feature's size, the faunal assemblage from Feature 38 consisted of 54 specimens. Thirty-three were identifiable, 10% of the total identifiable specimens from the site's features (Table 16). As in Feature 109, despite the representation of two rats in the assemblage, none of the bone exhibited gnaw marks. This larger collection also contained the remains of a wider variety of food sources, including both wild and domestic species.

Feature 40 appeared undisturbed, and yielded one wrought and two cut nails, and one sherd of a glass historical flask. The ovoid deep aquamarine pint flask bore the molded image of a sailing sloop on one side, and the probable profile of Louis Kossuth on the other, surrounded by the inscription "NEW JERSEY," "BRIDGETON" (McKearin and Wilson 1978:551). The c. 1851-1855 production period for the flask (McKearin and Wilson 1978:133) provides a TPQ for the feature's fill.

To conclude, then, sometime after 1803 an addition was constructed adjoining the central portion of the main store's east wall, perhaps in conjunction with the change in function of the structure just prior to or following John Darrach's death in 1805. Measuring 14' x 15' feet, it had no basement. Several post, pier and rodent disturbed features located within and adjacent to the addition appear not to predate it, based on their artifact assemblages. Their functions in the ell's structural systems are unknown. Their contemporaneity is also uncertain, but their distribution and spatial relationships suggest some represent the remains of replacement posts.

Outbuildings

Outbuilding I

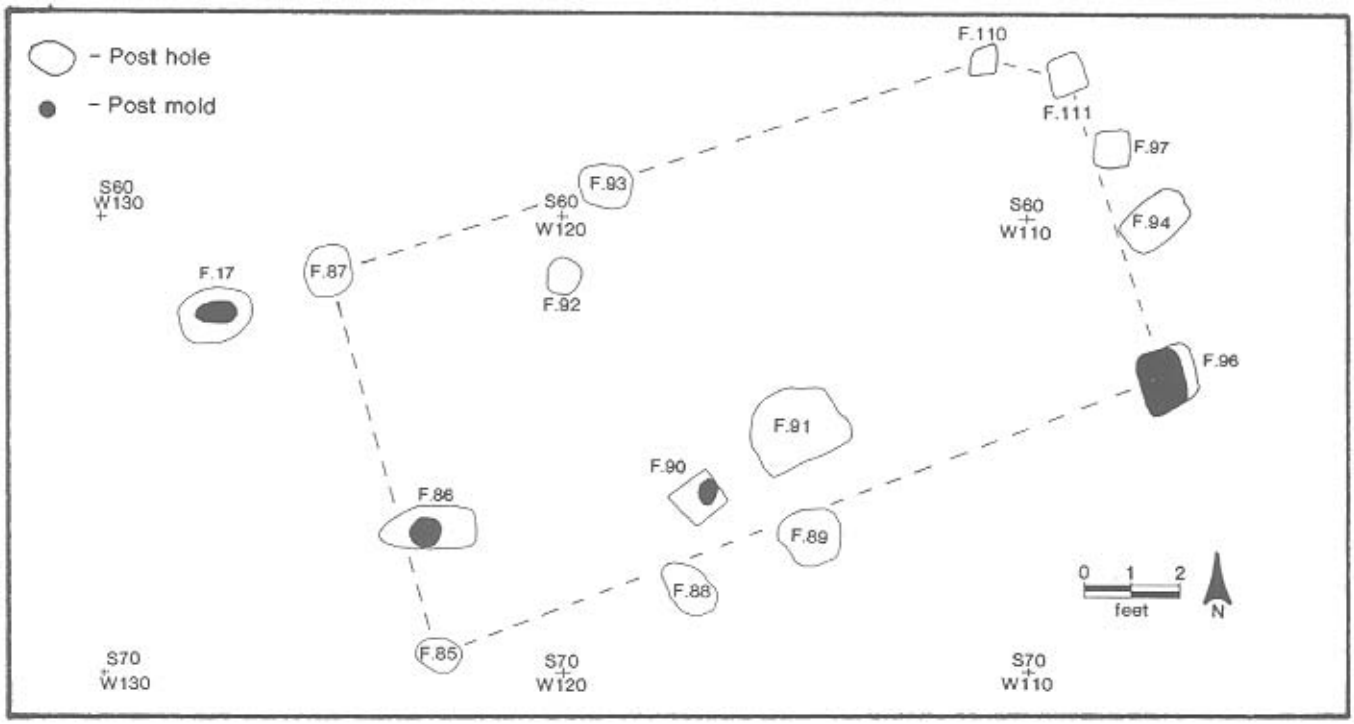
The smallest, northernmost of the two post-in-ground outbuildings has been designated Outbuilding I (Figure 26). Fourteen post holes define an irregularly shaped rectangular structure measuring 16.5'-18' by 9'-13.25'. Oriented with its long axis northeast-southwest of grid north, almost exactly as the store itself, Outbuilding I stood approximately 25' south of the store's southwest corner. Another twenty feet to the southeast stood Outbuilding II; one well was located 9' north of the northern structure, another only 2' south of its southern wall.

Three post holes define the structure's north wall, a fifth lies just 2.75' southwest of the northwest corner, and a sixth is located just southwest of the one near the center of the wall, inside the structure (Figure 31). Irregularly spaced, the three main wall posts were separated by 5.9' and 9.4' (measuring from the feature's midpoints, as most did not have definable post molds). Four more closely spaced posts, at intervals of 1.7', 3.5' and 3.8' formed the east wall. The three posts of the western wall stood 6' and 2.75' apart. Most problematic is the structure's south wall, as both of the central posts of the wall are mirrored by second post holes 1.5'-2' to the north. The two sets of central posts were spaced 2'-2.7' apart, the distances between them and the corner posts ranging from 5.6'-8.25'. The three posts which have paired post holes just off their corners on the structure's interior (one along the north wall, two along the south wall) may either have had secondary supports or been replaced. At the same time, the south wall of Outbuilding I aligned with one of the series of northeast-southwest trending fencelines that divided the inner and outer yards. Perhaps the "extra" post holes represent an extension of a fenceline that either pre-dated or post-dated the structure. Unfortunately, neither of these hypotheses can be confirmed or refuted by reference to the formal characteristics of the post holes, the soil fills, the soil chemistry, or the artifact assemblages.

The post holes appeared as variously shaped soil stains - circular, oval, rounded corner square, square and rectangular (Table 17). They measured 0.7'-2' in diameter/on a side, however most did not exceed 1.25' in size. Their depths ranged from 0.4' to 1' below the surface of subsoil. Only four of the features had clearly definable post mold stains within the post holes - Features 17, 86, 90 and 96. The post in Feature 17 sat in the middle of the hole, was rectangular with one rounded corner and had a maximum diameter of 0.9'. It extended 0.8' below the base of the post hole into subsoil. A round post 0.5' in diameter stood at the center of Post Hole 86, having been driven only 0.2' into the subsoil below the post hole. Feature 90 also contained a round post mold, 1' in diameter. Unlike the others, it sat 0.6' above the base of the hole. Feature 96 contained a rectangular post which almost filled the square hole. The post measured 0.9' x 1.4' and sat on the floor of the hole.

FIGURE 31

Plan of Outbuilding I



The post holes' profiles also exhibited diversity. Eight post holes had essentially straight walls; of these, six also had flat bases, the rest were sloping or rounded. The walls of four others sloped in toward the base; of these two had rounded bases and two were almost flat. Finally, the shallowest hole exhibited a bowl shape, and the walls and base of the last, Feature 86, were irregular. Soil color in the backfilled holes also varied, from a yellowish brown to a dark grayish-brown. Soils themselves ranged from a clayey loam to a sandy loam.

Soil samples from five of the post holes were chemically analyzed. The pH readings from all five exceeded the average for the subsoil, ranging from 6.2-6.7, approaching the alkaline range. Phosphate readings also exceeded those of the subsoil, with most clustering between 23-29. Feature 111 exhibited the highest reading, 110, and Feature 91 read 53. High phosphate levels are generally indicative of organic wastes present in the soils. Feature 111 also produced the only high potassium reading, 76, although no evidence of ash was discerned in the soil. Magnesium levels also exceeded the average 75 reading from the subsoil samples; they averaged 135-149, with Feature 111 reading 173 and Feature 88 reading 183. Calcium levels exceeded the subsoil average of 800 in all but Feature 90. Three of the four features with high readings contained oyster shells or animal bone.

One hundred and four artifacts were recovered from the fourteen features. Three features, 91, 94 and 96 contained substantially more than the others; these features are clustered in the southeastern corner of the structure. Half of the features contained brick fragments. No complete bricks were found, and none of the features appear to have served as brick pier supports for posts. The cut nails in Feature 94 provide a TPQ for the structure of c. 1790 (Nelson 1968). The only other architectural remains consisted of a few sherds of window glass. Bottle glass was similarly limited to a few fragments of molded glass. Oyster shells were numerous in Features 89 and 91, and were found in smaller numbers in three other post holes. Seven ceramic types were represented in the post holes by 18 sherds - utilitarian redware, slip trailed redware, undecorated creamware, undecorated and blue shell-edged

TABLE 17

OUTBUILDING I POSTHOLES

Fea. No.	Midpoint	Shape	Size	Soils	Soil Chemistry	Artifacts	
17	S62W127.5	ovoid circle	1.6x1.2x1	hole: dark brown sandy loam; mold: very dark grayish-brown sandy loam	not sampled	brick redware (slip-trailed)	1 1
87	S61W125	circular	1x1x.65	dark grayish-brown clayey loam flecked with charcoal	not sampled	brick pearlware (undec.)	2 2
92	S61.3W120	circular	.7x.7x.5	dark brown gravelly sandy loam	not sampled	unid. iron	1
93	S59.5W119.3	rounded square	1x.8x.8	dark grayish-brown silty loam	not sampled	oyster	1
110	S56.2W110.5	square	.7x.7x.45	yellow-brown clayey loam	not sampled		0
111	S57W109	square	.8x.8x.4	dark grayish-brown silty loam	PH:6.6 P:110 K:76 MG:173 CA:1170	brick porcelain (American)	3 1

TABLE 17 (cont.)

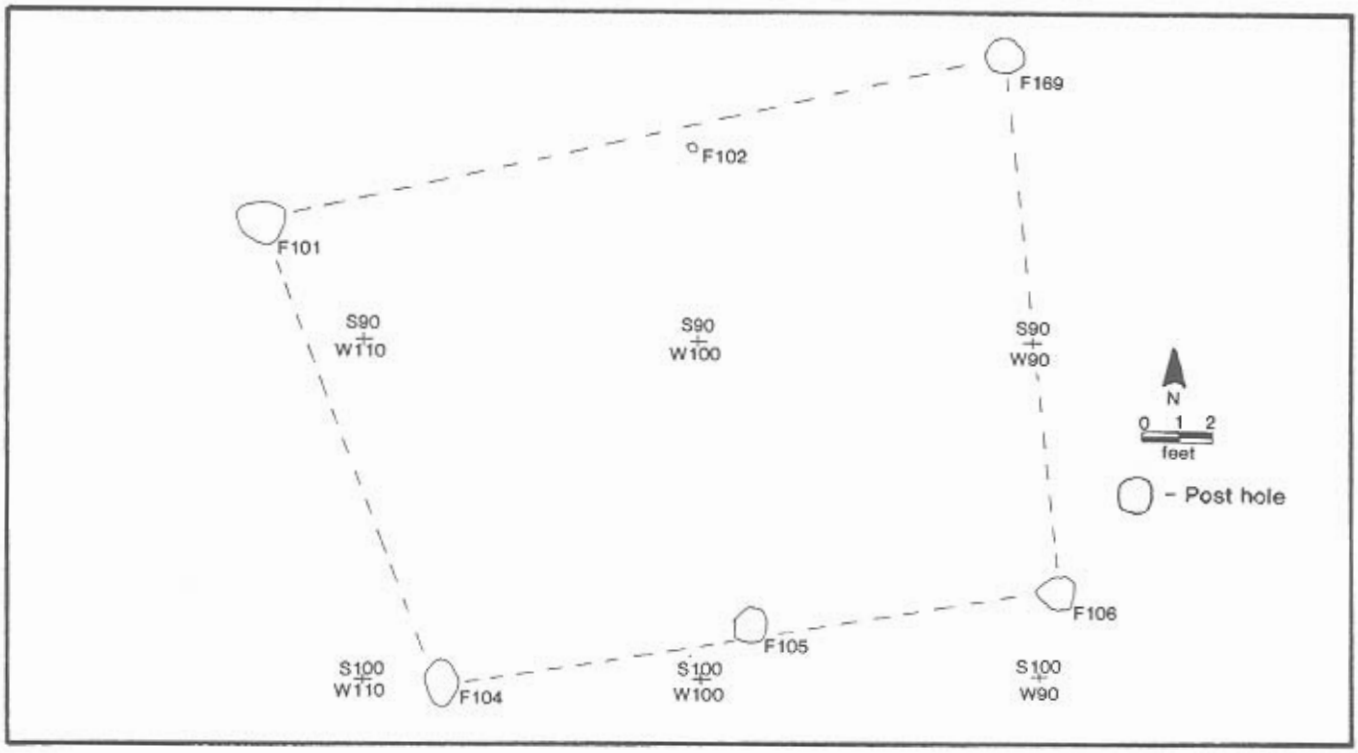
Fea. No.	Midpoint	Shape	Size	Soils	Soil Chemistry	Artifacts
94	S60W107.2	roughly rectan-gular	1.25x1x.8	brown sandy loam	not sampled	cut nails 4 unid. nails 2 bone 1 pearlware (undec.) 1 creamware 3 redware (American) 3
96	S63.8W107	square	1.25x1.25x.7	mold:dark brown sandy loam, hole: yellow-brown sandy loam	not sampled	pearlware (undec.) 1 w. glass 2 brick 76g molded bot. glass 2 lamp glass 1 unid. nails 2 oyster 3 clam 1 bone 2
89	S67W114.6	circular	1.25x1.25x.6	dark yellow-brown silty loam flecked with charcoal	PH:6.3,6.7 P:23,29 MG:135,149 CA:980,1100	oyster 13 metal 2
88	S68W117.1	oval	1.25x1x.9	dark yellow-brown silty loam flecked with charcoal	PH:6.2 P:27 MG:183 CA:1020	brick 2 bone 1

TABLE 17 (cont.)

Fea. No.	Midpoint	Shape	Size	Soils	Soil Chemistry	Artifacts	
85	S69.5W122.5	oval	1x.75x.75	dark grayish-brown silty loam flecked with charcoal and brick	not sampled	brick	3
86	S67W122.5	circular	1.4x1.4x.5	dark brown silty loam flecked with charcoal; mold darker soil	not sampled	oyster	1
90	S66W117	square	1.25x1.25x.8	hole:dark yellowish brown silty loam; mold:dark grayish-brown clayey sand	PH:6.2,6.4 MG:140,145 P:25	redware (American)	1
91	S65.6W115	rectangular	2x1.5x.5	dark grayish-brown sandy loam with brick and charcoal	PH:6.7 P:53 MG:145 CA:1410	clear molded bot. glass	1
						brick	5
						oysters	34
						bird bone	1
						redware (American slipped)	2
						bone China	1
						pearlware (shell-edged)	2

KEY: Fea. = feature; No. = number; undec. = undecorated; unid. = unidentified; bot. = bottle; w. = window

FIGURE 32
Plan of Outbuilding II



pearlware, bone china and English porcelain. The slip trailed redware sherds came from a rectangular drape molded plate with a coggled rim; a shell edged pearlware plate and saucer were also identifiable.

The archaeological remains of Outbuilbing I indicate an irregular rectangular vernacular post structure. The posts themselves were variously sized and shaped, and the builder had seated them at varying depths in variously sized and shaped holes. The shallowness of the post holes suggests an insubstantial structure, although a few of the principal posts measured 1' or more in size. Window locations are not clear from the archaeological remains; the door may have opened just off center in the south wall (supported by posts 88 and 89). The two bay structure apparently consisted of only a single room. Neither was evidence discovered of a fireplace or hearth. The artifacts from the post holes demonstrate that the structure was not a part of the Darrach Store landscape originally, and point to a construction date of c. 1790-1815. The concentration of shell and artifacts in the southeastern post holes may indicate the structure disturbed an earlier midden in this area. The structure's function is uncertain; its use as a granary is certainly a possibility.

Outbuilding II

The second post-in-ground outbuilding stood about 25' south and a little east of Outbuilding I (Figure 26). Its six post holes provide an archaeological record with clearer focus than that of the 14 defining Outbuilding I. This second structure, nevertheless, appears as an irregular rectangle, measuring 18'-23.1' by 14.7'-16'. Oriented with its long axis northeast-southwest as the store and Outbuilding I, but at a slightly different angle (25 degrees off grid north), Outbuilding II stood 57' south of the store, 20'-25' south of the northeast-southwest trending fencelines separating the inner and outer yards, and 6' south of the southernmost well (Feature 99), in the outer yard of the Darrach Store landscape.

Only three post holes define the northern and southern walls of this, the larger of the two outbuildings (Figure 32). The four posts forming the eastern bay of the two bay structure defined a rectangular 10' x 16' space. More irregular is the western bay, as the westernmost posts of the structure's north and south walls stood respectively 13.1' and 8' from the walls' center posts. In addition, the two western corner posts stood 1.3' closer together than the two eastern corner posts.

As in Outbuilding I, the post holes appeared as variously shaped soil stains - circular, oval, rounded corner square, and square (Table 18). All three post holes of the structure's northern wall were circular in plan; the three defining the structure's south wall each appeared a different shape in plan. The holes measured 0.6'-1.4' in diameter/on a side; however, most did not exceed 1' in size. Their depths clustered between 0.4'-0.5' and 0.85'-1.1' below the surface of subsoil. Three of the four corner posts had the deepest holes. Thus, in comparison with the post holes of Outbuilding I, these average slightly smaller in plan, but were within the same range of depths. None of these post holes had clearly definable post mold stains.

The post holes' profiles also varied, as did those of Outbuilding I. Two had straight walls, one with a sloping, rounded base, and the other with a flat base. Three others exhibited sloping walls; two of these had slightly rounded bases, the third was flat. Finally, Feature 106 had straight walls around roughly half of its circumference; the other half sloped down to the base, probably toward the corner where the post stood.

Soil samples from four of the six post holes were chemically analyzed. The pH readings of three exceeded the average for the subsoil, ranging from 5.9-7.0. Forty-nine oyster shells were recovered from the post hole which yielded the 7.0 reading, probably accounting for the soil's alkalinity. Phosphate levels exceeded the subsoil average only in two features, 101 and 104. In these features, the phosphate readings were 95 and 108, compared to a subsoil average of 5. As phosphates are normally associated with organic waste products, high phosphate levels are not expected in backfilled post holes. While none of the features produced high potassium readings, all exceeded the subsoil average of 75 for magnesium, ranging from 96-172. Two readings from Feature 101 alone varied between 96 and 151. As oyster and clam shells were present in the fill, the variation in readings may have resulted from the varying distances of the samples from a shell concentration. If this is the case, it implies a very localized impact of soil chemistry-altering materials such as shell on the chemical composition of the surrounding soils. The calcium readings from the two Feature 101 samples similarly varied by 800 points, ranging from 1200-2000. The only other feature (104) also exhibiting a high calcium reading contained 49 fragments of oyster shell, the highest number from any of the post holes from Outbuildings I or II.

Seventy-eight artifacts and over 17 lbs. of brick comprise the assemblages from the six features. All contained brick, the only architectural material represented in the assemblages. While none of the features appear to have served as brick pier supports for posts, brick and some stone stabilized the post in a few of the features. Oyster shells were especially concentrated in Feature 104 at the southwest corner of the structure, and were present in much smaller numbers in Features 101 and 105. Only one sherd of a molded olive green wine bottle was recovered, along with two ceramic sherds, one from a redware plate and one from an undecorated pearlware plate. The pearlware provides a TPQ for the structure of c. 1780, thus indicating it too was not an original feature of the Darrach Store landscape.

In summary, an irregularly shaped vernacular post structure describes Outbuilding II. Like Outbuilding I, the post holes defining the walls of the structure varied in size, shape and depth. The shallowness of the post holes and the spans between the vertical members indicate another fairly insubstantial structure. Door and window locations are not clear, and the two bay structure, also like Outbuilding I, appears to have contained only a single unheated room. Differences between the two outbuildings are, however, discernible. Outbuilding II was 1.5'-5' longer and 2.75'-7' wider than Outbuilding I, though less substantially framed (at least as indicated by the structural posts buried in the ground). Further, the limited artifactual evidence provides an earlier TPQ for Outbuilding II, and no indication of rebuilding, possibly evidenced in Outbuilding I. Nevertheless, the two structures could have been built at the same time and shared similar lifespans. A clear difference is that the two

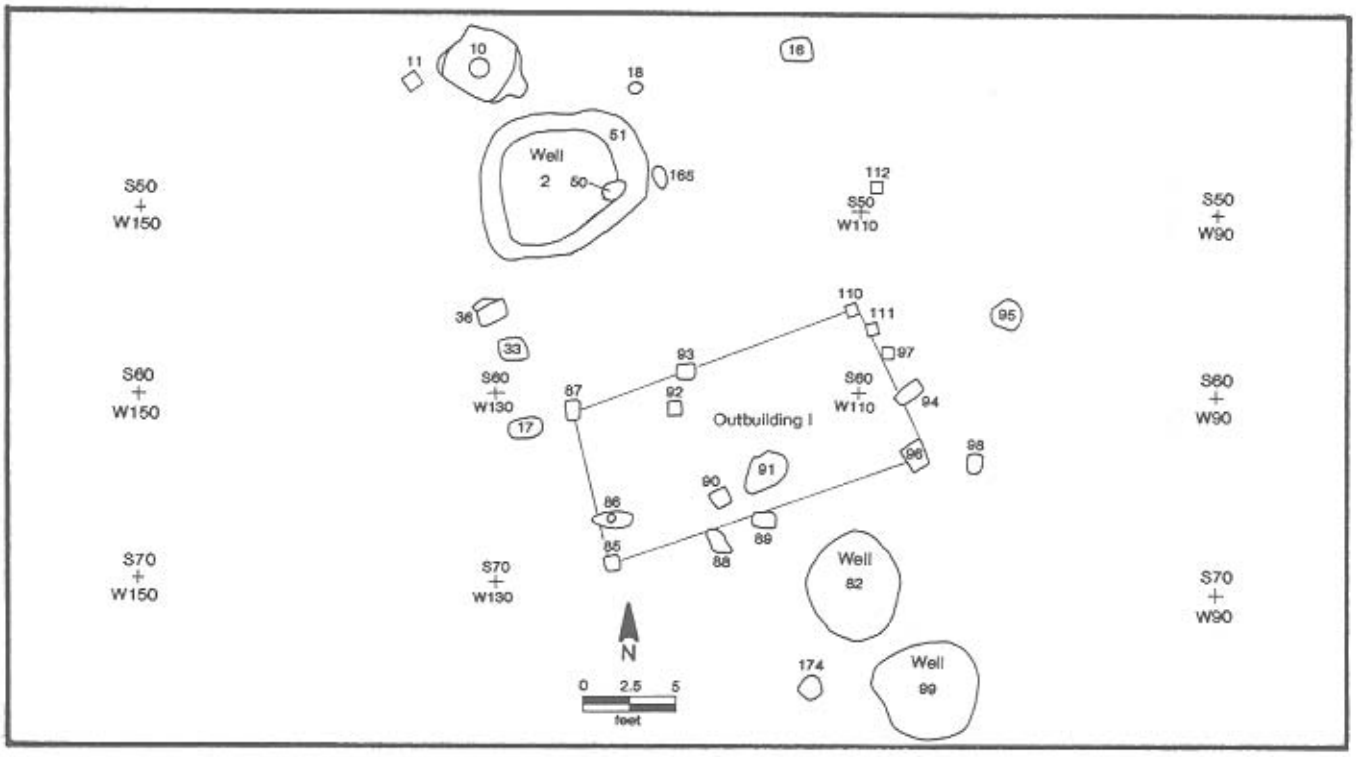
TABLE 18

OUTBUILDING II POSTHOLES

Fea. No.	Midpoint	Shape	Size	Soils	Soil Chemistry	Artifacts
101	S86.5W113	circular	1x1x.85	dark brown sandy loam	PH:6.6,7.5 P:95-6 MG:96,151 CA:1200,2000	brick 2 lbs., 6 oyster 9 clam 1 redware (American) 1
102	S83.5W100.2	circular	.6x.6x.4	dark brown clayey loam	not sampled	brick 4g
169	S81.5W90.5	circular	1x1x.4	dark grayish-brown flecked with brick	MG:123	0
106	S97.5W89.5	square	1x1x1.1	medium brown clayey loam	not sampled	brick 7 lbs. glazed brick 1 lb. pearlware (undec.) 1
105	S98.3W99.5	rounded square	.9x.9x.5	medium brown sandy loam	PH:5.9 MG:172	brick 2 lbs. & 1 oz. metal 2 shell 3 bone 5
104	S100W107.3	oval	1.4x1x1.1	dark grayish-brown loam mottled with subsoil	PH:7 P:108 MG:151 CA:1270	brick 5 lbs. molded olive bottle glass 1 oyster 49

FIGURE 33

Plan of Outbuilding I and Wells



structures occupied physically and conceptually distinctive places in the cultural landscape of the lot. Outbuilding I stood just within the inner yard, Outbuilding II well into the outer yard. The function of Outbuilding II, however, remains elusive, but an agricultural or storage use is not inconsistent with the archaeological evidence.

Wells

Well: Features 2 and 51

Well 2/51 was discovered during the Phase I/II investigations, and excavation of a 3' x 3' test square to a depth of 5' revealed the essence of the feature's structure and stratigraphy (Figure 11). The well's center point was located 15' south of the southwest corner of the Darrach Store and about 12' north of Outbuilding I in the inner yard (Figure 33). The Phase II test excavation determined that at or sometime after the well's abandonment, the uppermost 5' of the brick lining was robbed and the robber's excavation and well backfilled. The Phase III excavation of the well provided further detail on its construction and on the date of its robbing and filling.

The brick lining, intact beginning 5' below the surface, consisted of regular construction bricks and not of specially shaped "well bricks" (which are wider at one end than the other). These bricks were laid with their long ends adjoining, "header" style, and set in a fine gray clay. The handmade, irregular, poorly-fired bricks measured on average 8" x 3-7/8" x 2-1/4". The Phase I/II test also exposed a small section of the original well construction pit surrounding the brick lining, filled with a medium brown clay mottled with dark brown sand (Figure 11). The construction pit fill was not investigated during the Phase III excavations, when the fill of the brick-lined shaft was excavated to a depth of 14' below subsoil surface with the assistance of a backhoe. The backhoe was still bringing up brick, wood, and shell at 14'; the excavation had to be abandoned, however, due to a rising water table.