining a cross section of the various paints on this fragment and proceeding from the face of the panel back to the plaster, we find that immediately below the face red was white; immediately, below that was a yellow and immediately below that was a red which indicates that the room from which this fragment was procured was originally painted red. The red on the part facing the plaster or the original red is somewhat darker than the red on the face, and may be an indicating that the original red was an imported Spanish brown or Spanish red oxide whereas the last red painting was undoubtedly of domestic source. The examination of this fragment is also an indication that the color schemes then as now changed from period to period.

Artifact #3 was a yellow color on the face which indicated that this room was painted yellow when the building was torn down. This yellow was clean and bright as compared to the yellow color on some of the other samples and was due to the fact that immediately below the yellow was white and successive coats of white, going right down to the plaster. Undoubtedly this room was painted white originally and was continually painted white until the last painting which was yellow. The yellow being put over successive coats of white indicating a brighter cleaner looking color.

Artifact #4 was also yellow faced but in examining this fragment, there was a succession of colors indicated. The first color on the face was yellow; below it was a dirty bluish color. This dirty bluish color is very thin and probably represents only 1 coat. Whether this was a definite color of the room or whether it was put in between for color effects which was sometimes done, we do not know. It is also possible that there may have been some fire in this room that might have created an effect of a dirty blue or this particular fragment may have come from an area that was somewhat close to a fireplace, since it is very thin as noted. The next color under this dirty blue was red; the fourth color was white and the fifth was a thin coat of red; the six was a number of coats of white. Therefore in this room, the original color was white.

Artifact #5 had a yellow face and had about the same sequence as Artifact #4 but ended in red rather than white.

From the above, we could deduce at least 2 of the rooms were white paint originally, 2 were red, and perhaps the 5th one had not been painted at all.

From examination of scraped particles of the paint, it appeared to us that these pigments were in the case of white exclusively calcium carbonate which is sometimes called chalk whiting or limestone whiting. This pigment was exclusively used in water paints or white wash types of coating. The binder was casein or glue and sometimes milk that had been soured. We have a slight further evidence that the vehicles were of a water nature since on page 152 of Mr. Riley's brochure in a letter written by Mrs. Franklin to her husband in the Fall of 1765, she says in part, "The curtains are not made, nor did I press for them, as we had a very great number of Flies, as is observed they are very fond of new paint." If the binder were a glue type or a soured milk or similar type of water binder, there is no question that the flies would have been very prominent and fond of such a compound. There is little chance that these paints were anything but water paints, but the exact nature of the binder or vehicle is not known.

The red and yellow colors mentioned above were all iron oxides, and probably were imported in the earlier coats, and natural domestic in the latter coats. They were mixed with water binder vehicles described above. On some of the fragments as much as 30 - 35 mils of paint were measured, indicating many repaintings during the 47 years that the house was standing.

The red color used as the original painting in some of the rooms was a common decorative color used throughout colonial times and is common throughout the eastern seaboard. Many indications of it are found in New England and Williamsburg and other localities where the old homes have been restored, or where they can be examined in their original condition. Also, the yellow made from the plentiful yellow ochre pigment is a common paint and used quite generally in colonial times. However, both these paints are rarely used except in rooms which are more common such as kitchens, utility rooms, work rooms, storage rooms, and in some cases, bedrooms and attics. The more decorative rooms were generally papered and had elaborate wood wainscoting which was painted and generally the paint on these surfaces were rather dark colors and were oil paints.

The above information adds just a little bit more to the already large fund of information established and being established regarding the construction, furnishing, and appearance of Benjamin Franklin's original and enlarged home.

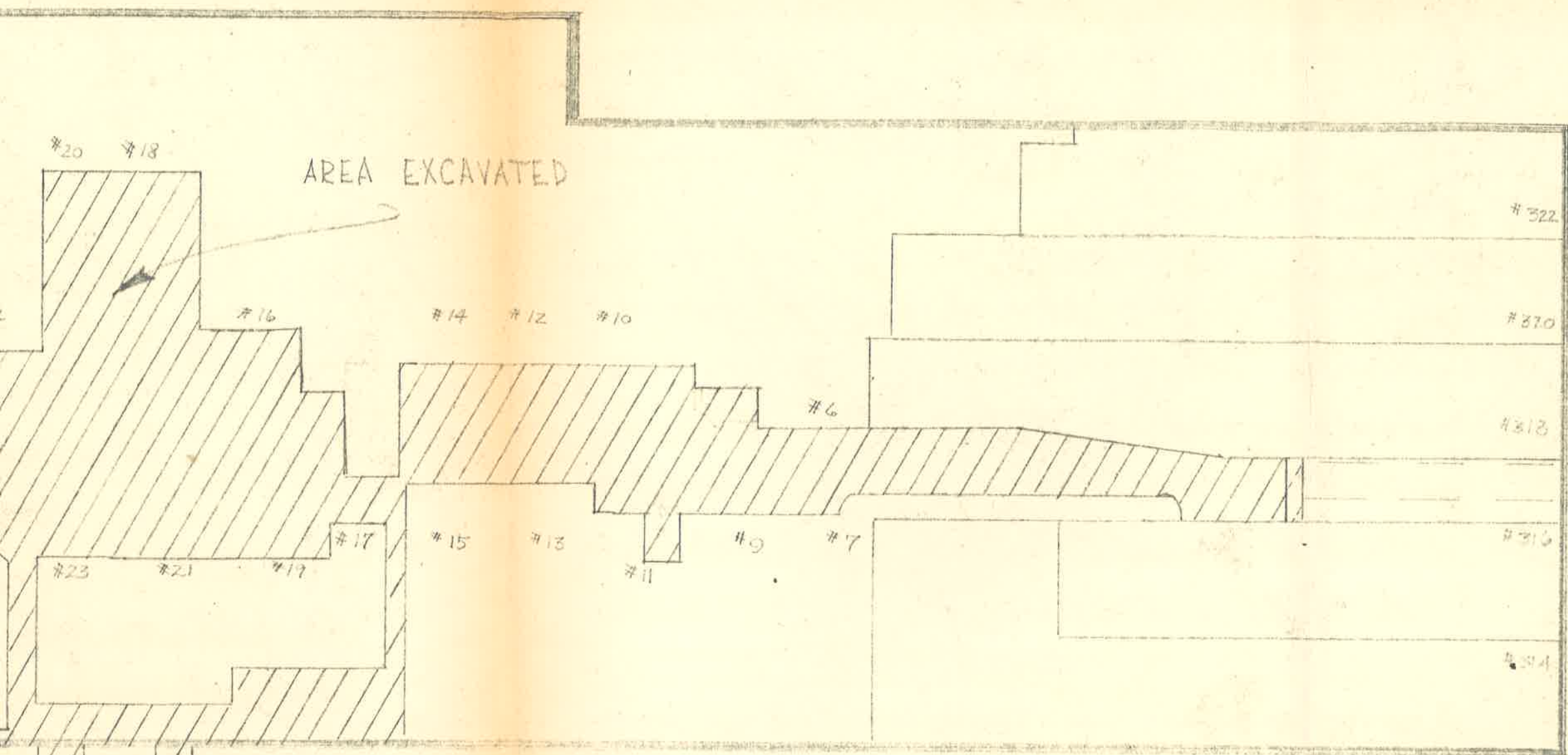
L. F. WAGNER
CHIEF CHEMIST
THE GLIDDEN COMPANY

LFW:ed
April 14, 1954

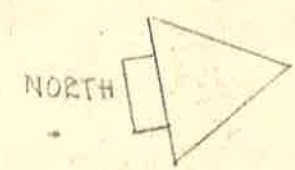
APPENDIX E

Temporary Catalog Numbers and Field Specimen Numbers containing artifacts associated with the Franklin house and household.

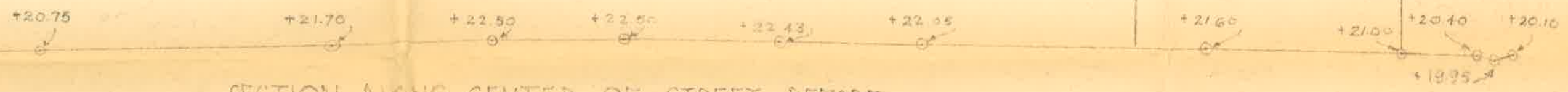
Temporary Catalog No. 15-1	Field Specimen No. 48
15-2	49
15-3	50
15-4	51
21-1	52
21-2	53
21-3	54
	55
Field Specimen No. 9	56
10	57
11	58
12	59
14	60
14-B	61
14-C	62
15	65
15-B	67
16	75
16-B	79
17	80
17-B	96
18	98
19	103
20	109
21	149
22	150
23	151
25	152
26	157
43	159
44	194
45	196
46	198
47	200



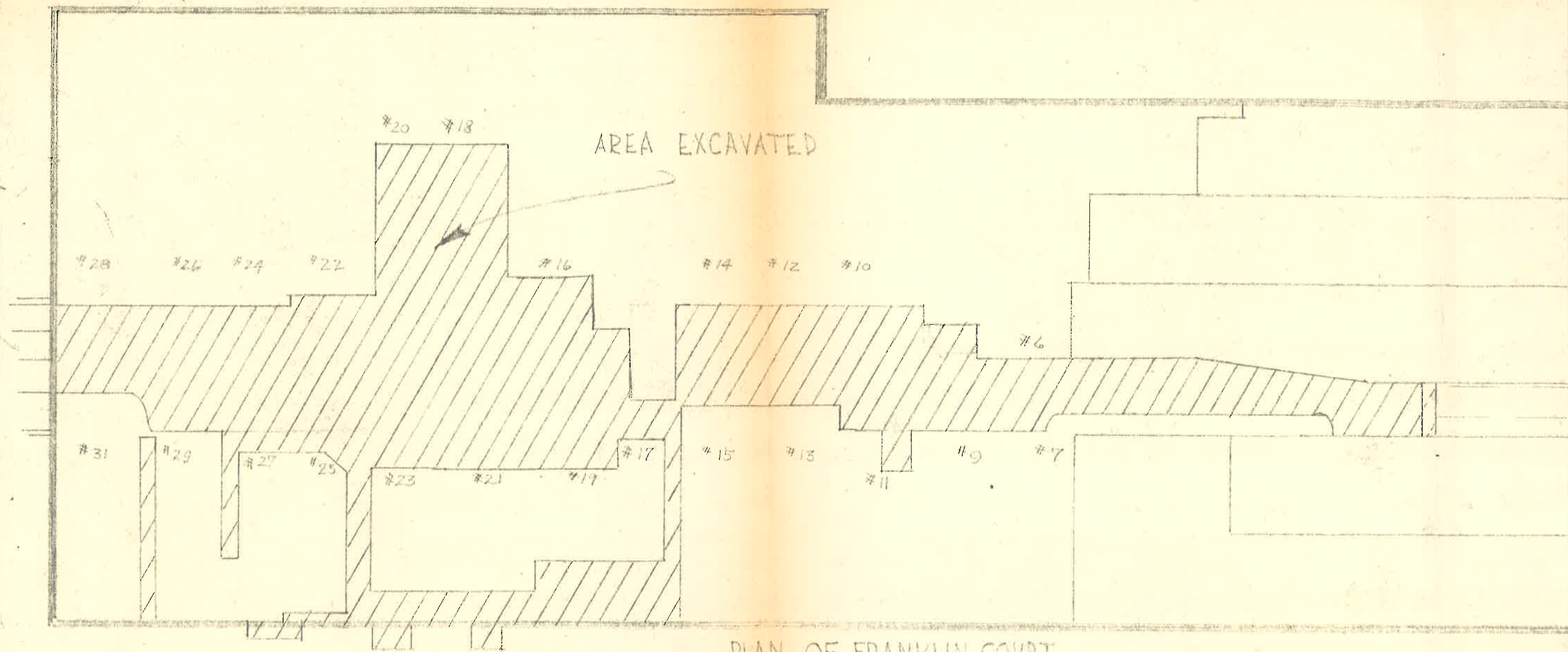
MARKET STREET



PLAN OF FRANKLIN COURT



SECTION ALONG CENTER OF STREET BEFORE



PLAN OF FRANKLIN COURT

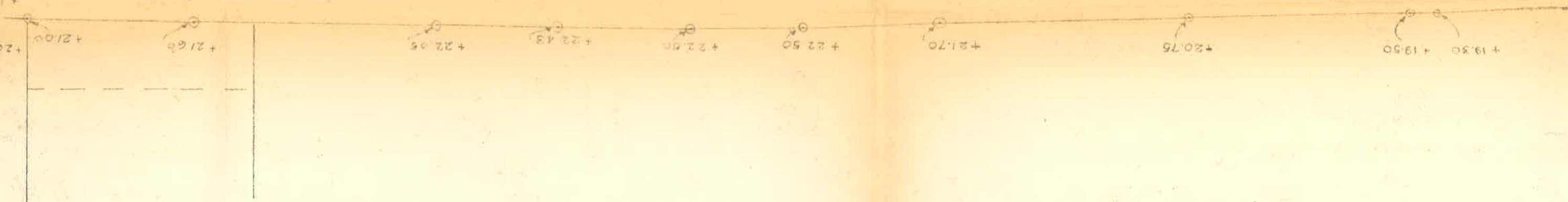


SECTION ALONG CENTER OF STREET BEFORE

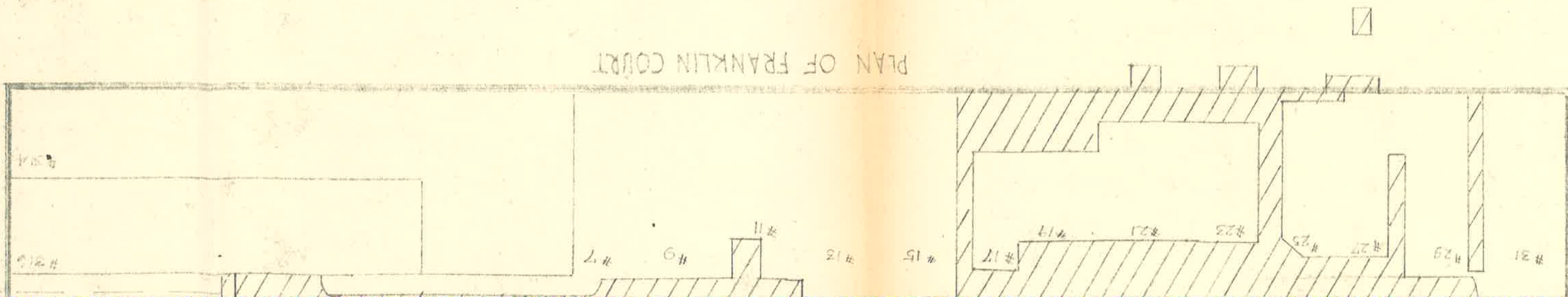
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
INDEPENDENCE NATIONAL HISTORICAL
PLAN AND SECTION
SHOWING AREAS EXCAVATED AND STR
GRADES BEFORE EXCAVATION

SCALE 1 INCH = 20 FEET
0 20 40 FEET

SECTION ALONG CENTER OF STREET BEFORE EXCAVATION

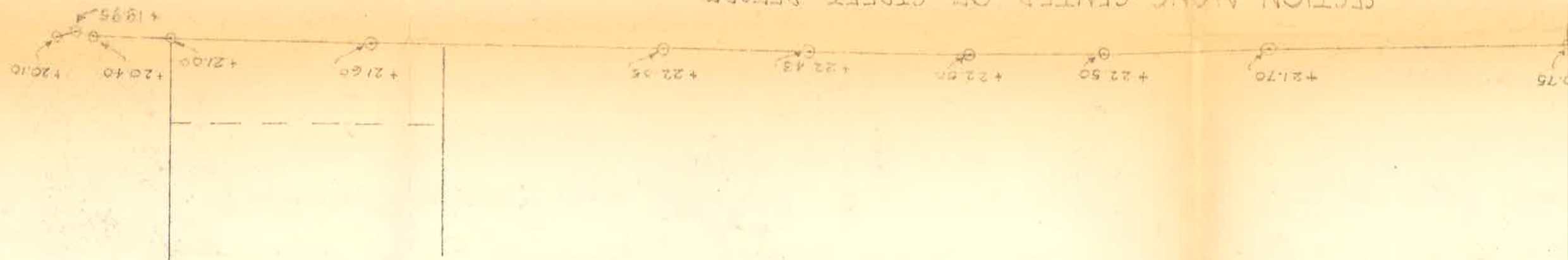


PLAN OF FRANKLIN COURT

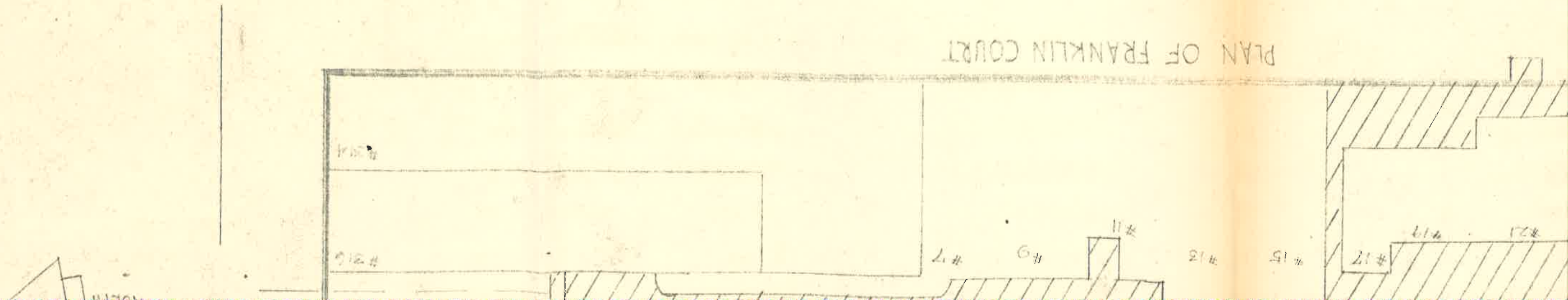


UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE INDEPENDENCE NATIONAL HISTORICAL PARK		PLAN AND SECTION SHOWING AREAS EXCAVATED AND STREET FRANKLIN COURT GRADES BEFORE EXCAVATION	B.B. POWELL JUNE 15, 1962 2783 NHP IND REGIONAL FIVE
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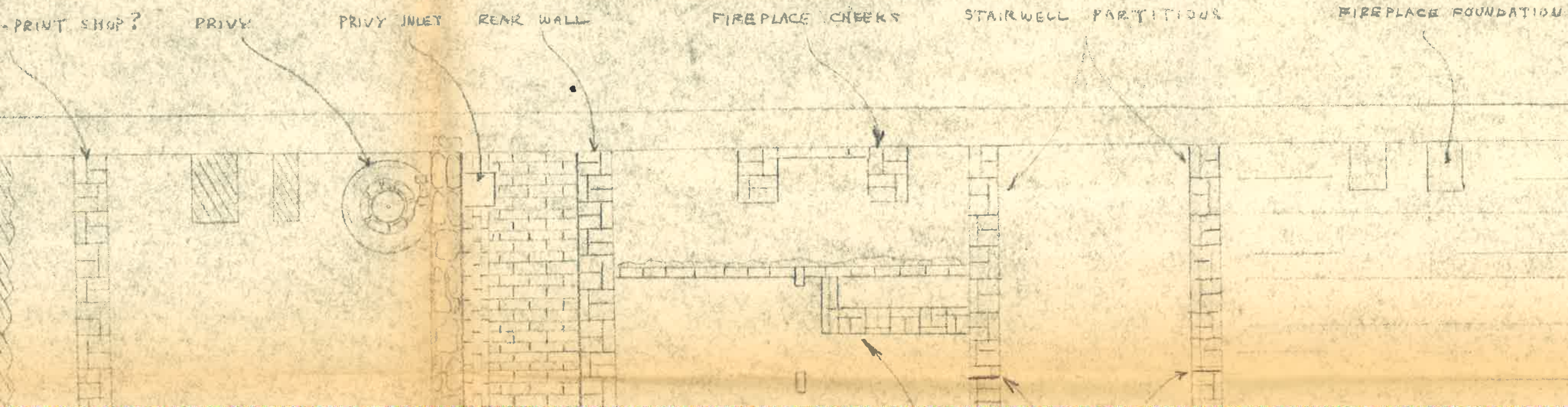
SECTION ALONG CENTER OF STREET BEFORE EXCAVATION



PLAN OF FRANKLIN COURT



318 MARKET STREET



ORIENTATION

REVIEWED

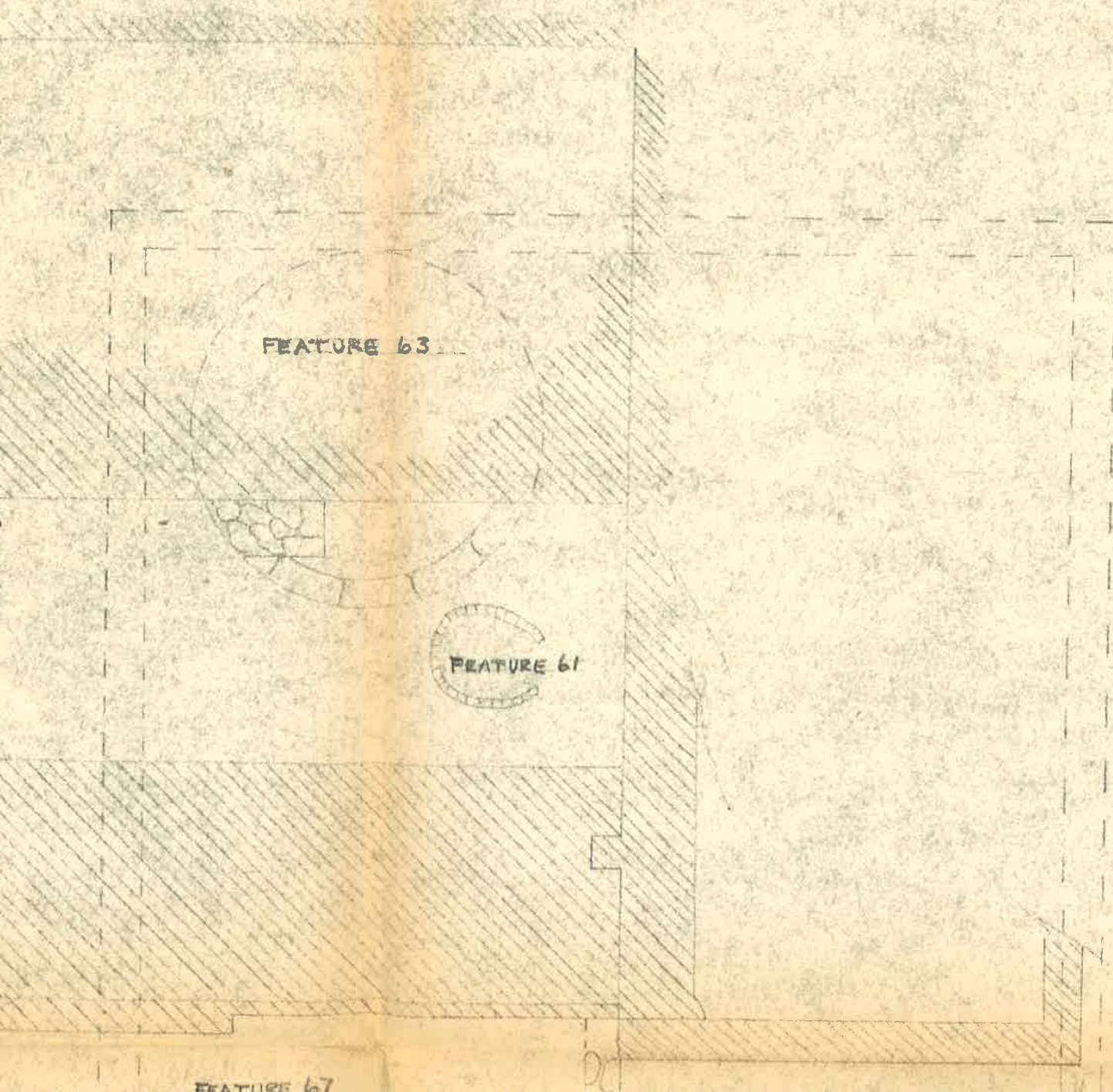
OPERATIONS
REGION

WASHINGTON

INTERP.
REGION

WASHINGTON

FRANKLIN HOUSE

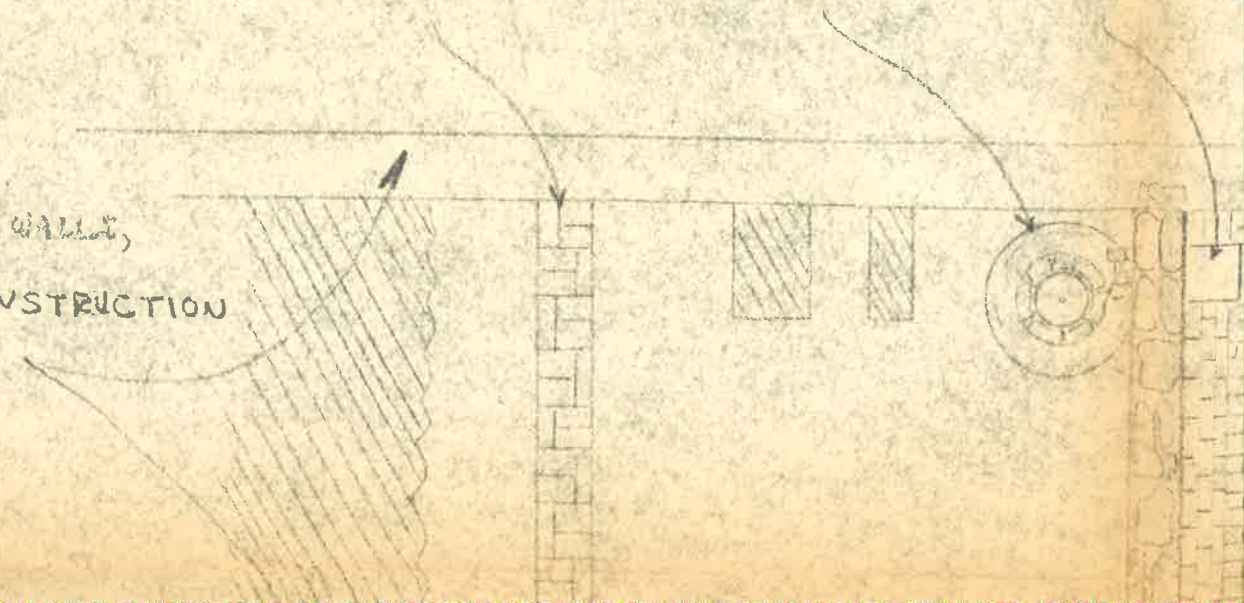


BRICK & STONE PARTY WALL,
EXTENT OF ORIGINAL CONSTRUCTION
UNDETERMINED.

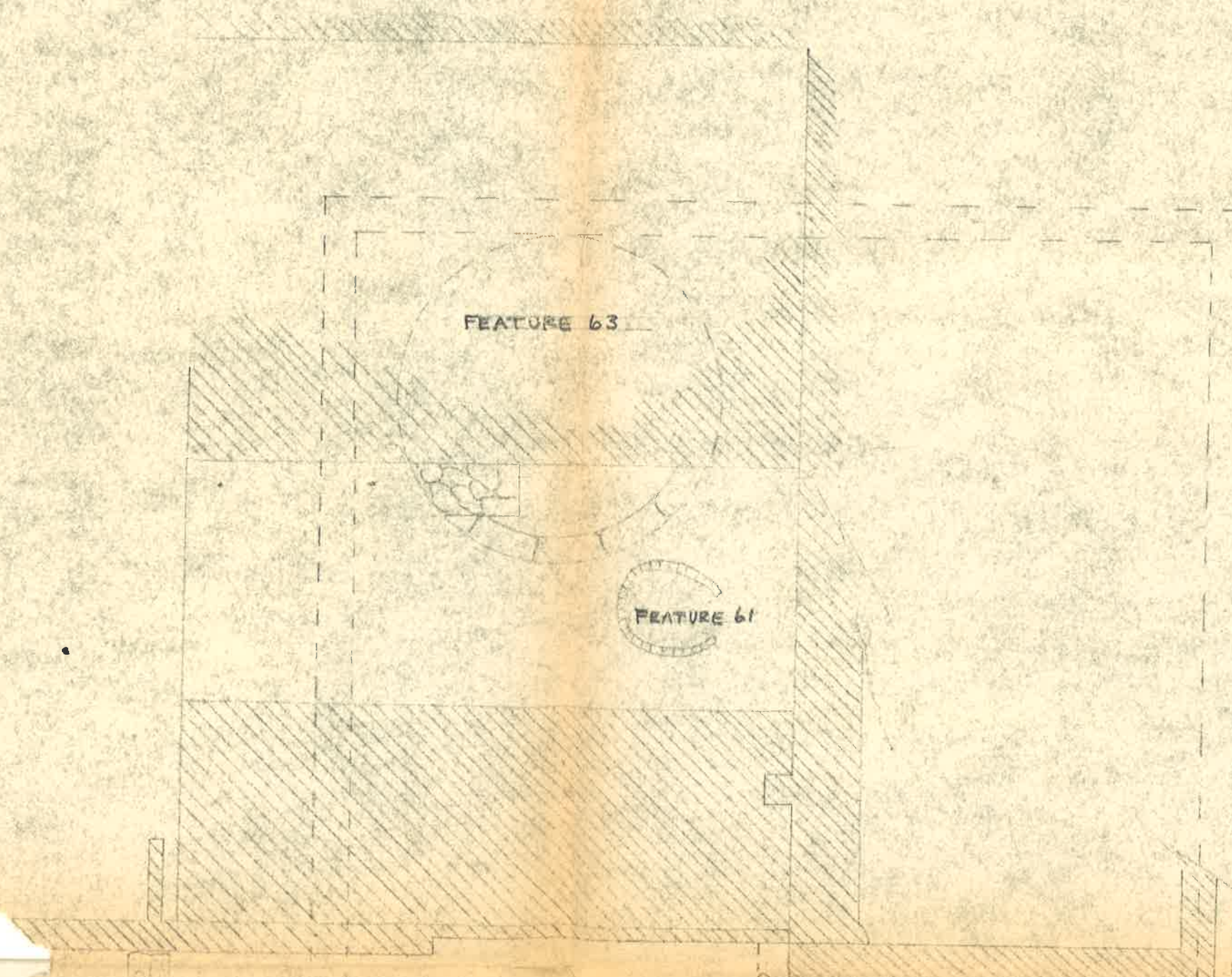
OLD WALL - PRINT SHOP?

PRIVY

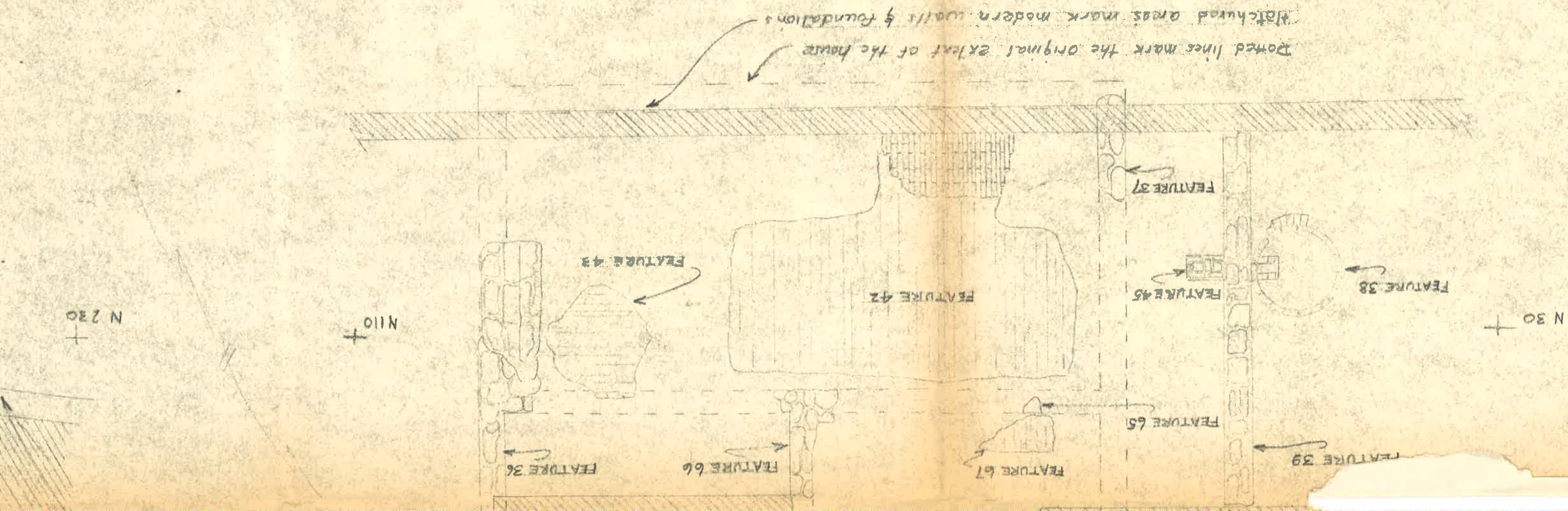
PRIVY INLET RE



FRANKLIN HOUSE



BRICK & STONE PARTY WALLS,
EXTENT OF ORIGINAL CONSTRUCTION
UNDETERMINED.

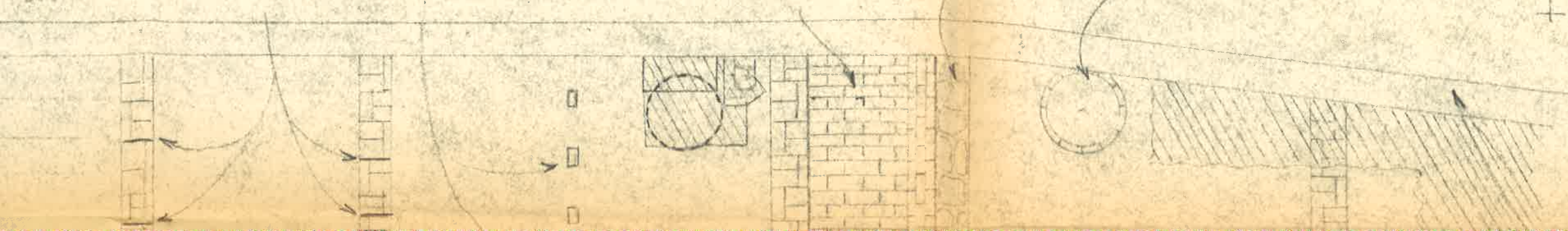


UNIVERSITY OF CHICAGO
 DEPARTMENT OF ANTHROPOLOGY
 FRANKLIN D. ROWELL
 INDEPENDENT NAT

RECOMMENDED	DATE
APPROVED	

1 INCH

PORTAL WITH
 EVIDENCE OF DOOR
 BRICK REMAINS
 SIGNIFICANCE UNKNOWN



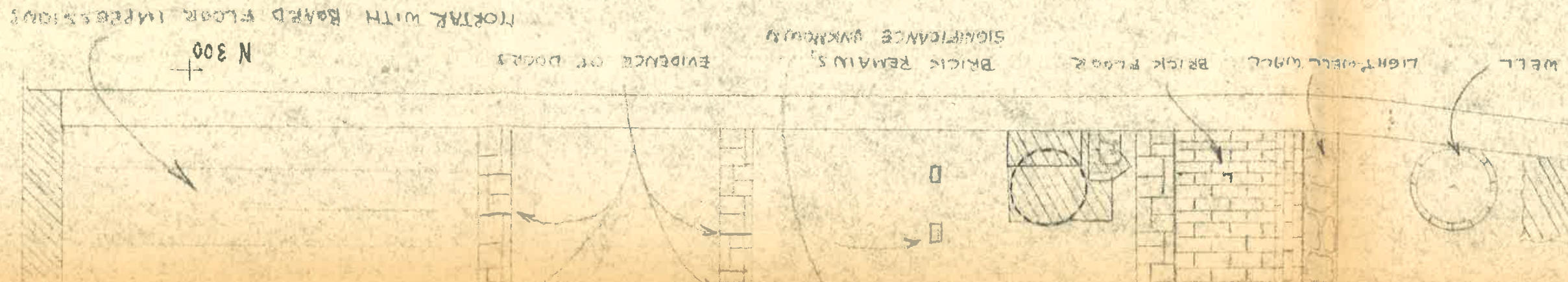
N 230

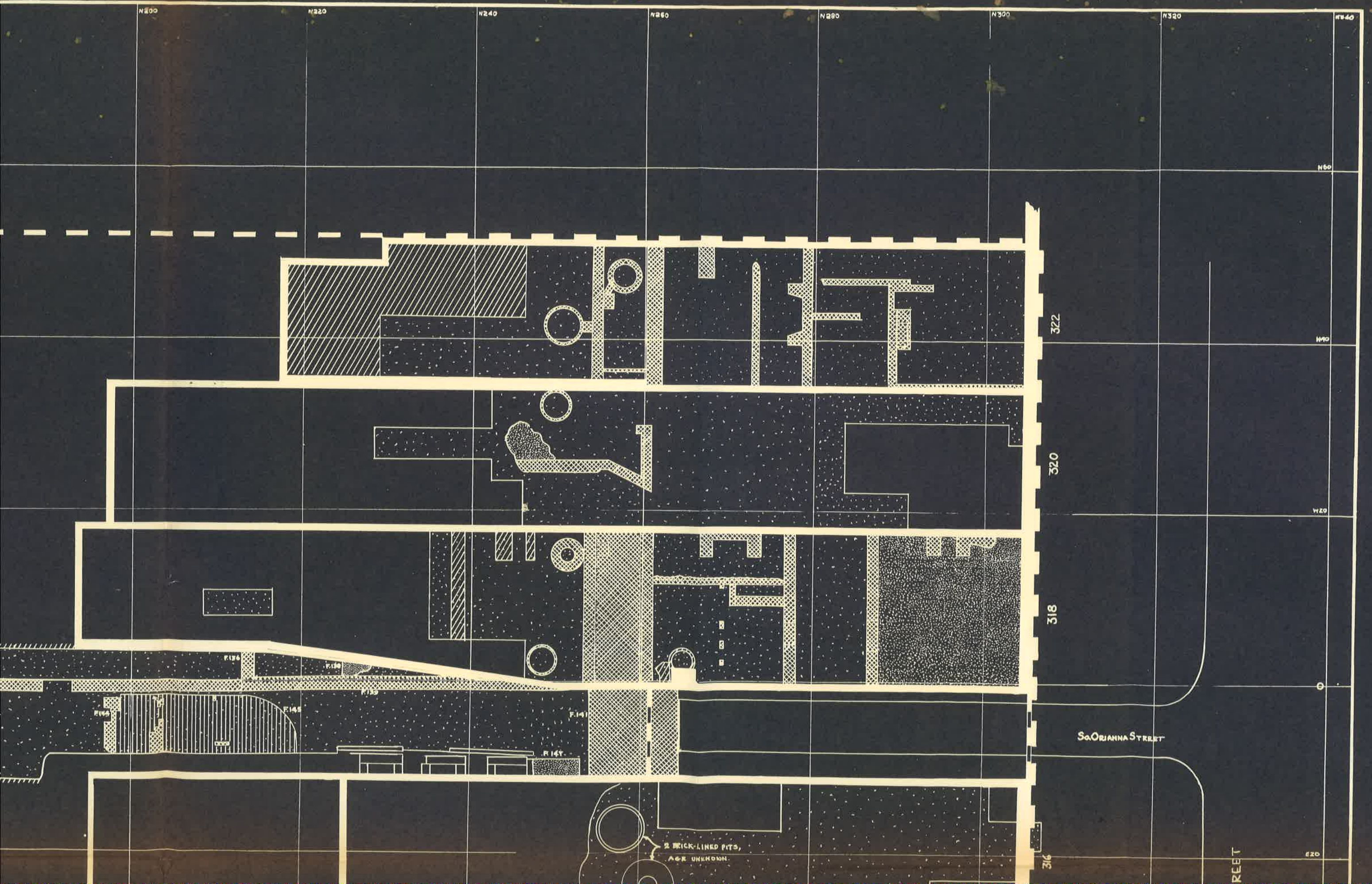
N 110

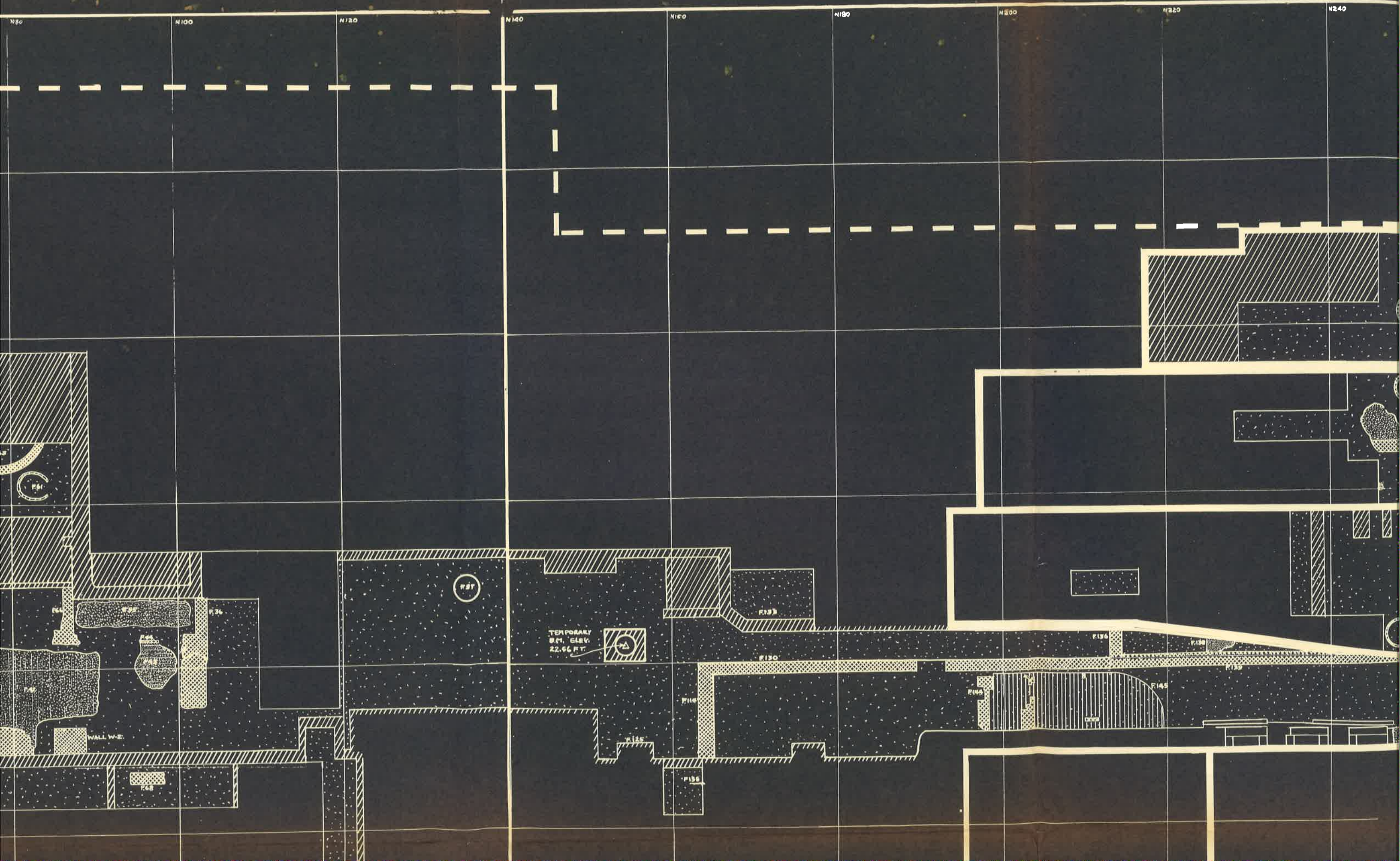
DATE 16 NOV 60 DRAWING NO. NHP IND 2652 SHEET / OF / PCP REGION FIVE		UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE ARCHEOLOGICAL PREPARED BY FIELD OFFICE ARCHEOLOGICAL : EXCAVATIONS TITLE OF DRAWING FRANKLIN COURT LOCATION WITHIN AREA INDEPENDENCE NATIONAL HISTORICAL PARK NAME OF AREA	RECOMMENDED APPROVED DATE
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SCALE
1 INCH = 5 FEET

COOP. ACTV.	REGION	WASHINGTON	DES. & CONST.	A. STERN	E. L.A.	WASHINGTON	A. L.A.	OTHER	PREPARED	DESIGNED	DRAWN	CHECKED	REVISED	DATE INITIAL
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N20

N40

N60

N80

N100

N120

N140

W40

W40

W20

F89

O/O

E20

F56

F63

F64

F53-60

F39

F67

F65

F44

F52

F36

F64

F63

F88

F45

F42

F37

WALL W-2

F69

F1

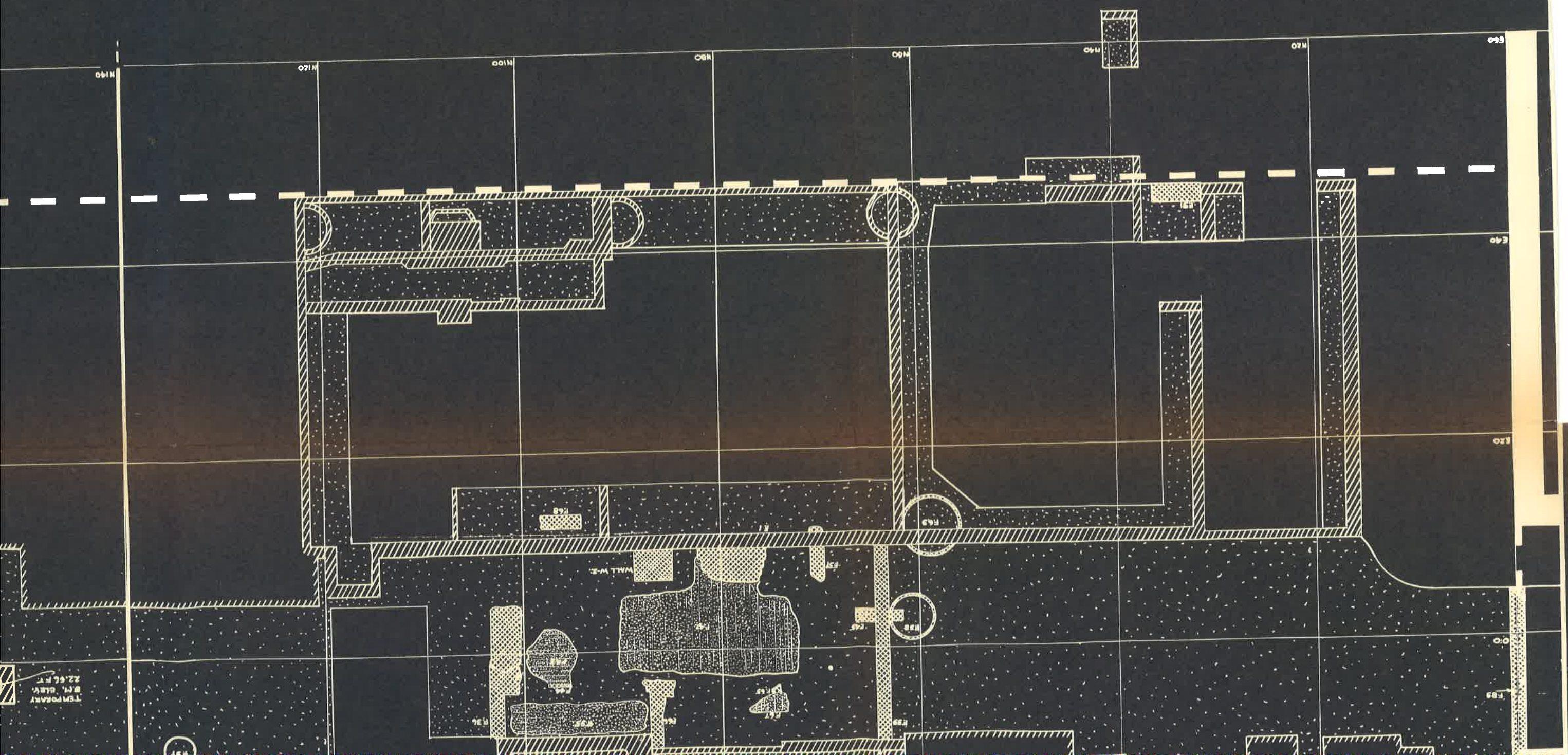
F68

F57

TEMPORARY
S.M. Elev.
22.66 FT.

F125

- LEGEND
- PARK BOUNDARY
 - STANDING WALLS
 - MODERN CONSTRUCTION
 - HISTORIC CONSTRUCTION
 - MORTAR SURFLOOR
 - EXCAVATED AREA
 - BURNED CLAY



FRANKLIN COURT, PHILADELPHIA, PENNSYLVANIA
Drawing No NHP:IND 2788
JUNE, 1962
B. Bruce Powell

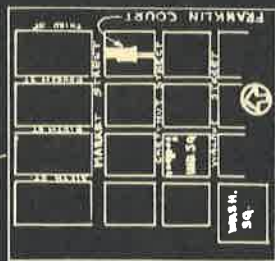
INDEPENDENCE NATIONAL HISTORICAL PARK

JUNE, 1962

DRAWING NO. NHP:IND 2788

FRANKLIN COURT, PHILADELPHIA, PENNSYLVANIA

B. BRUCE POWELL



KEY

κ

TEMPORARY
B.W. CLARK
22.66 RT

22.66 RT

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
INDEPENDENCE NATIONAL HISTORICAL PARK
ARCHAEOLOGICAL BASE MAP
OF THE SITE OF
BENJAMIN FRANKLIN'S HOME

FRANKLIN COURT, PHILADELPHIA, PENNSYLVANIA
Drawing No. NHP:IND 2788
JUNE, 1962
B. BRUCE POWELL

SCALE
0 50 100 200 FEET

N

