I. PROJECT CONTEXT

The Plymouth Antiquarian Society and the Plymouth Guild secured Community Preservation Committee funds in 2012 to restore a small building located behind The Plymouth Guild's headquarters at 11 North Street in Plymouth, Massachusetts. The building, which measures 8 x 12 feet, is believed to be related to the estate of Colonel George Watson, once the eighteenth century owner of a significant portion of the land between North and Middle streets. Watson was a slave owner and the structure is on file with the Massachusetts Historical Commission as being possibly related to the slaves owned by him. Research indicates that there were approximately 5,000 slaves in eighteenth century Massachusetts, with most of them being in Boston and Salem. Plymouth is known to have been home to at least 50 slaves.

The structure is timber-framed with plastered interior walls divided horizontally by a possible chair rail and finished decorative corner posts, indicating that it is more than a shed, as such a building would not have warranted the interior finishing seen in this building. The exterior is covered with hand-rived clapboards secured with hand-wrought nails, hinting at a possible pre-1820 date for its construction. Renovation plans call for the removal and replacement of the nineteenth to twentieth century tongue and groove flooring with more period sawn boards, the replacement of damaged clapboards, the stabilization of the interior walls, and the eventual replacement of the late twentieth century roof. The building will serve as a permanent outdoor exhibit remembering the experience of African-Americans in Plymouth with a free-standing plaque and interior panels that will explain its historical significance.

The Plymouth Antiquarian Society and the Plymouth Guild requested an archaeological site examination be conducted beneath and around the structure prior to architectural restoration. A site examination is designed to "give a preliminary definition of the size, data contents and spatial arrangement of artifacts and features for the purpose of assessing the site's integrity, research potential and significance and in order to make an opinion of the potential eligibility of the site for inclusion in the National Register" (950 CMR 70.04). Goals of the site examination are to 1) determine if the building has been moved or exists in situ; 2) examine the architecture of the structure and to determine the possible original use for it; 3) examine the possible African origins of the architectural style and possible African/ African-American material culture that may be present under and around it; 4) examine the yard around the structure to search for traces of the property's use during the prehistoric and historic periods; 5) make preliminary recommendations for future preservation and research.

Site examination testing consisted of the excavation of 22 50-cm-square test pits adjacent to and around the extant 8 x 12' structure. Due to the need to expand five of the initial test pits in order more fully expose features encountered, an additional ten 50-cm-square test pits were excavated. All of the excavations on the exterior of the structure were carried out by means of 50-cm square units excavated in five or ten centimeter levels within natural horizons. Testing on the exterior was focused on examining the ground surface immediately outside of the structure as well as testing the surrounding yard in order to place the structure within a larger context. Two sites, one prehistoric- **the PAG Site**, and one historic- **the Watson/ Jackson Site**, were identified. The PAG site was found to consist of a scatter of Late Archaic and Late Woodland artifacts and one possible cache pit. The Watson/ Jackson site consisted of significant deposits of household and architectural materials and features dating from the seventeenth to nineteenth centuries.

The present document is PARP's report on the Site Examination (950 CMR 70) at 11 North Street on behalf of the Plymouth Antiquarian Society and the Plymouth Art Guild. The Plymouth Art Guild building is owned by the Guild but the land on which it sits is owned by the Town of Plymouth. The Site Examination is being conducted in compliance with MGL c.9, ss. 26-27C (950 CMR 70.03). No further archaeological investigations are scheduled for the property.

As a result of Site Examination testing, the Watson/ Jackson site was found to have definite boundaries, site integrity, and high research potential due to presence of intact occupation deposits. Intact deposits were identified beneath the extant outbuilding, associated with demolition and filling activities in the early nineteenth century and yard scatter. Intact deposits were identified which could be definitively be linked to the period of the occupation of the site by Colonel George Watson and Abraham Jackson as well as successive owners of the property. As a result of Site Examination testing, the site is considered eligible for inclusion on the National Register of Historic Places.

The PAG Site was found to have definite boundaries, site integrity, and a high research potential due to presence of at least one intact occupation deposit. Intact deposits were identified as a possible Late Woodland cache pit and potentially intact deposits of reduction debris. As a result of Site Examination testing, the PAG Site is considered eligible for inclusion on the National Register of Historic Places.

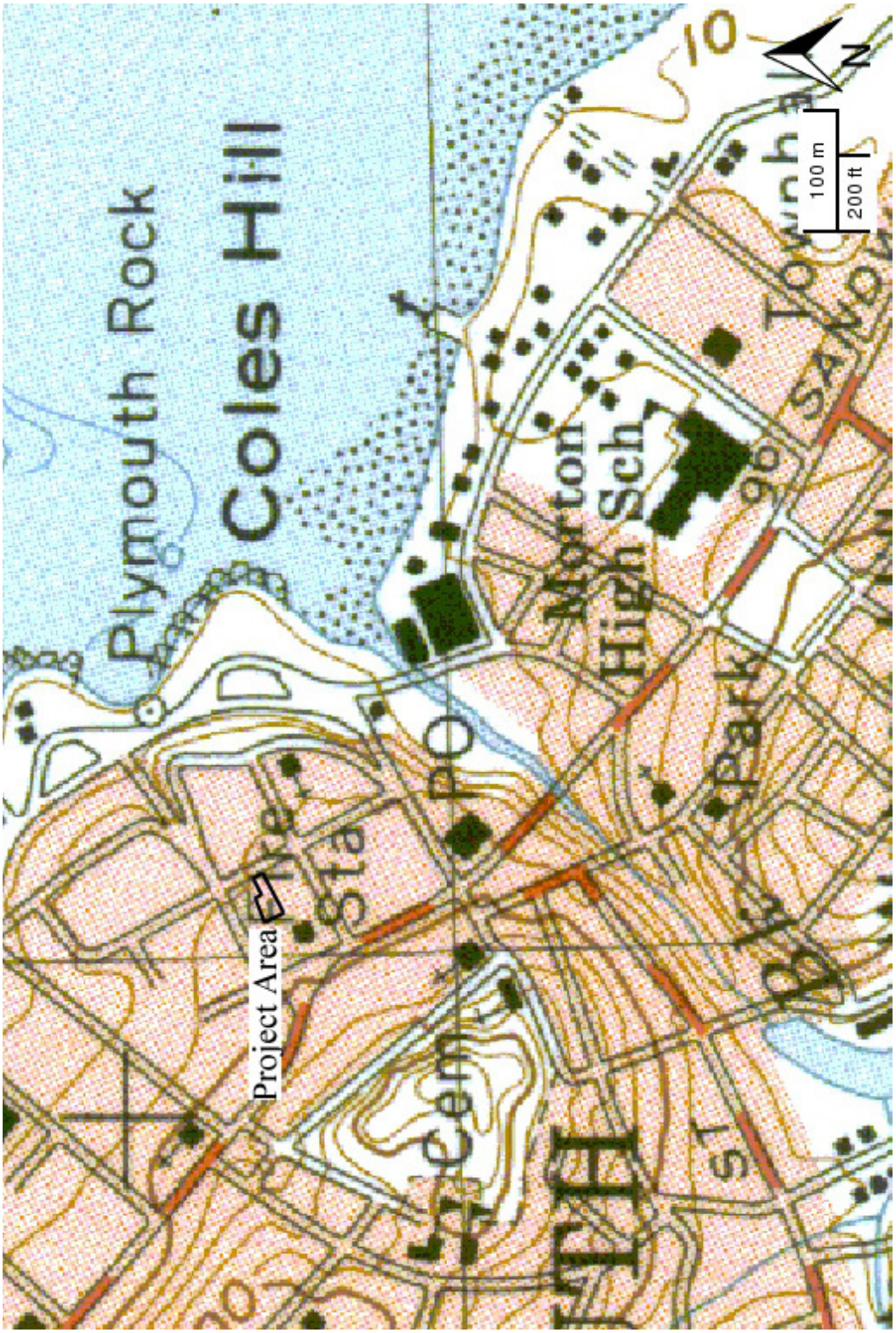


Figure 1. Project area shown on USGS topographic map Plymouth quadrant

II. ENVIRONMENTAL CONTEXT

The Town of Plymouth is located on the Coastal Lowlands in Plymouth County. It is bounded to the south by Wareham, Bourne and Sagamore, to the west by Carver, to the east by Plymouth Harbor, and to the north by Kingston and Plympton. Drainage in the northern portion of the town is via Town Brook and the Eel River and the Agawam River, Beaverdam and Indian brooks in the south. As a result of its glacial and immediate post-glacial history, Plymouth has a varied topography with level areas interspersed amidst numerous hills and rises.

The project area consists of an open lawn area located between buildings on the south side of the Plymouth Guild building at 11 North Street. One medium-size tree is located just to the northwest of the structure, one maple tree stump is located to the east, and one large oak tree is located to the northeast. Soils on this side of North Street are recorded by the USDA as Urban land (602B), a generic designation without further details. Soils on the north side of North Street are recorded as being Carver loamy coarse sand on a 3-8% slope (259B), while those to the south east of 11 North Street are recorded as being Carver coarse sand on 8-15% slopes (252C), giving a high probability that the soils at the project area are of the Carver series, probably Carver loamy coarse sand (259B). Carver loamy sands are deep, excessively-drained soils on outwash plains and glacial lake deposits. They are poorly suited to cultivated crops, hay and pasture, and woodland due to their excessive droughtiness. Trees that are present are generally small and stunted with pitch pine, scrub oak, scarlet oak, white oak, and black oak, all attaining sizes under 35 feet, being the common species present. The typical unplowed soil profile consists of eight centimeters of a light brownish gray, very friable loamy coarse sand A horizon that overlays 83 cm of coarse sand subsoil. The subsoil is divided into 25 cm of a strong brown and very friable B1 horizon that overlays 23 cm of a yellowish brown, very friable B2 horizon which in turn overlays 35 cm of a brownish yellow loose C1 horizon. The C1 overlays a substratum of light yellowish brown, loose coarse sand.

III. PREHISTORIC CONTEXT

New England's prehistory is poorly understood relative to that of other regions in North America. Throughout the majority of the region's prehistory, river drainages defined physiographic units within which human communities operated. This pattern follows from the longitudinal diversity of habitats that occur along drainages, forming ecologically unique wetland habitats, together with the transportation routes afforded by their watercourses. In the clearest examples, rivers provide access to maritime and upland resources at each end of the drainage, and to the diverse habitats in between. The exploitation of those habitats can be integrated into a seasonal round that differs at various historical moments.

The prehistory of southern New England is divided into seven periods, each identified by characteristic projectile points, pottery and other artifacts. These periods are the Paleo Indian (10,500-9000 BP), Early Archaic (9000-8000 BP), Middle Archaic (8000-6000 BP), Late Archaic (6000-3000 BP), Early Woodland (3000-2000 BP), Middle Woodland (2000-1000 BP) and Late Woodland (1000-350 BP). These cultural periods also are distinguishable on the basis of changing patterns of site location, activities, and size.

Paleo-Indian Period (13,000-10,000 BP*)*

Although there is new research continually being conducted, the present theory is that the people who first settled in New England arrived in the New World during the end of the Wisconsin ice age, approximately 13,000 years BP (Stone and Borns 1986; Braun and Braun 1994:14-15). Before this time, mile-and-a-half-thick sheets of ice called glaciers covered New England, and much of the northern half of the United States. Ice ages are part of the earth's natural warming and cooling cycle. Approximately 60,000 years BP, the temperature dropped on Earth by just a few degrees, enough to cause the glaciers and ice caps located at the north and south poles to begin capturing water from the oceans and growing. By approximately 20,000 years BP, the edges of the northern ice sheet had reached their maximum extent, covering present-day Martha's Vineyard and Nantucket, and began to recede. As the glaciers melted, they dropped millions of tons of sand, gravel and boulders that had accumulated during their journey southward. All this material, the moraine and outwash soils became the sandy hills, the drumlins, eskers and kames, and all the lower layers of soil that make up our landscape today.

Following the retreat of the glaciers, the vegetation association in southern New England was southern tundra**.** It was cold, windy, barren and covered with large wetlands. Scattered intermittently across the landscape were patches of grasses, shrubs, sedge, alder and willow, and small stunted trees including spruce followed by birch and pine. There was also a lot more landscape than there is today because the oceans were approximately 300-400 feet lower. In New England, this meant that the coastline was up to 50 miles to the east of its present position. This left exposed large portions of land, like George's Banks, that are today underwater. The islands that we see in many coastal harbors were at this time hills on a barren landscape and many rivers were springs or small streams (Braun and Braun 1994:3).
The types of animals that were present at this time included some of the smaller species such as foxes and rabbits, but megafauna were also present. Megafauna is a term that describes the large species of animals in New England after the last ice age. These included the mammoth, which existed on the

tundra; the mastodon, which lived in the early forests; the horse, which later became extinct and was reintroduced by the Spanish in the 1500s; bears like the large Kodiak variety as well as giant beavers, bison, elk, caribou and musk ox, which disappeared from New England soon after the end of the last ice age.

In southeastern Massachusetts, sites that date to this period have been encountered on the Eel River in Plymouth, on the coast in Marshfield and on the Nemasket River in Taunton. At these sites, the evidence of people living after the last ice age has consisted predominately of stone projectile points of a variety called the Paleo or fluted point. These points were generally made from exotic materials that were carried in by the inhabitants as they traveled from the west. These materials were predominately very fine-grained stones, including cherts from New York and Maine and jaspers from Pennsylvania. Population densities have been estimated at approximately 5-12 people per 100 square kilometers. People from this time period made their living by hunting and possibly scavenging the carcasses of the megafauna. They also hunted smaller game such as rabbits and they may have fished on the coast. The populations in New England at this time may have numbered no more than a few hundred, living in small groups and traveling seasonally. They probably were not nomadic, but were following migrating herds, and as a result, Paleo sites are often located on hilltops overlooking plains or are high on the shores of glacial lakes (Dincauze 1980; Snow 1980). Eventually, by 12,500 BP, these lakes drained, leaving behind many marshes, swamps and bogs the final remnants of the great glacial lakes.

By the end of the Paleo Period the environment in New England was stabilizing and lifeways were becoming fairly distinct. The megafauna were extinct by 10,000 years BP, probably due to a combination of hunting by the first settlers and climatic change. The forests were beginning to change to more pine and nut-bearing hardwoods that created new habitats for animals and new food sources for people. The tundra gave way to spruce parkland by 9000 BP and eventually became oak and hemlock by 7000 BP. While the Paleo Period can be seen as a time of initial colonization, the next period, the Early Archaic, can be viewed as a time of settling in and accommodation to life in New England.

Early Archaic (10,000-8,000 BP)

The extinction of the megafauna and the changing climate led to a revamping of the Paleoway of life around 10,000 years BP. The environment in the Early Archaic had warmed slightly and as a result, trees such as oaks, pitch pines, beeches and hazel began to flourish. It was during this time that the major rivers of today began to form, and into these rivers anadromous fish species like salmon and herring began to run, providing another food source for the inhabitants of New England. As New England began to become more forested, new mammalian species also would have moved into the area including black bear, deer and moose.The Early Archaic is one of the least understood and most elusive periods of New England prehistory. Early Archaic sites tend to occur in a wide range of settings, including hillsides with slopes over 15 degrees and hilltops. Some sites are situated in the same locations as Paleo sites while others appear alone in the landscape. Homes at this time have been theorized as being either of a longhouse shape, such as have been identified in Taunton, Massachusetts at the Titicut site, or of small pits dug into the sides of hills, such as have been identified in Connecticut and northern Massachusetts (Braun and Braun 1994: 35; Dudek 2005: 12).. It is unknown if the two forms of houses occurred simultaneously, were seasonally determined or represent different building traditions by different populations.

Evidence of the Early Archaic peoples' process of "settling in" is found in their use of local volcanic materials such as rhyolite and felsite for tools and projectile points and their possible use of quartz for quick, expendable tools (Dincauze 1980, Meltzer 1988). Hunting during this period may have taken the form of spear throwing with the use of the atlatl, a weighted stick held in the hand onto which a long spear was placed for launch. The atlatl was basically an extension of the thrower's arm and it effectively increased the distance, force and accuracy of the throw.

Evidence for the Early Archaic has been recovered from Marshfield, Taunton and Carver, Massachusetts with an especially large concentration of sites in Taunton on the Taunton River (Dincauze and Mulholland 1977; Thorbahn 1982; Taylor 1976). The types of artifacts recovered from the Early Archaic period include Dalton-like points and Eden lanceolate points (Johnson and Mahlstedt 1984). The Titicut site is the largest identified from the Early Archaic period. It has been interpreted as a base camp for several families. A number of Early Archaic sites identified in Massachusetts contained evidence that suggests that small hunting groups returned to camps with seasonal regularity. These sites contained stone tools diagnostic of the Early Archaic Period, dateable radiocarbon samples, or both. Another site had deep pit features, interpreted as pit houses, with an abundance of charred hazelnut shells (Forrest 2000).

Early Archaic diagnostic points include Bifurcate-Base points, Kirk Stemmed and Kirk Corner-Notched points. The materials for these types of points generally do not include the exotic lithics characteristic of the Paleo period, but tend to be local rhyolites and quartz. There has also been a noted occurrence of quartz technology in the form of bifaces and unifaces without any of the usual temporally diagnostic points being present (Forrest 2000).

Middle Archaic (8,000-6,000 BP)

While the Early Archaic was a time of transition from the Paleo-Indian nomadic way of life to a more sedentary and permanent situation, the Middle Archaic can be seen as a time of increasing normality and permanence. It still was a time of many changes, however. Oceans remained lower than they are today but the rate of rise had slowed enough for estuaries to begin forming, which led to the establishment and proliferation of shellfish beds. Shellfish first settled in the warmer southern waters and eventually moved northward as the sea level rise slowed and water temperatures increased.

By 7000 years BP, forests with the same basic composition as today began to be established (Dincauze 1976:119). Evidence of site differentiation and a more complexly ordered social landscape can be extrapolated on the basis of a number of large Middle Archaic sites containing a variety of features. The use of heavy stone woodworking tools such as axes, adzes and gouges increased during this period, possibly indicating the construction of log canoes or at least an increase in woodworking. While atlatls may have been used during the early Archaic, physical evidence for their use first appears at this time. In fact, the oldest burial in New England, 7570 +/- 150 to 7660 +/- 110 years BP, was located in Carver, Massachusetts and contained two atlatl weights of the whale-tail variety (Doucette 2005: 24).

Sites from this period are fairly common, indicating that people had begun to spread out over larger areas. They have been found on the margins of bogs, swamps, rivers, lakes and ponds and on the present-day coast, with sites of differing sizes possibly based on site function reflecting seasonal

rounds or scheduled subsistence activities, as was the case at the time of European contact (Dincauze and Mulholland 1977). Substantial base camps along rivers, streams or wetlands, smaller special-purpose camps in uplands or near wetlands, and rock shelters, stone quarries, and workshop areas have been identified in southeastern Massachusetts (Bussey et al. 1992). The wide variety of sites and the common occurrence of projectile points from this period probably indicate that there were more people living in Massachusetts than before. Artifacts recovered from sites of this period include stemmed projectile points of the Neville, Neville-like and Stark varieties, atlatl (spear-thrower) weights, pecked, ground and polished woodworking tools such as axes, adzes and celts, and plant processing tools such as mortars, pestles, grinding stones and nutting stones.

Late Archaic (6,000-3,000 BP)

The Late Archaic represents the period with the largest identified and recorded number of archaeological sites in Massachusetts. This has been interpreted by many as indicating a very large number of people living in our area during this period, although archaeologists are not sure why this happened. The case may also be made that this proliferation of stone tools and sites may be more related to a wider variety of stone tools being manufactured for specific purposes and a wide variety of habitats being exploited, rather than to a population boom. The Late Archaic is also a time of greater diversification and specialization than was evident in the earlier periods. The tool kits of the people living on the south coast and its coastal forests differed from those of the people in Maine and further north.

Along coastal Massachusetts, the combination of stabilizing sea levels and estuary formation led to significant runs of anadromous fish by the Late Archaic. As a way of taking maximum advantage of these fish runs, Native people began using weirs (low stone dams or wooden fences that restrict the movement of fish species) in the rivers, streams and bays. Weirs were undoubtedly employed in most of the bays, rivers and larger streams in southeastern Massachusetts (Johnson 1942, Johnson 1949). Late Archaic populations appear to have settled into narrow foraging territories defined by drainages, and highly specialized to the habitats within these drainages where activities focused around the seasonal cycle. Sites are found in the same locations as those of the Middle Archaic with some greater focus on inland/upland locales. The variety of site sizes suggests use of a radiating, seasonally dynamic settlement pattern (Dincauze 1974, 1975, 1980; Thorbahn and Cox 1984).

The pattern of a riverine-upland subsistence settlement apparently emerged during the Middle Holocene, which is the period between 6000 and 5000 BP, when the climax oak-hickory forest had matured and population levels increased, leading to regional Late Archaic strategies of extensive and intensive resource exploitation (Dincauze 1974). In southeastern Massachusetts, the number and diversity of Late Archaic sites, and their distribution in riverine and inter-riverine, upland settings suggest a broad-based collecting approach to resource use and considerable attention to small-scale environmental features, including bogs and kettle-hole swamps (Binford 1980).

Another significant development in the Late Archaic was the use of bowls carved out of soapstone (steatite). The actual carving of the bowls was probably not a significant development in itself, but what these bowls represented was. The raw material for the bowls, soapstone, is found only in certain inland deposits in Rhode Island, Massachusetts and Connecticut. As a result, the recovery of soapstone fragments on the coast indicates either that these items were being traded for, or that people were

traveling fairly significant distances to quarry this stone. From the coast, the quarries could have been reached in approximately 2-3 days. The stone would then have to be quarried, worked into shape and carried back to the homesite. These bowls are not small affairs by any means; some weigh up to 60 pounds. It is believed that the effort expended to acquire these bowls, as well as their weightiness, must mean that they were fairly important to the people. Before these bowls were used, food was probably either roasted or boiled in skin lined pits in the ground through the used of hot stones. The soapstone bowls allowed for cooking directly on the fire, a change in cooking technology that eventually led to the use of pottery in southern New England. Steatite bowls appear to have been used only in the Late Archaic and do not appear in more recent periods.

Artifacts from this period include a wide variety of projectile points that some archaeologists believe relate to the movements of southern or western peoples into New England. Projectile points and tool traditions represented in Massachusetts include Laurentian (Brewerton), Narrow Point (Small-Stemmed), and Broadpoint (Susquehanna or Wayland Notched) (Johnson and Mahlstedt 1984).

Early Woodland (3,000-2,000 BP)

The main distinction between the Archaic and Woodland Periods is the use of pottery. Current research suggests pottery was not made in New England during the Archaic period and soapstone was not as widely used as it was during the Archaic. When and where and even why pottery was first manufactured in southeastern Massachusetts is a mystery to archaeologists. Pottery is more fragile, but lighter than soapstone and the raw material used to make pottery is readily available and easily acquired but not as valuable as soapstone. The switch from soapstone to pottery was neither immediate nor widespread but eventually it did occur everywhere in southeastern Massachusetts. The change may have been a result of increasing sedentism and larger community size. In this case, because people were not moving around as much, there was less of an occasion for the pottery to be broken during transport and more people began to make it. The earliest pottery in southeastern Massachusetts dates from approximately 3000 BP (Braun and Braun 1994:65). This pottery, identified as Vinette 1, has thick walls tempered with a great deal of crushed rock and little decoration. These pots are believed to have been suitable for simmering but not boiling. The use of pottery may be related to an increased utilization of nuts and the removal of oils thorough boiling. Pottery may have also been used to render fat to grease in much the same way.

This period is marked by basic technological and economic changes such as the above-mentioned production and use of pottery and a gradual shift to food production (maize, beans, squash, sunflower and other vegetables). The latter trend is documented by ca. 1100 BP on Martha's Vineyard (Ritchie 1969) but perhaps began by ca. 2000 BP (Thorbahn 1982). Other identified changes from the Late Archaic include the formation of stable estuaries with tidal flats (Cross 1996:5-6) and an apparent increased use of exotic raw materials such as jasper, chert, and copper. This increase in exotic raw materials may reflect an increase in trade and communication. Sites dating to this period have been found around large wetlands and lakes, along large river valleys and on the coast at the mouth of rivers and streams. This period is marked by a decrease in the number of exotic finished goods indicative of long-distance trade, and by mortuary practice including secondary interments, less use of ocher, fewer grave goods, and more variation in preparation of the dead. While the roots of ceramic and lithic variability are found in the preceding periods, more rapid variation in sequence through time and more regional variation characterize this period. Pottery varies more in decoration and form. Lithic projectile

points are less important in the tool kit, and bone and antler tools are preserved at some sites where matrix conditions are appropriate (Shaw 1996:84-87). By the end of the period there is evidence of maize horticulture (Thorbahn 1982).

Artifacts attributable to the Early Woodland include side-notched bifaces, lobate-stemmed Adena, Small Stemmed, Orient Fishtail, Meadowwood and Rossville projectile points, and cache blades. Smoking pipes, possibly used for the ritual smoking of tobacco, but also for the smoking of other plants such as pokeweed or mint, began to be present in the archaeological record.

Middle Woodland (2,000-1,000 BP)

Settlement and subsistence are similar to those of Early Woodland Period, with the main difference being lengthened stays at large sites along waterways and a continuation of the use of upland areas for short-term resource procurement. During this period there is a marked decrease in the number of exotic finished goods, and changes in mortuary practice to an increase in secondary interments and less use of ocher. Ceramics vary more in decoration and form with more occurrences of smoothed surfaces and the beginning of the use of shell temper. The decrease in the variety of projectile points may be evidence that these were now less important in the tool kit although this point is still being studied. Typical projectile points include Fox Creek and Steubenville points and in the later Middle Woodland, Jack's Reef points. While the amount of exotic finished goods decreased, the amount of exotic raw lithic materials increased, with Jack's Reef points often being made of non-local chert (Shaw 1996: 92-93). Some projectile point types, such as Rossville and Small Stemmed appear to continue into the Middle Woodland (Shaw 1996:90; Hasenstab et al. 1990).

Settlement and subsistence are similar to those of Early Woodland period, but sedentism increases. Stays at large sites along waterways increase in duration, while upland areas are used short-term for procurement. Long-distance communication and exchange appear to shut down by the end of the period.

Late Woodland Period (1,000-400 BP)

This is the period just prior to European contact and as a result, many of the historical reports written by the early explorers to New England (Verrazanno, Gosnold, Pring, Smith) present one way of understanding the Late Woodland period. Some of their observations may be extrapolated back into the prehistoric past through the use of ethnographic analogy. These analogies can be created with more confidence as pertaining to the culture of the Late Woodland period than with any earlier one.

Ethnohistorically, it was recorded that the Native people lived within a community territory that for the most part supplied their needs. Being on the coast or within a coastal environment, the Native people of Cape Cod and southeastern Massachusetts participated in a seasonal migration that was probably very similar to that which they had done for centuries before.

The seventeenth-century Wampanoag were practicing what is well known to anthropologists as a mobile economy. These people were seasonally migrational, so that they moved from place to place throughout the year to coordinate the resources of their territory. The resources they were using were ill-distributed and as a result, they had developed a specialized economy that maintained higher population numbers than could have been sustained if those resources were gathered in isolation by

specialized groups (Higgs and Vita-Finzi 1982:28). Their system was not as unique among peoples as some researchers believe (Dunford 1992: 23). In Frederick Dunford's view, the Cape Cod and southeastern Massachusetts Natives practiced a unique human adaptation to the environment that he termed "conditional sedentism" (Bragdon 1996:58). This adaptation had the estuary as its primary focus with its human community "joining and splitting like quicksilver in a fluid pattern within its bounds." (Bragdon 1996:59).

The Wampanoag exploited a diffuse range of plants and animals and coordinated their gathering so that as each species came into season it was intensively harvested and stored for the winter. In order to do this, the people would split up during the spring, summer and early fall and each family would venture out to its planting fields, which became their seasonal bases. They would then move out from these to exploit various resources. In the fall they would all join up again and move as a community to a sheltered valley or into the woods and establish a winter seasonal base from which to venture out and exploit winter resources. Come spring the entire process would begin again (Nanapashamet 1996).

The pottery of the Late Woodland period is often shell-tempered or made with fine grit temper and have thinner bodies and a more globular form than the earlier ceramics. The diagnostic projectile point of the Late Woodland period is the triangular Levanna point and occasionally the Madison. This period is marked by an increasing importance in horticulture (maize, beans, squash, sunflower and other vegetables) in coastal or riverine zones, which begins by ca. 1100 BP on Martha's Vineyard (Ritchie 1969).

The decrease in projectile-point styles and the increase in the reliance on horticultural crops, may be attributed to increasing numbers and densities of population at larger sites. While the occurrence of the "village" in southeastern Massachusetts continues to be debated, the effect of an increased reliance on corn, beans, squash and to a lesser degree gourds, sunflowers and tobacco, definitely led to a degree of sedentism not seen prior to this time (Hasenstab 1999; Kerber 1988; Luedtke 1988; Thorbahn 1988).

Contact Period (400 BP- 1524 AD)

The Contact period was a time of dramatic social, political and personal upheaval for southeastern Massachusetts Native populations. This period began with amiable trade relations with European explorers such as Giovanni da Verrazanno (1524) and Batholomew Gosnold (1602), followed by a growing distrust of Europeans and an increase in hostility between the two, especially on Cape Cod as evidenced by Martin Pring in 1603 and Samuel de Champlain in 1605. This hostility was due primarily to the kidnapping of Native men by Europeans desirous of returning home with informants or curiosities from the New World. Examples are George Weymouth in 1607 and William Hunt working under, but not under orders of, Captain John Smith in 1614. By the time of the settling of the English at Plymouth, 1620, Natives in southeastern Massachusetts had been decimated by a European epidemic, 1616-1619, with mortality rates possibly reaching 100% in some mainland communities.

The first recorded trading encounter in New England occurred in 1524 and involved the Florentine sailor Giovanni da Verrazano who was sailing for France. Verrazanno arrived in Narragansett Bay in April of 1524 and traded with the Native people (Parker1968:14). He stated that they were apparently unfamiliar with Europeans and were very willing to trade and to host the visitors. The Natives were first enticed to trade by tossing "some little bells, and glasses and many toys" (Parker1968:14) to them

as they came to Verrazanno's ship in their own boats. The Europeans remained in the harbor until early May and Verrazanno stated that of all the goods they traded to the natives "...they prized most highly the bells, azure (blue) crystals, and other toys to hang in their ears and about their necks; they do not value or care to have silk or gold stuffs, or other kinds of cloth, nor implements of steel or iron." (Parker 1968: 16). It was also noted that the natives there possessed ornaments of wrought copper, which they prized above gold. The copper may have come indirectly through trade with natives to the north who obtained them from European fishermen, or it may have been native copper from the Great Lakes or Bay of Fundy regions.

The next explorer known to have visited southeastern Massachusetts was Bartholomew Gosnold, who arrived at the Elizabeth Islands off Martha's Vineyard in May of 1602. There he traded with the first natives he encountered, giving them "certain trifles, as knives, points, and such like, which they much esteemed" (Parker1968:38). Gosnold's crew, in return for the trifles, received many different types of fur from animals such as beavers, luzernes, martens, otters, wildcats, black foxes, conies (rabbits), deer and seals as well as cedar and sassafras, the latter of which was prized as a cure-all in Europe. Of particular note is his description of the great store of copper artifacts which he saw people wearing and using.

The Native informant asked by Gosnold to say where they obtained the copper from was probably signing that it came from the mainland (possibly meaning through trade with other natives or Europeans). Alternatively, he may have been referring to a Native historical tale about the origin of the copper. What is interesting is the great store of copper possessed by the natives and their desire to trade for metal knives. It would appear that between 1524 and 1602 they had begun to see a value in steel knives and they had expanded their use of copper to create beads and arrowheads, whereas in 1524 they were noted as having only breastplates of copper.

At this time, natives saw European goods as being different, special, and/or in some ways technologically superior and spiritually empowering. Unfortunately, the power that the natives felt could help them cope with the sometimes disturbing new relationship with these strangers could not preserve them from their diseases.

A. Known Prehistoric Sites

A total of 13 prehistoric archaeological sites are recorded in the MHC site files within two kilometers of the two project areas (Table 1).

Table 1. Known prehistoric sites within 2 km of project areas

Site	Water	Type	Date	Finds
First Brook				
19-PL-532	First Brook	Shell Midden	Middle Archaic-Contact	Shell, bone, lithic points
19-PL-530	First Brook	Unknown	Unknown	Unknown
19-PL-427	Cold Spring	Unknown	Unknown	Point tips, edge tools, flakes
19-PL-307	First Brook	Unknown	Transitional Archaic	Orient Fishtail point
Town Brook/ Poorhouse Pond				

Table 1. (cont.)

Site	Water	Type	Date	Finds
19-PL-443	Town Brook	Unknown	Unknown	Unknown
19-PL-439	Unnamed Pond	Unknown	Middle Woodland	Jack's reef point
19-PL-108	Town Brook	Unknown	Unknown	Unknown
19-PL-107	Poorhouse Pond	"Village"	Unknown	"Shell and village refuse"
19-PL-106	Poorhouse Pond	"Village"	Unknown	"Shell and village refuse"
19-PL-105	Poorhouse Pond	"Village"	Unknown	"Shell and village refuse"
19-PL-104	No Bottom Pond	Unknown	Unknown	Unknown
Wellingsly Brook				
19-PL-488	Wellingsly Brook	Unknown	Late Archaic-Late Woodland	Lithic tools, ceramics, shell, ocher
19-PL-103	Wellingsly Brook	Shell Midden	Unknown	Unknown

The Paleo-Indian period is represented in Plymouth by one Eden Type point from the Eel River. The Early Archaic, like the preceding Paleo-Indian period, shows limited representation in the Plymouth area with bifurcate base point having been recovered from Great Herring Pond (19-PL-179) in South Plymouth.

The Middle Archaic Period shows a higher degree of representation in the archaeological collections from Plymouth. Components dating from this period have been identified at the following sites: Hedges Pond (19-PL-295), Nook Farm Garden (19-PL-532), South Pond Bog (19-PL-533), Plimoth Plantation Spring (19-PL-522). Middle Archaic sites were located on an unnamed stream in North Plymouth (n=2), on Upper Town Brook (n=1), on Wellingsly Brook (n=1), and on the Eel River (n=2).

The Late Archaic to Transitional Archaic Period is well-represented in and around Plymouth. Component associated with the Small Stemmed Tradition have been identified at the following sites: Warren Bog (19-PL-361), Morton Park 7 (19-PL-358), Triple P (19-PL-171), Powers Shell heap (19-PL-114), Lucas Pond (19-PL-300), Plimoth Plantation (19-PL-311), and the Rocky Nook Midden (19-PL-527). Component from Laurentian and Susquehanna tradition associations were found at the following sites: Nook Farm (19-PL-102), Poverty Point (19-PL-96), Nook Farm Garden (19-PL-532), South Pond Bog (19-PL-533), Plimoth Plantation Spring (19-PL-522), and Little Herring Pond (19-PL-773). Components associated with the Orient Tradition were recovered from Nook Road (19-PL-488), Shellheap (19-PL-312), Nelson's Field (19-PL-307), Powers Shell Heap (19-PL-114), Nook Farm (19-PL-102), and an Unnamed Site (19-PL-131). Seventy-three percent of the Late Archaic sites were on drainages.

Early Woodland sites were often found as elements of multi-component sites: Nook Farm Garden (19-PL-532), Nook Road (19-PL-488), PCC (19-PL-787), Plimoth Plantation Spring (19-PL-522), Powers Shellheap (19-PL-114), and also as single-component sites: Pine Road (19-PL-170), Eel River (19-PL-521), and Davis (19-PL-98).

Sites containing distinct Middle Woodland components were the Nook Farm Shellheap (19-PL-103), Swan Pond (19-PL-439), and Shellheap (19-PL-312).

Late Woodland and probable Late Woodland period sites were among the most common types of sites around Plymouth with most of these being shell midden sites: Nook Farm Shellheap (19-PL-103), Shellheap (19-PL-312), High Cliff II (19-PL-346), South Pond Bog (19-PL-533), Hedges Pond (19-PL-295), Triple P (19-PL-171), Unnamed (19-PL-126), High Cliff (19-PL-111), Rocky Nook (19-PL-293), Ira Wood (19-PL-97), Duxbury Beach (19-PL-328), Clark's Island (19-PL-46), J.H. Finney (19-PL-73), and Unnamed (19-PL-72, 78, 101, 105, 106, 107, 110, 126, and 312). In general, 86% of the Woodland Period sites were located on drainages, with a high percentage of those being located on the coast.

B. Prehistoric Archaeological Potential

Archaeological sites are found in a wide variety of environmental settings with new settings and locations of sites in areas not usually tested by cultural resource management surveys coming to light each year. The majority of sites though are to be found in particular environmental contexts (Funk 1972; Root 1978; Thorbahn et al 1980; McManamon 1984; Mulholland 1984; Thorbahn 1984; Nicholas 1990). Using the contexts of known sites allows archaeologists to predict the likelihood of additional sites in similar environments. These predictive models inform the location and testing interval of archaeological surveys.

In general sites in southern New England appear to be linked to three variables, topography, soil characteristics and proximity to water. These factors can be used to generate a predictive model showing a predominance of sites on flat to low slopes on well-drained soils near fresh or salt water (Robertson and Robertson 1978; Thorbahn, Loparto, Cox and Simon 1980). These factors can be combined with the proximity to natural resources (clay, lithic raw materials, and seasonal foods) and the use of transportation routes via waterways or land trails.

Prehistoric Archaeological potential can be stratified as follows:

High Potential: 100-200 meters (m) from a fresh water source on a 0-5 degree slope with well drained to excessively well-drained soils and minimal site disturbance;
Moderate Potential: 200-300 m from a fresh water source 5-10 degree slope with well drained to moderately well-drained soils;
Low Potential: >300 m. from a water source, >15 degree slope on poorly drained soils and in a heavily disturbed context.

Sites in Plymouth tend to cluster around freshwater drainage systems and where those freshwater sources empty into the harbor or bay at the coastline with 70% of the sites having been identified along Spooner Pond Stream, Town Brook, Wellingsly Brook, Eel River, Beaver Dam Brook, Indian Brook, and a stream in Ellisville (Donta et al 1999: 22). Of the remaining 30% of sites, 10% were on the coast, 13% were on ponds and bogs, and only 8% were slightly inland and not near water sources. Among the inland sites that were over one kilometer from the coast, 60% were on drainages, 30% were on ponds and 10% were not located near any water source but some were near large dry kettleholes that may have held water in the past (Donta et al 1999: 23). Ten multi-component sites have been identified with three of the earliest ones being inland (two on Billington Sea) and one on the Eel River. The areas of Plymouth with the highest potential for containing prehistoric resources are those that are within one kilometer of the coast along streams and brooks with a somewhat lower potential around ponds (Donta

et al 1999: 23). The areas with the lowest potential are those that are away from streams and ponds and away from beaches and promontories (Donta et al 1999: 23).
Due to the presence of 13 recorded archaeological sites within two kilometers of the project area and the presence of excessively well-drained soils, the project area is given a high probability for ancient Native American archaeological resources.

Anticipated prehistoric sites were small to large task or habitation camps expected to date from the Late or Transitional Archaic to Contact periods. Small sites were expected to relate to resource procurement activity such as the harvesting of floral and faunal resources from the adjacent shore including lithic production and sharpening loci and hearths. Larger sites could reflect habitation related to the use of the general Town Brook/ Plymouth Harbor area as a base camp. These sites typically have multiple feature types, multiple classes of artifacts representing a variety of activities, and often have storage features, burials, and architectural evidence.

IV. HISTORIC CONTEXT

Plymouth, which was called Pawtucxet (translated as 'the place of the little falls of water') is suspected to have been the location of a substantial Native population during the **Contact Period (1524-1620)**. Between the years 1605 to 1619, Plymouth Harbor was visited by several European explorers including Samuel de Champlain (1605) **(Figure 2)**, Captain John Smith (1614), and Thomas Dermer (1619). Trails ran from the community north to the Jones River and Pembroke Ponds (Court Street/ Route 3A), south to Cape Cod (Sandwich Street and Old Sandwich Road), and west to Middleboro (Summer Street) (MHC 1981: 2). Historic period roads ultimately followed these trails and evolved into many of today's streets and roadways. Native populations in Plymouth were concentrated along the coast and the river and brook valleys (Eel River, Hobshole Brook, Town Brook) where the most level and most fertile ground was located. While no numbers exist for the extent of the original population, following a pandemic between 1616 and 1618, which may have resulted in up to 100% population loss in some communities, only one survivor was known from Plymouth (Tisquantum), although it is likely that there was some population aggregation among decimated communities. Two Contact Period sites have been identified in Plymouth, the Sandbank Shell Midden (19-PL-71) and the Finney site (19-PL-73), both located on the Eel River. Other suspected Contact Period sites are believed to exist at Nook Farm along Hobshole Brook in Wellingsly.

The establishment of the Plymouth Colony in 1620, at the start of the **Plantation Period 1620-1676,** at what was once Pawtucxet, represents the first permanent English settlement in New England. Plymouth was chosen for settlement due to the accommodating harbor and the fields which had been cleared by the previous inhabitants. Storehouse and house construction began in the fall of 1620 with a total of 102 persons making up the company. The subsequent winter saw their number cut in half by disease. They received an influx of settlers in the fall of the following year and erected a fort/ meetinghouse over the winter. The population continued to grow throughout the decade with 84 persons arriving in 1622 and the total company numbering 180 by 1624. In the winter of 1622 a palisade was erected around the entire settlement. The inhabitants in 1624 were reported to have lived in 32 dwellings at this time. The founding of the Massachusetts Bay Colony in 1630, led to a general migration away from Plymouth center. Following an exodus of settlers to the north, south and west, the total population was 150 (MHC 1981: 6). The first meeting house was built off of Burial Hill in 1638. This structure was located at the head of town square. The first court house was built opposite the meeting house, replacing an earlier “country” house. Population expansion occurred by the early 1630s to the north along present day Court/ Main streets and at Eel River. Plymouth's economy focused on trade, agriculture, fishing and livestock production for the Massachusetts Bay Colony after 1630. A maize pounding mill was established on Town Brook at Alms House Pond in 1632 by Deane. This was replaced by John Jenney with a grist mill in 1636. A fulling mill was established on the north side of Town Brook in 1672 and a brickyard was in use to the east of present day Pilgrim Hall. No remnant Native population existed in Plymouth center, but populations are suspected to have lived at the Manomet/ Break Heart Hill area and at Great Herring Pond.

In order to better foster industriousness and to more evenly spread the work load of the colonists, land outside of the palisaded town was divided in 1623 for private cultivation among all the colonists present in the town that year (Mayflower Descendant 1899: 227-230). The colonists who were present in Plymouth by this point had arrived on the *Mayflower* (1620), the *Fortune* (1621), and the *Anne*

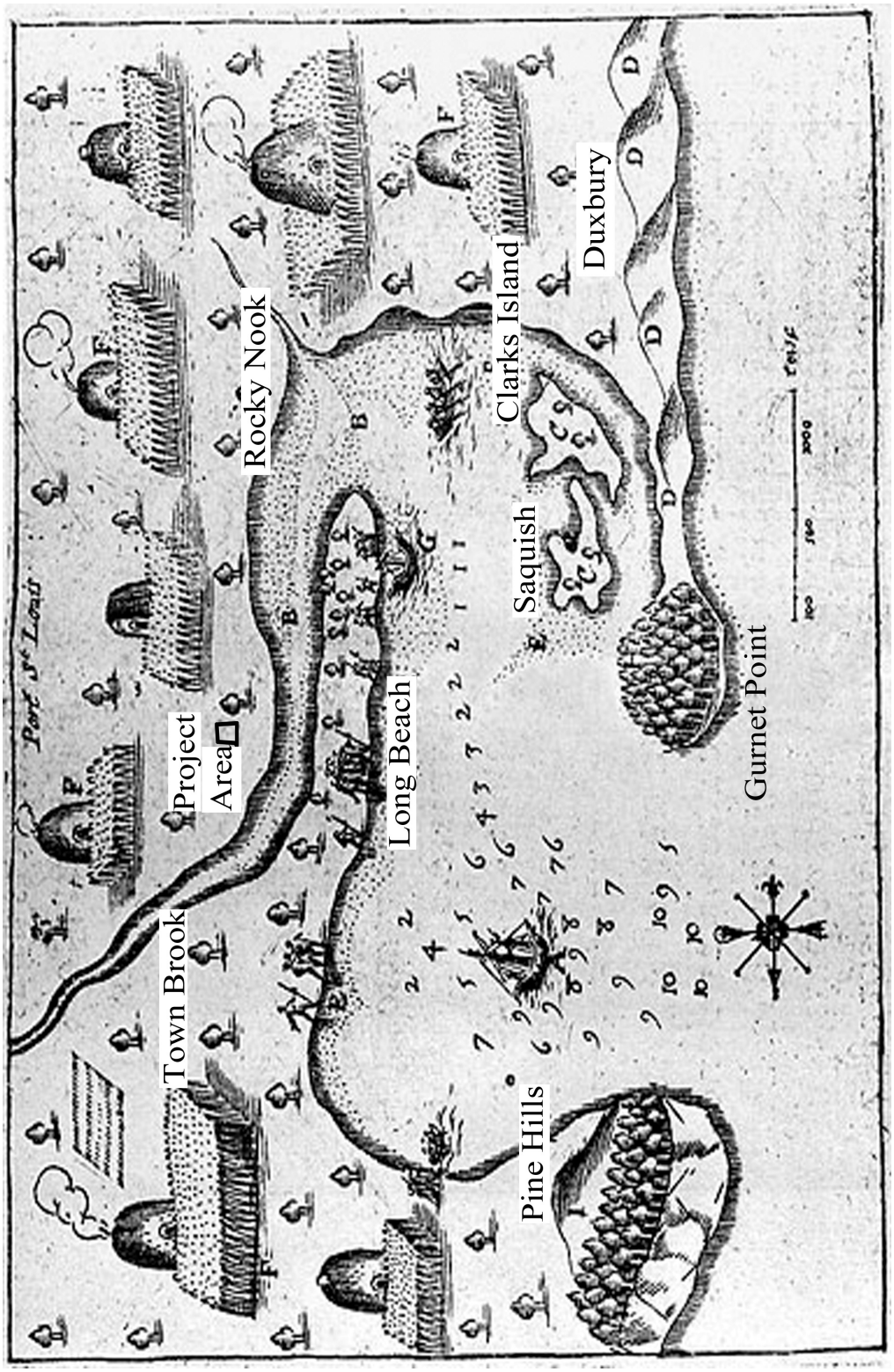


Figure 2. General location of project area shown on Champlain's 1605 map of Plymouth Harbor

(1623) with a few others possibly having arrived on the supply ships the *Swan* (1622) and the *Little James* (1623). Each individual was granted one acre of land measuring a half pole in breadth and three in length (83 x 492 feet). The acres were oriented with the width (83 feet) aligned with the coast and the length (492 feet) extending inland.

The lots that extended to the immediate north from the palisade across the project area were laid out to the settlers that came aboard the *Fortune* in 1621: William Hilton 1 acre, John Winslow 1 acre, William Coner 1 acre, John Adams 1 acre, William Tench 1 acre, and John Cannon 1 acre. **Figure 3** shows, that in this theoretical reconstruction, the settlers from the *Fortune*'s lots extended from the palisade to the north side of North Street. It is hypothesized that the acres of William Tench and John Cannon were farming in the immediate vicinity of 11 North Street.

North Street was variously called New Street, Queen Street, or Howland Street and was laid out in 1633. It was named North Street in 1823. At some point between 1623 and 1641, Thomas Cushman acquired the 11 North Street land. No record of either the colony's grant to him or of his purchase of the land exists, but it is recorded that on March 23, 1641 he sold "All that house & garden and seaven acrees of land therevnto belonging scituate in Plymth wherein Mr Andrew Hellott lately lived in" to Thomas Lettis (Pulsifer1861: 77). Hellott (also spelled Hallett) had come to the colony in 1637 and eventually moved to Cape Cod. Thomas Lettis, by 1657, owned the whole square between Main Street and Cole's Hill, except the upper lot on Main Street, and the lower lot on Cole's Hill. His lot measured about one hundred and sixty-five feet on North Street, two hundred and eighteen feet on Cole's Hill, and ran about sixty feet on Middle Street (Davis 1883: 180).

The population grew rapidly during the **Colonial Period (1676-1776)**. This was especially true following King Philip's War when the townspeople felt more secure in their possession of the land and had less fear of attack from the Native inhabitants. While Plymouth itself was spared the devastation that was inflicted on some of the more remote towns, one house is known to have been attacked (merchant William Clark's house on the Eel River) and the town built a 100' square fort on Burial Hill in preparation for attack. Plymouth's population numbered 1000 persons in 1698 and by the end of the period had risen to 2655. An expanded area of settlement and the creation of at least four settlement nodes went along with the increased population. The West Precinct (Plympton) was established in 1695 and the Jones River Parish (Kingston) was formalized in 1717. These two joined Plymouth Center and the Eel River community nodes. The town's economy had a strong maritime focus at this time, being based on whaling, fishing, coastal and international trading, and shipbuilding (MHC 1981: 11). The construction of wharves at the foot of Cole's Hill and along the north side of Town Brook pond in 1795 marked the beginning of the serious maritime focus of the town.

The reconstructed 1701 map of The Mile and a Half Tract in Plymouth shows the house of Thomas Gray on or near the property at this time **(Figure 4).** The 1780 map of Plymouth shows structures around downtown Plymouth, but, probably due to the closely spaced nature of the buildings there, does not show any structures on or around the project area **(Figure 5).**

The 11 North Street lands were left to Thomas Little's widow Ann upon his death in 1682 and she conveyed them to her daughter Dorothy. Dorothy was the widow of prominent merchant Edward Gray and she married Nathaniel Clark. Through this marriage, the Clarks now owned the whole square

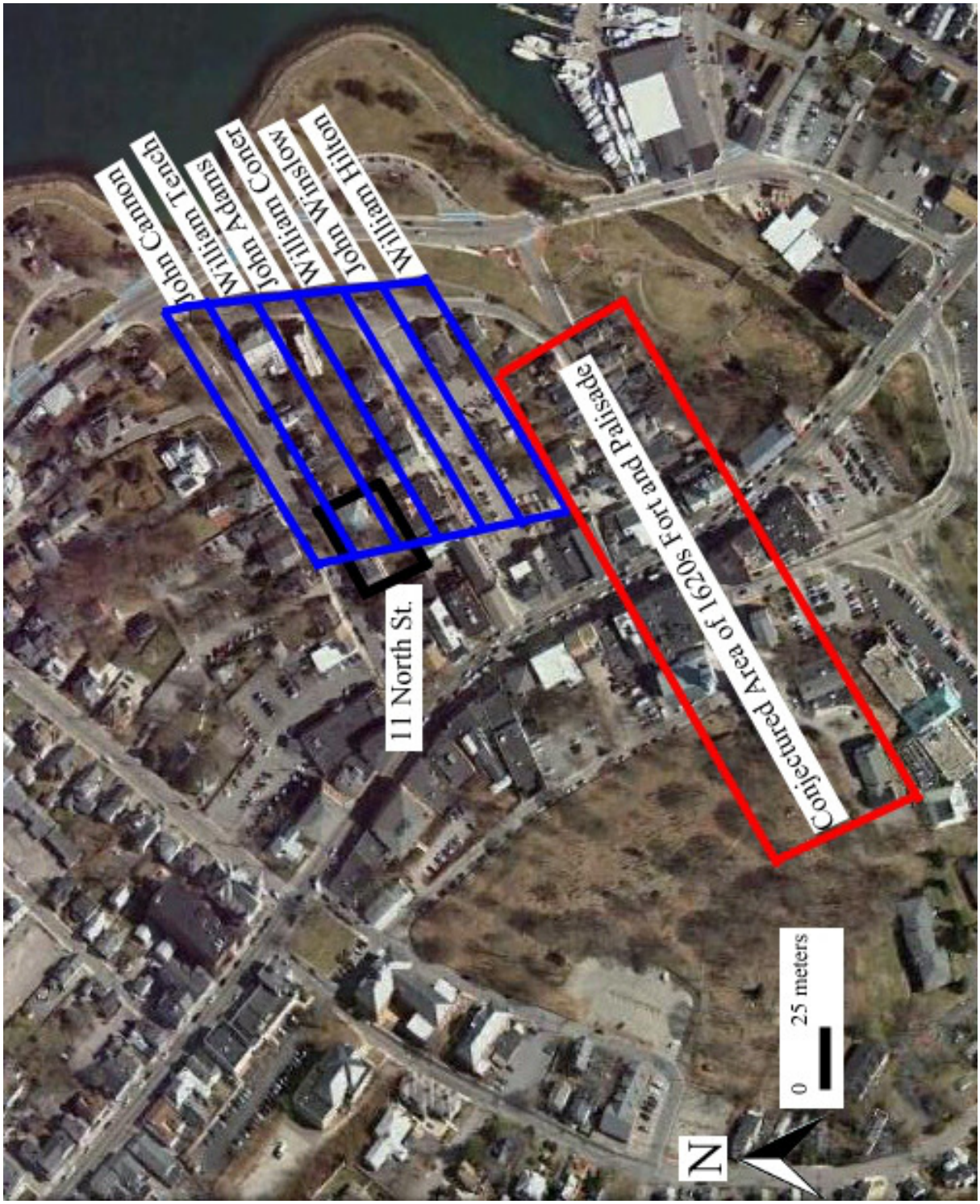


Figure 3. Location of project area in relation to theoretical layout of settlers from the *Fortune*'s lots

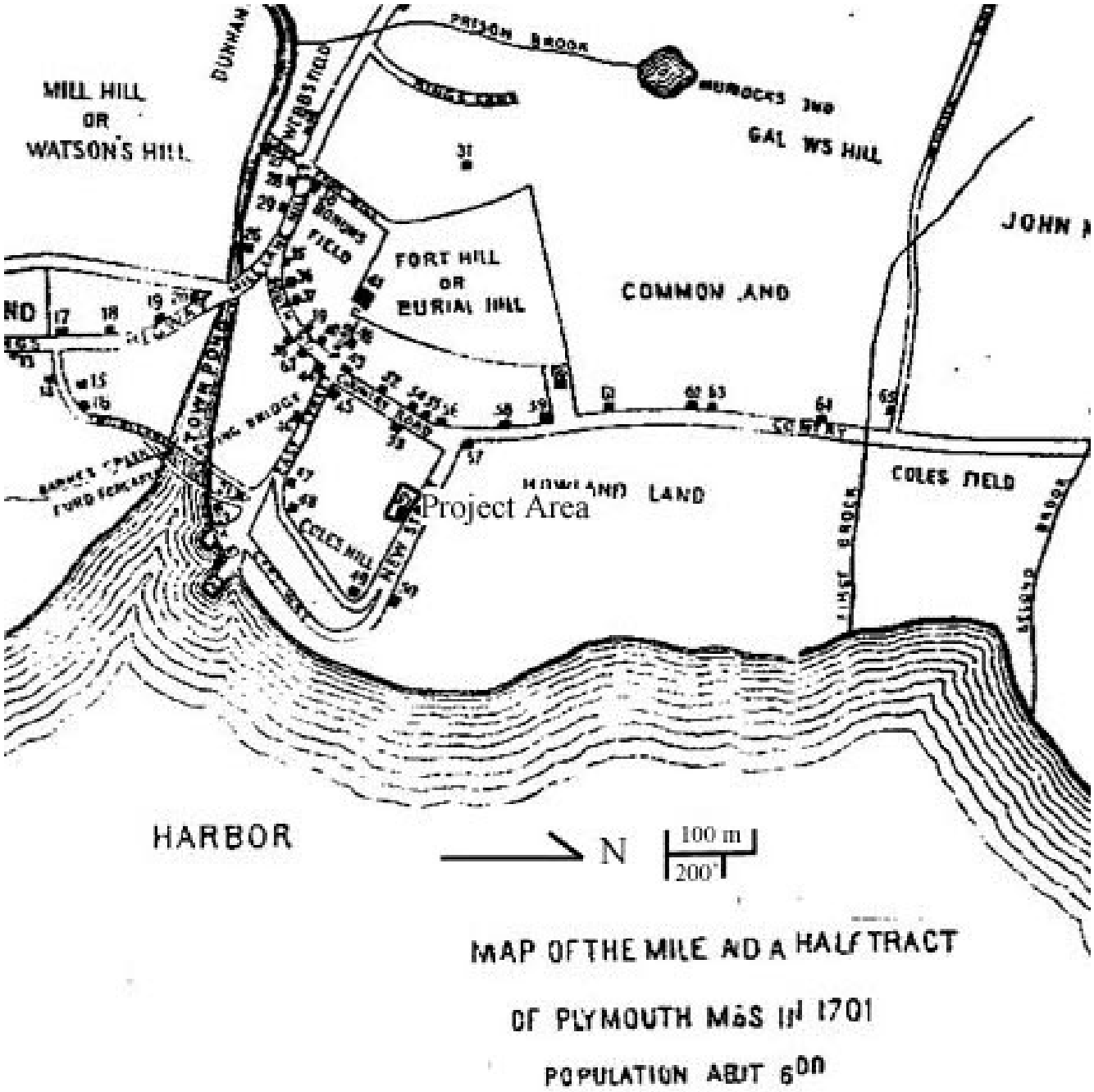


Figure 4. Reconstructed map of The Mile and a Half Tract showing the project area

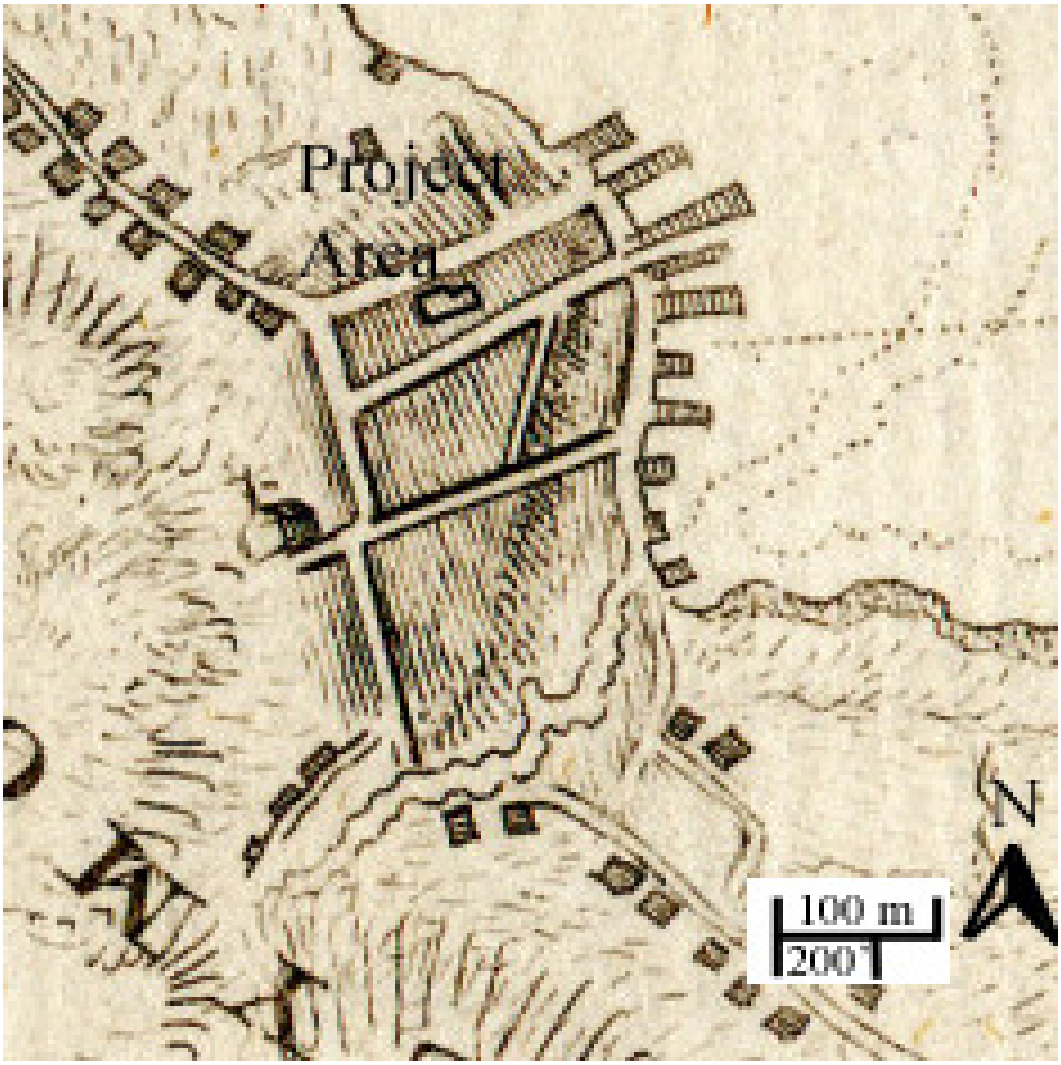


Figure 5. 1780 map of Plymouth showing location of the project area

between Main Street and Cole's Hill (Davis 1883: 180). This was eventually conveyed to Thomas Little by 1705, except for the eastern portion, the Cole's Hill portion, which had been sold to John Cole in 1697 (Davis 1883: 180).

Thomas Little's children sold off portions of the property after their father's death with John Watson in 1737 purchasing the lot where his son George lived. George Watson is believed to have built a house somewhere on the property between 1745 and 1750 and continued to live here until his death in 1800.

John Watson, George's father, had purchased the 11 North Street land in 1737 from Mrs. William S. Russell and T. B. Drew. Additional purchases were made from John Winslow and William Dyer in 1742 and Nicholas Drew, creating the frontage on North Street that John must have given to his son George between 1742 and 1745 (Davis 1883: 178). It is not known precisely where George Watson built his house, what style the house was, or if he even built a new house or merely lived in a house that

already existed on the site. George Watson eventually owned the entire width of his lot between North and Middle Streets by the late eighteenth century. The southeast quarter of his lot that abutted Spooner Alley was purchased by George Watson in 1785 from the First Precinct, whose splinter group the Third Precinct had built a church on the lot in 1743 (Davis 1883: 184). When George Watson first moved on to the property circa 1745, he owned an L-shaped piece of land with 160 feet of frontage along North Street that was 210 feet deep between North and Middle streets on the west end and 120 feet deep on the east end. It is believed that most of the yard activity may have been focused on the area immediately behind the present standing (Jackson) house.

George Watson was born on July 18, 1718 in Plymouth. He was the son of the prominent merchant John Watson (1678 - 1731) and his wife Sarah (Rogers). The Watsons were one of the old Plymouth families with the first ancestor, George Watson, arriving in 1634. John Watson lived in the house that was later the custom house (Davis 1885: 81). The custom house was located at the southeast corner of Leyden and Main streets where the Post Office now stands. George Watson married Abigail Saltonstall, daughter of the Superior Court Judge Richard Saltonstall, on June 4, 1748. She died in 1750 and he married Elizabeth Oliver of the Middleborough Olivers (loyalists who were driven from the colony during the American Revolution) on June 14, 1753. Upon her death in 1767 he married for a third, and final time, to Phebe Marston who outlived him and died in 1825. He had six children, three of whom (George, George and Elizabeth) died in infancy. His fourth child, Elizabeth, born in 1767, married the Honorable Thomas Russell, a merchant of Boston and after his death, married Sir Grenville Temple. She died in Rome about 1806. His two other children, Mary, who married Elisha Hutchinson Esq., son of Governor Hutchinson of Massachusetts, died in England before 1800, and Sarah, who married Martin Brimmer Esq., a merchant of Boston. She died in August 1832.

George Watson achieved the rank of Colonel during the French and Indian War, a commission that was probably purchased by his father, and commanded the Second Militia company of Middleboro in 1762 (Shurtleff 1912). Watson also commanded the First Regiment of Plymouth County Militia in 1771 and 1772 (SCWCM 1906). He did not command any forces during the American Revolution, most probably due to his divided loyalties. During the war, late in 1776, he and Isaac LeBaron stood as sureties for a £200 bond for violation issued to Gideon White. White was another Plymouth resident. He was captured by Patriot captain Simeon Sampson, also of Plymouth, while attempting to transport supplies to Loyalist communities in Nova Scotia (Shurtleff 1912). Gideon eventually was released and purchased a commission in the British Army.

George Watson served as selectman in Plymouth from 1756 to 1773, replacing his father John who had served as selectman for numerous years before 1756 (Davis 1885: 61-62). The last time he served as selectman was in 1778. One short-lived, but important, colonial position that George Watson held was on the Governor's Council in 1774. Governor council members were originally appointed by the Governor, and served at his pleasure, usually for a term that lasted longer than the governor's. The first act of most new governors was to re-appoint or continue the current council members in their offices. When there was an absentee governor, or in a period between governors, the council acted as a government. Most of the Council positions were unpaid, and members pursued a number of professions such as lawyers, a common council component in all the colonies, merchants, who were common appointees in the northern colonies, and planters, who were more common in the South.

In 1774, because of the Council's opposition to Massachusetts Governor Francis Bernard, the Council effectively blocked the Governor from performing his duties by refusing to elect his supporters to the Council. Parliament's passing of the Massachusetts Government Act of 1774 created an unelected Governor's Council made up of designated Loyalists. These men were summoned by a writ of mandamus. They were thus termed "mandamus Councilors" or "new-fangled Councilors." by Massachusetts' Patriots. One of the Mandamus Councilors appointed was Colonel George Watson. Thousands turned out in the summer of 1774 to protest the new Loyalist council and many of those appointed soon resigned their posts or moved to Boston.

Soon after his appointment on April 26, 1774, Watson was in Boston visiting John Singleton Copley, another Loyalist whose father-in-law was the merchant who owned the tea that started the Boston Tea Party. After Watson had left Copley's house, a mob arrived and demanded that Watson be turned over to them. Copley related later in a letter to his brother-in-law Isaac Winslow Clarke

> "I told them he had been here but he was gone & I supposed out of Town . . . they then desired to know how I came to entertain such a Rogue & Villin [sic], my reply was he was with Col. Hancock in the afternoon at his House & from thence came here & was now gone . . .they seemed somewhat satisfied with this & retired a little way up the Street but soon returned & kept up the Indian Yell for sometime . . . ." (Copley 1914).

The crowd refused to believe him and "...would take no Mans word .. . & my Blood would be on my own head if I deceived them; or if I entertained him or any such Villain for the future must expect Resentment of Force . . . ." (Copley 1914). Copley's final conclusion was that he had two options "... if Mr. Watson had stayed (as I pressed him to) to spend the night I must either have given up a friend to the insults of a Mob or had my House pulled Down & perhaps my family Murthered." (Copley 1914).

Watson's troubles with his Mandamus Councilor followed him from Boston to Plymouth, where, on August 28, 1774, George Watson, went to church as usual. When he entered the building, many of the more prestigious inhabitants of the town stood and left, saying that "being determined not to worship and fellowship with one, who was sworn to support that change of our constitution, which professedly establishes despotism among us" (Anonymous 1774).

Watson responded to this censuring at the hands of his peers on August 30, 1774, by sending his resignation to General Gage in Boston:

> "By my accepting all of this Appointment, I find that I have rendered myself very obnoxious, not only to the inhabitants of this place, but also to those of the neighboring towns. On my business as a Merchant I depend, for the support of myself and Family, and of this I must be entirely deprived, in short, I am reduced to the alternative of resigning my Seat at the Council Board, or quitting this, the place of my Nativity, which will be attended with the most fatal Consequences to myself, and my family. Necessity therefore obliges me to ask Permission of your Excellency to resign my Seat at the Board, and I Trust, that when your Excellency considers my Situation, I shall not be censured." (Wroth 1975: 157).

Plymouth vital records indicate that in 1757 a slave named Eseck, who was owned by George Watson, was published to be married to Rose, who was owned by William Clark, and Cuffee, who was also owned by George Watson, married Nanny, who was owned by Samuel Bartlett in 1768 (Davis 1883: 75). It is interesting to note that a slave named Cuffee, who was owned by Isaac Lothrop, was published to be married to Nanny of Samuel Bartlett in 1734 (Davis 1883: 75). It is not known if this was the same Cuffee and Nanny as were married in 1768. It is also not known if Cuffee and Eseck both were owned by George Watson at the same time or if they represent successive slaves owned by Watson.

Farming and maritime activities dominated the local economy during the **Federal Period (1776-1830)** and population growth was fairly slow. Agricultural communities had developed at Cedarville, Ellisville, Vallerville and Wellingsly while Plymouth Center, Manomet and Chiltonville had a mixed agricultural and industrial economy (MHC 1981: 13). Nathaniel Russell initiated Plymouth's entry into serious industrial development in 1807 when he constructed two iron furnaces on Town Brook (MHC 1981: 14). Russell followed in 1827 by constructing a rolling mill on Mill Pond and his total revenue from these industries, which were all geared toward supporting his nail factories, was $212,000.00 annually (MHC 1981: 14). Russell also established, in 1809, a cotton mill, the Plymouth Cotton Company, on Town Brook eventually erecting a brick mill building in 1813 which still stands. The Plymouth Woolen and Cotton Company was erected on the Eel River in 1813 to partake in the profits that the British Embargo and subsequent War of 1812 generated for American industries. By the end of the period over 300 persons were employed in industrial activities. Other industries included a shovel factory and a ropeworks, both on Town Brook.

Colonel George Watson died on December 13, 1800 and was remembered a generation later in glowing terms. Plymouth historian James Thacher in 1832 described him as being

> ".. uniform dignity of manners, and uprightness of conduct, he preserved the respectability of his family, unsullied to the grave. From early life he entertained an invincible abhorrence of these excesses, which, while they enfeeble the constitution, make destructive inroads in the order of families, and harmony of society. In the meridian of his days and amidst the multifarious 'concerns and solicitudes of commercial business, he formed a just estimate of the scenes fleeting before him, and looked forward to an inheritance eternal in the heavens. Becoming a member of the most ancient church of Christ in New England, he was exemplary in his observance of all the institutions of its primitive founders. Blessed with affluence, he was always ready to indulge the benevolent propensities of his nature in affording relief to the indigent and necessitous..." (Thacher 1832: 226).

Upon the occasion of his death, the town said that

> "George Watson, Esq., who from his unbending rectitude and conscientious punctuality as a merchant, from his liberal hospitality and diffusive benevolence as a man, from the graces of his behavior, as a gentleman, and from the lustre of his example as a christian, displayed with undeviating constancy in a long life, was justly held in the most respectful estimation by an extensive circle of friends,

> and by all classes of his fellow men, while his amiable partialities for his native town, the persevering assiduity with which he discharged its most important public offices, and the deep interest he invariably took in its happiness and prosperity, has engraven his name in the affections of its inhabitants, in characters that no time can efface. Prompted by their high sensibility to exhibit on this melancholy occasion every testimonial of respect for the venerable dead, and as an incitement to the imitation of such pre-eminent virtues,—Voted, 1. That on the day of the interment of George Watson, Esq., the selectmen be requested to direct the sexton to toll the bell, commencing at sunrise and continue three hours. 2. That it be recommended to the inhabitants to suspend their usual business in the streets, by shutting up their shops, stores, &c. from two o'clock, P. M. till the funeral is over. 3. That it be recommended to the owners of shipping in the harbor to place their flags half mast high, in token of mourning during the day of interment." (Thacher 1832: 226).

Apparently in the eyes of the leaders of the town (and the townspeople in general?) Colonel George Watson, slave owner, merchant, Loyalist, and richest man in Plymouth, was viewed as the paragon of virtue, manners, and Christianity charity, worthy of having the whole town come to a stand still during his funeral and ships in the harbor to lower their flags to half mast in deference.

The praises for his character followed him to his grave and are still visible on his gravestone on Burial Hill to this day:

"In Memory of
GEORGE WATSON Esqr
who died the 3d of December 1800
in the 83d Year of his Age.
No folly wasted his paternal Store,
No guilt, no fordid av'rice made it more:
With honest fame, and sober plenty crown'd,
He liv'd and spread his cheering influence 'round.
Pure was his walk and peaceful was his end-
We bless'd his rev'rend length of Days,
And hail'd him in the public ways,
With veneration and with praise.
Our Father and our Friend"
source: Epitaphs from Burial Hill
by Bradford Kingman [p. 87]

One of Watson's legacies was the planting of a number of Linden trees behind his house circa 1750. The trees were imported by him, and brought from London by a Captain Cameron of Boston (Davis 1883: 178). They were described as being the largest and finest specimens of the kind in the country. A number of the trees were transplanted to the front of the house along North Street circa 1765. One of the lindens in the rear of the present house was photographed in the early 1900s **(Figure 6).**

Figure 6. One of the linden trees in the yard behind 11 North Street (Curtin 2011: 45)

The fledging industrial activities of the previous period blossomed in the **Early Industrial Period (1830-1870)** into larger scale works, which soon competed with the original maritime focus of the town. Bolstering the industrial development of this period was the establishment of the Old Colony Railroad in 1845 with a route that ran along the coast from Plymouth Center north to Boston (MHC 1981: 16). More industrial operations were established along the railroad's route and other established industries moved their works to be closer to the tracks. Increased industrial activity led to increasing population influx, chiefly foreign-born individuals from Germany, Italy, and Canada, increasing an 1830 population of 4758 to 6238 persons by 1870 (MHC 1981: 17). While the manufacture of nails and iron remained the most important industries in the town, several cotton mills and cordage works employed many of the immigrants. The railroad line boosted the production of shoes and boots, allowing products to be rapidly shipped north to Boston. Between 1845 and 1855, the number of shoemakers in the town rose from 20 to 442 with an annual revenue of $155,000.00 (MHC 1981: 17).

Abraham Jackson purchased the lot in 1818 and is believed to have built his house, the present extant house, circa 1833. At the time of Jackson's purchase, the lot is believed to have extended from North to Middle streets. Jackson sold the lot on Middle Street to William Churchill in 1831 who built a house there (Davis 1883: 180). The 1832 map of Plymouth does not show any structures on the property, but this may be due more to the lack of detail on this map versus the actual absence of any structures **(Figure 7)**.

Abraham Jackson was born in Plymouth in 1791 and married Harriet Otis Goddard in August of 1818. Jackson was a merchant and he lived on the property until his death in 1859. Among Plymouth antiquarians fond remembrances of the Jacksons' tenure at the property was the fact that, in 1833, Capt. Samuel Rogers in command of the schooner *Capitol*, which belonged to Daniel and Abraham Jackson, brought the first bananas into Plymouth. These were given to Abraham Jackson and he hung them in a tree in the backyard of the property (Davis 1883: 509). Davis reported that they were of the yellow variety, that Captain Rogers called a plantain (Davis 1883: 509).

The railroad lines were expanded in the **Late Industrial Period (1870-1915)** with a line established west to Middleboro. The street car line that was constructed in the Early Industrial Period was extended to Manomet. Manomet had seen increasing settlement in the preceding period and continued to see population growth in the Late Industrial. The overall population doubled again, owing to the arrival of more immigrants to work in the mills and industries with an increase in foreign-born residents from 1022 in 1885 to 4065 in 1915 (MHC 1981: 20). Immigration shifted in this period to include a greater proportion of Italian and Portuguese.

The project area, the Jackson lot, continued to exist in an L-shape between North and Middle streets until sometime after 1879 and before 1885 when cartographic sources indicate that it had attained its present configuration **(Figures 8 to 13)**. Several important changes to the project area are visible in

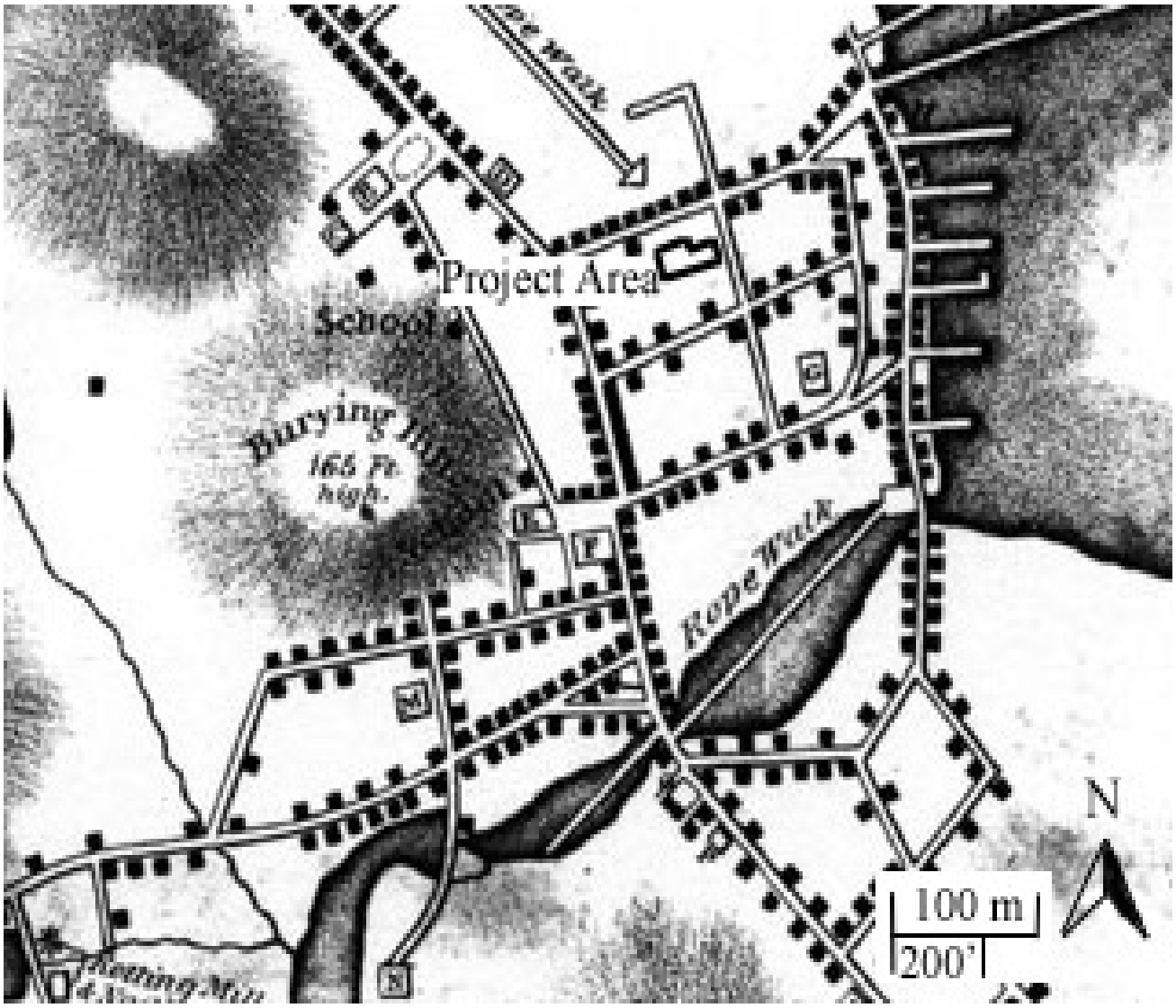


Figure 7. Project area shown on the 1832 map of Plymouth

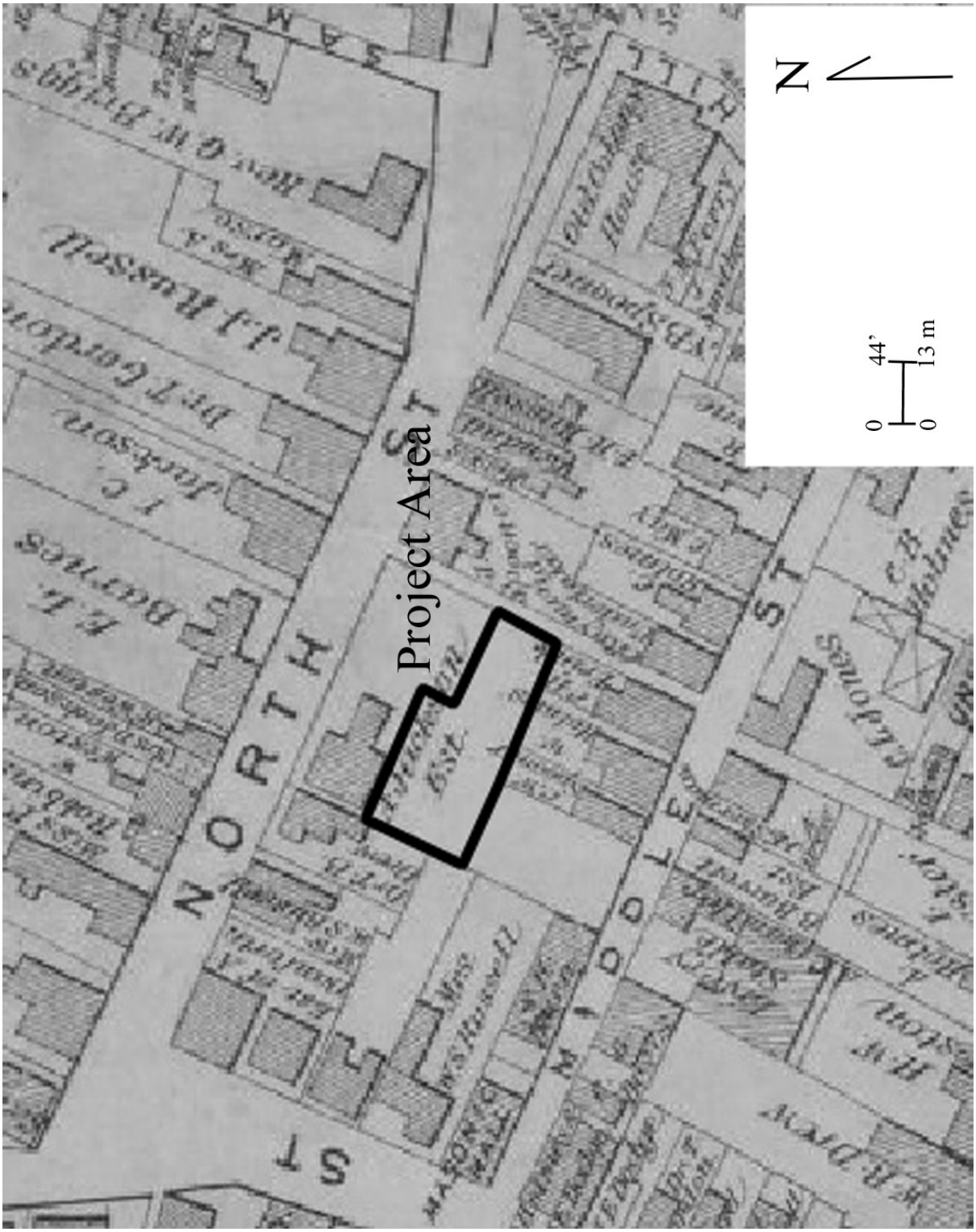


Figure 8. Project area shown on the 1874 map of Plymouth

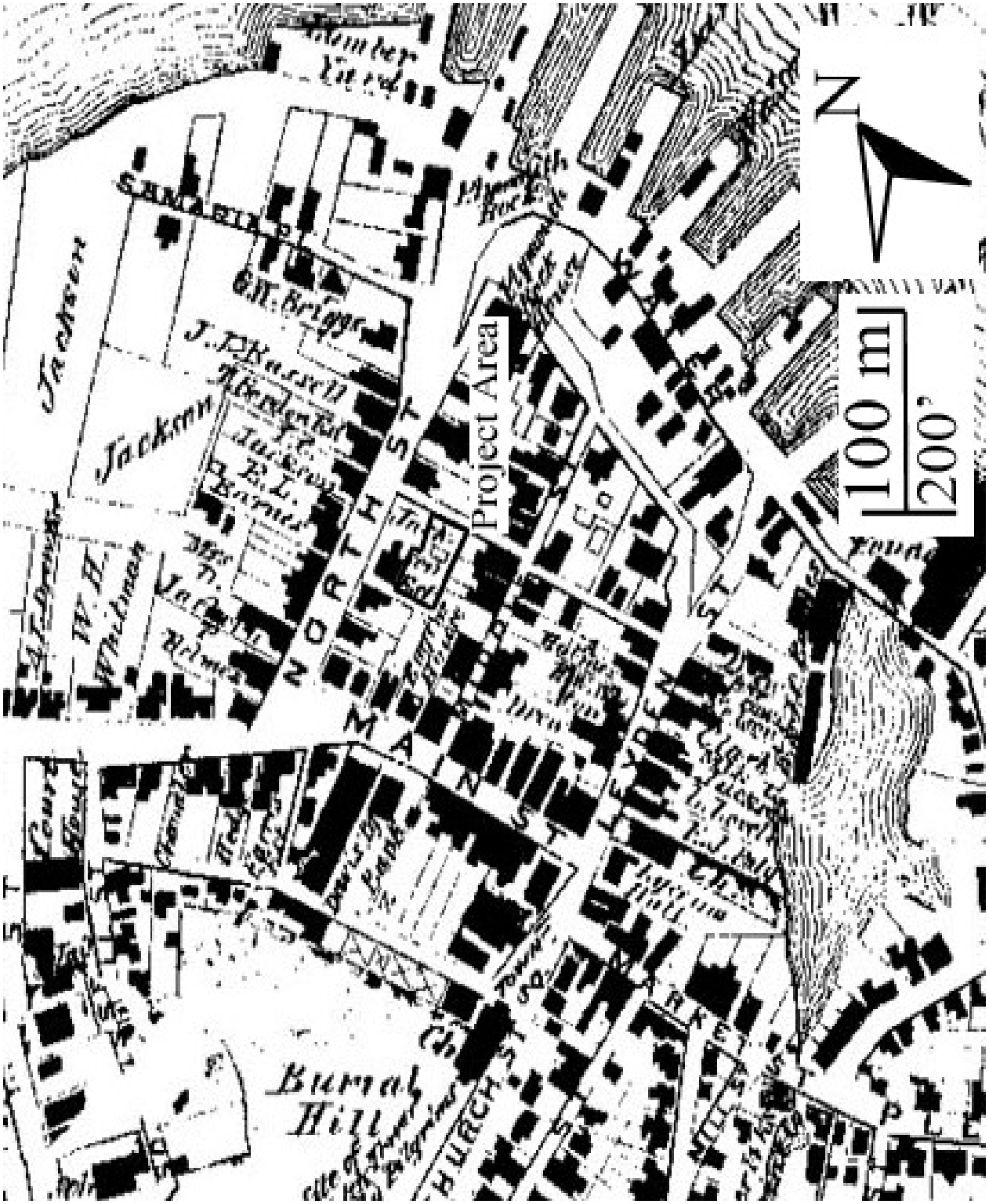


Figure 9. Project area shown on the 1879 map of Plymouth

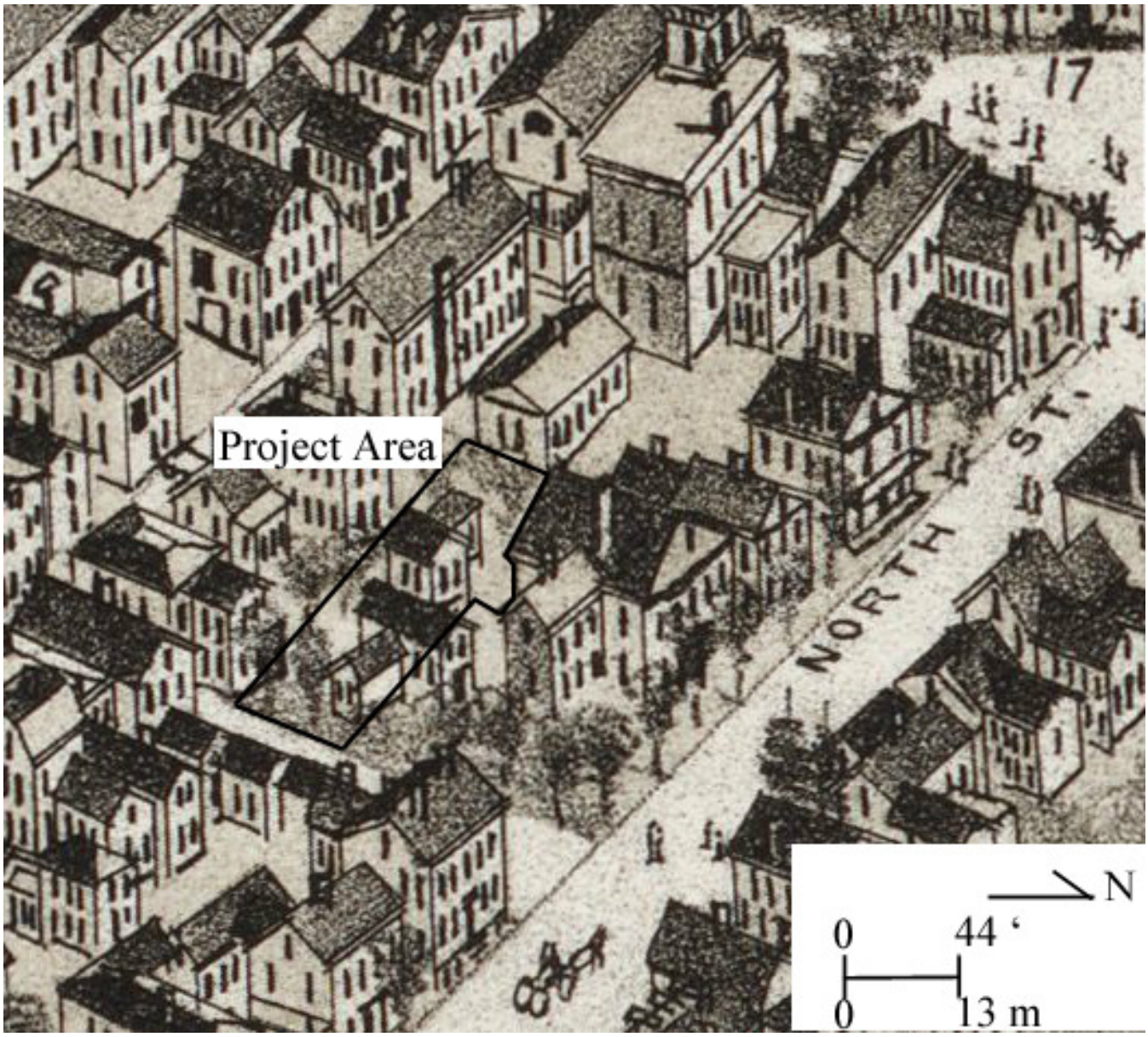


Figure 10. Project area shown on the 1883 lithograph of Plymouth

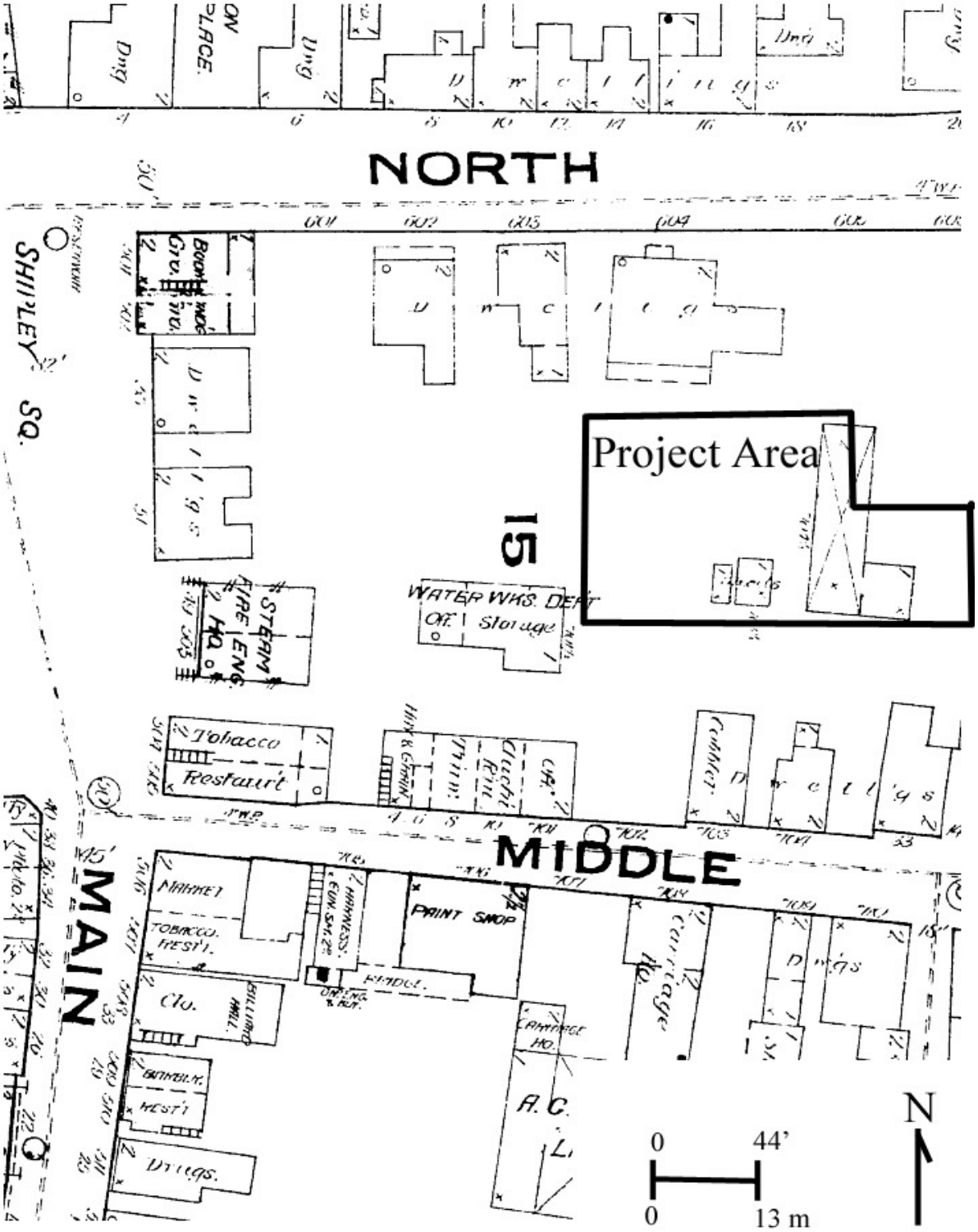


Figure 11. Project area shown on the 1885 Sandborn map

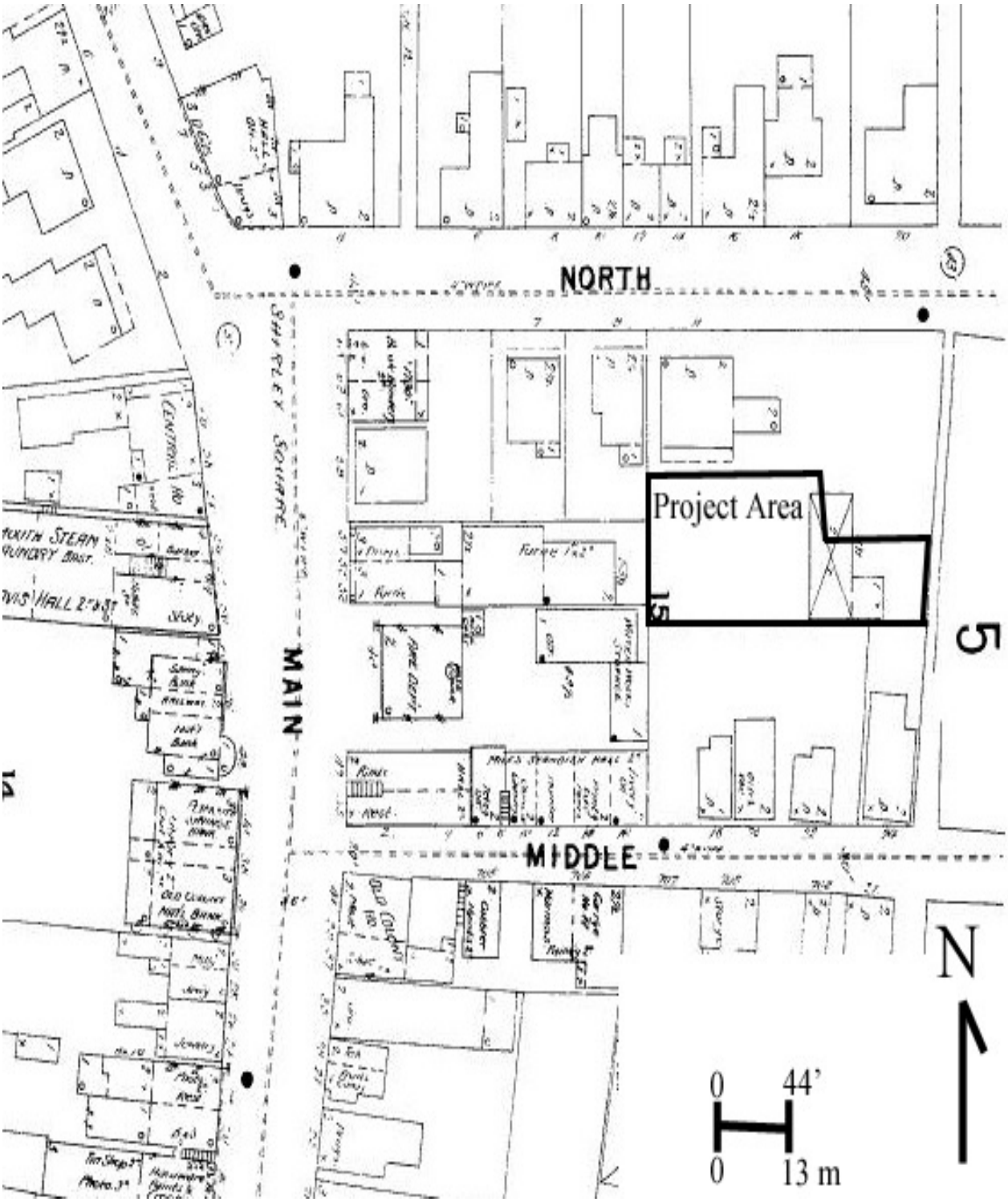


Figure 12. Project area shown on the 1896 Sandborn map

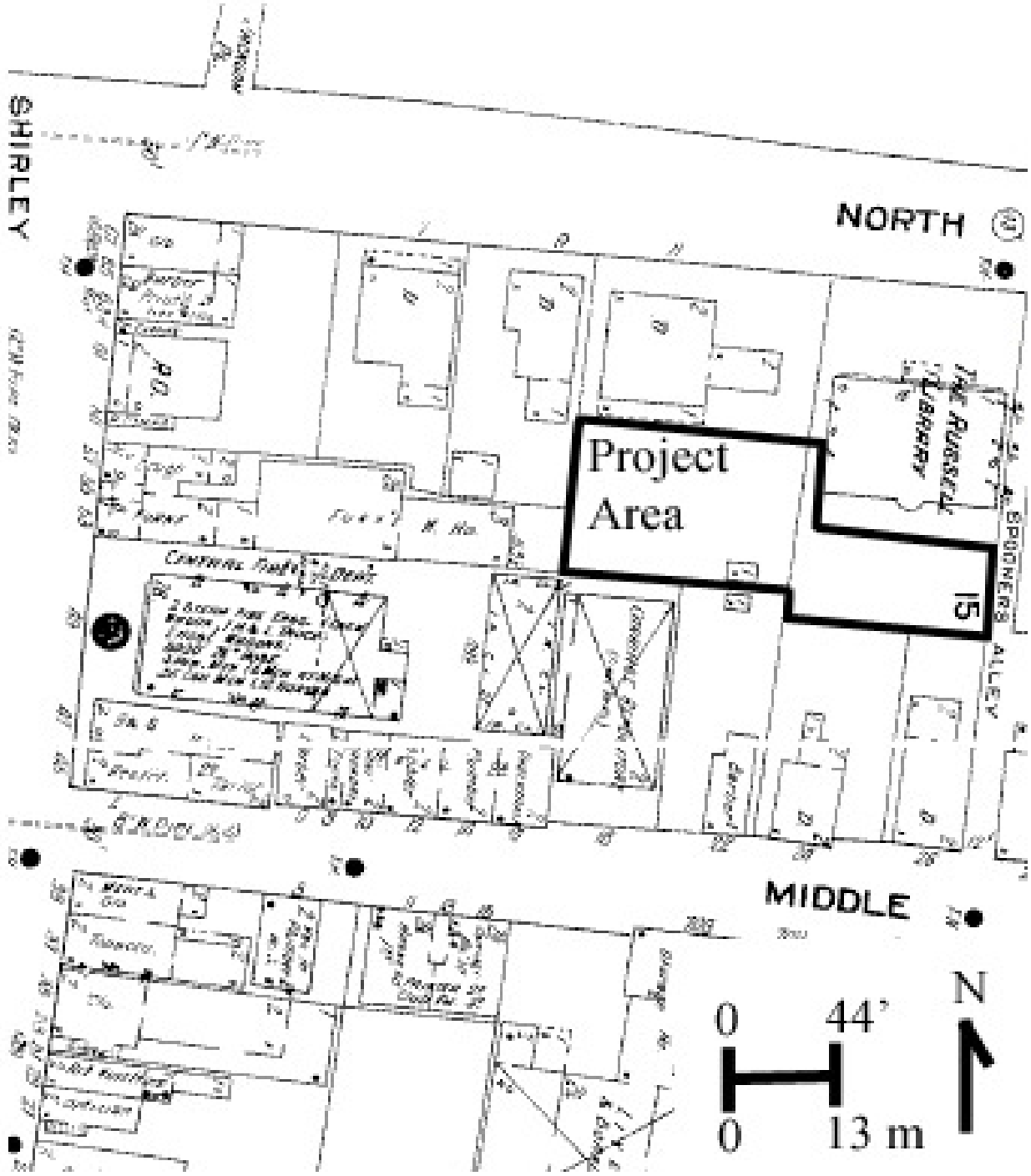


Figure 13. Project area shown on the 1912 Sandborn map

these maps. The 8 x 12 structure is shown being oriented north to south on the 1879, 1883, and 1885 maps, it is not present on the 1896 map, and is shown oriented with its long axis east to west on the 1912 map.

It appears that the 12 x 8 structure was apparently rotated 90° between 1879 and 1912, attaining it present orientation sometime before 1912 but after 1885. Two structures that appear to be the same shape, style, and size as the 11 North Street structure are visible on the 1883 lithograph. They are located directly across Spooner Alley to the east of the project area. The presence of these structures may offer support to the theory that small rectangular gable-ended structures were once common in downtown Plymouth and served utilitarian (privies or sheds) versus a unique (slave housing) function. A similarly sized structure is also present on the 1912 Sandborn map, again possibly indicating a structure of similar function. The 1883 and 1885 lithograph and map show a lean-to addition on the west side of the 12 x 8 structure behind 11 North Street. It is unknown what the function of this structure may be. An additional L-shaped house appears on the 1883 to 1896 maps. This structure is located to the east of the Jackson house just west of Spooner Alley. This house was subsequently demolished when the Plymouth Library was constructed in 1905. The lot is shown in its present configuration on the 1912 map.

The trolley lines were abandoned in the **Early Modern Period (1915-1940)** as roadways were improved and automobiles became more common. Plymouth airport was constructed in the 1930s on South Road. The need for an airport was a response to a new industry that was sweeping eastern Massachusetts- tourism. Plymouth's tercentenary celebration in 1920 established it as one of the historical places to go on vacation. It occupies a prime location between metropolitan Boston and vacation destination Cape Cod and the local economy responded by shifting to servicing tourist needs. Most of the town's ironworks had closed by 1906 and the waterfront was rehabilitated in preparation for the 1920 celebration. Outside of Plymouth center, cranberry, dairy, and poultry production flourished.

The 1927 Sandborn map shows the lot in it present configuration with the 12 x 8' structure being oriented east to west **(Figure 14)**. An early twentieth century photograph of the backyard of the house shows one of George Watson's Linden trees apparently in the center western portion of the yard **(Figure 6)**.

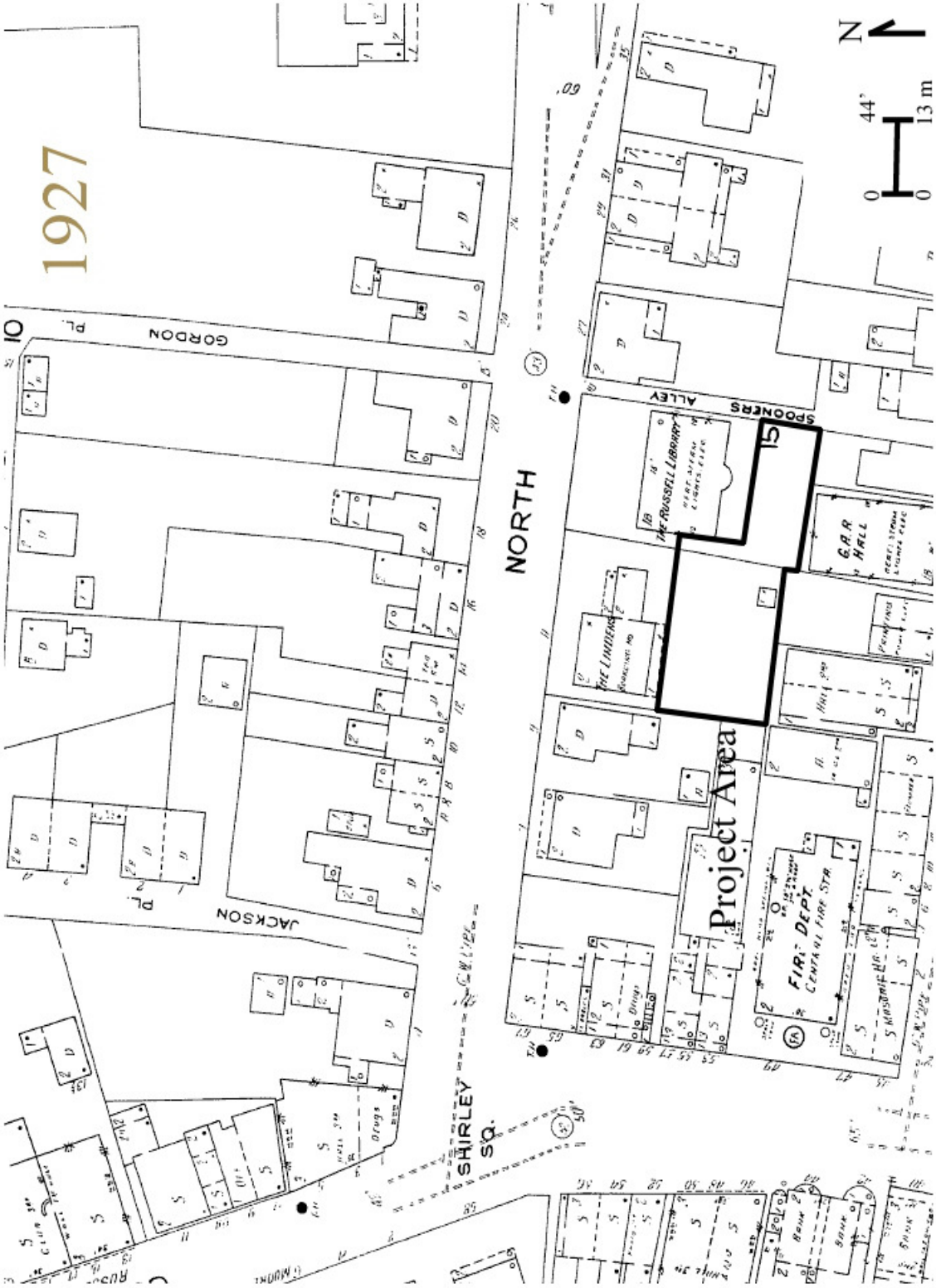


Figure 14. Project are shown on the 1927 Sandborn map

A. Known Historic Sites

A total of 17 historic archaeological sites have been registered within approximately two kilometers of the project area (Table 2).

Table 2. Historic archaeological sites within approximately two kilometers of the project area

Site Number	Site Name	Type	Period
HA-1	Brig Arnold Shipwreck	Maritime	18th century
HA-17	Plymouth Cordage Company	Industrial	19th-20th century
HA-27	Plymouth Aquaduct	Industrial	19th-20th century
HA-28	Lout pond Pump Station	Industrial	19th-20th century
HA-31	Fort Andrew	Military	18th-19th century
HA-33	Fort Standish	Military	19th century
HA-35	Site WW	Refuse Dump	19th-20th century
HA-38	Craig's Wharf	Maritime	19th-20th century
HA-40	Billington Street Dam	Industrial	19th-20th century
HA-44	Billington Street Dam	Industrial	19th-20th century
HA-45	Coles Hill	Residential	17th-20th century
HA-46	South Park Feature	Maritime	19th-20th century
HA-49	Harlow Old Fort House	Residential	17th-20th century
HA-50	Brewster Gardens	Industrial	19th-20th century
HA-51	George Fuller Homesite	Residential	18th-20th century
HA-52	Plymouth Mills	Industrial	19th-20th century
HA-53	Plymouth Aquaduct	Industrial	18th-19th century

Most of the identified sites are industrial or maritime in nature, which is consistent with the project area's location near the coast and near Town Brook, the former the location of the town's shipping activity and the later the focus of its industrial activity. Military sites are located across the harbor on Gurnet and Saquish and another unrecorded military fort was located on Coles Hill in the eighteenth century.

The project area I located within the Plymouth Village Historic District. The district is located on Winslow, North, Middle, Carver, and Leyden streets and represents the locus of original Plantation period settlement and subsequent permanent occupation. The Plymouth Village Historic District was added to the National Register of Historic Places in 1982 and comprises 350 acres and approximately 60 buildings. The buildings are typically two-and-one half-story wood-frame structures with gable roofs dating from the eighteenth to nineteenth centuries. The project area is listed as properties PLY.37 and PLY.38 on the list of historic properties in the district.

B. Historic Archaeological Potential

General historic settlement patterns have been developed for historical resources in New England and these can be used to help predict where historic archaeological sites may be found (Handsman 1981; Paynter 1982; Walbauer 1986; Wood 1978). Economic geographers have also formulated models on historic settlement that take into account variables such as proximity to water bodies, arable soils, granite outcrops, and gravel and clay beds (Haggett et al. 1977). Proximity to settlement concentrations, freshwater springs, streams and sources of waterpower also affect where people will settle.

Historic Archaeological potential can be stratified as follows:

High Potential: Within 100 m of a major transportation network, within 100 m of fresh water, within 1000 m of a settlement concentration and inclusion on historic maps;
Moderate: Within 100 m. of a major transportation network, within 100 m. of fresh water, within 1000 m. of a settlement concentration, but exclusion from historic maps;
Low Potential: >100 m of a major transportation network, >100 m of fresh water and >1000 m. of a settlement concentration

The project area is located to the south of an extant ca. 1833 house and contains one 12 x 8' building, possibly constructed as early as the middle to late eighteenth century. Soils appear to have been good enough for cultivation in the prehistoric to early historic periods. Historic cartographic evidence showed occupation as early as the eighteenth century while documentary research shows historic occupation beginning in the 1630s to 1640s. The project area is located in the historic Town Center core and appears to have portions that had always been open land. The project area is adjacent to North Street, a ca. 1630s road.

Considering these characteristics, the project area expressed high potential for containing prehistoric archaeological resources and high potential for seventeenth to twentieth century resources.

C. Slave Housing

Housing, as opposed to clothing and other more perishable elements of culture, is usually well represented and more visible archaeologically, and some see housing as the most sensitive indicator of class in eighteenth to nineteenth century America (Soltow 1992: 131). Other classes of material culture, ceramics, glass, faunal remains, etc., can be used to better understand the lifestyles of the inhabitants versus their use as status indicators. Catts and Custer (1990: 227) found that 450 square feet formed a convenient dividing line between the houses of the poor and those of the middle class. The examination of the size, structure and layout of the 12 x 8' structure, can provide insight into the social class and real status of this industrial period working class family. Conversely, some investigators see status as best indicated by social status followed by the quality of the house or residential area (neighborhood) (Spencer-Wood 1984: 35).

During the seventeenth century in the South and the North, slaves were fewer in number and were treated more as indentured servants than as slaves, leading to a greater level of racial mixing and social intimacy between master and slave (Davis 1999: 4). The increase in the numbers of slaves entering the southern colonies and large ports like Boston versus the relative paucity of slaves in a county like Plymouth, led to a dramatic change in how masters and slaves related to each other. Masters like the Royalls in Medford, created formalized layouts of their plantations with designs that allowed them to keep aloof from their visitors and servants, creating physical and social buffers between the two (Chan 2007; Upton 1984: 358). On larger farms and plantations, the masters created definite lines between the Big House and the quarters where the slaves lived. Masters viewed the world as they viewed their slaves, uncivilized and in need of control and order. To that end, masters built and housed house slaves near to, but separate from, the Big House in small dwellings that showed their ability to bring order to chaos and civilize the uncivilized. Field slaves were never expected to come near the Big House and thus their houses were near where they worked in the fields. The housing for house slaves was always of higher quality than that of the field workers. It was designed and built using Anglo measurements and traditional square or rectangular shapes that complemented the design of the Big House (Upton 1984: 360). The buildings that were close to the Big House were of three designs: small, square, one room designs that were typically square in plan; a two-room variety, essentially two small squares with a common fireplace between the two rooms; and a double-pen house of two stories high, often with the plantation kitchen on the ground floor and bedrooms for the slaves on the second story (Vlach 1993: 24). Documentary evidence (newspaper advertisements, building contracts, and court records) in the South indicate that slave housing could be as small as 12 x 8' and that dwellings larger than 16 x 20' were divided into to units (Upton 1984: 60). The double-pen house is the kind of slave quarter that the Royalls built at their plantation in Mendon. Field quarters by contrast were built by the slaves and offered an opportunity for them to attempt to recreate some semblance of the African culture they were taken from due to the lax of oversight by the Master.

It would be expected that housing located near the Big House, whether in the South or in the North, would be less reflective of any African elements versus quarters located away from it. It would also be expected that for house slaves it would be more difficult for them to openly maintain and express their African heritage than it would be for slaves living away from the Master's direct, daily oversight. As a result, it is predicted that in a county such as Plymouth, and possibly in the North in general, where slaves are believed to have been house slaves who lived in or in very close proximity to the Master, slaves would have less opportunity to express African heritage in the form of architectural styles, dress choices, foodways, and religious aspects than it would be for field slaves in the South. It is assumed that a Master would not allow his slaves to build their own style house in the immediate proximity to the Big House, as the slave house would be visible to the Master, his family, and the guests that they entertained. It is predicted that if a slave quarter was to exist near the Big House, if house slaves did not live in the house with the Master and his family, that the quarter house would reflect not the slaves' tastes in architecture but the Masters', as is the case at the Royall House.

To have a slave house that was patterned after a traditional African house in style or even dimensions it would have to mean that 1) the Master was either absent and never saw or cared about what was being done near the Big House; 2) the Master was extremely lenient and did not view himself as the master of these people he owned but saw them democratically as equals who were given a fair chance to voice their opinions and preferences in the Master's affairs; or 3) that the structure was built using African

dimensions or in an African fashion surreptitiously in an act of direct defiance and active, non-violent resistance to the desires and orders of the Master.

The late Dr. James Deetz excavated the portions of the Parting Ways site on the Plymouth/ Kingston line in Massachusetts in 1975 (Deetz 1977). Parting Ways is a parcel of land granted to a group of freed slaves in the late eighteenth century. Plymouth granted the 106 acres of land that was formerly the residences of Euro-American squatters, to four Revolutionary War veterans- Quamony Quash, Plato Turner, Cato Howe and Prince Goodwin. At least three houses were constructed and the site area also contains the burial ground of members of this community. Deetz's excavations led to subsequent interpretations that extensively highlighted elements of the material culture (architecture and artifacts) that he saw as clear evidence of the retention and expression of African cultural elements within this American environment. The placement of the community away from the center of Euro-American social and civic life, the town centers of Plymouth and Kingston, and the expression of these interpreted African elements- the perceived size of houses based on what was interpreted as a 12' golden measure, the use of what were interpreted as Tamarind jars, the lack of clear evidence of chimneys in the houses, the butchery techniques present on the faunal remains, and the placement of ceramic and glass vessels in the burial areas- were all taken as evidence that the inhabitants, while living in a Euro-American society, were recreating elements of their African heritage and culture.

This site was excavated during a time in American history when African-American pride was at a very high point after the struggles of the Civil Rights Era of the 1960s. The years of excavation, 1975-1978, were also significant as this project started just before the American bicentennial celebrations of 1976, and it was hoped that investigation of the site could help highlight African-American contributions to the founding of the country. The Town of Plymouth in 1974 had plans to build a new cemetery on the site and Marjorie Anderson became the leader of a group of concerned citizens who eventually persuaded the town to set aside 15 acres of land, including the graveyard and house sites, for archaeological and educational purposes. The grant of 15 acres was later expanded to include the entire 106 acres originally granted to the veterans and in 1979 the parcel was accepted for listing on the National Register of Historic Places. The site was also subjected to further testing in the 1980s by Constance Crosby and Dr. Stephen Mrozowski of the University of Massachusetts, Boston.

Deetz subsequently interpreted the data recovered from the site before field and lab work had even been completed and his interpretations have subsequently been used as the standard for any attempted interpretations of slave and post-slavery African-American experience in New England and elsewhere. As soon as he had made them, Deetz's interpretations came under scrutiny by archaeologists and historians who did not think that his findings were as cut and dry and he presented them in his 1977 work *In Small Things Forgotten*. The collection is currently being reanalyzed for a doctoral dissertation by a graduate student from Boston University. Deetz's interpretations may have been affected by a desire to help fuel the feelings of pride being expressed by African-Americans during this period and he may have felt that archaeology, his profession and specialty, was a vehicle to try to help African-Americans have a connection and claim to the past in a town, Plymouth, that was more famous for its Euro-American historical roots. This site, aptly named Parting Ways, could in fact reflect a parting of the ways for the traditional history of historic Plymouth, leading researchers away from the dead rich white guy archaeology of the past to the New Archaeology that focused on the underrepresented, people such as these freed slaves.

No final report was ever written on this site and the most extensive discussion of the project by Deetz was in *In Small Things Forgotten* (1977). Deetz stated that the dates of occupation for the site were 1790 to 1840 for most of the site, with one house being occupied into the early twentieth century (Deetz 1977: 192). The excavators identified one structure, the one that was occupied into the early twentieth century (called the Turner-Burr Homesite), as originally consisting of a 12' square cellar hole with a structure above it that was later expanded with a 12' square addition added longitudinally at a later time. This resulted in a building that measured 12' wide by 24' long (Deetz 1977: 192). No evidence of a chimney or hearth was found although one appears in an early twentieth century photograph of the house. A second cellar hole was identified, also measuring 12' square, this time with an external bulkhead, two dry-laid stone walls, and two wooden plank walls (Deetz 1977: 192). A third structure was found to measure 12' long by nine feet wide. It was of earthfast construction, having post holes at two corners and one in the center of each long wall. The interior of the structure was found to be 18" below the original floor surface. The presence of what was identified as clay associated with the structure was interpreted as being the result of walls that were daubed or of clay construction like certain African houses (Deetz 1977: 200).

Deetz cited work by John Vlach who compared traditional African vernacular architecture to American shotgun houses (Vlack 1990). Vlach stressed that in African society there was a strict repetition of what African farmer/architects would consider optimal space for a house. In Bight of Benin, 9 x 9' was the rule, in Angola, 8 x 8 or 10 x 10' was the optimum while in West Africa, 10 x 10' was most commonly used (Vlach 1990:124). This standard rule of architecture based on eight to ten foot squares that could be added on to each other to form linear strings or even end-to-end gathered groupings around central courtyards was interpreted as a result of a particular sense of dimension that dictated that rooms should be a consistently fixed size (Vlach 1990: 124-125). The Yoruba of West Africa were one tribe that contributed many persons to the slave trade to the New World. Common Yoruba house sizes were 10 x 20' and when transported to Haiti, the Yoruba built rectangular, wattle and daub, gable-roofed houses with the same dimensions they were familiar with from their homeland (Vlach 1990: 125). Vlach sees these as being the prototypes to the shotgun house, a longhouse built of consistently-sized rooms entered through a doorway on the gable end. He sees this house form as being directly transferred to New Orleans, where they are best known, by immigrants and slave from Haiti in the first decades of the nineteenth century (Vlach 1990: 129). Other researchers see these houses as arising from the popular one-room-deep house floor plan popular in the south, rotated and adapted to the narrow house lots in urban settings (McAlister, Virginia and Lee 1997: 90).

Colonial slave houses were commonly rectangular in shape with one or two small rooms with a total average house size being 365 square feet in Virginia and 209 square feet in South Carolina (Ferguson 1992: 72-73). Room sizes that were 9-11 feet wide, which are common in South Carolina, are closer to the West African norm, versus rooms that were 15-24 feet wide, as was common in Virginia slave housing, which is closer to the Euro-American norm (Ferguson 1992: 73). Ferguson also related the native Africans preferred living outside and having small houses with dirt floors and, central fires and few openings and that slave housing in the South reflected this (Ferguson 1992: 81).

Slave vernacular architecture in Barbados also had a West African origin, as reported by Handler and Bergman (2009). Here slave housing was found to commonly be rectangular, single story, and often with a thatched roof (Handler and Bergman 2009: 4). Recorded dimensions were 12 x 25', 12 x 30', 10-

15' by 25', 13 x 23' and 12 x 21' (Handler and Bergman 2009: 10-11). Houses were recorded as typically being comprised of one to three rooms with two rooms divided by a wooden partition. One room was used for sleeping by a married couple, while the other was a general purpose room that also served as the sleeping room for the children (Handler and Bergman 2009:11). As should be clear, while the 12 foot measurement did occur in both Vlach and Handler and Bergman's studies, sizes varied and finding a measurement of 12 feet in a house does not automatically indicate that it was built by African Americans or with a West African floorplan in mind. Twelve-foot measurements used in non-African colonial building construction were not as rare as Deetz thought. A 1675 Plymouth Colony work order for a watchhouse on Burial Hill stipulated the following:

> "....the said watchhouse... is to be sixteen foot in length and 12 foot in breadth and eight foot studd to be walled with board; and to have 2 flores the upper flore to be six foot above the lower flore; and he is to batten the walls and to make a smale paire of staires in it and to fram two smale windowes below to make 2 gabels to the roofe or eachsyde one, to cover the roof with shingle; and to build a chimney in the said house; and to do all the worke thereunto..." (Pulsifer 1861: 147).

Unfortunately, Deetz did not identify any evidence of sills or foundations associated with the cellar holes he excavated and in the absence of any in situ evidence of sills or foundations, he assumed that the houses existed only on top of the cellar hole, the walls of which would have served as foundations. He unfortunately had forgotten his experiences just a few years earlier at the C-06/ William Bradford III and the C-21/ Allerton site where he identified cellar holes but no evidence of hearths or foundations. The dimensions of these cellar holes were 10 x 10' for the C-06 site and 11 x 11' for the C-21 site. At neither site did he declare that these houses were occupied by African-Americans or that the dimension corresponded to the dimensions of the Yoruba houses cited by Vlach. At both of these sites he assumed that post-occupation forces, demolition, robbing of foundations and reuse of architectural materials, had erased the traces of these elements. Cellar holes beneath Plymouth Colony houses came in a variety of sizes with size likely dictated more by need and use versus ethnicity. Cellars are also not present in traditional West African houses, so the identification of a cellar, a non-traditional African architectural element, at a site indicates either that the traditional vernacular architecture had been modified with American architectural influences or that the architecture may not be African in origin.

The ceramics from the site were interpreted to emphasize the impoverished position of the freed slaves, even though Deetz patronizingly interpreted them as representing hand-outs by wealthy Plymouth families to the poor former slaves. This was due to the fact that he interpreted the material as dating too early for the perceived occupation of the site- ca. 1790-1840 (Deetz 1977: 198). Howe's estate was rated in 1820 when he applied for a government pension. At this time, his estate was valued at 27 dollars and later when he died in 1824, his estate was probated and appraised at $61.82 1/2, a modest sum for the time but definitely not the completely destitute.

Deetz also saw the presence of the unglazed storage and transportation jars in one of the cellars as being important indicators of the African or at least the West Indies origin of the freed slaves. He described the jars as

> "Eighteen inches tall, of red, unglazed, well-fired clay, their shape and physical characteristics immediately set them apart from the entire Anglo-American

> ceramic tradition. These jars were made in the West Indies, and served as sugar containers for shipment to various colonial ports. They are also said to have been used at times for storing and shipping tamarind, a West African cultivated fruit that was grown in the West Indies. By a striking coincidence, during the same season as the Parting Ways dig and again a year later, similar vessels came to light. At least four were found in a contemporary trash pit in Salem, Massachusetts, and one came from a site in Portsmouth, New Hampshire. Their initial discovery at Parting Ways suggests that they might well relate to the African and West Indian background of the people who lived there. In the New Hampshire case, there were blacks living in the household represented by the site. And of course Salem was an important port town in the nineteenth century, dealing in a wide range of West Indian commodities." (Deetz 1977: 198-199).

Salem, of course, was not the only port town to deal with a wide range of West Indian commodities, as both Plymouth and Portsmouth were as well. This leads to the probability that the jars may be more reflective of merchant shipping and access by people to goods from locations such as the West Indies, versus indicating African affiliation. It is most probable that jars such as these will not be found in contemporaneous sites located away from the coastal ports, and as a corollary they should be most common in port town contexts. The excavators at the site in Salem, the Narbonne House, recovered fragments from at least six identical jars from three deposits dating to the 1790s (Moran et al 1982: 93). Noel Hume stated that the exact origin of these jars is unknown, but that an Iberian origin was suspected while the Narbonne House researchers found that similar vessels were used in Jamaica to collect and store rainwater (Noel Hume 1969:144; Moran et al 1982: 93). Even if they were used to ship tamarind, by the late eighteenth to nineteenth century, this was a product that was consumed by everyone, no matter what ancestry, eventually becoming one of the ingredients in Worcestershire sauce. Tamarind were first described in England in 1633 and by the late eighteenth to nineteenth century were widely grown in the West Indies where they were processed and stored in jars between layers of sugar (Phillips 1820: 344).

Faunal remains recovered by Deetz were also considered to be a sign of poverty (Deetz 1977: 204). He said that the bones were chopped versus sawn and that a "large number of cow's feet, which make up the majority of the animal bone" were recovered (Deetz 1977:204). Deetz made his conclusions 1) before excavations were completed, 2) before any formal analysis of the faunal remains had been carried out, 3) from a biased and completely late 20th century interpretive position. He felt that cow's feet were of little value to Anglo-Americans, a statement that completely ignores recipes such as mince-meat and neat's foot jelly, common foods for any table in the period, but uncommon in the late twentieth century. Deetz's succinct statements about the faunal remains also ignores the context of the remains. Where they were found, did they represent butchery or kitchen waste? The presence of more chopped bones than sawn appears more indicative of home butchery versus purchased meat cuts. It could thus be used as an argument for greater self-sufficiency versus poverty.

The degree to which Deetz's interpretation of the Parting Ways site has affected other interpretations can be seen in Vernon Baker's interpretation of the Black Lucy's Garden Site in Andover, Massachusetts. The site was identified by Bullen and Bullen while they were conducting an excavation

at an adjacent prehistoric site. It was subsequently reported in 1945 in the Bulletin of the Massachusetts Archaeological Society (Bullen and Bullen 1945). The site consisted of a 10'2" x 11'6" cellar hole, a large artifact dump to the southwest of the cellar hole, a well, a possible vegetable cellar (although it is not stated why they would need this as they already had a cellar) and a later logging camp shack. Bullen and Bullen found no evidence of any foundation stones around the cellar, but did find the cellar hole with many abundant stones that may have been foundation stones that were thrown into the hole to help fill it (Bullen and Bullen 1945: 1). They also failed to find any evidence of a hearth but found a concentration of stacked brick in the cellar that they interpreted as a possible hearth (Bullen and Bullen 1945: 2). Ceramics were found to consist of transfer printed wares, edged wares, hand-painted wares, and mochaware in creamware, pearlware and whiteware pastes. Vernon Baker, after essentially rehashing all of the Bullen's findings regarding the historical context of the site, took their work and combined it with Deetz's finding from Parting Ways (Baker 1980). Baker came to the conclusion that Black Lucy's house fit in to the same 12' African pattern as Deetz's houses at Parting Ways, stating that 10'2" x 11'6" is close enough to 12 by 12 to be considered the same "Lucy's cottage clearly fits the 12-foot pattern" (Baker 1980: 35).

D. Outbuildings

Outbuildings can be defined as "purpose-built structures designed to do a single task and to do it well" (Olmert 2009: 3). Numerous types of outbuildings could exist to support a household including kitchens, laundries, smokehouses, dairies, privies, offices, dovecotes, icehouses, shops, barns, and stables. The number and type of outbuildings that can be expected on a property is believed to be directly related to the status of the property owners and occupants and the needs of the household. Properties with numerous support buildings existed in Plymouth center from an early date as is evidenced by a deed of conveyance from Edward Winslow to merchant Thomas Wallis in 1639:

> "The ixth of December 1639.
> MEMORAND That Mr Edward Winslowe doth acknowledg That for and in
> consideracon of the sume of six score pound s to be payd him by Mr Thomas
> Wallis merchant ....hath freely and absolutely bargained & sould vnto the
> said Thomas Wallis All his dwelling house & garden place the backhouse
> in the end thereof wth the fould yard now adjoyneing as the same is now
> taken in and the outhouse on the banck side & the land lying betweene the
> p'misss and the waterside as farr as the garden & fould yard do extend
> wth all & singuler thapp'tencs to the said p'miss belonging & euery pt &
> pcell thereof and all his right title and interrest thereinto & euery pt thereof
> except liberty of ingresse egresse & regresse for the said Edward Winslow
> his heires and Assignes in the said fould yard to his barne and stable wth
> liberty also to lay manure in the said yard and also except the land lying
> northward from thend of the said barne & stable to the streetward and little
> pcell of land lying at the south end of the said barne, and liberty likewise to
> take away the fruit trees when he pleaseth now growing in the said garden. "
> (Records of the Colony of New Plymouth 1861: 50).

Winslow's property, which is believed to be the same parcel allotted to him in 1620/1621 when the first colonists arrived, along with the lot to the south of him (John Cooke's lot), included his house with a garden with fruit trees to the west, behind it, a fold yard adjacent to the house, and a backhouse (or bakehouse?) at the end of the garden, as well as outhouses further to the west along the bank side of Town Brook. A barn and stable were located within or at the opposite side of the fold yard.

The century from the middle eighteenth century to the middle nineteenth century can be seen as the era of the outbuilding in Virginia and possibly in New England as well. Outbuildings were most often located in back yards, often being clustered to resemble small villages with "...its buildings knit together by similar design and building materials" as the main house (Olmert 2009: 2). Suites of outbuildings were arranged in linear rows, C-shaped configurations or even squares with their own courtyards behind the main house (Olmert 2009: 15). Two separate work zones are often created as a result of the configuration of the buildings. Kitchens, laundries, slave quarters, and dairies open on to a relatively clean zone which also opened towards the back of the house. Buildings such as smokehouses, places where dirtier work was done, opened onto an industrial work zone with a higher amount of surface refuse and which faced away from the back of the main house. The creation of these two zones in the yard behind the main house "...suggests further hierarchical structures and boundaries within the known classes of owners, family, paid craftsmen, servants, and slaves." (Olmert 2009: 17).

Little identified evidence of outbuildings has been found on New England archaeological sites. This is in large part due to New England archaeologists' reluctance or financial means to open large areas around houses in all but exceptional cases, such as at the Narbonne House in Salem or during the archaeological work conducted in association with the Central Artery project in and around Boston. The lack of archaeologial evidence of outbuildings may also be the result of a restricted use of such buildings in the North versus the South due to the incorporation of the functions of outbuildings in the South under the roof of the houses in the North. The addition of ells and lean-tos to the rear and cellars beneath many smaller New England houses in the seventeenth and eighteenth century created the space needed to perform tasks associated with outbuildings in the South. Lean-tos added to the rear of single-cell or hall-and-parlor houses took the cooking out of the hall into the lean-to with adjacent rooms serving as dairies and chimneys serving as smokehouses.

Cellars were used for a variety of functions that were traditionally carried out in outbuildings in England. Cellars were not an invariable component of house design. The set of early seventeenth century English traditions that the early colonists of Plymouth brought with them did not include an idea that every house needed a cellar. On the contrary, it has been found from the study of the inventories made upon death of people in the areas in England from which the early colonists originated, that the cellar was usually absent. It has been shown that the cellar was a novel idea in East Anglia (England), the place where the greatest percentage of colonists originated (Cummings 1979: 29). Abbott Lowell Cummings' study of 189 probates dating between 1633 and 1700 from mid-Essex England found that in only 10 instances was the presence of a cellar noted and that the first was not reported until 1686 (Cummings 1979: 28). In Plymouth Colony, cellars occurred in 30% of the probates that were reviewed by James and Patricia Deetz in their study of vernacular architecture (Deetz and Deetz 1998). In the Massachusetts Bay Colony, Cummings found that fully half of the inventories he reviewed contained cellars (Cummings 1979: 30). As noted earlier, the probates reviewed from mid-Essex indicated a low occurrence of cellars. What these probates lacked in cellars they made up for in

specialized service rooms, specifically the buttery and dairy or milk house. Butteries were specialized storage areas, usually within houses, where liquids such as beer, wine, rum or butter were kept. Later they became synonymous with pantries. Unlike the buttery which was a place of storage, dairies or milk houses were places of production where milk was set to let cream rise to the top and butter and cheese were made. Abbot Lowell Cummings looked at 189 probate records from mid-Essex for the years 1635-1700. He found that the buttery was almost invariable in its occurrence but that the dairy or milk house only occurred in about half of the inventories (Cummings 1979:28). The mid-Essex butteries were found to often contain items not usually associated with butteries such as cooking and serving equipment while milk houses were found to contain items such as powdering tubs, which were used for salting meats (Cummings1979:28). It would be expected that with the prominence of dairies and especially cellars in mid-Essex, then early New England houses should also have had butteries and dairies in relative abundance This has not been found to have been the case in either Plymouth or the Massachusetts Bay Colony.

Both Plymouth and Massachusetts Bay colonies had moderate to high instances of cellars, with cellars accounting for the greatest percentage of service rooms out of the four. In Massachusetts Bay butteries appeared more than twice as often as in Plymouth Colony (12.8% vs.5%) while in Plymouth Colony dairies appeared almost twice as often (10% vs. 4.9%). Both colonies had almost the same percentage of occurrence of lean-tos. Cummings interprets the low occurrence of butteries and dairies in Massachusetts Bay as having been the result of these specialized service rooms having been absorbed into the larger world of the hall and kitchen and the lean-to (Cummings 1979:29). Eventually, this was replaced by the pantry. He feels that this was due to the frontier nature of New England (Cummings 1979:29). Cummings felt that the freezing cold New England winters necessitated the need for a room where liquids could be kept cool but above freezing. As a result, the underground cellar was used almost immediately for this purpose. Deetz and Deetz , on the other hand, felt that the evidence of the Plymouth inventories did not support this interpretation. In their study, they saw cellars as being "… invariably used to store a variety of goods." (Deetz and Deetz 1998).

The lack of outbuildings in New England is also related to financial means, as only the most prominent citizens could afford the construction of ancillary structures and the upkeep of slaves or servants who would work in those buildings.

Privies, also called necessaries, temples, jakes, boghouses, little house or house of office, varied widely in style, shape and construction depending on who built it, where it was to be located, and who would be using it (Olmert 2009:118). Privies can be of two types, Pit and Box. Pit privies consist of a deep hole over which the privy house is situated. Once the hole becomes filled or too odoriferous, a new pit was dug nearby, the privy building was simply moved over the new privy pit, the old pit was back filled with refuse and/ or soil and business went on as usual. Pit privies were considered very unsanitary due to the ease which they can contaminate the underground water supply. Box privies consisted of a privy building erected over either a shallow pit or trench or even raised above bare ground, any of which were used to receive the waste. The box privy most often had a door on the backside from which the waste could be periodically shoveled and/ or scraped out. The waste was then carted off-site to be used as fertilizer. Because the waste was removed from the site, these were considered more sanitary and perhaps better suited for urban environments.
To the well-to-do late eighteenth to early nineteenth century merchant or professional, the privy was

designed to be as comfortable and as well-made as the houses in which they lived and at Williamsburg, which is well known for its well-ordered, well-designed collections of plantings, well-made outbuildings and pathways that make up the back gardens, privies were prominently displayed (Olmert 2009:120). In fact, those behind the Wythe House look very similar to the structure at 11 North Street. The prominent places given to privies in the back gardens of the well-to-do can be seen as an attempt by the users of these structures to elevate a necessary house to a fixture of architectural eminence "an elegant garden folly deeply at odds with its reality." (Olmert 2009:122).

On Viginia's Eastern shore at a plantation called Bowman's Folly, Olmert describes

> "a privy finished to a very high style, with a gable roof, beaded weatherboards, and gracefully curved cornice stops. Flanking the door are two small windows with double-hung sashes, four lights over four. Inside, are four seats neatly fitted into impressive wainscot paneling. Above the level of the paneling, the walls are plastered, as is the ceiling which forms a shallow barrel vault overhead. The two adult seats and-just 4 inches lower-the two child seats, all have hinged covers." (Olmert 2009:124) **(Figure 15).**

The Bowman's Folly privy is believed to date to the late eighteenth to early nineteenth century. Across Chesapeake Bay from Bowman's Folly at Port Royal, Virginia was another, almost identical, privy. It was also dated to the same period (Olmert 2009:125).

Privies in Williamsburg were found to measure 8 x 8 feet at the Grissell Hay house, 9 x 5 feet at the Tayloe House, 8 x 10' at the John Brush House and 12' 1¾" x 8' 1¼" at the Dr. Barraud House (Olmert 2009:127, 128; Knight 1942). Shallow pits or no pit at all were found beneath most of the Williamsburg privies with an 18" pit beneath the Geddy House privy being considered an extremely deep privy pit (Olmert 2009: 129). Olmert reports that excavations in Williamsburg have found few traces of any privies whatsoever, leading to the speculation that people either used box privies which were cleaned out on a regular basis, or that people used chamber pots and then spread their yield out across their yards (Olmert 2009: 129).

As stated previously, the late Dr. James Deetz conducted excavation in downtown Plymouth in the 1970s and identified several probable privies in a back lot off of School Street. Excavations at the Narbonne House in Salem identified ten large features in the yard behind the structure (Moran et al 1982: 43). Five of these were grouped together along the eastern property line and were interpreted as probable privy pits. All five of these pits (Features 22, 23, 25, 26, and 27) varied in depth from four to six feet. Feature 22 had wood framing holding up the sides and Feature 25 had shallow trenches in the bottom, which were interpreted as possible evidence of wooden walls here as well (Moran et al 1982: 47). These pits were found to date to the Hodges period of occupation (1750-1780) in the case of features 23, 25, and 26, and the Andrews period (1780-1820) for feature 22. The remaining five pits (Features 8, 13, 14, 21, and 24) were somewhat scattered across the property and dated from the late eighteenth to mid nineteenth century.

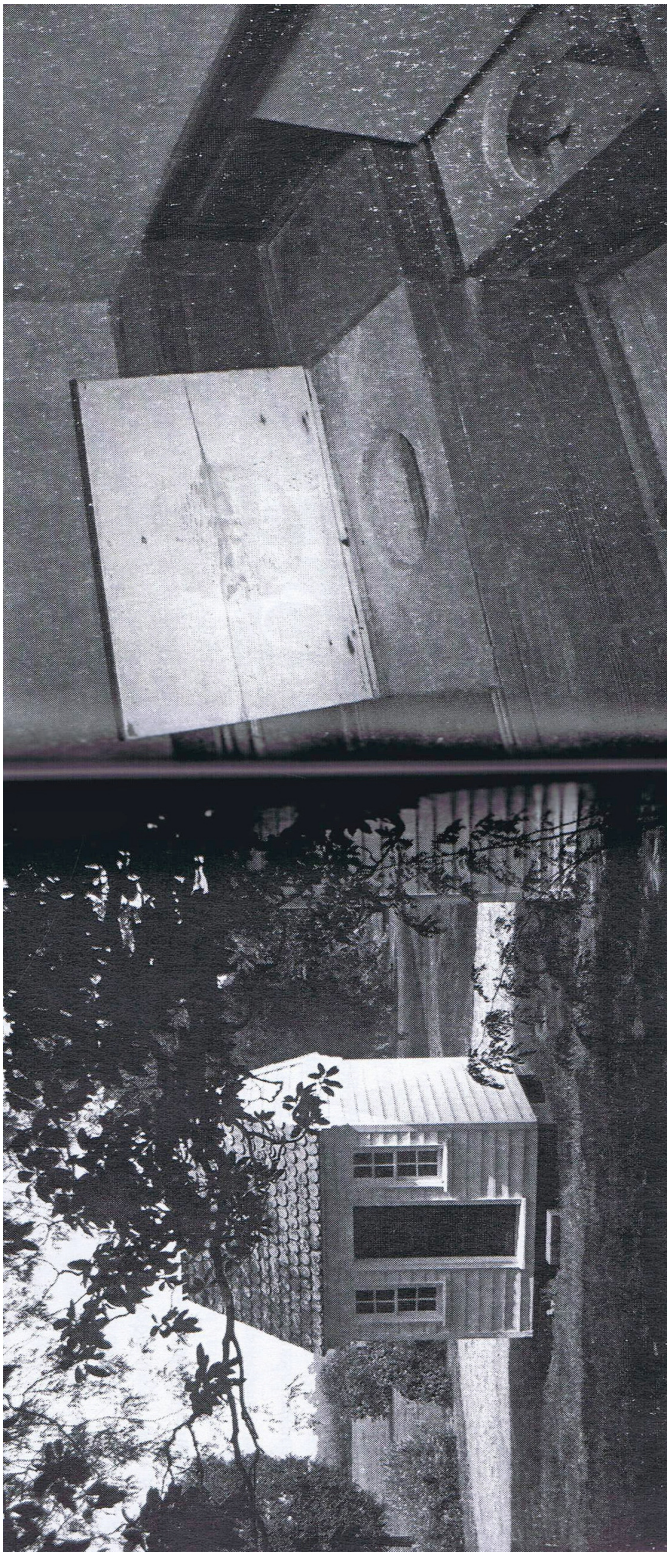


Figure 15. Virginia privy similar to 11 North Street structure (Olmert 2009)

These pits were identified as being trash pits versus filled privies but they in fact shared many of the same characteristics with the pits that were identified as privies. Feature 8 (colloquially termed the Moran Hoard by the excavator) was located 25 feet from the house in the middle of the yard, just south of the dairy. This feature extended to a depth of four and one half feet below the surface and did not have any wooden sides. The Turner Hoard (Feature 14) was located 30 feet to the rear of the house against the west property line. This pit was found to be five feet square and was framed with wood. The bottom was five and one half feet below the surface (Moran et al 1982: 47). A small mid nineteenth century pit that was also framed with wood was found on top of the Turner Hoard (Feature 13). The Hebb Hoard (Feature 21) was square in shape, 37 inches wide, 38 inches long and 28 inches deep with no wooden supports. It was located five feet east of the property line (Moran et al 1982: 47).

Dairies were places where milk was processed into cream, butter, and cheese, and as such, cleanliness was of the utmost importance here. Most commonly these buildings or rooms had stone or brick-paved floors located 2-3 feet below grade to help keep the dairy products cool, plastered or whitewashed interiors to help combat dirt and often insulated walls (Olmert 2009: 93). Dairy sizes in Virginia ranged from 4 x 4 feet to 12 x 12 feet for squares and 6 x 4 to 12 x 8 and 12 x 10 feet for rectangular structures (Olmert 2009: 93). Dairies usually lacked windows, instead having long horizontal openings high up on their walls below wide eaves, giving the whole structure a toadstool-like appearance. The lack of windows and wide eaves aided in passive cooling in the summer (Olmert 2009: 95).

At the Narbonne House in Salem, excavators encountered a four foot square unmortered brick paving within a dry-laid fieldstone foundation (Moran et al 1982: 35). Artifacts found associated with it dated its destruction to circa 1760 and its use was determined to be a dairy. No other dairies have been identified archaeologically in Massachusetts. This may be a result of the trend discussed above where the cellar or a room beneath a lean-to addition on the rear of the house served that function.

Offices appeared in the late eighteenth century and were used as a way of "demarcating the business of lawyering or farming from the chaos of the family" conferring a sense of privacy while bolstering the image of the owner as a serious lawyer or plantation owner (Olmert 2009: 4). Offices were traditionally placed to the right of the front of the house (Olmert 2009: 147). They were often constructed on properties belonging to judges and lawyers and were a way to separate work from family life. Offices were finished the same way as a house would be and had chimneys as part of their standard equipage. The function of the office may have been incorporated into the study or library that was sometimes found among Plymouth Colony houses of the better off. The study was a room that was often found in parsonages and well-off yeoman farmers in the English midlands (Deetz and Deetz 1998).

Smokehouse, like dairies, were another small outbuilding more often found in the South than in the North. In its most basic sense, a smokehouse was a small enclosed building where a fire could be kept smoldering and smoking for days or weeks. Meats, especially pork, was hung in here in order to preserve it for long term storage within the same structure. Out of necessity, smokehouses lacked windows and had doors that could be tightly sealed. Smokehouses became popular in Virginia in the eighteenth century (Olmert 2009: 76). They were typically eight to 14 feet square with steep pyramidal roofs for hanging meat and a firebox in the middle of a dirt floor (Olmert 2009: 76). No smokehouses have been identified in New England and the smoking of meat may have been done inside the kitchen chimneys.

Kitchens are where foods were prepared into meals to be served to the family of the house. In the typical household, the women of the family prepared the foods for the family, thus making the kitchen the realm of women. In larger, wealthier households, male and female servants and slaves prepared the food in the kitchen and served it to the masters of the house from the kitchen. In New England kitchens were attached to or were within houses and "there wasn't as pressing a need to keep the races separate" (Olmert 2009: 5). Kitchens in the Tidewater were a badge of power and often one of many buildings whose very presence implied that the master owned a large number of slaves to staff them (Olmert 2009: 5). While separate kitchens were common in Virginia, in New England only in the wealthiest households, like the Royalls of Medford, would an entire building separate from the main house be built for this purpose. Kitchens were generally rectangular in shape and contained a large hearth on one wall and an oven either built into the hearth or located on the exterior adjacent to the house. At the Royall house, as often happened on Virginia plantations, the second floor of the detached kitchen served as the sleeping place for the family's slaves. In houses where the kitchen never left the main house, slaves often slept in the attic of the house. It is said that in the house in Middleborough built by Judge Oliver for his son, Peter Oliver, Jr., (the old Sproat house at Muttock), there are apartments in the attic for the slaves of the family (Weston 1906: 101).

Laundry preparation was originally done under the same roof in well-to-do houses in Virginia and new England. During the eighteenth century, the laundry was moved outside to its own one room structure in which cooking was also often done (Olmert 2009: 53). Eventually, the laundry was moved to it own wash house in the wealthiest households. Separate wash houses are not recorded in New England. The layout of the wash house was similar to that of the kitchen with a large hearth and rectangular ground plan.

Dovecotes, while found in Virginia, were never common in New England. These buildings were used to house doves that provided feathers, meat and manure for their owner's use. Dovecotes were octagonal, square and more often, round structures up to ten or twelve feet high, although they could be much smaller resembling large multi-room bird houses, where the doves were kept. It is possible that chickens were more commonly kept in New England to provide the same resources that were harvested from the doves.

V. PREVIOUS ARCHAEOLOGICAL SURVEYS IN PLYMOUTH TOWN CENTER

One research-oriented and two cultural resource management surveys have been conducted in the vicinity of the project area. The late Dr. James Deetz carried out excavations in 1970 at the C-13A site, located in a lot off of School Street behind a store at the base of Burial Hill in downtown Plymouth. His goal was to locate traces of the seventeenth century colonial occupation like palisade or houselot evidence. While he does not appear to have located any seventeenth century material he did find a series of four wood-lined pits. He initially reported that they could be privy holes or holes to store ice, but eventually opted for an alternate interpretation that they were specifically created to dispose of refuse in the eighteenth and nineteenth centuries. The pits were described as being five feet square and averaged six feet deep (Anonymous 1970). It is unclear why he felt that people would want to dig a square pit and then carefully line it with wood if it was only to be used to dispose of trash. It is much more probable that these were pits beneath the privy that served the house and business adjacent to the east of the lot fronting Main Street. One pit was lined with sawn boards and was believed to date to the mid to late eighteenth century. Included in this pit were a slipware posset pot, eight tin-glazed chamber pots, white salt-glazed stoneware plates, mugs, and bowls, local redwares, tin-glazed fireplace tiles, and sets of Chinese porcelain tea bowls and saucers as well as wine bottles. Metal artifacts included two George II halfpennies dated 1735, a three-legged cooking pot, a pewter spoon, and iron fire tongs. The second pit dated to the early nineteenth century and was lined with cedar logs and contained creamware and pearlware plates. It was adjacent and cut into the first hole and contained a Vermont penny dated 1786 as well as glasses, bottles and a collection of 40 drinking tumblers. The third pit was also five feet square, lined with boards, but contained mostly soil. The fourth was timber-lined, five feet square and dated to approximately 1900.

Deetz interpreted these and other similar pits from sites dating to after ca. 1750, as representing a deliberate decision to bury their refuse versus broadcasting it across the lot as was more typical before that time (Deetz 1977:126). Deetz attributed this to a “compulsion to order” that he saw as part of the Georgian world view (Deetz 1977: 126). Privies are discussed in more detail in the section below, but suffice it to say that pit privies are known from the seventeenth century in Massachusetts and their occurrence and use may have more to do with population density than with an enlightened notion regarding how one should get rid of their trash.

The University of Massachusetts Amherst Archaeological Services (UMAS) conducted an intensive survey on four parcels in downtown Plymouth in 1999 (Donta et al 1999). Testing consisted of the hand excavation of 50 cm square test pits, five 50 cm wide by two meters long trenches, and one machine excavated trench. The areas tested were the South Park and the North Park, both located on Water Street at the base of Coles Hill, Coles Hill and the Pilgrim Society lot across Carver Street from Coles Hill proper, and the edge of the parking lot at Memorial Hall. This survey was conducted in Pilgrim Memorial Park along Water Street, and at the adjacent properties, because proposals were being considered for the construction of a visitor center and various improvements in the area. Testing at the South Park, located at the base of Leyden Street, consisted of the excavation of three 50 cm wide by two meter long hand-dug trenches (Donta et al 1999: 30). The entire South Park area was found to consist of multiple fill layers deposited before approximately 1920 and possibly as early as the early nineteenth century. One feature, a possible foundation of large rounded cobbles, was encountered at 112 cmbs in Trench E (Donta et al 1999: 35). Excavators hypothesized that this foundation related to

one of the wharf buildings that individuals erected in the nineteenth century. One possible prehistoric modified bivalve shell tool was recovered from nineteenth to twentieth century fill deposits during the testing conducted at Trench F in this area (Donta et al 1999: 33).

The year prior to UMAS's testing at the North Park where the Mayflower II is berthed, wooden foundations determined to have been associated with the Jackson wharf (1850s-1890s) were disturbed during the construction of the public rest rooms in the park (Donta et al 1999: 26). UMAS's testing strategy was to excavate a series of trenches to further delimit that wharf and to encounter some of the buildings that cartographic research showed were once in the area. As a result of time constraints, only one trench was excavated and it failed to find any traces of any wharves or buildings (Donta et al 1999: 26). Numerous unconsolidated fill layers were discovered though, resulting in several instances of wall slump into the open trench (Donta et al 1999: 26). One prehistoric stone pestle was found within one of the nineteenth to twentieth century fill deposits (Donta et al 1999: 27).

Testing on top of Coles Hill and at the Pilgrim Society lot across Carver Street yielded evidence of pre-Contact through twentieth century use of this part of Plymouth. A total of five 50-cm-square shovel test pits and three 50 cm wide by two meters long hand-excavated trenches were excavated here. One trench (Trench C) was located six meters north of the Sarcophagus Memorial on Coles Hill. This trench encountered fill deposits that overlaid a dry-laid stone wall that may be associated with walls encountered during the testing at the Pilgrim Society lot across the street (Donta et al 1999: 41). Prehistoric artifacts recovered from this trench consisted of flakes, an edge tool, a ground stone tool fragment, a core, a biface, and a possible Squibnocket Triangle point (Donta et al 1999: 41). All were recovered from fill deposits. Historic artifacts dated from the nineteenth to twentieth centuries.

Testing on the Pilgrim Society lot encountered intact soil horizons, all of which, except those in Trench B, STP 1 and STP 4, were beneath fill layers containing a mixture of prehistoric, seventeenth, eighteenth, and nineteenth century artifacts (Donta et al 1999). Excavation of STP 1 revealed a deep brown silty sand that probably was an intact A1 horizon beneath a similarly colored and textured fill layer. This fill and A1 deposit extended to a depth of 80 cmbs and overlaid an orange brown B1 horizon. Excavation of STP 2 revealed a mottled brown and yellow brown coarse sand layer that extended to a depth of 142 cmbs. This layer probably consisted of a mixture of brown fill soils like in STP 1, buried A1 soils and B1 soils. The orange brown B1 subsoil was excavated to a depth of 150 cmbs below that upper disturbed fill (Donta et al 1999: 38). Excavation of STP 3 revealed a 28 cm deep brown sandy loam fill that overlaid a tan sand fill. The tan sand overlaid a probable Buried A1 horizon that dark brown (10YR3/3) in color and gravelly sand in texture. The top of the probable A1 horizon was at 64 cmbs. The soil profile revealed by the excavation of STP 4 was of a 24 cm dark brown (10YR3/3) A1 horizon that overlaid an orange brown B1 horizon that was excavated to a depth of 68 cmbs. Excavation was ceased when a large rock was encountered at 68 cmbs covering the floor of the unit. STP 5 yielded a profile similar to STP 3 with a dark brown (10YR3/3) sandy loam fill extending to a depth of 24 cmbs. The dark brown (10YR3/3) fill overlaid a light tan coarse sand fill that extended to a depth of 44 cmbs. This second fill layer overlaid a gray brown coarse sand that was excavated to a depth of 100 cmbs. This lower layer may represent a fill layer on top of a buried A1 horizon. Artifacts recovered included numerous prehistoric artifacts, and seventeenth to twentieth century historic materials. The excavators reported that the artifacts all appeared mixed with no clear temporal separation. Unfortunately artifact analysis was extremely limited and did not include significant

information about the historical material recovered, aside from the presence of generic ware types (redware, creamware, whiteware, pearlware, etc.). No information was provided about decoration, vessel form, or glaze colors.

Excavation of Trenches A and B encountered a dry-laid stone foundation in parts of both trenches. These were interpreted as being part of the Jackson/ Dickson house built ca. 1802 on this lot (Donta et al 1999: 40). This house was reported to have replaced an earlier seventeenth to eighteenth century house referred to as Caswell (Donta et al 1999: 40). What appears to be an intact prehistoric possible midden deposit was encountered in Trench B. This feature was described as greasy, black, organic, silty coarse sand that was 30 cm thick and contained charcoal, fire-cracked rock, lithic tools, and Small Stemmed and Squibnocket Triangle style projectile points (Donta et al 1999: 41). This deposit appears to have been located within the A1 horizon and rested on top of the intact B1 horizon, possibly indicating that it dated to the Late Woodland to Contact period versus the Late Archaic period as suggested by the recovered points. No radiocarbon dates were submitted for this feature and no flotation samples were collected or processed.

Excavations at Memorial Hall were limited to a narrow area between the street and the parking lot. Fill deposits dating from the late nineteenth to twentieth centuries were encountered (Donta et al 1999: 44). No intact horizons were encountered and excavations extended to a depth of 100 cmbs.

The Public Archaeology Lab (PAL) conducted and intensive survey of the Brewster Gardens Park in 2006 prior to town-planned improvements to the area. Testing consisted of the excavation of either 58 or 59 (both numbers were cited in the report) shovel test pits placed at five to 10 meter intervals on four judgmental transect and as individual judgmental test pits (Chereau and Bonner 2006: i). Testing was conducted on the south and north banks of Town Brook and layers of fill dating to the 1920s landscaping and filling of portions of the brook were encountered. Testing on the south bank identified two late nineteenth to early twentieth century timber and fieldstone-walled probable privies. These were determined to have been associated with stores and dwellings that fronted Sandwich Street to the southwest (Chereau and Bonner 2006: i). Testing on the north side of the brook identified several below ground structural features and fill strata. These were determined to have been associated with eighteenth to late nineteenth century industrial activities (ropewalk, barrel factory) located in this area and visible on contemporary maps (Chereau and Bonner 2006: i). One middle to late nineteenth century trash deposit, possibly representing another privy, was identified on the north bank at a level slightly higher than the industrial features.

UMAS's excavations to the south and east of 11 North Street reinforces the hypothesis that intact areas of undisturbed soil horizons still exist in downtown Plymouth. It is predicted that the soil stratigraphy at 11 North Street may be expected to be similar to that encountered by UMAS at the Pilgrim Society lot. Deetz's and PAL's surveys show that privies appear to have been common occurrences in downtown Plymouth in the late eighteenth to early twentieth centuries.

VI. FIELD METHODS AND STRATEGIES

A. Theory

The development of the goals and research questions for the Site Examination followed a cultural/ historical geography research approach as defined by the National Parks Service. The cultural/ historical geography research approach places emphasis on four main concepts: process, function, context and the vernacular (USDI 1980: 11). **Process** is defined as the way in which cultures, and on a smaller scale, individual site occupations, develop in time and place. The need to understand the **Function** and the functional organization of the occupation at a site examines the systems (social, economic, religious and political) and communities (local, regional, and national) within which the occupation occurred. Functional analysis is combined with a well-researched historical and social **Context** to provide an understanding of the individual occupations in terms of changing socio-economic patterns from which they emerged and operated within. Cultural resources must not be investigated in isolation, but as part of a larger, dynamic, contextual system of local and regional patterns. Finally, the **Vernacular** is the everyday event, the commonplace ways in which the vast majority of people have lived and continue to live. The vernacular, popular, and folk cultural manifestations and elements of communities and landscapes should be considered at least as important as the high styles of material culture.

On a broad scale, Site Examination investigations should be designed so as to "give a preliminary definition of the size, data contents and spatial arrangement of artifacts and features for the purpose of assessing the site's integrity, research potential and significance and in order to make an opinion of the potential eligibility of the site for inclusion in the National Register" (950 CMR 70.04: MHC). The research orientation of the Site Examination at the 11 North Street project area seeks to investigate the relationships of the site's inhabitants to the natural, social and cultural environment within which the site was situated. This geographically oriented framework has the advantage over more implicit approaches in that it "...focuses attention on the operation of past cultural systems in the environment, the areal expression of these systems in the cultural landscape, and the material expression of the past cultural systems in its formal associations." (United States Department of the Interior [USDI] 1980: 11).

Determination of Site Significance

The determination of the significance of the 11 North Street project area was made by examining the size, data contents and spatial arrangement of artifacts and features with the final product being a recommendation regarding the potential eligibility of the site for inclusion in the National Register (950 CMR 70.04: MHC).

Site Boundaries

PARP archaeologists determined the boundaries of the site based on topographic features, concentrations of artifacts, and property bounds.

Site Integrity

A preliminary assessment of the site's integrity was made through the excavation of 50 cm square shovel test pits along a five-meter grid pattern across the project area. Site integrity was further refined during the site examination through the determination of the presence or absence of intact subsurface features and deposits. These deposits were expected to take the form of cellar holes, trash deposits, post holes and post molds, foundation and sill trenches and possibly wells or privies. Judgments regarding the integrity of the site was based upon the content and extent of the intact activity areas, stratigraphy or horizontal separation of materials, and the preservation of features and organic material. The content and preservation of the spatial arrangement of artifacts and features formed the basis for the assessment of the site's research potential and significance.

Research Potential

Research potential for this site was assessed by examining how individual artifact classes, and the site as a whole, can add to what is known and what can potentially be known about urban homesites and their place in the local, regional, national and international markets, history, and culture during the eighteenth to nineteenth century.

At the most essential level, historic sites can be considered significant if they have intact, spatially and temporally distinct features; superstructures were destroyed in a catastrophic versus organized dismantlement or abandonment fashion; and if there is a good documentary record of the occupants living at the site (Wilson 1990: 30). Wilson saw the best sites as being those with a good documentary record because on of the keys to understanding the site lies in the examination of readily available primary and secondary sources and then placing the sites within a broad geographical and socio-economic context (Wilson 1990: 23). He also considered it important that a site was occupied for a period of under 20 years because short-term occupations potentially have analytical clarity, although at the same time, as a result of the short-term occupation, they may have lower visibility and lower artifact counts (Wilson 1990: 30). A site with a high potential for being able to significantly answer questions at the local, regional and national levels (a "good " site in Wilson's discussion)would be one which had a rich documentary record, was occupied for a short period of time and was destroyed by a major catastrophe such as a fire. A site with a low research potential (a "bad" site in Wilson's discussion) would be one that had a minimal record of occupation, evidence of major rebuilding at the same location, destruction through house cleaning coupled with a complete removal of the house superstructure. The site will prove especially significant if discrete deposits attributable to specific periods in the site's occupation can be identified during the Site Examination. This will allow for a focused examination of the change in lifeways by the site's inhabitants over time.

The vast majority of historic archaeological sites are not those associated with the Washingtons, the Bradfords or the Rockefellers, they are the ones associated with the Smiths, the Does, and the Jones, the common everyday citizens that built this country. In the past, archaeology had more implicit evaluative parameters which tended to place emphasis on cultural resources with outstanding merit or association and not those of the everyday person. The research objectives of the Site Examination investigations at the 11 North Street project area have been designed to examine the ways in which the behavior of the inhabitants was structured on a variety of scales within local, regional and national systems.

Research questions sought to be investigated by the Site Examination include the general questions of wealth, self-sufficiency, vernacular architecture, and landscape/ homelot use :

1. **What traces of the Native occupation of this part of Plymouth are present at the site and how do these relate to the evidence of native occupation found elsewhere in Plymouth? Can the prehistoric material recovered be used to investigate the economy of the Native inhabitants and the degree of sedentism represented at this site?**

Extensive occupation by Native people has been recovered from the Plymouth Harbor area and from previous surveys conducted close to the current project area. It appears from cartographic and the narratives of early explorers and settlers that Plymouth was a substantial Native community prior to the settlement of the area by the colonists in 1620. What is not known is the extent of the community and the nature of its occupation. It is hoped that the current investigation, when combined with previous research, will help to determine if the Plymouth area represents a base camp that has been repeatedly occupied since at least the Late Archaic period, as has been found at other community center/ village sites (Chartier and Donta 2012; Chartier 2007).

In order to understand the distribution of sites, it is important to consider the settlement systems that were employed by the prehistoric inhabitants. Generally, populations in southeastern Massachusetts changed from semi-nomadic hunters and gatherers to more sedentary horticultural populations over time. This change is evident from the distribution of known archaeological sites through time. Environmental change since the last Ice Age, led to increased diversity and stability over time, with the period of the fourth millennium (ca. 4,000 BP) being the time of maximum stability (Dincauze and Mulholland 1977). Beginning in the Late Archaic and concurrent with stabilizing environmental conditions, there was a shift from a simple foraging economy to a more complex collecting logistic strategy. Changes in economy throughout the prehistoric period have been explored through the use of two main models, one of which is territorial based and another which is logistical based.

Four behavioral aspects are associated with these models: 1) the geographic range of activities carried out by groups; 2) the specialization of resource procurement; 3) the function of specialization in the manufacture and maintenance of tools; 4) the bulk processing and storing of resources. The geographic range and minimum possible territory for a community was hypothesized by the Public Archaeology Laboratory Inc. during their I-495 survey (Thorbahn et al 1980), as 10 km for day trips, the minimum distance to another adjacent community would be 20 km, making the minimum local territory approximately 60 km (three times as large as the distance to next closest community) (Thorbahn et al 1980: 169). This means that archaeologically, the materials represented at a site came from five potential spatial intervals from the base camp: 1) on site; 2) off site local (10 km); 3) off site territorial (30 km); 4) non-local regional (100 km); 5) remote regional (300 km).

The **Territorial model** was first proposed by Dincauze (1980). This model hypothesizes that the response to increasingly stable, predictable and abundant resources in the fourth millennium BP, was marked by a reduction in foraging territories. Territory sizes were large during the Paleo-Indian and Early Archaic periods, but they shrank from 8,000 to 4,000 BP due to local groups becoming increasingly specialized at exploiting resources. After 2,500 BP, the environment became less stable

and swidden horticulture was adopted as a way to maximize the return from these new smaller territories. A more generalist approach to exploiting the hinterland of the community came into fashion. Without the limits caused by reduced foraging and hunting territories after the fourth millennium, populations could have just expanded their subsistence area to cope with environmental instability. Now, because one community occupied one specific area, expansion without ensuing conflict (e.g. warfare) with neighboring communities, was more difficult. As a way of maintaining social cohesion and relationships, an intensification of the use of predictable, controlled resources was a better option to expansion. After 2,500 BP, adoption of swidden horticulture led to relatively permanent, high density settlements in core areas of arable land with foraging continuing over large areas that then became the community hinterlands.

In Dincauze's Territorial model, a decrease in foraging territory size correlates with increasing specialization of resource use in a stable, diverse and high resource dense environment. This should be visible archaeologically by a highly functional and diverse set of tool assemblages across space and through time. On both a seasonal and millennial scale, linked small territories will develop exchange networks for the procurement of essential and useful commodities unavailable locally. This exchange network will be partially visible through the occurrence of non-local lithics used for tool production, as well as an increase in non-local high status items.

In contrast, Binford (1980) proposed a **Logistic** based model. He hypothesized that hunter-gatherers have two distinct strategies available to them in time of environmental stress: move their base camp to key resources, or move their resources to the base camp. The Logistical organization of the hunter and gatherer settlement system reflects the size of the group and the duration of the occupation. This model predicts that in the face of increasing spatial and temporal variation in resources, such as those faced by New England Natives after the fourth millennium, hunter-gatherers are most likely to chose the second option, moving resources to a base camp. Binford termed this foraging and collecting. Foraging is characterized by low spatio-temporal variation in resources and high population mobility. Base camps are provisioned by individuals or groups moving between locations in the immediate vicinity (catchment area) of the base camp. Foraging is coupled with collecting, which is when the same base camp is maintained, but there are also field camps, stations and caches at a greater distance from the base camp. These collecting locales are maintained by smaller task groups who procure and process key resources in high bulk for use by all in the community. This model is concerned with the behavior of hunters and gatherers over their entire range, regardless of the group size. In Binford's model, territory size is not significant to logistic camps because he did not see a constriction in foraging areas over time. Binford explained an increased number of artifact concentrations at certain sites as being the result of tracking- the tendency for a group to return to the same spot year after year due to specific characteristics of the sites that make it attractive for recurrent settlement. People chose to use the site because it was attractive, not because they had fewer options for occupation.

Three types of sites are predicted for this type of system: **Residential Base Camps (RBC), Foraging Locations (FL),** and **Field Stations (FS)**. At RBCs, large groups of people within the community congregate for weeks or months forming the base to which resources foraged and collected in the local area are concentrated for redistribution. Within a hunter-gatherer territory, several of these RBCs exist for use during the course of the year. RBCs should not be functionally specific but should be places where a full range of activities related to the manufacture, processing and maintenance take place. FLs

are places where people from the RBCs hunt and collect wild plants for use at the RBC. FLs are occupied for short periods of time, generally a day or less. FLs can be functionally and seasonally specific and have low archaeological visibility (i.e. low artifact density and little spatial cohesion of artifacts and features at one place). The third type of site, the FS, is a site where special task groups collect large quantities of resources (e.g., herring runs). These are occupied for longer periods of time, and are located more than one day's walk from the RBC. The FS resources are stored or processed and transported back to the RBC. FSs and caches are functionally specific for the kinds of activities carried out there and the season when they were carried out. Overall, because FS were occupied for a longer period by a larger number of people, there should be evidence of a range of activities comparable to that found at RBCs. Both RBCs and FSs should be marked by indications of high bulk procurement and processing of resources. After 3,000 BP there appears to have been an increase in the FLs and FSs possibly due to the fact that if territories were expanding then the increase in special task group occupations indicates that there was a concomitant increase in the complexity of the logistical organization of the settlement systems (Thorbahn 1984: 219).

During a CRM study for the I-495 project, Peter Thorbahn (1984) had an opportunity to test both the territorial and logistical models with data from the Taunton Basin in southeastern Massachusetts. Thorbahn found that territory sizes changed over time. They were large from 9,000 BP to 4,000 BP when they shrank, only to expand after 3,000 BP. After the beginning of the Early Woodland, he also found that instead of becoming more specialized with decreasing territory area, as predicted by Dincauze's territorial model, groups underwent generalization creating fully developed, highly complex, logistic systems by 3,000 BP (Thorbahn 1984: 236). Logistical organization for the Early to Middle Archaic was unclear but there appeared to have been an increase in complexity during the Late Archaic to Early Woodland, and that overall, both Dincauze and Binford's models were supported. Approximately 10,000 BP the Paleo-Indian to Early Archaic inhabitants of southern New England operated within large group territories with low logistic complexity and low population density. Their resource economy was relatively specialized and exploited a limited range of resources. This was reflected in a low diversity of tool inventories per site (Thorbahn 1984:255).

Environmental stress as a result of a lowered water table during the hypsithermal climatic period led to high resource heterogeneity causing human groups to adopt a highly specialized approach to resource exploitation within localized habitats (Thorbahn 1984: 255). Territory sizes were still small at 4,000 BP, logistical complexity had increased to a medium level, but population density was still low. A more diverse tool inventory reflecting tool complexity and a generalized approach to resource utilization was evident during this period. At ca. 4,000 BP, territorial sizes were at a minimum with the minimum area for a group being approximately 1,040 square kilometers. Thorbahn (1984) estimated each RBC was located within 20 km of another. This indicated there were approximately 34 groups of 20 to 50 people each in southern New England (Thorbahn 1984: 253).

2. What traces of the pre-Watson occupation of the site are present and is it possible to infer anything about the earlier inhabitants of the property from the material encountered?

The project area lies just north of where the Plymouth colony's 1622 palisade is conjectured to have been located (approximately near what is now Middle Street) and was an area that was probably farmed

by the colonists as early as the first spring. The first record of construction on or in close proximity to the project area was in the 1630s to 1640s and it has been continuously occupied since.

3. What was the socio-economic level of the Watsons and/ or the Jacksons as reflected in their consumer choices (ceramics, glass, and faunal)?

One of the theoretical basisese of the Site Examination at the 11 North Street project area will be to examine how the physical remains recovered (artifacts, architectural evidence and evidence yard space use) can be used to link these physical remains to processes such as status display, wealth, homesite organization and economy in the seventeenth to late nineteenth centuries. The examination of status and wealth will follow the theoretical and methodological basis outlined by Gibb (1996).

The study of consumer behavior attempts to link artifacts to historical processes such as status, display, and class conflict (Gibb 1996: 1). In order to investigate how occupants of a site expressed these, Gibb focused his investigation on the siting of the household, the creation, maintenance and modification of architectural spaces, internment of dead, and choices of crockery (Gibb 1996:2). Consumer behavior investigators such as Gibb see these as direct attempts by the household to maintain their identities and/ or to achieve identities and forms to which they aspire with household members making decisions guided by prescribed roles within larger social, cultural and economic contexts (Gibb 1996 2, 16).

Wilks has pointed out some of the limitations of a consumer behavior model of studying historic households and houselots: the household is not a corporate entity with well-defined bounds and motivations and cannot be investigated as such; the household is not isolated and autonomous, but is embedded within a wider reference of social and economic networks; individuals within the household have different degrees of household membership; the household economy is always abridged by law, custom, community; and there is no function that is universal to all households (Wilks 1990). Other weak points to a consumer behavior based study of households and houselots are that internal and external influences that affect the household (social class, ethnicity, family marketing efforts) are often not controlled for or investigated (Henry 1991).

4. To what degree was the family self-sufficient and to what degree did they rely on the larger local, regional, national and international markets? What was the nature of the relationship between the Watson and Jackson households and their neighborhood and town spheres of interaction?

One of the research questions for this project involves the degree to which this household, which was within Plymouth center and was the home of known merchants during the Watson and Jackson occupations, was involved with the local market economy. This question revolves partially around the occupant's degree of self-sufficiency. The nature and degree of rural inhabitants' self-sufficiency, be they farmers or laborers, rests not on economics but on attitudes. Rural inhabitants could and did often produce their own food, fuel, and furniture but no one really believes that they were totally self-sufficient. Food, firewood, and clothing do not survive well archaeologically and the most common artifacts we are generally left with to investigate socio-economic position are often those, which specifically had to be produced at the markets- glass, ceramics and metal items. In many ways this does not make consumer goods purchased at the market a good indicator of the overall standard of living enjoyed by the people who used them. Overall it has been found that consumer produced goods

accounted for only a small percentage of total household expenditure in the nineteenth century (Friedlander 1991; Klein 1991). But, if the purchase of consumer goods, thus relatively lower degree of self-sufficiency, was a high priority for inhabitants of any economic level, then this should be reflected in a high occurrence of such items in an assemblage. If, on the other hand, the purchase of matched sets of ceramics or of the finer or finer looking tea sets was not a high priority of the inhabitants, if they were more interested in helping their families or in having time to spend in communal projects, then the percentage, quality and types of market produced goods present at a site may reflect this.

The real question is whether and to what degree did rural inhabitants make economic decisions that would maximize their profits and increase their purchases of consumer goods with regards to maintaining their economic independence and preserving strong relations with their neighbors.

5. Does the architectural style of the 12 x 8' structure suggest an African origin for it? Is there any evidence (documentary or archaeological) that can link it to either the Watson occupation or more specifically to the slaves that they were known to have owned? If it is not associated with the Watson's slaves, what function did it serve?

In order to answer the question of whether this small structure could represent an eighteenth century slave house, an investigation into what sort of slave housing would be expected was made. During the seventeenth century in the South and the North, slaves were fewer in number and were treated more as indentured servants than as slaves, leading to a greater level of racial mixing and social intimacy between master and slave (Davis 1999: 4). The increase in the numbers of slaves entering the southern colonies and large ports like Boston versus the relative paucity of slaves in a county like Plymouth, led to a dramatic change in how masters and slaves related to each other. Masters like the Royalls in Medford, created formalized layouts of their plantations with deigns that allowed them to keep aloof from their visitors and servants creating physical and social buffers between the two (Chan 2007; Upton 1984: 358). On larger farms and plantations, the masters created definite lines between the Big House and the quarters where the slaves lived.

The architecture of the structure at 11 North Street was compared to known examples of slave and freed slave housing in the South and the Comparisons will be made with housing styles and patterns identified by Ferguson (1992), McAlister, Virginia and Lee (1997) Upton (1984) and Vlach (1990, 1993) for southern architecture and Baker (1980), Bullen and Bullen (1945), Chan (2007), Deetz (1977), for northern slave and freed slave architecture.

Another possible interpretation of the North Street structure is that it is some type of outbuilding associated with either the Watson or the Jackson households. Outbuildings can be defined as "purpose-built structures designed to do a single task and to do it well" (Olmert 2009: 3). Numerous types of outbuildings could exist to support a household including kitchens, laundries, smokehouses, dairies, privies, offices, dovecotes, icehouses, shops, barns, and stables.

Little identified evidence of outbuildings has been found on New England archaeological sites. This is in large part due to New England archaeologists reluctance or lacking financial means to open large areas around houses in all but exceptional cases, such as at the Narbonne House in Salem or during the

archaeological work conducted in association with the Central Artery project in and around Boston. The lack of archaeological evidence of outbuildings may also be the result of a restricted use of such buildings in the North versus the South due to the incorporation of the functions of outbuildings in the South under the roof of the houses in the North. The addition of ells and lean-tos to the rear and cellars beneath many smaller New England houses in the seventeenth and eighteenth century created the space needed to perform tasks associated with outbuildings in the South. Lean-tos added to the rear of single-cell or hall and parlor houses took the cooking out of the hall into the lean-to with adjacent rooms serving as dairies and chimneys serving as smokehouses.

The North Street structure was compared with outbuildings identified architecturally as well as archaeologically in the North, Mid-Atlantic, and South (Anonymous 1970, Moran et al 1982, Olmert 2009).

B. Subsurface Testing Techniques

The planned focus of the Site Examination was testing the area beneath and around the 12 x 8' structure present in the backyard of the Plymouth Art Guild at 11 North Street. Archaeological findings sought to examine the prehistoric occupation of the project area and attempt to determine the temporal range of prehistoric occupation, the prehistoric use of the property, and the economy and settlement practices of the Native inhabitants. Evidence for the native occupation of the project area were expected to take the form of scattered and concentrated artifacts, hearths, pits, and architectural remains.

Investigations also attempted to locate any evidence of the pre-Watson era occupation of the property and determine the potential of seventeenth to eighteenth century structural and use remains across the property. Evidence of the pre-Watson occupation of the site was expected to take the form of scattered refuse deposits, foundations, postholes, well, and privies.

The main focus of the investigations was the recovery of artifacts and data that will help address some of the topics relating to urban life in the life in the eighteenth to nineteenth centuries as proposed in the research questions. These include material culture, foodways, the spatial organization of the yard, and evidence of any change or evolution in that organization, evidence of work areas relating to the Watson or Jackson occupation of the property. Landscape features looked for during the Site Examination that have the potential to add to our understanding of these topics include cellar holes, refuse deposits, privies, evidence of landscaping (filling and scraping), domestic and work areas, pathways, soil profile evidence of agricultural use, wells, and boundary walls or ditches.

It was proposed that the entire area of the backyard of 11 North Street be subjected to shovel testing at a close (five meter) interval **(Figure 16)**. PARP archaeologists determined the boundaries of the site based on topographic features, property boundaries, and concentrations of artifacts. A total of 22 test pits were proposed for the yard. These test pits were to be excavated at 10 cm arbitrary levels within natural horizons.

Testing was also conducted beneath the 12 x 8' structure that is the planned focus of the CPC funded restoration. Testing beneath the structure began after the floorboards are removed. The exposed ground surface was photographed and mapped and artifacts present were collected. Following the initial

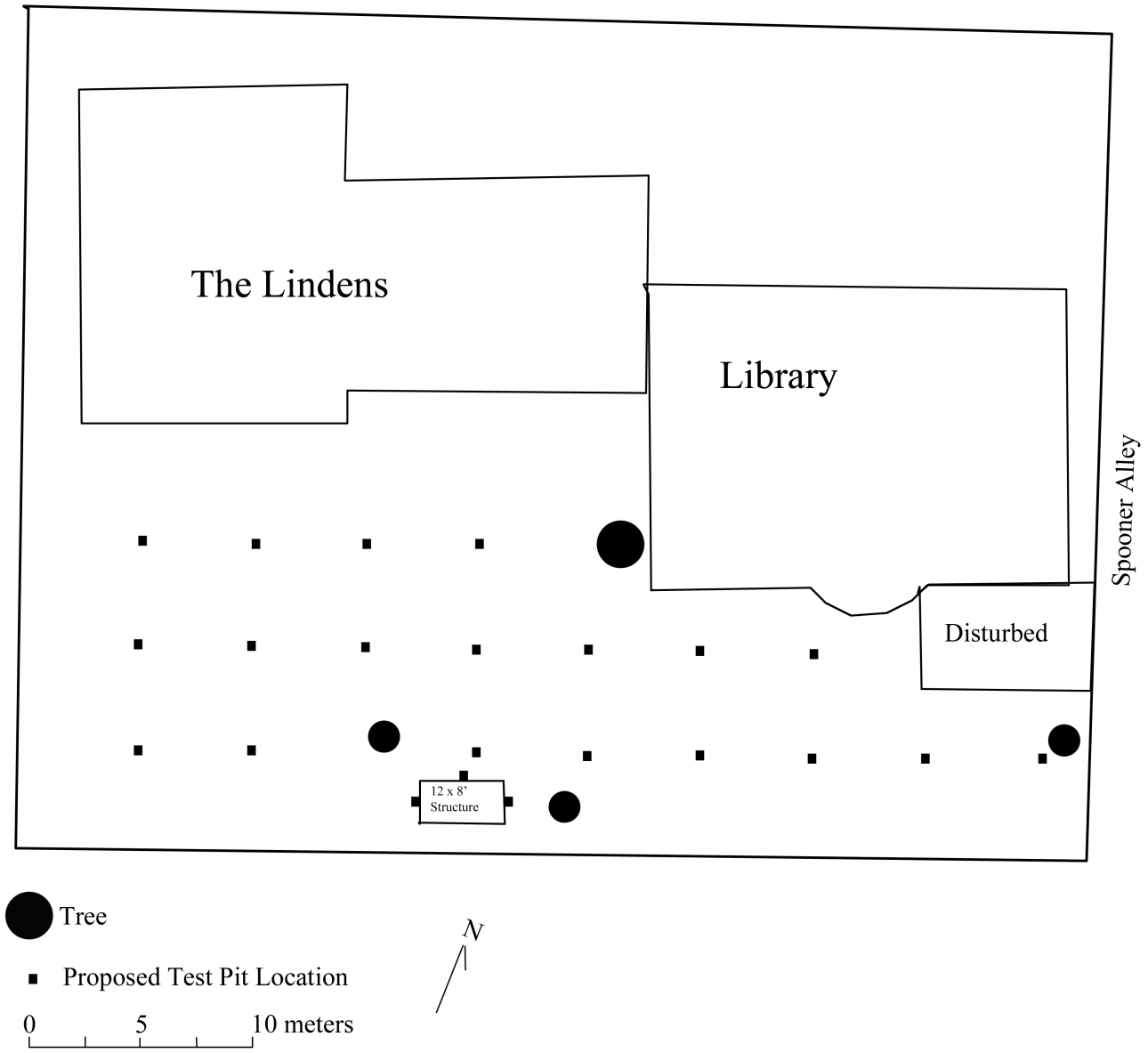


Figure 16. Location of proposed testing at 11 North Street

collection of artifacts, half of the area beneath the structure was excavated using contiguous 50 cm squares. Each square was excavated separately in five centimeter levels. Excavation was carried out to the C1 horizon in approximately half of these units. Excavation beneath the structure was proposed in order to help date the building and to examine the historic and prehistoric evidence of occupation that may be present. The remaining half of the space beneath the structure was left unexcavated and preserved.

All test pits were 50 x 50 cm. in size and were dug to the C1 sterile subsoil when possible. All soils were screened through quarter-inch mesh screens and examined for cultural material. All recovered material was documented and bagged for later processing and analysis with all appropriated locational information being recorded on the bags. All test pit locations, stratigraphy, and contents was recorded on the appropriate forms and maps. All soil colors was recorded using the Munsell Soil Color Chart. Photographs were also taken and measured drawings made of any visible above ground cultural features such as structures or structural remains.

A portion of the field work was carried out by a limited number of lay volunteers supervised by experienced staff. Lay volunteers were paired up with experienced field crew with a maximum of five lay volunteers being present per day. Experienced field crew provided close direction to the lay volunteers and supervised and personally carried out all field tasks including excavation, feature identification, screening, and filling out field forms and bag labels in order to maintain the Standards for Field Investigation (950CMR70.13). Lay field crew were allowed to help carefully trowel excavate 50-cm-square units, provide interpretive comments to their experienced field crew partners and to assist in shaking screens and recover artifacts under the supervision of the experienced field crew.

C. Laboratory Processing and Analysis

Artifacts collected during the site examination were cleaned, identified, described and cataloged for analysis. The artifacts were then placed in labeled, acid-free plastic bags that were then placed within acid-free boxes for curation at Plimoth Plantation in Plymouth, Massachusetts. One copy on acid free archival quality paper and the original excavation forms, maps, catalog sheets and a copy of the final report will all accompany the artifacts to the curation facility. PARP will retain copies of all this documentary material in our project files.

Analysis focused on identifying the nature, period of manufacture, possible use and interpretation of recovered materials. This analysis, along with the findings from the site examination and background research, was used to determine if the sites are eligible for the National Register of Historic Places. The information will also be used by the Town of Plymouth and the Plymouth Art Guild to avoid artifact concentrations or features identified when any alterations to the property are proposed in the future.

Historic Material Culture Analysis

The artifact assemblage that was recovered from site examination testing was analyzed within the context of the household and town histories. It was hoped that the artifacts could help to illuminate changing household composition, architectural renovations and subsistence activities. This contextual approach is based on an interpretative approach championed by Mary Beaudry, among others, which is

a broad based and historically grounded way of studying households with an eye towards the analysis of household's changing form over time as well as changing relationship with exterior world on local, regional and global levels (Beaudry 1984: 27). The utilization of historical documents as aids in interpretation is key to understanding the artifacts that are recovered. Documents used include general ones which help to place the site and assemblages within a larger context such as state and town histories and historical maps, and sources that relate to the occupants of the site itself such as wills, probates, court records and family histories. This contextual approach to interpretation helps to link household cycles and family histories to the archaeological and depositional histories of the site (Beaudry 1999: 117).

Analysis of recovered cultural material focused on four main classes of excavated materials: ceramics, glass, architectural remains, and faunal remains. These classes have been found to first, be the most commonly recovered classes on historic archaeological sites and second, to hold the most potential for helping to investigate some of the research questions posed for this project. During the cataloging, the attempt was made to identify certain characteristics that researchers have seen as being common among slave and recently freed slave material culture. These include the presence of certain ceramic types such as unglazed possibly Iberian storage jars ("Tamarind jars") (Deetz 1977), an abundance of bowls versus flatwares (Feder 1994), handmade pottery (Colono Ware) (Ferguson 1992: 87), pottery with ownership or cosmological marks scratched onto their bases or sides (Ferguson 1992: 110), handmade, reworked, or owner-repaired artifacts (Chan 2007), cowrie shells (Monticello), beads (Chan 2007), and Native American artifacts mixed in with European refuse (Chan 2007).

Ceramic Analysis

Ceramic analysis focused on functional and temporal analysis of the recovered wares. Functional analysis focused on the identification of the types of vessels present as well as how the wares could be used as socio-economic indicators. Ceramics in general have the potential to yield information on market distribution systems, food processing, preparation, consumption and other aspects of foodways behavior. Ceramics were also used for status display and possibly ideological statements (Spencer-Wood and Heberling 1984: 33). The ceramics recovered from nineteenth century sites are assumed to largely have been acquired from those that were available at the local market economy with some percentage possibly being acquired as gifts, heirlooms or through some for of secondary recycling. Ceramics that are recovered archaeologically are the result of consumer choices of goods available in the market and the loss and selective discard patterns of the past inhabitants of the site (Spencer-Wood and Heberling 1984: 33, 34). The types and styles of ceramics used by a household is influenced by an indeterminate number of interrelated factors including site location, availability of goods, occupation, ethnicity, economic level, social status, family status, religious and political affiliation and individual preferences (Spencer-Wood and Heberling 1984: 34).

The ceramic assemblage was also used to examine the socio-economic position of the Watsons and Jacksons in their eighteenth and nineteenth century worlds using historical documents combined with Miller's revised set of CC Index values (Miller 1991). Other aspects of wealth was explored through the recovered ceramic assemblage included a comparison of the relative frequencies of tea wares as opposed to flatwares and bowl (Spencer-Wood and Heberling1984; Di Zerega Wall 1991).

Glass

Glass artifacts that were expected to be encountered include flat glass from windows, mirrors, picture frames and lanterns, curved glass from bottles and hurricane lamp chimneys, pressed glass from candlesticks, oil lamps and decorative items and buttons. Glass fragments were analyzed in much the same way as the ceramics with vessel types and manufacturing techniques being identified and cross-mending within and between contexts being attempted.

Faunal Remains

After the remains were cleaned and initially cataloged, all remains were sorted from the entire assemblage. Then, by provenance, the remains were sorted into identifiable and unidentifiable pieces. The potentially identifiable pieces were then identified using the author's faunal collection. During identification, the individual pieces were identified by species, element, side of body, and degree of fragmentation. All fragments were weighed and measurements were taken of key anatomical features for comparative purposes.

Each of the species identified were examined using documentary sources and modern field guides to determine the habitat of each animal, to what degree the harvesting of these species was seasonally determined, and what the seventeenth century sources state concerning their utilization by the local Native population. It was hoped that by looking at the animals from these three aspects, the season of occupation and utilization of the site and the features within the site can be determined.

The remains were quantified using the Minimum Number of Individuals (MNI) present, the Number of Individual Specimens Present (NISP) which is essentially a count of all of the fragments of a species, and the weights of the bone fragments for each species. Depending on the quantification used for comparison the amount that the species contributed to the diet varies. This has been a long-standing dilemma in zooarchaeology. Taphonomic processes such as processing, disposal, scavenging, and excavation affect the NISP. This is compounded by the fact that fish bone, by its very nature, is thinner and less durable than mammal or even bird bone. This results in a lower probability of survival and recovery of fish remains. These factors also hold true for comparisons based on bone weight. The archaeological decay of bone that results in it losing much of its fresh weight will also hamper comparisons. The MNI is no better for comparisons due to the fact that one herring will not contribute the same amount to the diet as one deer.

Analysis of the faunal remains examines the site inhabitant's involvement in the larger local and regional markets by examining the degree to which they raised and butchered their own livestock versus what they may have purchased from neighbors or from the larger markets in Plymouth. The recovery of a wide variety of elements (cranium to tail vertebrae, upper and lower elements of legs, phalanges) from a species likely indicates that the species was raised on site and butchered there or that it was purchased whole and butchered on site. The faunal elements recovered when species are butchered and consumed on site differs markedly from instances where only specific elements are purchased at a market or from a neighbor. In the latter case, only specific elements are present with many of the less desirable elements (tail vertebrae, lower legs, phalanges) being absent. There are two schools of thought on the nature of rural farming in the nineteenth century. One school believes that all American farmers, regardless of proximity to markets, were capitalists whose economic decisions were greatly influenced by market forces. The other school sees small, rural inhabitants not as capitalists but

as subsistence farmers who valued their independence over consumption of market products. This school believes that rural inhabitants preferred to produce their own goods to the point that they produced everything they could by themselves and purchased whatever else they needed from their neighbors. In this instance, trade between neighbors took the form of reciprocal exchanges of goods and labor in which tradition, family loyalty, neighborliness and self-sufficiency was valued over profit and regulated economic decisions (Henretta 1978; Kulikoff 1989; Rothenberg 1981)

The faunal remains was used to investigate questions of self-sufficiency and dietary habits, butchery practices and the stock raising methods of the inhabitants. Analysis of the remains focused on the examination of the cultural and taphonomic processes that altered the faunal record prior to and following deposition. Analysis attempted to identify the taxon and elements present, aging of elements, and the identification and analysis of the evidence of butchery present on the elements.

Prehistoric Artifact Analysis

Four categories of archaeologically recovered data, lithics, faunal and floral remains, pottery and features, were used to investigate the five main research objectives as well as several secondary objectives more specific for each class of materials.

Lithics

The attributes that have been selected for the analysis are the fairly standard ones used by most researchers. This was done to ensure that others researching the field can readily use this analysis. As a means of investigating these questions, the debitage from the site was analyzed in the following fashion. Initial sorting separated the material type and recorded the color of the debitage. This was followed by separating the shatter, cores and flakes/ flake-like debris. The shatter was counted, weighed and measurements of length, width and maximum thickness were made. It was identified as to type of shatter, block and plate, and whether those are decortification or interior shatter pieces. The shatter was categorized as to shape (rectangular, triangular, square or amorphous) and they were examined for flake scars. It was hoped that this analysis of the shatter would help to determine the reduction sequence that was used and the amount of waste generated by it.

The results of the analysis were compared to Sullivan and Rozen's findings from Arizona and to Cowan's findings from his work in interior New York state (Cowan 1999; Sullivan and Rozen 1985). In the series of Archaic sites that they examined, they found five varieties of assemblages characterized by varying proportions of the categories of reduction waste and lithic products: core use only; unintensive core reduction; moderately intensive core reduction; intensive core reduction; and bifacial tool manufacture (Sullivan and Rozen 1985: 759-764). Cowan found a strong relationship between lithic technology strategies and the degree of mobility practiced by the populations who created the debitage (Cowan 1999:593).

Faunal and Floral Remains

The site examination investigations attempted to better define the role of faunal resources in the subsistence system of the occupants of the prehistoric sites. The prehistoric faunal remains were analyzed in much the same way as the historic faunal remains. Floral remains were analyzed to identify the species and habitats where they grow and whether they are wild or domesticated. The floral remains were collected through field screening and processing of flotation samples from significant features.

Pottery

Pottery from the site was examined using a multi-variant attribute form of analysis similar to that proposed by Chilton (1999) and carried out by Bunker (2002). It was decided that attribute analysis would be used due to Chilton's findings that the decorative analysis classification systems that have been used in the past may in fact have little usefulness in New England ceramic research (Chilton 1999: 97-101). Analysis in the past has focused too much attention on attributes that are the easiest to identify, decoration and rim shape, but which have been found to be the ones that vary too much through time and across distances. Past analysis has also focused too much attention on the presumption that New England ceramics "evolved" over time from thick, crude, undecorated vessels in the Terminal Archaic to Early Woodland, to thinner, finer and more highly decorated Contact Period examples (Chilton 1999: 98.). The goal of multi-variant attribute analysis is to look for both variation and covariation within and between objects, not to formulate typologies (Chilton 1999: 102). By identifying the attributes of vessels, research is freed of the rigid typologies of the past and may expand to investigate the utilitarian reasons behind the choices of temper, thickness and surface treatment in themselves and not as part of "type" of ware. The reasons for the production of pottery bearing specific use characteristics is thus related to the needs of the society in relation to their subsistence pattern and degree of mobility as well as availability of raw materials and degree of social interaction with other groups.

VII. RESULTS OF SITE EXAMINATION TESTING

A. Exterior Testing

Proposed site examination testing consisted of the excavation of 22 50-cm-square test pits adjacent to and around the extant 8 x 12' structure. Due to the need to expand five of the initial test pits in order more fully expose features encountered, an additional test 50-cm-square test pits were excavated **(Figure 17)**. All of the excavations on the exterior of the structure were carried out by means of 50-cm square units excavated in five or ten centimeter levels within natural horizons. Testing on the exterior was focused on examining the ground surface immediately outside of the structure as well as testing the surrounding yard in order to place the structure within a larger context. Units were excavated to the C1 horizon when possible, but the extreme depth of fill episodes and subsequent buried soil horizons prevented this objective from being achieved in many cases.

Unit 1
Unit 1 was located at the exterior of the northeastern corner of the structure and was aligned adjacent to the corner. The first level, 0-12 cm, consisted of dark brown (10YR3/3) silty sand fill, identified as Fill Layer 3. At 12 cmbs a dense concentration of nineteenth century ceramics and glass was encountered (Fill Layer 2). This was found to extend down to 25 cmbs and was associated with a concentration of cobbles beneath the brick foundation. The soil became more mottled at 30 cmbs which may be a remnant of the Fill Layer 1 from the interior of the house. The buried dark brown (10YR3/3) A1 horizon was encountered at 50 cmbs. It was found to contain many small roots, rootlettes, a moderate to light amount of gravel and no cultural material. A mottled layer of mixed A1 and B1 soil, possibly an A1/ B1 transition was excavated to 70 cmbs where the B1 was encountered. The B1 horizon, a yellowish brown (10YR5/6) silty sand, was excavated to a depth of 90 cmbs where the B2 horizon was found. The light olive brown (2.5Y5/3) silty sand B2 was excavated to a depth of 90 cmbs where the pit became too deep and constricted to continued excavation.

Unit 2
This unit was located five meters north of the northwest corner of the structure in the grass-covered lawn. An A0/ duff extended from the ground surface to five centimeters below it. This horizon was followed by an 18 cm deep dark brown (10YR3/3) sand loam Fill Layer 3. The fill layer overlaid a buried A1 horizon that had a concentration of gravel and rocks on its upper three centimeters and then was a dark brown (10YR3/3) sandy loam with a low to moderate amount of gravel. The A1 horizon overlaid a yellowish brown (10YR5/6) B1 horizon that was first encountered at the bottom of the A1 at 45 cmbs. The B1 horizon extended to 65 cmbs and overlaid a light olive brown (2.5Y5/3) silty sand B2 horizon that was excavated to 80 cmbs where it transitioned to a pale yellow (2.5Y7/3) C1 horizon.

Unit 3
This unit was located ten meters north of the northwest corner of the structure in the grass-covered lawn. An A0/ duff extended from the ground surface to five centimeters below it. This horizon was followed by an 18 cm deep dark brown (10YR3/3) sand loam Fill Layer 3. The fill layer overlaid a

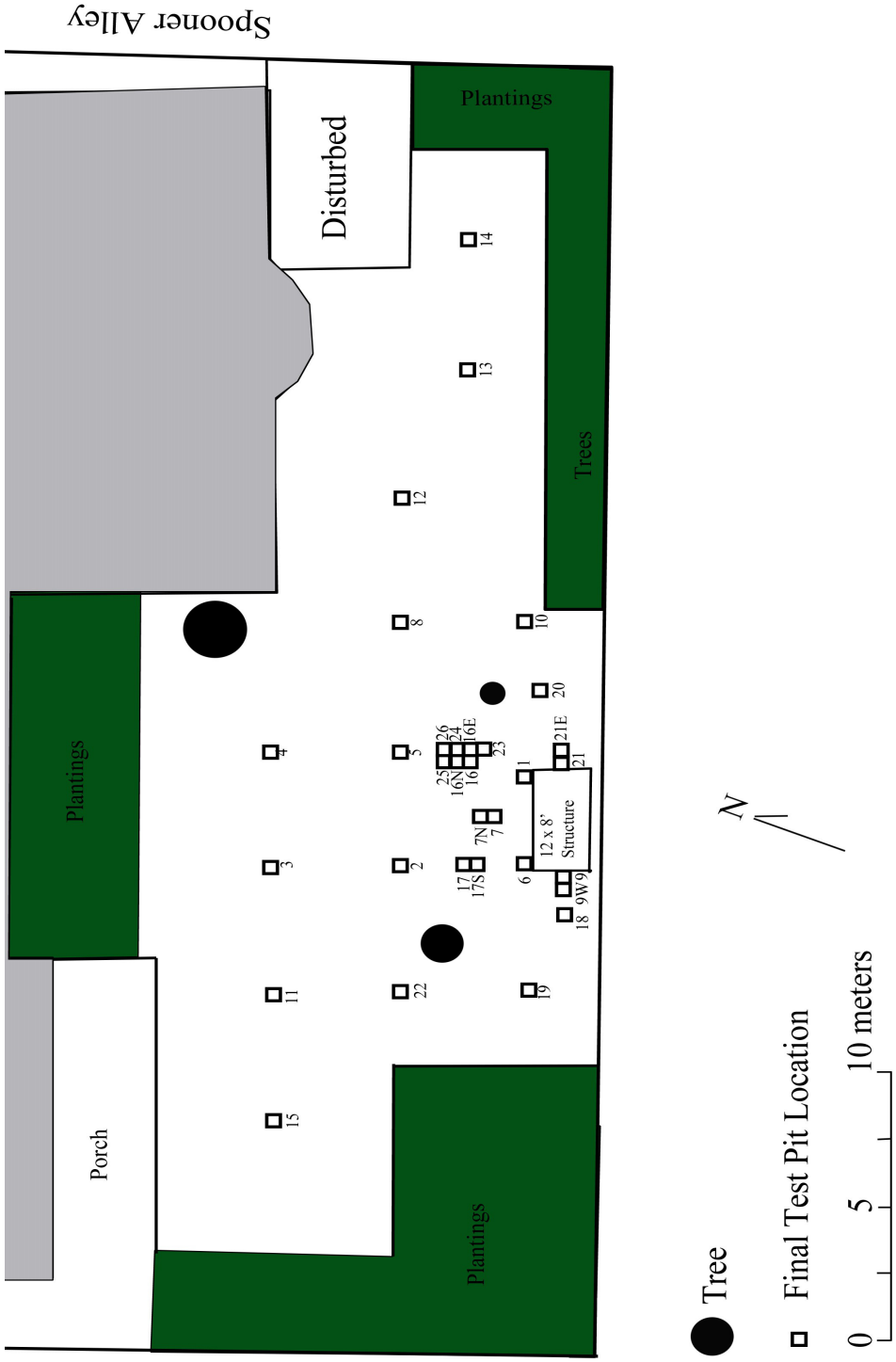


Figure 17. Final testing at 11 North Street, Plymouth

buried A1 horizon that had a concentration of gravel and rocks on its upper three centimeters and then was a dark brown (10YR3/3) sandy loam with a low to moderate amount of gravel. The A1 horizon overlaid a yellowish brown (10YR5/6) B1 horizon that was first encountered at the bottom of the A1 at 45 cmbs. The B1 horizon extended to 65 cmbs and overlaid a light olive brown (2.5Y5/3) silty sand B2 horizon that was excavated to 80 cmbs where it transitioned to a pale yellow (2.5Y7/3) C1 horizon **(Figure 18)**.

Unit 4

This unit was located five meters north of the northeast corner of the structure in the grass-covered lawn. An A0/ duff extended from the ground surface to five centimeters below it. This horizon was followed by an 18 cm deep dark brown (10YR3/3) sand loam Fill Layer 3. The fill layer overlaid a buried A1 horizon that had a concentration of gravel and rocks on its upper three centimeters and then was a dark brown (10YR3/3) sandy loam with a low to moderate amount of gravel. The A1 horizon overlaid a yellowish brown (10YR5/6) B1 horizon that was first encountered at the bottom of the A1 at 45 cmbs. The B1 horizon extended to 65 cmbs and overlaid a light olive brown (2.5Y5/3) silty sand B2 horizon that was excavated to 80 cmbs where it transitioned to a pale yellow (2.5Y7/3) C1 horizon.

Unit 5

This unit was located five meters north of the northeast corner of the structure in the grass-covered lawn. An A0/ duff extended from the ground surface to five centimeters below it. This horizon was followed by an 30 cm deep dark brown (10YR3/3) sand loam Fill Layer 3. The fill layer overlaid a buried A1 horizon that had a concentration of gravel and rocks on its upper three centimeters and then was a dark brown (10YR3/3) sandy loam with a low to moderate amount of gravel. The A1 horizon overlaid a yellowish brown (10YR5/6) B1 horizon that was first encountered at the bottom of the A1 at 45 cmbs. The B1 horizon extended to 60 cmbs and overlaid a light olive brown (2.5Y5/3) silty sand B2 horizon that was excavated to 80 cmbs where it transitioned to a pale yellow (2.5Y7/3) C1 horizon **(Figure 18).**

Unit 6

Unit 6 was located at the exterior of the northwestern corner of the structure and was aligned adjacent to the corner. The first level, 0-20 cm, consisted of dark brown (10YR3/3) silty sand fill, identified as Fill Layer 3. At 20 cmbs a dense concentration of cobbles was encountered below the brick foundation in the south half of the unit. This as the cobble foundation fill visible on the interior of the structure and in Unit 1. The matrix in the north half of the unit was a mottled yellow brown (10YR5/6) and dark brown (10YR3/3) silty sand with few artifacts, identified as Fill Layer 5. Fill Layer 5 may be a mixture of Fill Layer 1 and a later fill deposit. A dark brown (10YR3/3) silty sand layer with a high concentration of nineteenth century artifacts, Fill Layer 2, was encountered from 40 to 60 cmbs. Fill Layer 2 overlaid the buried A1 horizon in this unit. The buried A1 horizon was encountered at 60 cmbs and extended to 80 cmbs. It was found to contain many small roots, rootlettes, a moderate to light amount of gravel, eighteenth century artifacts and Native cultural material. A mottled layer of mixed A1 and B1 soil, possibly an A1/ B1 transition was excavated to 80 cmbs where the B1 was encountered. The B1 horizon, a yellowish brown (10YR5/6) silty sand, was excavated to a depth of 90 cmbs where the light olive brown (2.5Y5/3) silty sand B2 horizon was found. The B2 was excavated to a depth of 90 cmbs where the pit became too deep, rocky, and constricted to continue excavation.

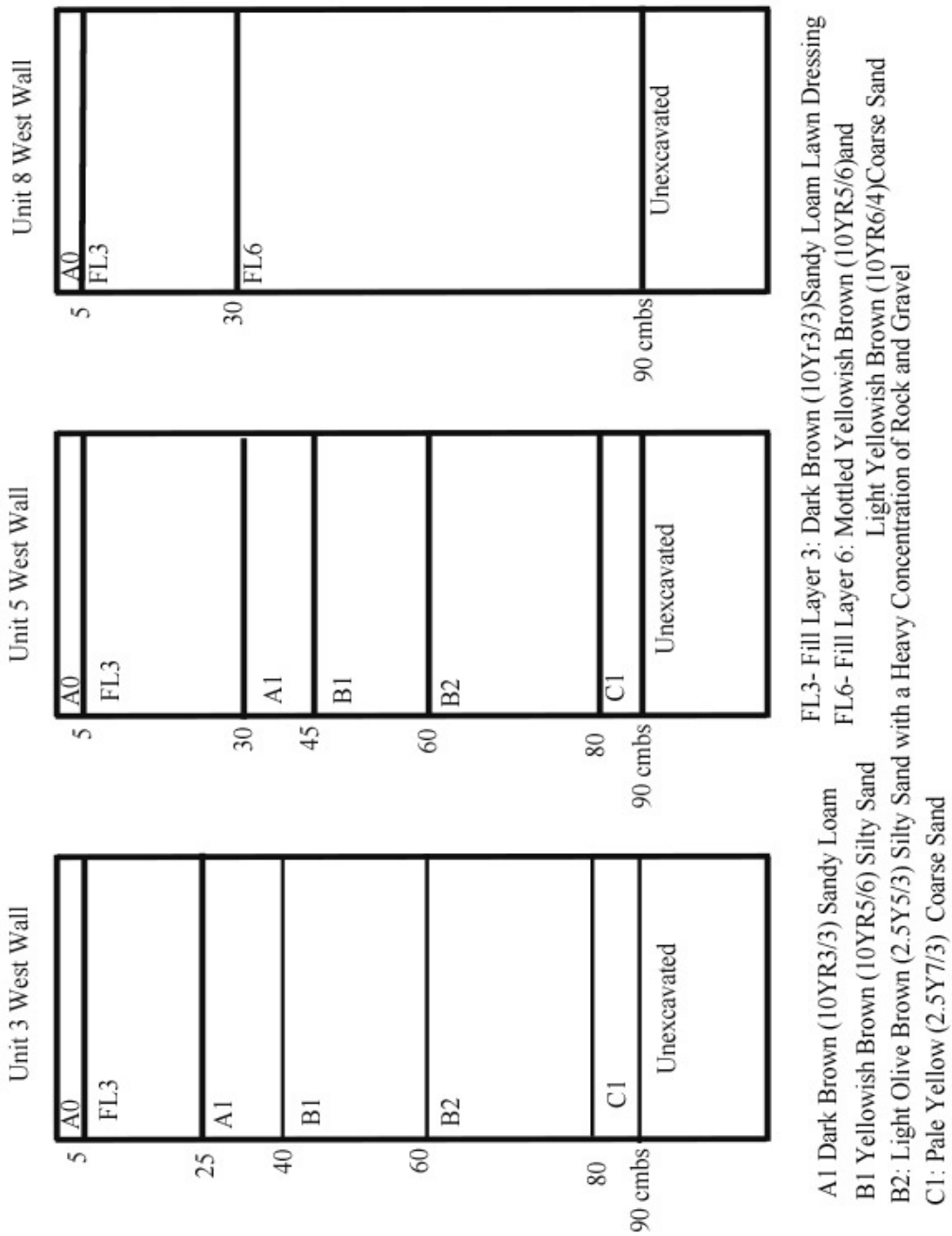


Figure 18. Representative soil profiles

Unit 7

This unit was located two meters north and one and one-half meters east of the northwest corner of the structure. It was placed here to examine the area immediately in front of the door of the structure. A brick and rock concentration was encountered at 25 to cmbs and this unit was expanded by 50 cm to the south. This resulted in a unit that measured a total of one meter long, north to south, by 50 cm wide, east to west. This extension of Unit 7 was labeled Unit 7 south (U7S). Excavation found the soil horizons in this unit showing a definite downward slope from north to south in the western half, a finding that corresponds with what was observed under the structure. The profile of the north wall of the unit showed two fill layers (Fill Layers 3 and 4) above the buried A1 horizon. Fill Layer 3 extended from the ground surface to 10 cmbs and Fill Layer 3 extended from 10 to 30 cmbs. The A1 horizon was found to be 16 cm thick and the B1 was found to extend from 45 to 70 cmbs. The B2 horizon extended from 70 to 90 cmbs. The south wall profile showed Fill Layer 3 as a ground cover layer that was a consistent depth across the unit. Fill Layer 5 extended from 40 cm south of the north wall back to the south wall. This was the same fill layer that was encountered in Unit 6. Fill Layer 5 sloped from 10 cmbs (the bottom of Fill Layer 3) at 40 cm south of the north wall, to 22 cmbs at the south wall. Fill Layer 4 was encountered below Fill Layer 5 and it followed the same slope as Fill Layer 5 but Fill Layer 4 extended across the entire unit. Fill Layer 4 averaged 20 cm thick and contained abundant amounts of large pieces of brick and cobbles. This layer is believed to have been deposited in the 1830s and represents demolition debris associated with the removal of the Watson house and the construction of the Jackson house at that time. The buried A1 horizon was encountered below Fill Layer 4 and both it and the lower B1 horizon followed the same slope as Fill Layer 4. This means that the original ground surface sloped from north to south and that an appreciable amount of filling occurred when Abraham Jackson purchased the property and embarked on a major landscaping and rehabilitation project across the entire parcel. The A1 horizon was found to extend from 25 to 45 cmbs against the north wall and from 40 to 56 cmbs against the south wall.

Unit 8

This unit was located five meters north and 10 meters east of the northeast corner of the structure in the grassy, open lawn. The stratigraphic profile of this unit consisted of a five centimeter thick A0/ duff horizon followed by a Fill Layer 3 horizon to a depth of 30 cmbs. Fill Layer 3 overlaid Fill Layer 6, a mottled layer of yellowish brown (10YR5/6) and light yellowish brown (10YR6/4) sand that is believed to represent a filled cellar hole associated with the structure that stood in this area in the late nineteenth to early twentieth centuries. This fill horizon was excavated to a depth of 90 cmbs with no change in composition **(Figure 18)**. A mixture of prehistoric and nineteenth century artifacts were found within the fill horizon.

Unit 9

This unit was located between one and one and one-half meters south of the northwest corner of the structure, adjacent to the west wall. It was placed here to examine the area immediately outside of the west wall. A brick and rock concentration was encountered at 25 to cmbs and this unit was expanded by 50 cm to the west. This resulted in a unit that measured a total of one meter long, east to west, by 50 cm wide, north to south. This extension of Unit 9 was labeled Unit 9 west (U9W). Excavation found the soil horizons in this unit showing a definite downward slope from east to west. The south wall profile shows a 20 to 30 cm deep Fill Layer 3 overlaying a dark yellowish brown (10YR4/6) Fill Layer 7 from 20 to 35 cm in the east half and extending from 30 to 55 cmbs in the west half. This fill layer contained

nineteenth century artifacts and overlaid Fill Layer 8, a pale yellow (2.5Y7/3) sterile coarse sand that was excavated to a depth of 90 cmbs and believed to date to the twentieth century. It is believed that this fill layer was used to fill a deep hole associated with the small structure shown on the late nineteenth century maps of the property. Considering the depth and nature of the fill, it is believed that this structure was either a privy or an ice house, the latter being a less likely explanation than the former. The cobble and stone foundation associated with the structure was found to slope significantly to the west in this unit, reaching a width of 80 cm west of the structure by 90 cmbs. Mixed amongst the cobbles were middle to late nineteenth century artifacts. Unit 18, located 50 cm to the west of U9W's west wall, revealed a corresponding soil profile showing a slope to the east versus the west as was found in unit 9.

Unit 10

This unit was located ten meters east of the northeast corner of the structure towards the fence between the lots. Excavation revealed a stratigraphy that matched that of Unit 8, located five meters to the north. The stratigraphic profile of this unit consisted of a five centimeter thick A0/ duff horizon followed by a dark olive brown (2.5Y3/3) silty sand Fill Layer 12 horizon to a depth of 30 cmbs. Fill Layer 12 overlaid Fill Layer 6, a mottled layer of yellowish brown (10YR5/6) and light yellowish brown (10YR6/4) sand that is believed to represent a filled cellar hole associated with the structure that stood in this area in the late nineteenth to early twentieth centuries. This fill horizon was excavated to a depth of 110 cmbs with no change in composition.

Unit 11

Unit 11 was ten meters north and five meters west of the northwest corner of the structure. It was seven meters south of the back porch of the Jackson house. The stratigraphy consisted of five centimeters of A0/ duff below which Fill Layer 3, the lawn dressing, was encountered to a depth of 23 cmbs. A layer of gravel and scattered oyster shells were present between Fill Layer 3 and the next layer, Fill Layer 10. Fill Layer 10 was encountered below Fill Layer 3. This layer was mottled dark brown (10YR3/3) and dark yellow brown (10YR4/6) in color and silty sand, with a moderate amount of gravel, in texture. It extended to a depth of 38 cmbs and is believed to date to the nineteenth century when the Jackson's constructed their house and landscaped the yard. The buried A1 horizon was encountered below Fill Layer 10 and continued to a depth of 67 cmbs, containing more gravel and rock than the same expression of the horizon to the south. The old topsoil was found to have a slight slope downward from north to south. The A1 horizon overlaid the B1, a yellowish brown (10YR5/6) silty sand, that extended to a depth of 80 cmbs. The B2 horizon, a light olive brown (2.5Y5/3) silty sand, extended to a depth of 100 cmbs.

Unit 12

Unit 12 was five meters north and 10 meters east of the northeast corner of the structure in a grassy area beneath a canopy of maple trees. Excavation revealed a stratigraphic profile consisting of five centimeters of A0/ duff below which Fill Layer 3, the lawn dressing, was encountered to a depth of 20 cmbs. The A1 horizon was encountered to a depth of 48 cmbs below Fill Layer 3. The yellowish brown (10YR5/6) silty sand B1 horizon extended to 60 cmbs and overlaid the light olive brown (2.5Y5/3) silty sand with heavy gravel and rock B2 horizon, which extended to a depth of 80 cmbs.

Unit 13
Unit 13 was five meters north and 15 meters east of the northeast corner of the structure in a grassy area seven meters west of Spooner Alley. Excavation revealed a stratigraphic profile consisting of five centimeters of A0/ duff below which Fill Layer 3, the lawn dressing, was encountered to a depth of 20 cmbs. The A1 horizon was encountered to a depth of 40 cmbs below Fill Layer 3. The yellowish brown (10YR5/6) silty sand B1 horizon extended to 50 cmbs and overlaid the light olive brown (2.5Y5/3) silty sand with heavy gravel and rocks B2 horizon, which extended to a depth of 70 cmbs.

Unit 14
Unit 14 was five meters north and 20 meters east of the northeast corner of the structure in a grassy area two meters west of Spooner Alley and five meters north of the property line. Excavation revealed a stratigraphic profile consisting of five centimeters of A0/ duff below which Fill Layer 3, the lawn dressing, was encountered to a depth of 20 cmbs. The A1 horizon was encountered to a depth of 40 cmbs below Fill Layer 3. The yellowish brown (10YR5/6) silty sand B1 horizon extended to 50 cmbs and overlaid the light olive brown (2.5Y5/3) silty sand with heavy gravel and rocks B2 horizon, which extended to a depth of 70 cmbs.

Unit 15
Unit 15 was ten meters north and ten meters west of the northwest corner of the structure. It was seven meters south of the back porch of the Jackson house. The stratigraphy consisted of five centimeters of A0/ duff below which Fill Layer 3, the lawn dressing, was encountered to a depth of 20 cmbs. A layer of gravel and scattered oyster shells were present between Fill Layer 3 and the next layer, Fill Layer 10. Fill Layer 10 was encountered below Fill Layer 3. This layer was mottled dark brown (10YR3/3) and dark yellow brown (10YR4/6) in color and silty sand, with a moderate amount of gravel, in texture. It extended to a depth of 50 cmbs and is believed to date to the nineteenth century when the Jacksons constructed their house and landscaped the yard. The buried A1 horizon was encountered below Fill Layer 10 and continued to a depth of 70 cmbs, containing more gravel and rock than the same expression of the horizon to the south. The old topsoil was found to have a slight slope downward from north to south. The A1 horizon overlaid the B1, a yellowish brown (10YR5/6) silty sand, that extended to a depth of 90 cmbs. The B2 horizon, a light olive brown (2.5Y5/3), extended to a depth of 110 cmbs.

Unit 16
This unit was located two meters north of the northeast corner of the structure. Excavation encountered a large rock covering the floor of the unit at 30 cmbs and the unit was expanded with additional 50 cm units. A total of six units (U16, U16E, U16N, U24, U25, U26) were opened in this area to expose the possible foundation and to locate a corner of the foundation. The stratigraphy was found to consist of a five centimeter deep A0 horizon that overlaid a Fill Layer 3 deposit that ended at 30 cmbs on top of the buried A1 horizon. The stones initially encountered were found to be part of a north to south running wall that was 50 to 70 cm wide and set into the A1 horizon approximately 20 cm. The north end of the wall was found 58 cm south of the north wall of this complex of units and the building appears to have extended to the east. It is not the same building shown on the later nineteenth century maps and appears to date to the eighteenth century. The foundation stones in this unit align with those found in Unit 21 making a building that was at least 12 feet long, possibly extending outside of the current lot lines to

the south. The A1 horizon was found to extend to 45 cmbs and the B1 extended to 60 cmbs. The B2 was encountered at 60 cmbs and extended to 80 cmbs.

Unit 17

This unit was located two meters north of the northwest corner of the structure. It was placed here to examine the area outside of the north wall. A rock concentration was encountered at 30 cmbs and this unit was expanded by 50 cm to the north. This resulted in a unit that measured a total of one meter long, north to south, by 50 cm wide, east to west. This extension of Unit 17 was labeled Unit 17 north (U17N). Excavation found the soil horizons in this unit showing no evidence of the downward slope from north to south that was observed in units 7 and 7S. The stratigraphic profile shows a five centimeter thick A0 horizon covering a Fill Layer 3 deposit that extended to a depth of 25 cmbs. Fill Layer 5 was encountered below Fill Layer 3 in the northwestern half of the unit. Fill Layer 4 was found below Fill Layer 3 in the southeastern half of the unit. Fill Layer 4 contained a heavy concentration of brick and rock and covered a large flat possible foundation stone encountered at 35 cmbs and continued south of the stone to a depth of 48 cmbs. Fill Layer 4 rested on top of the buried A1 at 48 cmbs and Fill Layer 5 rested on top of it in the western half at 35 to 40 cmbs. Excavation north of the stone revealed that the stone was set eight centimeters into the A1 horizon and that the A1 continued to a depth of 80 cmbs. The B1 was encountered below the A1 and was excavated to a depth of 100 cmbs.

Unit 18

This unit was located one and one half meter to the west of the west side of the structure. It was placed here to determine the extent of the fill deposit encountered in Unit 9 and U9W located 50 cm to U18. The stratigraphy consisted of a 14 to 20 cm deep Fill Layer 3 followed by a 50 cm deep Fill Layer 9. Fill Layer 9 was a very dark gray brown (10YR3/2) sandy loam that is believed to correspond with Fill Layer 7 from U9 and U9W. This fill layer sloped in depth from west to east. Fill Layer 9 began at 20 cmbs at the eastern wall and extended to 70 cmbs at this wall while it began at 14 cmbs at the western wall and extended to 64 cm at this wall. Fill Layer 8 was encountered below Fill Layer 9 and it was excavated to a depth of one meter below the ground surface. It is believed that these layers represent fill within a deep pit feature, a privy pit or ice house cellar, located beneath a small structure shown on the late nineteenth century maps.

Unit 19

This unit was located five meters north and five meters west of the northwest corner of the structure. The stratigraphy consisted of five centimeters of A0/ duff below which Fill Layer 3, the lawn dressing, was encountered to a depth of 60 cmbs. The buried A1 horizon was encountered below Fill Layer 3 and continued to a depth of 80 cmbs, containing more gravel and rock than the same expression of the horizon to the south. The old topsoil was found to have a slight slope downward from north to south. The A1 horizon overlaid the B1, a yellowish brown (10YR5/6) silty sand, that extended to a depth of 90 cmbs. The B2 horizon, a light olive brown (2.5Y5/3) silty sand, extended to a depth of 110 cmbs. A semi-circular concentration of dark brown (10YR3/3) soil and rocks were encountered at the base of the A1 horizon and extending into the upper part of the B2 horizon. The anomaly appeared to be at least 100 cm in diameter but was very shallow, only 15 cm deep. Native material was recovered from the anomaly and it does appear similar to large shallow basin anomalies that have been encountered on Late Woodland Native sites (Chartier and Donta 2012).

Unit 20

This unit was two and one half meters east of the northeast corner of the structure, just south of a medium-size maple tree stump. It was placed here to determine if any evidence of the fill horizons encountered to the west and east were present here as well. Excavation revealed a five centimeter deep A0/ duff root mat overlaying the Fill Layer 3/ nineteenth century lawn dressing that was encountered across the yard area, to a depth of 20 cmbs. Fill Layer 3 overlaid Fill Layer 11, a yellow brown (10YR5/6) sandy loam that may represent excavat from the construction of the structure that stood to the east of this pit in the late nineteenth century. Fill Layer 11 extended to a depth of 30 cmbs and overlaid Fill Layer 4, the ca. 1830s fill layer associated with the construction of the Jackson house, to a depth of 50 cmbs. The buried A1 horizon was encountered to a depth of 63 cmbs and the yellowish brown B1 horizon was encountered to a depth of 80 cmbs. The B2 horizon was encountered below the B1 to a depth of 100 cmbs.

Unit 21

This unit was located adjacent to the east wall of the structure between one and one and one-half meters south of the northeast corner. Excavation of this unit revealed large rocks in the floor at 50 cmbs and the unit was expanded to the east by 50 cm. This resulted in the final unit size being 50 cm north to south by one meter east to west. The rocks were found to be within 15 cm of the foundation for the structure. Excavation revealed a five centimeter deep A0 horizon that overlaid a 12 cm deep Fill Layer 11, light yellow brown (10YR5/6) loamy sand possibly associated with the excavation of the presumed cellar to the east, in the east half of the unit. Fill Layer 12 was encountered below Fill Layer 11 and this extended to a depth of 28 cm in the northeast corner and 20 cm in the southeast corner, sloping up from north to south. A pale yellow (2.5Y7/3) sand, possibly Fill Layer 8, was encountered below Fill Layer 12 to a depth of 34 cm at the northeast corner and 30 cm in the southeast corner. Fill Layer 3 was encountered below Fill Layer 8 and this layer covered the stone paving encountered at 50 cmbs. This horizon was rich in ca. 1830s nineteenth century artifacts and represents the filling of what must have been an undulating and sloping rear yard to the Watson house. The covering of the foundation discovered at 50 cmbs indicates that this foundation predated the 1830s landscaping, thus possibly putting it in the Watson occupation. This foundation is a continuation of the foundation found in the Unit 16 complex and represents the west wall of a large building measuring at least 15 meters long north to south. This building may have been a warehouse, summer kitchen barn or stable. The cobble foundation for the possible slave house structure also extended to the same level as this foundation, indicating that the two may be contemporaneous. Excavation ceased at 50 cmbs and the foundation was covered to preserve it.

Unit 22

This unit was located five meters north and ten meters west of the northwest corner of the structure beneath a large tamarack tree. The stratigraphy consisted of five centimeters of A0/ duff below which Fill Layer 3, the lawn dressing, was encountered to a depth of 48 cmbs. The buried A1 horizon was encountered below Fill Layer 3 and continued to a depth of 81 cmbs, containing more gravel and rock than the same expression of the horizon to the south. The A1 horizon overlaid the B1, a dark yellowish brown silty sand, that extended to a depth of 90 cmbs where excavation was halted by the presence of a large root that inhibited further excavation.

Unit 23
This unit was placed adjacent to the south wall of Unit 16E in order to expose the continuation of the large possible foundation stone uncovered in Unit 16. Excavation encountered 10 cm of very dark gray brown (10YR3/3) (Fill layer 3) sandy loam with numerous recent paint chips but no other cultural material. Fill Layer 3 overlaid Fill Layer 5, a mottled yellow brown (10YR5/6) and dark brown (10YR3/3) fill that contained more gravel and nineteenth century artifacts. This layer extended to a depth of 30 cmbs. At 30 cmbs a greater amount of brick fragments than were found in the levels above was encountered in the south three quarters of the unit and the continuation of the large rock from Unit 16 was found in the north quarter. Excavation ceased at 30 cm at the rock.

Unit 24
This unit was located adjacent to the north side of Unit 16E and adjacent to the east wall of U16N. This unit was located here to further expose the rock encountered in Unit 16. Excavation encountered 10 cm of very dark gray brown (10YR3/3) (Fill layer 3) sandy loam with numerous recent paint chips but no other cultural material. Fill Layer 3 continued to a depth of 30 cmbs with more rocks, gravel, and small roots. The large rock encountered in Unit 16 was found at 30 cmbs in the southern third of this unit. The northern two-thirds consisted of gray brown sandy loam. A layer of dark brown (10YR3/3) soil with rocks and gravel, was found to 50 cmbs. This was identified as a possible foundation trench associated with the large stones. Possibly displaced chinking stones, bricks and artifacts were found in this soil horizon. Excavation ceased at 50 cmbs at the B1 horizon.

Unit 25
This unit was located adjacent to the north side of Unit 16N, being located here to further expose the rock encountered in Unit 16 and to explore the foundation trench identified to the south and east and to determine if the possible foundation continues to the west or east. The stratigraphy of Unit 25 consisted of ten centimeters of very dark brown (10YR3/3) loose soil with some white paint chips and rootlettes. More artifacts and some rootlettes were encountered to 20 cmbs within a dark gray brown sandy loam Fill Layer 3 horizon. Fill Layer 5, the mottled yellow brown (10YR5/6) and dark brown (10YR3/3) horizon, was encountered at 20 cm. It was found to contain a higher concentration of nineteenth century artifacts and more gravel. A possible buried A1 horizon was encountered from 30 to 40 cmbs with less gravel and less historic artifacts but more Native material. The B1 subsoil was encountered at 50 cmbs with no trace that any foundation trench extended into the subsoil.

Unit 26
Unit 26 was placed adjacent to the east wall of Unit 25 in an attempt to locate a possible foundation trench associated with the foundation found to the south. The stratigraphy of Unit 26 consisted of five centimeters of dark brown (10Yr3/3) loose soil with a high concentration of white paint chips and rootlettes. This overlaid five centimeters of dark brown (10YR3/3) sandy loam Fill Layer 3 that contained few artifacts. Fill layer 5, the mottled yellow brown (10YR5/6) and dark brown (10YR3/3) sandy gravelly loam, was encountered in the northeast corner of this unit. The remainder of the unit was a dark gray sandy loam. At 20 cmbs a layer of heavy gravel and artifact concentration was identified while soil was mottled Fill Layer 6. This mottled layer continued to 40 cmbs. A possible intact A1 horizon was encountered to a depth of 45 cmbs. The B1 horizon was encountered below this. Excavation of this unit allowed archaeologists to be certain that the foundation did not continue to the west but may go to the east.

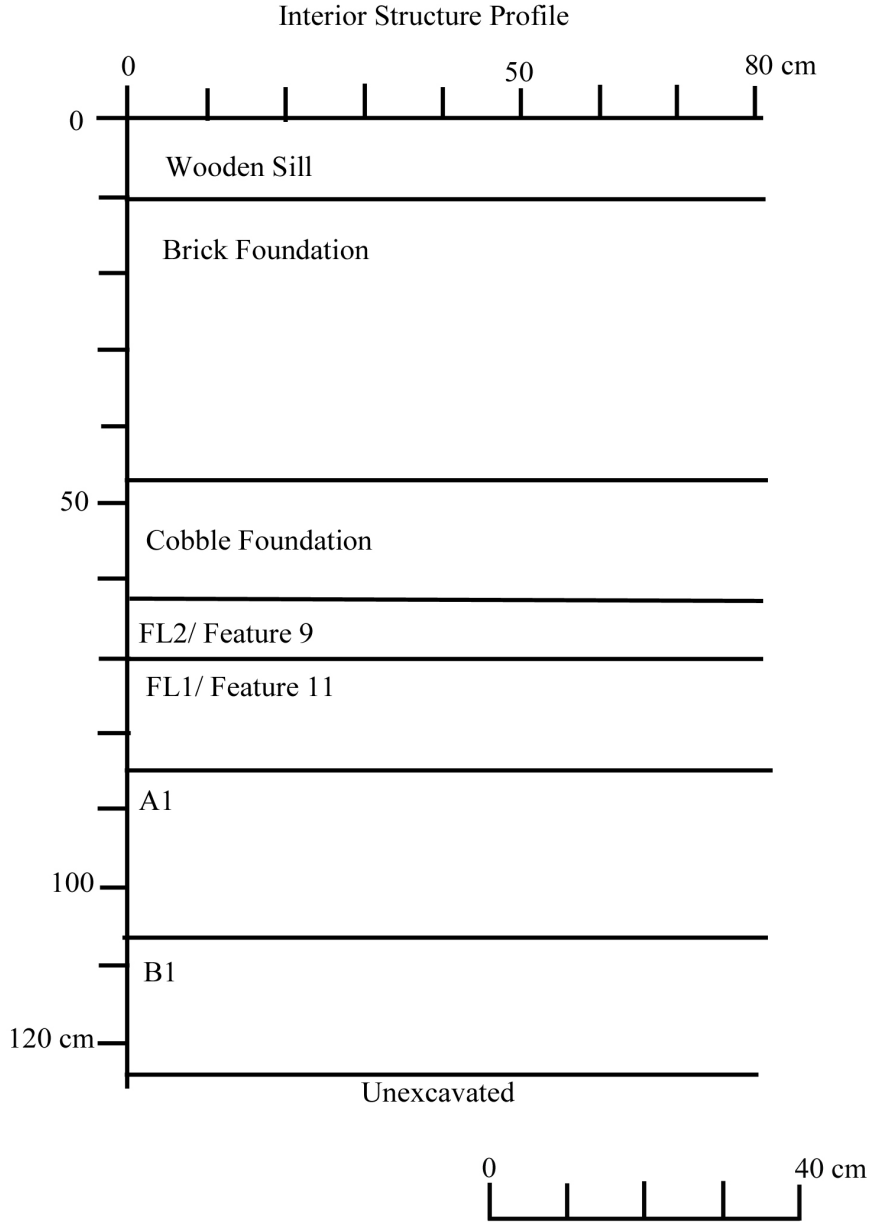
B. Interior Testing

Field work at the possible slave house at 11 North Street began with the removal of the flooring within the standing structure by archaeologists Craig Chartier, Plymouth Antiquarian Society Director Donna Curtin, and volunteers. The floor consisted of a layer of green linoleum that is believed to date to the 1950s, followed by a layer of Boston newspaper pages dated 1952. The flooring below the newspaper consisted of tongue and groove boards dating to the twentieth century. This flooring rested on a sub-floor made of wide creosote-soaked machine-sawn boards that are believed to have been reused from another structure. Once the flooring was removed, the sub-floor was found to rest on machine-sawn two by six floor joists, possibly dating to the 1950s as well. The joists and flooring may have been replaced when the structure was used as a summer house for the Hathaway children who lived in the house at 11 North Street. The Hathaway family rented out the bedrooms of their house in the summer for tourists to Plymouth. The parents relegated the children to the possible slave house so that they could rent their bedrooms out.

Once the flooring and floor-joists were removed, a layer of refuse dating to the early to middle nineteenth century was found 65 cm below the flooring. This refuse layer was found to cover the entire ground surface. The ground surface inside of the structure was found to be 15 cm deeper than the ground surface on the outside with 20 cm of brick foundation exposed on the exterior and 35 cm of brick foundation exposed on the interior. The surface debris consisted of bricks and brick fragment, cobbles and small boulders, wood scrap, dried, mummified commensal species such as squirrels and opossums, and dried leaves that had blown in from the opening on the east side of the foundation. The next step was to remove the extraneous surface detritus (the leaves, scrap modern wood, mummified animals) and once this was accomplished, the top five centimeters of the nineteenth century material was removed. The removal was carried out in 50-cm squares excavated adjacent to each other. This resulted in a total of 24 50-cm-squares within the structure. Numbering for these squares was referenced to their distance south and west from the interior northeast corner of the structure so that the first square excavated was 0-50 cm south and 0-50 cm west. Excavation then proceeded to square 50-100 cm south and 0-50 cm west and so on. The interior of the structure measured 210 cm north to south by 300 cm east to west. The final 50 centimeter strip from 250-300 cm west was left unexcavated.

The nineteenth century material was found to form a thin, five-centimeter thick, midden deposit across most of the surface below the floor. This is identified as Feature 9 **(Figure 19).** This midden extended deeper in the western quarter from 250 to 300 cm west of the east wall. This is believed to be the result of the turning of the structure from a gable end north to south orientation when it was built to a gable-end east to west orientation in the early nineteenth century back to a gable end north to south orientation in the later nineteenth century. A beach cobble foundation was found below the brick foundation. This cobble deposit appears to either be an earlier foundation that was replaced by the current brick foundation or else it was a cobble foundation deposit that was contemporaneous with the brick foundation. The cobble foundation was found to extend 20 cm into the interior of the floor of the structure and was present on all four sides. The cobbles were dry-laid within a shallow foundation trench.

A relatively clean deposit of fine silty sand was found below the nineteenth century midden in the eastern three quarters of the structure. This was identified as Feature 10 **(Figure 20)**. Only eighteenth



FL1- Fill Layer 1/ Feature 11: Mottled Light Olive Brown (2.5Y5/4) and Yellow (2.5Y7/6) Loamy Sand

FL2- Fill Layer 2/ Feature 9: Dark Brown (10YR3/3) Silty Sand

A1 Dark Brown (10YR3/3) Sandy Loam

B1 Yellowish Brown (10YR5/6) Silty Sand

Figure 19. Idealized stratigraphy beneath the 12 x 8' structure

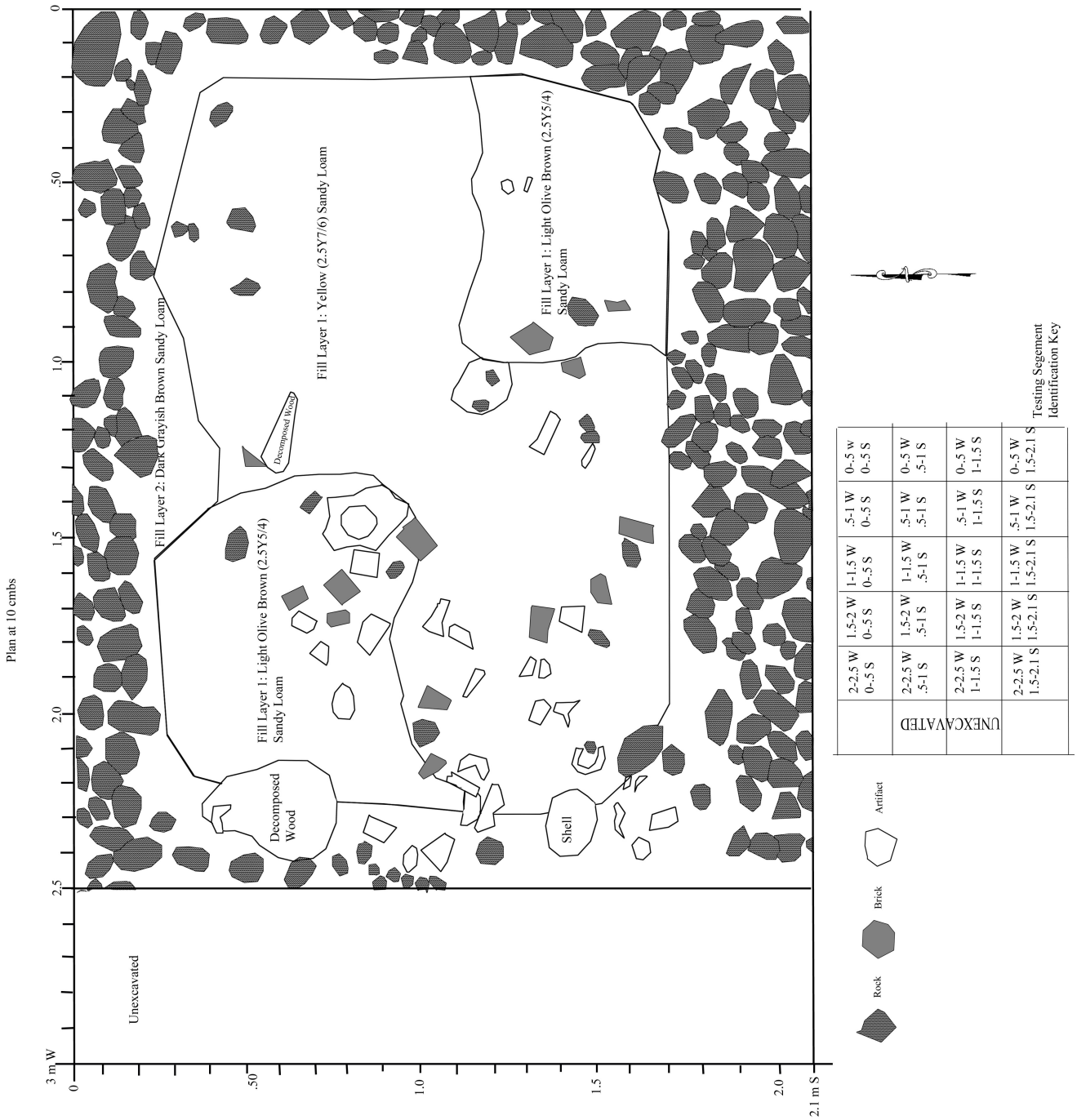


Figure 20. Plan of the interior of the 12 x 8' structure at 10 cmbs

century artifacts were found within this fill deposit, making it probable that it represented a fill layer deposited in the eighteenth century as a way to build up the ground surface. Excavation of this fill revealed the original ground surface of the yard at a depth of 10 to 25 cm below the present ground surface. This fill was found to be deeper in the southern two-thirds of the structure (averaging 25 cm) and shallower in the northern third (averaging 10 cm). The only artifacts found within the buried ground surface were pieces of yellow-bodied tin-glazed ceramics and Native American material. Only the north half of the interior of the structure was excavated down to the original ground surface. The south half was left unexcavated following the removal of the nineteenth century midden.

0-50 cm W

0-50 cm S

The surface of this square consisted of cobbles in the corner and loose dry soil covering the remainder of it. The surface of the ground ranged between 28 and 31 cm below the top of the brick foundation. Excavation of the first level (0-5 cmbs) revealed a cobble concentration in the northeastern three quarters with what was initially interpreted as topsoil beneath the loose, artifact rich, nineteenth century midden layer, especially in the southwest quadrant. The "topsoil" was determined to be a fill layer that overlaid the original A1 horizon. Excavation of the second level (5-10 cmbs) revealed a 20 cm wide cobble foundation adjacent to the north and east walls and an overall soil color of dark brown (10YR3/3). The north foundation appears to rest directly on, or slightly into, the original ground surface. The third level excavation (10-15 cmbs) removed most of the dark brown (10YR3/3) soil, revealing a mottled light olive brown (2.5y5/4) and yellow (2.5Y7/6) loamy sand Feature 10/ Fill Layer 1 soil and one obliquely oriented strip left running away from the foundation. This was later determined to be a root or rodent run. The mottled Fill Layer 1(15-17 cmbs) was found to rest on top of a buried A1 horizon that was dark brown (10YR3/3) in color and rose up to the cobble foundation against the north wall at 15 cmbs. Excavation of the A1 horizon, a dark brown (10YR3/3) silty sand yielded no cultural material from 17-25 cmbs but did yield Native American material and brick from 25-30 cmbs. The lower A1 layer was found to have a higher occurrence of gravel than the upper 17-25 cmbs layer. The A1 horizon continued to 35 cmbs where it gave way to a yellowish brown (10YR5/6) B1 horizon. The B1 horizon had a higher gravel and small rock content and no cultural material was recovered from it. The B1 continued to 50 cmbs where it gave way to a light olive brown (2.5Y5/3) B2 horizon that was excavated to a depth of 90 cmbs before it gave way to the pale yellow (2.5Y7/3) C1 horizon.

50-100 cm S

The surface of this square consisted of cobbles against the east wall, loose dry soil covering the remainder of it, and brick fragments in the south half. Excavation of the first level (0-5 cmbs) revealed a cobble concentration along the eastern wall with what was interpreted as topsoil beneath the loose, artifact rich, nineteenth century Feature 9 midden layer. Excavation of the second level (5-10 cmbs) revealed a 20 cm wide cobble foundation adjacent to the east wall and an overall soil color of dark brown (10YR3/3). The third level excavation (10-15 cmbs) removed most of the dark brown (10YR3/3) soil, revealing a mottled light olive brown (2.5y5/4) and yellow (2.5Y7/6) loamy sand Feature 10/ Fill Layer 1 soil horizon. The mottled fill layer (15-25 cmbs) was found to rest on top of a buried A1 horizon that was dark brown (10YR3/3) in color. Excavation ceased at the top of the buried A1 horizon.

100-150 cm S

The surface of this square consisted of cobbles against the east wall, loose dry soil and loose leaf litter covering the remainder of it. Excavation of the first level (0-5 cmbs) revealed a cobble concentration along the eastern wall with what was interpreted as topsoil beneath the loose, artifact rich, nineteenth century midden layer. Excavation of the second level (5-10 cmbs) revealed a 20 cm wide cobble foundation adjacent to the east wall and an overall soil color of dark brown (10YR3/3). The third level excavation (10-15 cmbs) removed most of the dark brown (10YR3/3) soil, revealing a mottled light olive brown (2.5y5/4) and yellow (2.5Y7/6) loamy sand Feature 10/ Fill Layer 1 soil horizon. The mottled fill layer (15-30 cmbs) was found to rest on top of a buried A1 horizon that was dark brown (10YR3/3) in color. Excavation ceased at the top of the buried A1 horizon.

150-210 cm S

The surface of this square consisted of cobbles against the east and south walls, loose dry soil and loose leaf litter covering the remainder of it. Excavation of the first level (0-5 cmbs) revealed a heavy cobble and gravel concentration along the eastern and southern walls associated with the nineteenth century midden. Excavation ceased at the top of the buried second fill layer at 5 cmbs.

50-100 cm W

0-50 cm S

The surface of this square consisted of cobbles against the north wall, loose dry soil covering the remainder of it. Excavation of the first level (0-5 cmbs) revealed a cobble concentration along the north wall with what was interpreted as topsoil beneath the loose, artifact rich, nineteenth century midden layer. Excavation of the second level (5-10 cmbs) revealed a 20 cm wide cobble foundation adjacent to the north wall with a dark soil concentration just to the south of the cobbles. This was interpreted as a builder's trench associated with the cobble or brick foundation. The third level excavation (10-15 cmbs) removed most of the dark brown (10YR3/3) soil, revealing a mottled light olive brown (2.5y5/4) and yellow (2.5Y7/6) loamy sand Feature 10/ Fill Layer 1 soil horizon with root or rodent disturbance. Several charcoal flecks were encountered in this level but no cultural material. The mottled fill layer (15-20 cmbs) was found to rest on top of a buried A1 horizon that was dark brown (10YR3/3) in color. Excavation ceased at the top of the buried A1 horizon and a seventeenth century bottle rim to neck was found on top of the buried A1.

50-100 cm S

The surface of this square consisted of loose, dry, shallow upper midden Fill Layer 2. Excavation of the first level (0-5 cmbs) revealed that Fill Layer 2 quickly gave way to Fill Layer 1 at 5 cmbs. Excavation of the second level (5-10 cmbs) revealed dark soil in the south half of the square with brick fragments surrounded by a mottled matrix of Fill Layer 1 soil. This was interpreted as a probable root or rodent run. Brick fragments were also encountered along the south wall of the square at 15 cmbs, still within Fill Layer 1. The buried A1 horizon was encountered at 25 cmbs. Brick and shell fragments were found on top of the buried A1. Excavation ceased at the top of the buried A1 horizon at 25 cmbs.

100-150 cm S

The surface of this square consisted of loose, dry, shallow upper midden Fill Layer 2 with scattered cobbles. Excavation of the first level (0-5 cmbs) revealed that the dark brown (10YR3/3) Fill Layer 2 quickly gave way to Fill Layer 1 at 5 cmbs. The rocks that were present at the surface were gone by 5

cmbs. Excavation of the second level (5-15 cmbs) revealed mottled Fill Layer 1 soil with scattered rocks and eighteenth century artifacts. Fill Layer 1 was excavated to 30 cmbs where the buried A1 horizon was encountered. Excavation ceased at the top of the buried A1 horizon at 30 cmbs.

150-210 cm S

The surface of this square consisted of cobbles against the south wall, loose dry soil and an abundance of nineteenth century artifacts covering the remainder of it. Excavation of the first level (0-5 cmbs) revealed a heavy cobble and gravel concentration along the southern wall associated with the nineteenth century midden. Excavation ceased at the top of the buried second fill layer at 5 cmbs.

100-150 cm W

0-50 cm S

The surface of this square consisted of cobbles against the north wall, loose dry soil covering the remainder of it. Excavation of the first level (0-5 cmbs) revealed a cobble concentration along the north wall with what was interpreted as topsoil beneath the loose, artifact rich, nineteenth century midden layer. Excavation of the second level (5-10 cmbs) revealed a 20 cm wide cobble foundation adjacent to the north wall with a dark soil concentration just to the south of the cobbles. This was interpreted as a builder's trench associated with the cobble or brick foundation. The third level excavation (10-15 cmbs) removed most of the mottled light olive brown (2.5y5/4) and yellow (2.5Y7/6) loamy sand Feature 10/ Fill Layer 1 soil horizon with root or rodent disturbance and exposed the lighter Fill Layer 1 horizon. Several charcoal flecks were encountered in this level but no cultural material. The mottled fill layer (15-20 cmbs) was found to rest on top of a buried A1 horizon that was dark brown (10YR3/3) in color. Excavation ceased at the top of the buried A1 horizon at 20 cmbs.

50-100 cm S

The surface of this square consisted of loose, dry, shallow upper midden Fill Layer 2. Excavation of the first level (0-5 cmbs) revealed that Fill Layer 2 quickly gave way to Fill Layer 1 at 5 cmbs. A piece of very deteriorated wood was found running north to south at 5 cmbs in the center of the square. The rim, neck and shoulders of a “tamarind jar” were found at 5 cmbs in the western half of the square. Excavation of the second level (5-10 cmbs) revealed concentration of wood, that was interpreted as a possible decomposed root, in the eastern half with dark soil beneath it at 10 cmbs. The buried A1 horizon was encountered at 25 cmbs. Brick and shell fragments were found on top of the buried A1. Excavation ceased at the top of the buried A1 horizon at 25 cmbs.

100-150 cm S

The surface of this square consisted of loose, dry, shallow upper midden Fill Layer 2 with scattered cobbles. Excavation of the first level (0-5 cmbs) revealed that Fill Layer 2 quickly gave way to Fill Layer 1 at 5 cmbs with less artifacts in the 0-5 cmbs that were recovered to the east. Half of a redware storage pot was found buried in the top of Fill Layer 1 at 5 cmbs. Excavation of the second level (5-15 cmbs) revealed mottled Fill Layer 1 soil with scattered rocks, brick, and eighteenth century artifacts. Fill Layer 1 was excavated to 30 cmbs where the buried A1 horizon was encountered. Excavation ceased at the top of the buried A1 horizon at 30 cmbs.

150-210 cm S

The surface of this square consisted of cobbles against the south wall, loose dry soil and an abundance of nineteenth century artifacts covering the area to the north of it. Excavation of the first level (0-5 cmbs) revealed a heavy cobble and gravel concentration along the southern wall associated with the nineteenth century midden to the north of the rocks. Excavation ceased at the top of Fill Layer 1 at 5 cmbs.

150-200 cm W

0-50 cm S

The surface of this square consisted of cobbles against the north wall, loose dry soil covering the remainder of it with artifacts being found under and around the cobbles. Excavation of the first level (0-5 cmbs) revealed a cobble concentration along the north wall with a loose, artifact rich, nineteenth century midden layer with some coal ash. Excavation of the second level (5-10 cmbs) revealed a 20 cm wide cobble foundation adjacent to the north wall with a dark soil concentration just to the south of the cobbles and one stone in the floor at 10 cmbs. The third level excavation (10-20cmbs) removed the Fill Layer 1 horizon. This layer was found to rest on top of the buried A1 horizon that was dark brown (10YR3/3) in color. Excavation ceased at the top of the buried A1 horizon at 20 cmbs.

50-100 cm S

The surface of this square consisted of loose, dry, shallow upper midden Fill Layer 2. Excavation of the first level (0-5 cmbs) revealed that Fill Layer 2 quickly gave way to Fill Layer 1 at 5 cmbs. Another portion of the rim, neck and shoulders of a "tamarind jar" were found at 5 cmbs in the eastern half of the square along with the base to a case bottle. Excavation of the second level (5-10 cmbs) revealed concentration of stone in the east half and dark brown (10YR3/3) soil at 10 cm. The buried A1 horizon was encountered at 25 cmbs. Tin-glazed ceramics and bottle glass were found at the top of the buried A1 at 25 cmbs.

100-150 cm S

The surface of this square consisted of loose, dry, shallow upper midden Fill Layer 2 soil. Excavation of the first level (0-5 cmbs) revealed that Fill Layer 2 did not have as many artifacts as it did to the east and that it quickly gave way to Fill Layer 1 at 5 cmbs. Excavation ceased at the top of Fill Layer 1 at 5 cmbs.

150-210 cm S

The surface of this square consisted of cobbles against the south wall, loose dry soil and an abundance of nineteenth century artifacts covering the area to the north of it. Excavation of the first level (0-5 cmbs) revealed a heavy cobble and gravel concentration in a dark brown (10YR3/3) soil matrix along the southern wall associated with the nineteenth century midden to the north of the rocks. Excavation ceased at the top of Fill Layer 1 at 5 cmbs.

200-250 cm W

0-50 cm S

The surface of this square consisted of cobbles against the north wall, loose dry soil covering the remainder of it with artifacts being found under and around the cobbles. Excavation of the first level (0-5 cmbs) revealed a cobble concentration along the north wall with a loose, artifact rich, nineteenth

century midden layer with some coal ash. Excavation of the second level (5-10 cmbs) revealed a 20 cm wide cobble foundation adjacent to the north wall with a dark soil concentration just to the south of the cobbles and rotted wood. The third level excavation (10-15cmbs) removed the mottled light olive brown (2.5Y5/4) and yellow (2.5Y7/6) silty sand Fill Layer 1 horizon. A heavy concentration of artifacts was found in the southwest half of this square. This was labeled Feature 1 and will be discussed further below.

50-100 cm S

The surface of this square consisted of loose, dry, shallow upper midden Fill Layer 2. Excavation of the first level (0-5 cmbs) revealed a dark gray brown soil horizon with charcoal that was associated with eighteenth and nineteenth century artifacts. A thin layer of light colored soil overlaid this darker soil with some rock and brick associated with it as well. Excavation of the second level (5-10 cmbs) revealed concentration of brick in the north half and dark soil and less artifacts in the south half with more gravel being present. A heavy concentration of artifacts was found in the northwest half of this square. This was labeled Feature 1 and will be discussed further below.

100-150 cm S

The surface of this square consisted of loose, dry, shallow upper midden Fill Layer 2 soil. Excavation of the first level (0-5 cmbs) revealed that Fill Layer 2 did not have as many artifacts as it did to the east and that it quickly gave way to Fill Layer 1 at 5 cmbs. Excavation ceased at the top of Fill Layer 1 at 5 cmbs.

150-210 cm S

The surface of this square consisted of cobbles against the south wall, loose dry soil and an abundance of nineteenth century artifacts covering the area to the north of it. Excavation of the first level (0-5 cmbs) revealed a heavy cobble and gravel concentration in a dark brown (10YR3/3) soil matrix along the southern wall associated with the nineteenth century midden to the north of the rocks. Excavation ceased at the top of Fill Layer 1 at 5 cmbs.

250-300 cm W

0-50 cm S

The surface of this square consisted of cobbles against the north wall, loose dry soil covering the remainder of it with artifacts being found under and around the cobbles. Excavation of the first level (0-5 cmbs) revealed a cobble concentration along the north wall with a loose, artifact rich, nineteenth century midden layer with coal ash. Excavation of the second level (5-10 cmbs) revealed a 20 cm wide cobble foundation adjacent to the north wall with a dark soil concentration just to the south of the cobbles and a heavy concentration of artifacts. The third level excavation (10-15cmbs) removed Fill Layer 1 horizon. A heavy concentration of artifacts was found in the southwest half of this square. This was labeled Feature 1 and will be discussed further below.

50-100 cm S

The surface of this square consisted of loose, dry, shallow upper midden Fill Layer 2. Excavation of the first level (0-5 cmbs) revealed a dark gray brown soil horizon with rotted wood and small stones. What appeared to be a rodent run or root was visible at 5 cmbs. Excavation of the second level (5-10 cmbs) revealed concentration of wine bottle bases along the south wall of the square with dark soil and

a heavier artifact concentration in the north half. A heavy concentration of artifacts was found in the northwest half of this square. This was labeled Feature 1 and will be discussed further below. The original ground surface was encountered at 25 cmbs in the south half. Excavation ceased at 25 cmbs on top of the buried A1 horizon.

100-150 cm S

The surface of this square consisted of loose, dry, shallow upper midden Fill Layer 2 soil. Excavation of the first level (0-5 cmbs) revealed a dark soil layer running north to south across this end of the structure at 5 cmbs. This concentration contained abundant oyster shell, glass, and pottery dating to the eighteenth to nineteenth centuries. This square was excavated to a depth of 35 cmbs where the buried A1 horizon was encountered.

150-210 cm S

The surface of this square consisted of cobbles against the south wall, loose dry soil and an abundance of nineteenth century artifacts covering the area to the north of it. Excavation of the first level (0-5 cmbs) revealed a heavy cobble and gravel concentration in a dark brown (10YR3/3) soil matrix along the southern wall associated with the nineteenth century midden to the north of the rocks. Excavation ceased at the top of Fill Layer 1 at 5 cmbs.

Summary of Stratigraphy within Structure

The stratigraphy beneath the structure, against the foundation wall 50 cm east of the northwestern corner, starting at the base of the wall, consisted of a 10 cm tall machine-sawn sill that appears to have been replaced in the nineteenth century. It rests on a 38 cm high nineteenth century brick foundation laid in a running/ stretcher bond and mortared together with a sandy tan colored mortar. The brick foundation rests on a one centimeter thick layer of mortar between itself and the cobbles beneath it. The cobble layer is 15 cm deep and appears to rest on a dark brown (10YR3/3) silty sand fill layer that was also encountered in the yard. This fill layer averaged 24 cm deep and rested on top of a 20 cm deep buried dark brown (10YR3/3) A1 horizon. The A1 overlaid a yellowish brown (10YR5/6) silty sand B1 horizon that was 20 cm deep and overlaid a light olive brown (2.5Y5/3) silty sand B2 horizon. The stratigraphy here paralleled that found in the yard and is believed to be the result of a change in the orientation of the structure, so that as a result, this stratigraphic profile was formed when this area was yard, before the structure was turned to its present orientation in the late nineteenth to early twentieth century.

The stratigraphy beneath the structure in the center of it consisted of five centimeters of nineteenth century midden (Feature 10) soil that overlaid an average of 20 cm of mottled light olive brown (2.5Y5/4) and yellow (2.5Y7/6) loamy sand Fill Layer 1 (Feature 11) soil. This layer contained only eighteenth century artifacts and is believed to represent a fill layer laid down no earlier than ca. 1762 based on the recovery of creamware from this fill. This fill layer rested on top of the original ground surface which was encountered at a depth of 25 cm below the unexcavated ground surface under the structure. The fill was found to be deeper in the south half versus the north half due to a gradual sloping of the original ground surface from north to south towards Middle Street. It is believed that Fill Layer 1 was added in the eighteenth century as a way to level this part of the yard in order to create a level area to build the present structure. A 20 cm deep buried dark brown (10YR3/3) A1 horizon was encountered

below Fill Layer 1. The A1 overlaid a yellowish brown (10YR5/6) silty sand B1 horizon that was 20 cm deep and overlaid a light olive brown (2.5Y5/3) silty sand B2 horizon.

The stratigraphy in the northeast corner at a point 17 cm west of the east wall of the structure consisted of a ten centimeter deep cobble foundation layer that was found to overlay a 12 cm deep Fill Layer 1. Fill Layer 1 overlaid the 20 cm deep buried dark brown (10YR3/3) A1 horizon was encountered below Fill Layer 1. The A1 overlaid a yellowish brown (10YR5/6) silty sand B1 horizon that was 20 cm deep and overlaid a light olive brown (2.5Y5/3) silty sand B2 horizon. The B2 horizon was 25 cm thick.

C. Features

A total of 12 features were identified beneath and outside of the 12 x 8' structure **(Table 3, Figure 21)**.

Table 3. Features identified at 11 North Street

Feature #	Units	Type	Temporal Range	Association
1	Structure	Pit	Post 1833	Jackson Occupation
2	U1, 6, 19, 21	Foundation	Post 1830- Pre 1850	Jackson Occupation
3	U7, 7S	Foundation	Post 1830- Pre 1850	Jackson Occupation
4	U9, U18	Privy Fill	Late 19th century	Post Jackson Occupation
5	U16, 16E, 16N, 24-26	Foundation	Post 1830-Pre1850	Jackson Occupation
6	U17, 17N	Foundation	Post 1830-Pre1850	Jackson Occupation
7	U19	Pit	Middle to Late Woodland	Native
8	U21, 21E	Foundation	Post 1830- Pre 1850	Jackson Occupation
9	Structure	Midden layer	Early to late 19th century	Jackson Occupation
10	Structure	Midden layer	Late 18th to early 19th century	Watson-Jackson Occupation
11	Structure	Midden layer	Late 18th Century	Watson Occupation
12	U8. 10	Cellar Fill	Late 19th century	Post Jackson Occupation

One feature was identified as likely being of Native origin (Feature 7), and two were identified as dating to the late nineteenth to early twentieth century (Features 4 and 12). One is a strong candidate for an eighteenth century date (Feature 11) and the remainder are believed at the present time to date to the nineteenth century. Several of the features may relate to the moving of the 12 x 8' structure around the south yard area in the early to late nineteenth century.

Feature 1

Feature 1 was in the northwest corner of the interior of the structure. It appeared to represent a circular pit measuring approximately 80 cm east to west by approximately 70 cm north to south **(Figure 22)**. It was first identified at 25 cmbs, below the nineteenth century midden layer and appeared to extend out from beneath the north wall. It also extended east from beneath the unexcavated 50-cm wide strip against the west foundation. The feature was bisected 25 cm east of 300 cm west of the east foundation of the structure. Excavation was carried out on the east half with the west half being retained in situ.

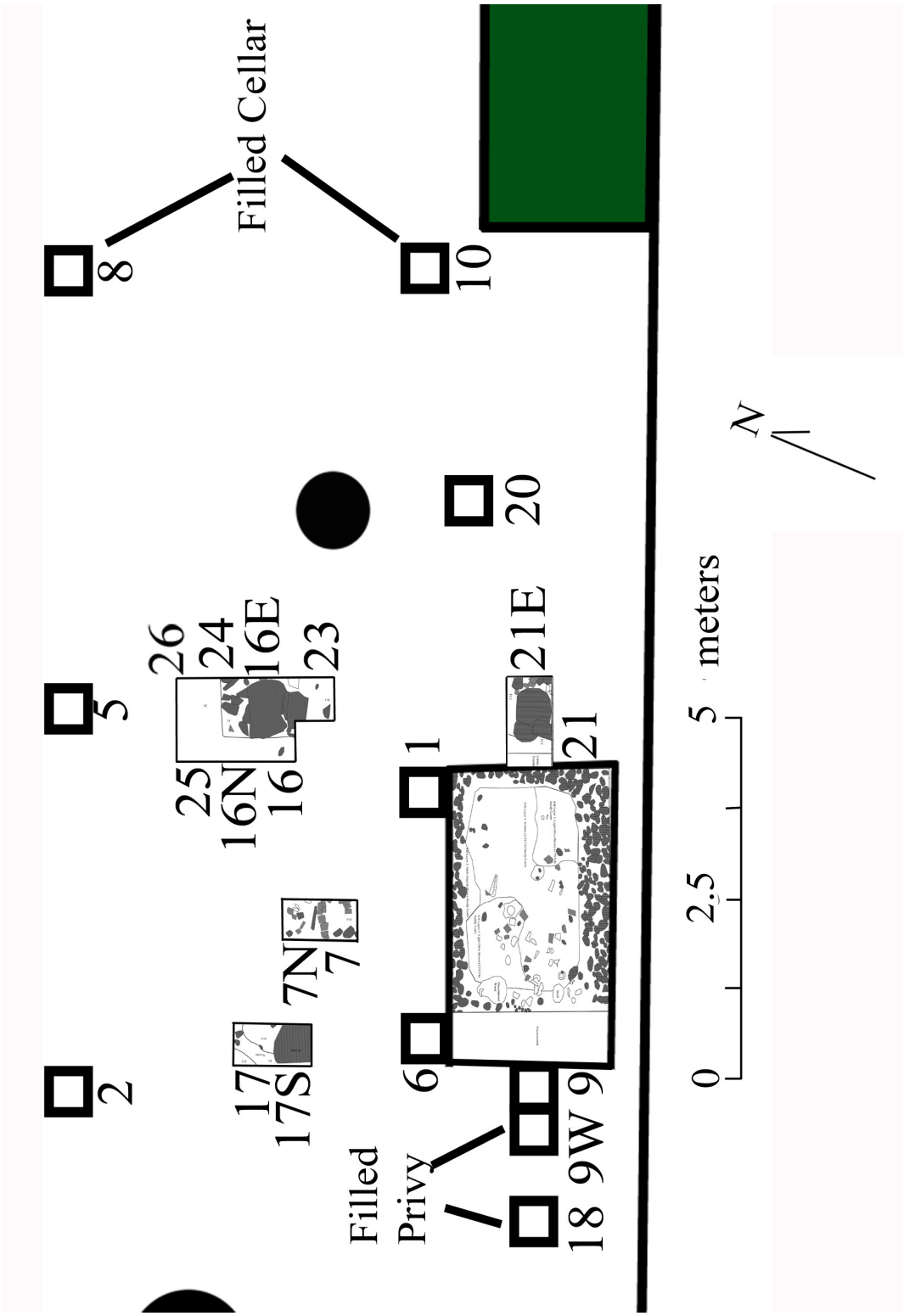


Figure 21. Location of features immediately around the 12 x 8' structure

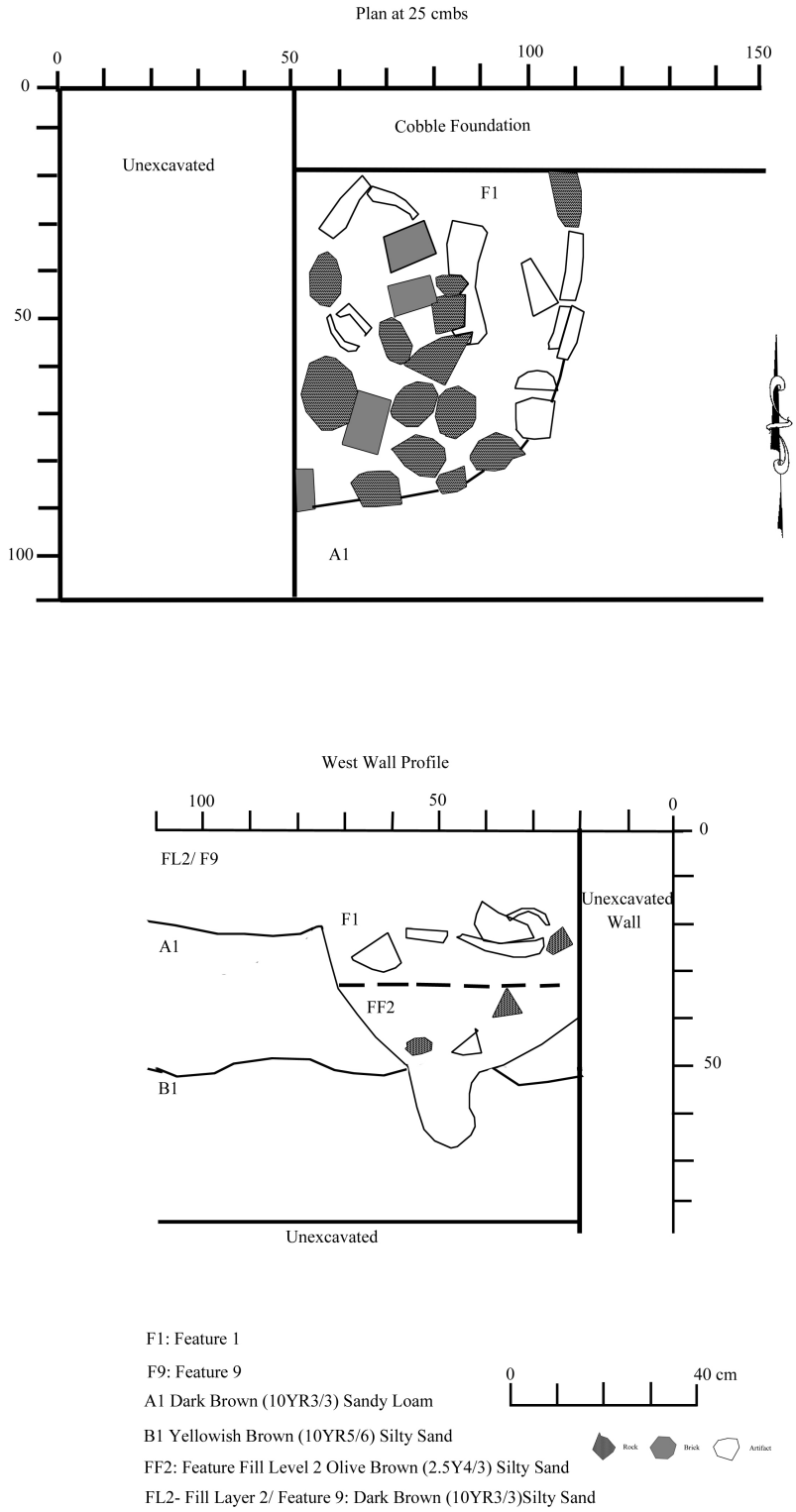


Figure 22. Feature 1 plan and profile

The first layer excavated (25-30 cmbs) contained a high occurrence of ceramics, glass, metal, and bone. The next layer (25-30 cm) contained several whiskey bottle bases embossed with the mark of the Dyattville Glass Works, which first started making bottles in 1833. The feature was slightly smaller at this level, shrinking slightly to the north and west, being only 25 cm wide east to west. Fewer artifacts were recovered and two rocks and pieces of shell were found in the fill. The soil on the edge of the feature was slightly lighter in color from 35-40 cm. The center of the feature remained dark in color and the matrix was the buried A1 horizon. Few artifacts were found from 40-45 cmbs and those that were recovered came from the center of the feature. Few artifacts were recovered from the matrix. The color of the feature had become a uniform olive brown (2.5Y4/3) color by 45 cmbs. The matrix soil was transitioning to the B1 horizon at 45-50 cm with an appreciable amount of Native material being found in it. Darker soil remained in the feature with some shell and nineteenth century ceramics present. The feature became smaller from 50-55 cmbs, shifting its center to the north and becoming more concentrated. Native material was recovered from the matrix and the feature at this level. Nails were also recovered from the feature. The feature was found to plunge to the north at 55-60 cm with loose soil being present. This lead to an interpretation that this was a rodent hole that was filled in ca. 1830s. At 60 cmbs the feature was found to be much smaller with runs leading off to the north and east. The final conclusion is that this feature may represent a rodent or root hole that was originally outside of the structure when it was built.

Feature 2

Feature 2 was the cobble foundation located beneath the brick foundation on which the 12 x 8' structure rested. This feature extended 20 cm into the interior of the structure and was found to contain a high occurrence of early to mid nineteenth century artifacts. It appears that this foundation was dug through Feature 10, the circa 1830s midden, dating it construction to some point after this period. Testing encountered this features on the exterior of the structure in Units 1, 6, 19, and 21. Feature 2 as represented in Unit 1, started at 15 cmbs, was 30 cm wide and 15 cm deep **(Figure 23)**. It consisted of large cobbles and large pieces of gravel with a layer of sand mortar, the same mortar that holds the brick superstructure together, on top of them. Fill Layer 3 overlaid Feature 2 and in the west half of the unit the feature overlaid a thin layer of yellow brown silty sand (Fill Layer 5). Feature 2 rested directly on top of a buried A1 horizon that was 25 cm thick. Mixed in and around Feature 2 were early nineteenth century ceramics, glass and brick.

As represented in Unit 6, Feature 2 was 25 cm wide north to south and at least 20 cm thick, consisting of some larger cobbles as well as smaller gravel **(Figure 24)**. An 18 cm deep dark grayish brown sand loam Fill Layer 3 overlaid Feature 2. Fill Layer 3 overlaid Fill Layer 5, which consisted of mottled yellow brown (10YR5/6) and dark brown (10YR3/3) silty sand, to the immediate north of the feature. Fill Layer 5 overlaid a dark brown (10YR3/3) Fill Layer 2 silty sand layer with a high concentration of nineteenth century artifacts. Fill Layer 2 was encountered from 40 to 60 cmbs. Fill Layer 2 overlaid the 20 cm thick buried A1 horizon in this unit. On the interior 50 cm to the east of Unit 6, the cobble layer was 15 cm thick and rested directly on top of a 24 cm buried A1 horizon. The foundation was very thick in Unit 9 and 9W where it was found to dramatically slope to the west extending from 10 to 80 cm wide between 10 and 90 cmbs. Feature 2 was found to contain a high concentration of early to middle nineteenth century ceramics and glass. The soils to the west of the feature were sandy fill that are hypothesized to be associated with the late nineteenth century orientation of the structure (north to south along its long axis) and the presence of a lean-to the immediate west. It is hypothesized that this

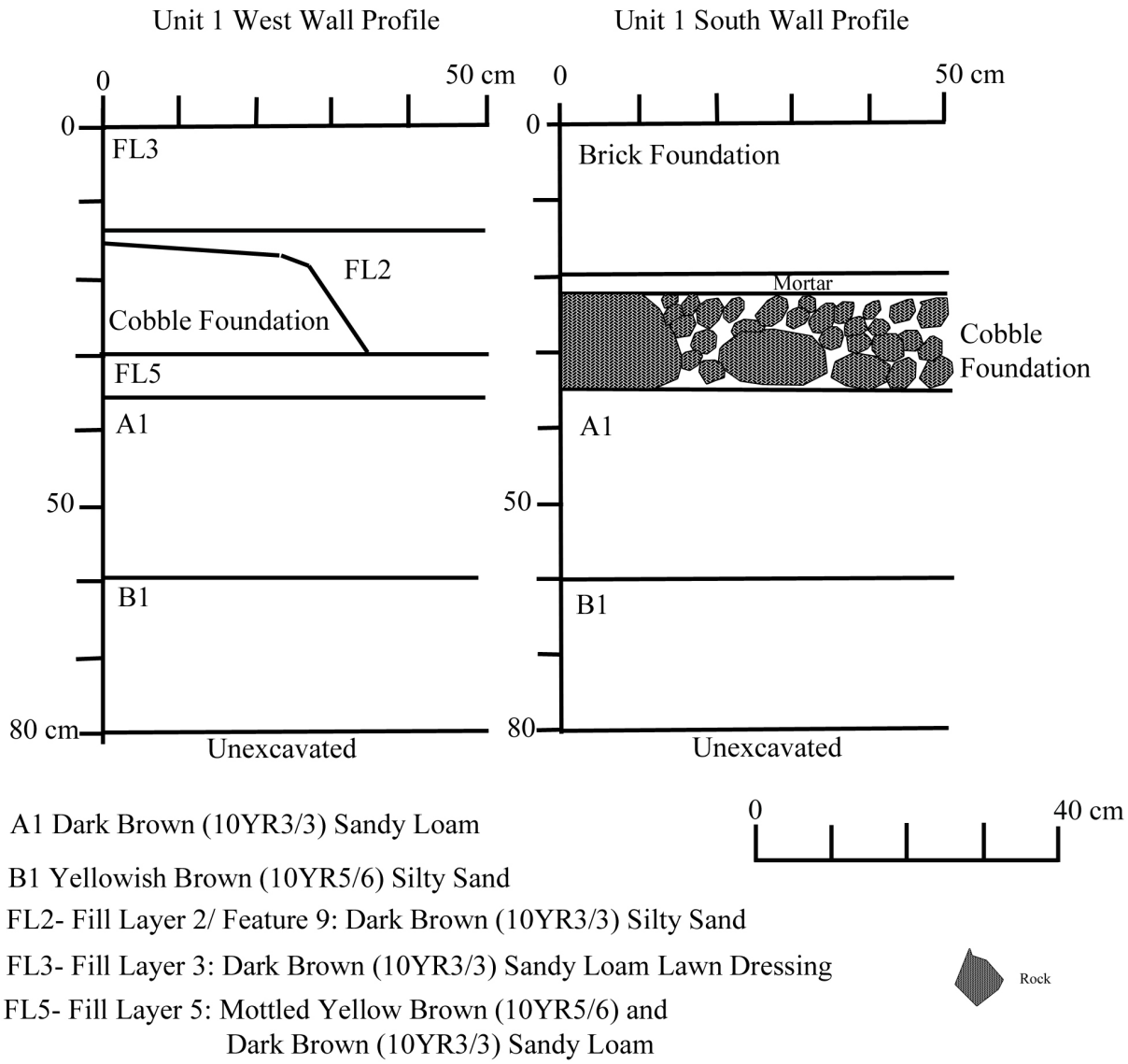
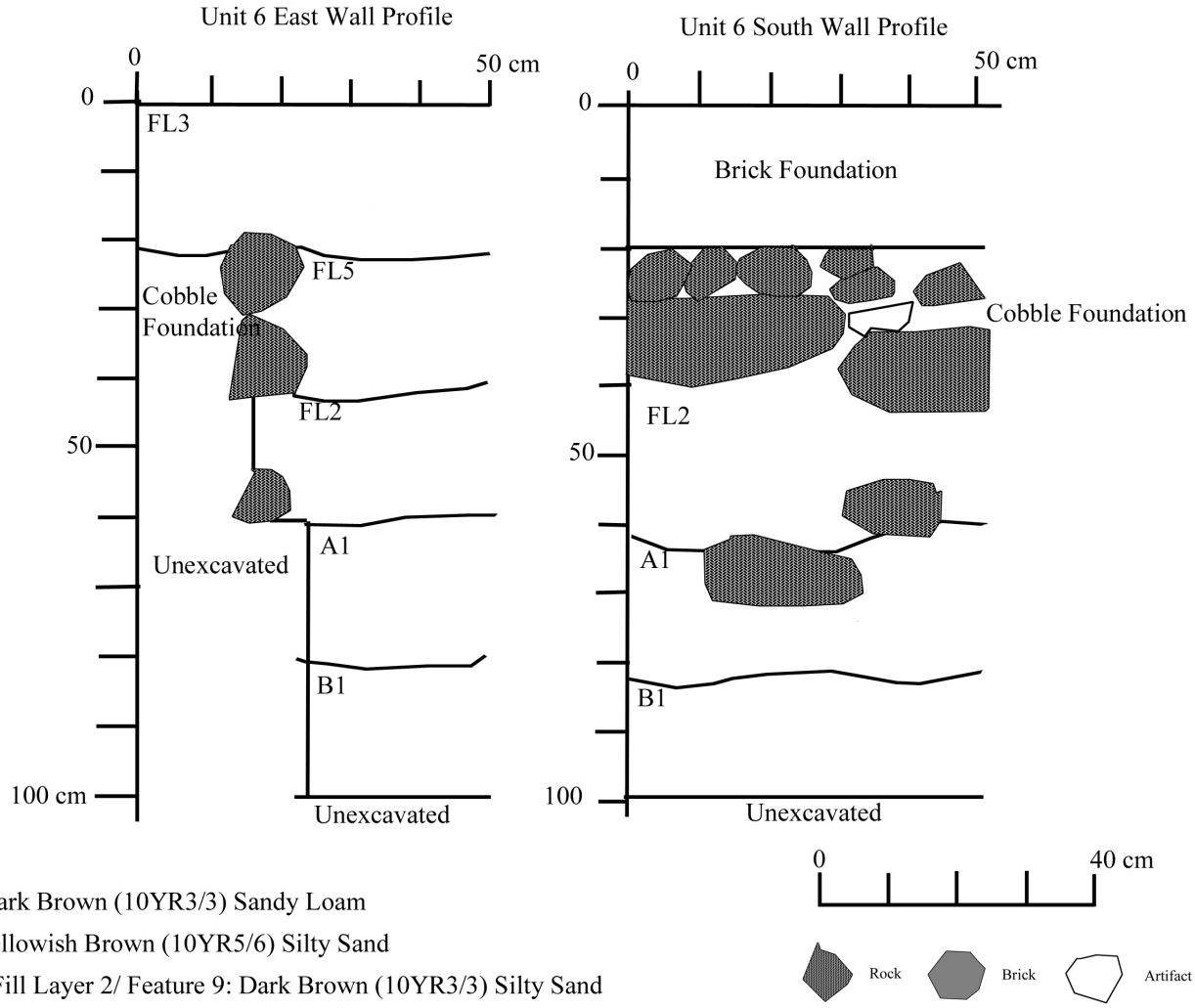


Figure 23. Feature 3 as represented in Unit 1



A1 Dark Brown (10YR3/3) Sandy Loam

B1 Yellowish Brown (10YR5/6) Silty Sand

FL2- Fill Layer 2/ Feature 9: Dark Brown (10YR3/3) Silty Sand

FL3- Fill Layer 3: Dark Brown (10YR3/3)Sandy Loam Lawn Dressing

FL5- Fill Layer 5: Mottled Yellow Brown (10YR5/6)
and Dark Brown (10YR3/3) Sandy Loam

Figure 24. Feature 2 as represented in Unit 6

lean to at least served as a privy at this time and that these deep fill layers represent very late nineteenth to early twentieth century filling of the abandoned privy.

Feature 3

Feature 3 was visible in the plan of the floor of Units 7 and 7S at 30 cmbs. The plan at this level shows a rough, single line of bricks extending from east to west across the middle of the unit with a few scattered bricks located to the north and south of this line **(Figure 25)**. Larger cobbles were also found on the north side of the line and upright piece of slate was found adjacent to the south side of the line. This brick line was found to only be one layer deep and appeared very haphazard versus being a well laid foundation. The soil on the south side of the brick line was Fill Layer 5, mottled yellowish brown and dark brown (10YR3/3), while the soil on the north side of the line (Fill Layer 4) was dark brown (10YR3/3) in color. Nineteenth century artifacts were found in both halves. This feature is interpreted as possibly representing part of the foundation of the 12 x 8' structure when it was rotated so that the gable ends faced the north and south.

Feature 4

Feature 4 was encountered in Unit 9. Excavation in this unit found the soil horizons showing a definite downward slope from east to west **(Figure 26)**. The south wall profile shows a 20 to 30 cm deep Fill Layer 3 overlaying a dark yellowish brown (10YR4/6) Fill Layer 7 from 20 to 35 cm in the east half and extending from 30 to 55 cmbs in the west half. This fill layer contained nineteenth century artifacts and overlaid Fill Layer 8, a pale yellow (2.5Y7/3) sterile coarse sand that was excavated to a depth of 90 cmbs and believed to date to the twentieth century. It is believed that this fill layer was used to fill a deep hole associated with the small structure shown on the late nineteenth century maps of the property. Considering the depth and nature of the fill, it is believed that this structure was either a privy or an ice house, the latter being a less likely explanation than the former. Unit 18, located 50 cm to the west of U9W's west wall, revealed a corresponding soil profile showing a slope to the east versus the west as was found in unit 9.

Feature 5

Excavation encountered a large rock covering the floor of Unit 16 at 30 cmbs and the unit was expanded with additional 50 cm units. A total of six units (U16, U16E, U16N, U24, U25, U26) were opened in this area to expose the possible foundation and to locate more of the foundation **(Figure 27)**. The stratigraphy was found to consist of a five centimeter deep A0 horizon that overlaid a Fill Layer 3 deposit that ended at 30 cmbs on top of the buried A1 horizon. The stones initially encountered were found to be part of a north to south running wall that was 50 to 70 cm wide and was set into the A1 horizon approximately 20 cm. The north end of the wall was found 58 cm south of the north wall of this complex of units and the building appears to have extended to the east. It is not the same building shown on the later nineteenth century maps and appears to date to the eighteenth century. The foundation stones in this unit align with those found in Unit 21 making a building that was at least 4 meters long, possibly extending outside of the current lot lines to the south. Alternately these stones could be part of an earlier foundation associated with the 12 x 8' structure when it was oriented with its gable ends facing north and south.

Feature 6

A rock concentration was encountered at 30 to cmbs in Unit 17 and it was expanded by 50 cm to the

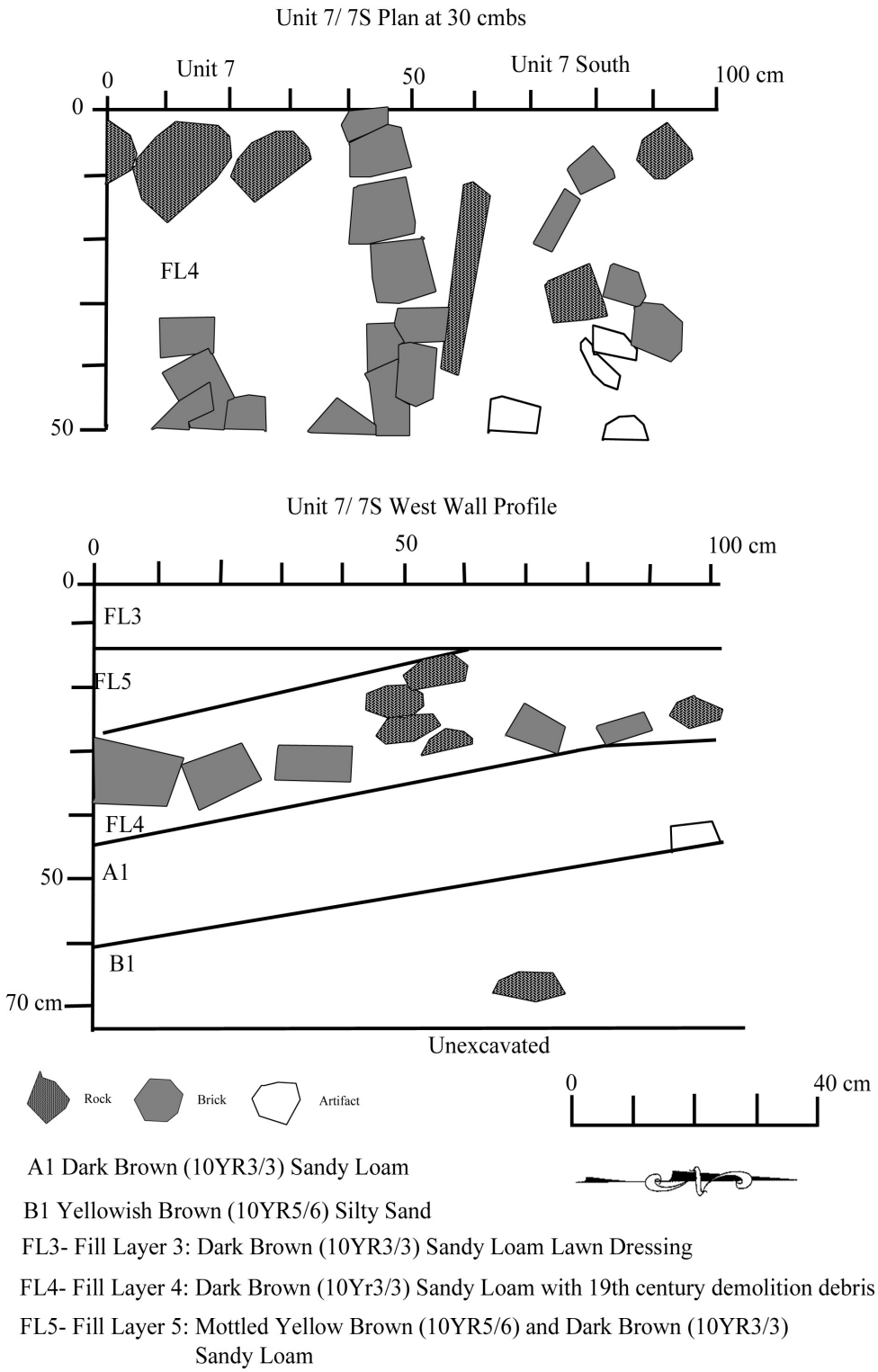
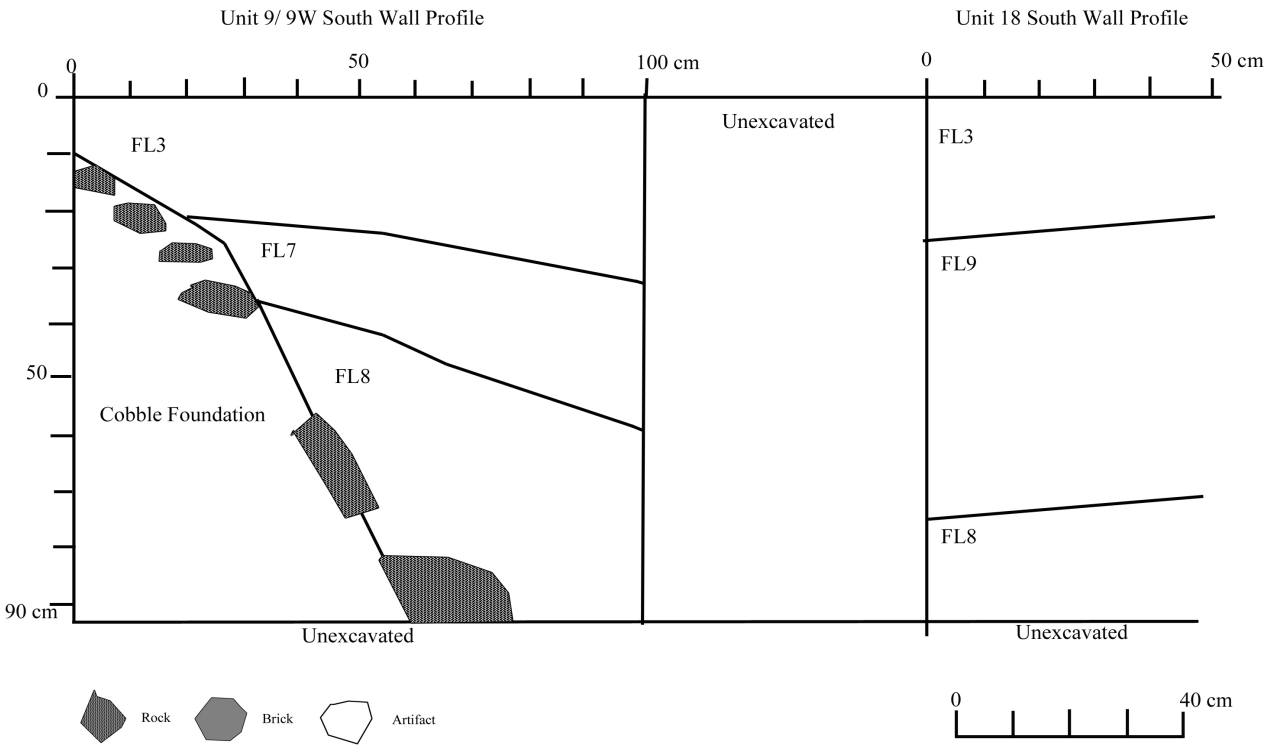


Figure 25. Feature 3 plan and profile



FL3- Fill Layer 3: Dark Brown (10YR3/3) Sandy Loam Lawn Dressing

FL7- Fill Layer 7: Dark Yellowish Brown (10YR4/6) Silty Sand

FL8- Fill Layer 8: Pale Yellow (2.5Y7/3)Coarse Sand

FL9- Fill Layer 9: Very Dark Grayish Brown (10YR3/2)Sandy Loam

Figure 26. Feature 4 profile

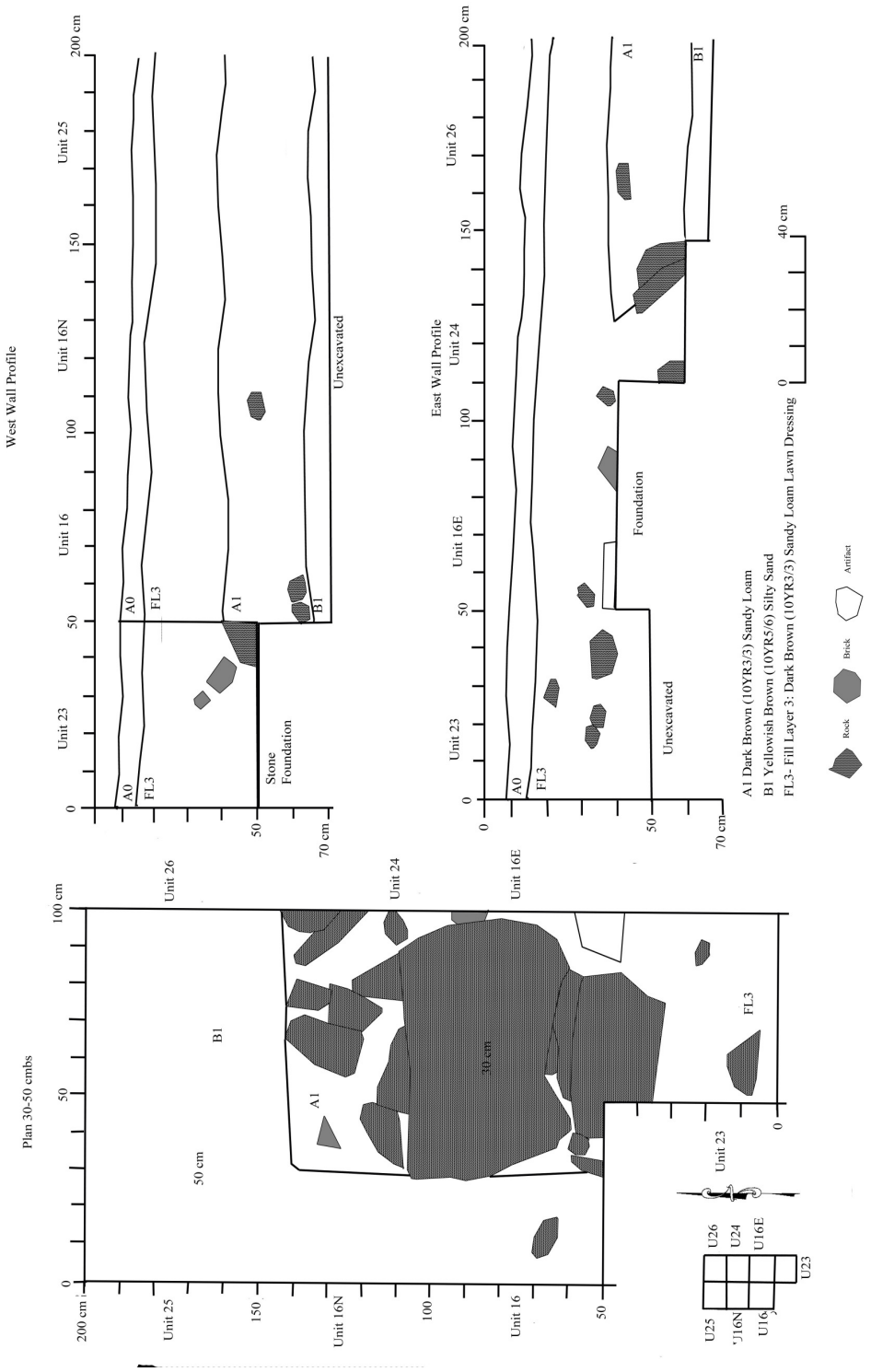


Figure 27. Feature 5 plan and profile

north. This resulted in a unit that measured a total of one meter long, north to south, by 50 cm wide, east to west. This extension of Unit 17 was labeled Unit 17 north (U17N). Excavation found the soil horizons in this unit showing no evidence of the downward slope from north to south that was observed in units 7 and 7S. The stratigraphic profile shows a five centimeter thick A0 horizon covering a Fill Layer 3 deposit that extended to a depth of 25 cmbs **(Figure 28)**. Fill Layer 5 was encountered below Fill Layer 3 in the northwestern half of the unit. Fill Layer 4 was found below Fill Layer 3 in the southeastern half of the unit. Fill Layer 4 contained a heavy concentration of brick and rock and covered a large flat possible foundation stone encountered at 35 cmbs and continued south of the stone to a depth of 48 cmbs. Fill Layer 4 rested on top of the buried A1at 48 cmbs and Fill Layer 5 rested on top of it in the western half at 35 to 40 cmbs. Excavation north of the stone revealed that the stone was set eight centimeters into the A1 horizon and that the A1 continued to a depth of 80 cmbs. The B1 was encountered below the A1 and was excavated to a depth of 100 cmbs. This foundation stone may represent the remains of another outbuilding dating from the late eighteenth to early nineteenth century. Alternately it could be part of an earlier foundation associated with the 12 x 8' structure when it was oriented with its gable ends facing north and south.

Feature 7

Unit 19 was located five meters north and five meters west of the northwest corner of the structure. The stratigraphy consisted of five centimeters of A0/ duff below which Fill Layer 3, the lawn dressing, was encountered to a depth of 60 cmbs **(Figure 29)**. The buried A1 horizon was encountered below Fill Layer 3 and continued to a depth of 80 cmbs, containing more gravel and rock than the same expression of the horizon to the south. The old topsoil was found to have a slight slope downward from north to south. The A1 horizon overlaid the B1, a dark yellowish brown silty sand, that extended to a depth of 90 cmbs. The B2 horizon, a yellowish brown (10YR5/6) silty sand, extended to a depth of 110 cmbs. A semi-circular concentration of dark brown (10YR3/3) soil and rocks was encountered at the base of the A1 horizon and extending into the upper part of the B2 horizon. The anomaly appeared to be at least 100 cm in diameter but was very shallow, only 15 cm deep. Native material was recovered from the anomaly and it does appear similar to large shallow basin anomalies that have been encountered on Late Woodland Native sites (Chartier and Donta 2012).

Feature 8

Feature 8 was identified in Unit 21 and 21E adjacent to the east wall of the structure between one and one and one-half meters south of the northeast corner. Excavation of this unit revealed large rocks in the floor at 50 cmbs and the unit was expanded to the east by 50 cm. This resulted in the final unit size being 50 cm north to south by one meter east to west. The rocks were found to be within 15 cm of the foundation for the structure **(Figure 30)**. Excavation revealed a five centimeter deep A0 horizon that overlaid a 12 cm deep Fill Layer 11, light yellow brown loamy sand possibly associated with the excavation of the presumed cellar to the east, in the east half of the unit. Fill Layer 12 was encountered below Fill Layer 11 and this extended to a depth of 28 cm in the northeast corner and 20 cm in the southeast corner, sloping up from north to south. A pale yellow sand, possibly Fill Layer 8, was encountered below Fill Layer 12 to a depth of 34 cm at the northeast corner and 30 cm in the southeast corner. Fill Layer 3 was encountered below Fill Layer 8 and this layer covered the stone paving encountered at 50 cmbs. This horizon was rich in ca. 1830s nineteenth century artifacts and represents the filling of what must have been an undulating and sloping rear yard to the Watson house.

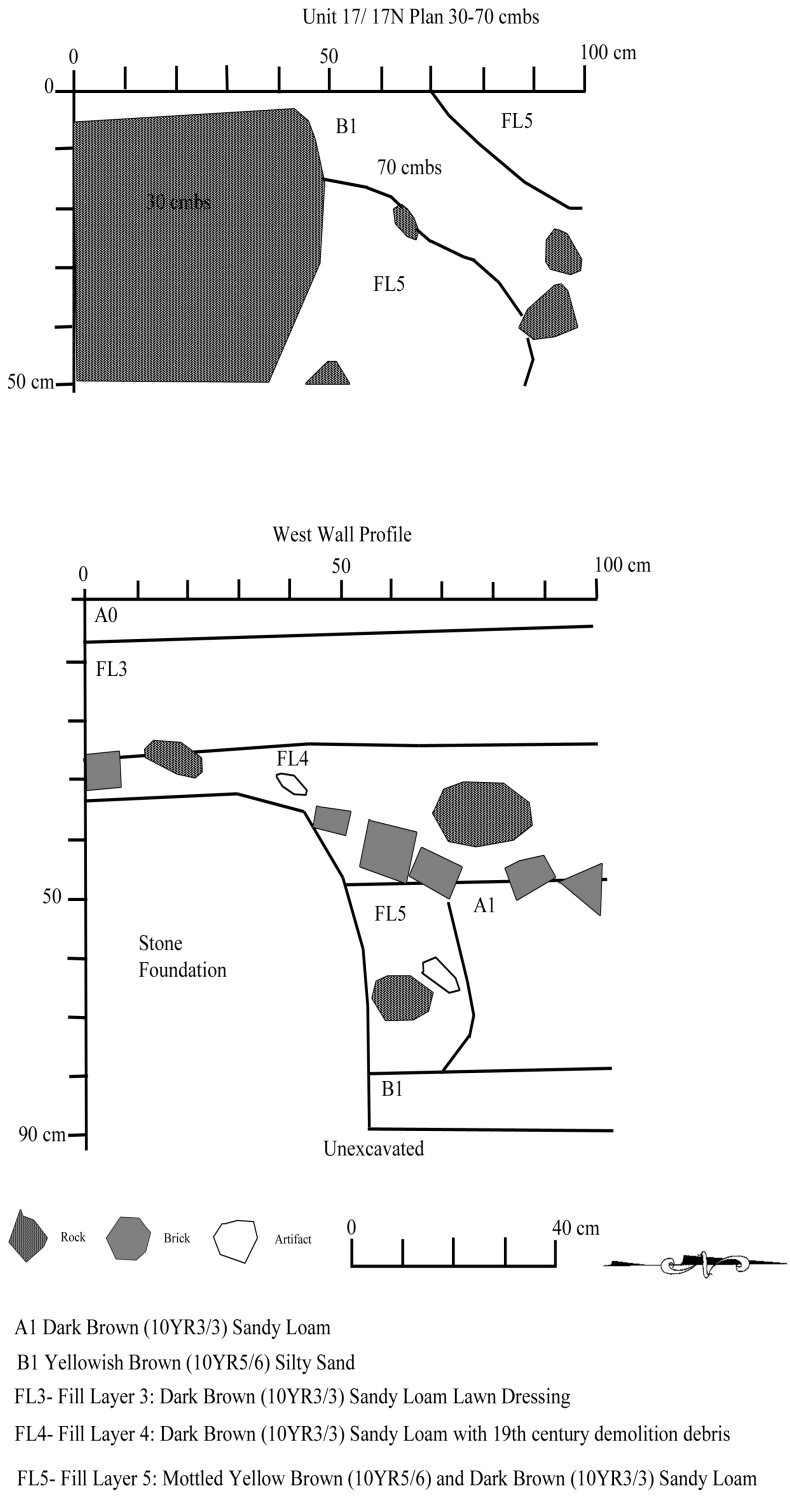


Figure 28. Feature 6 plan and profile

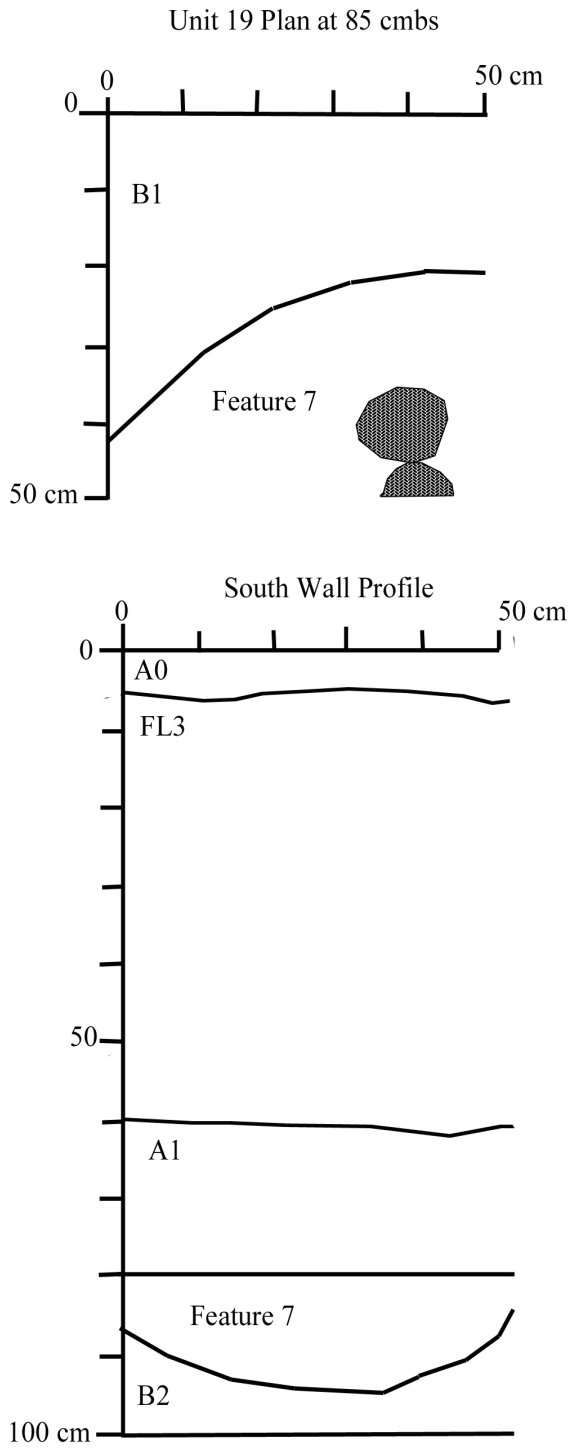
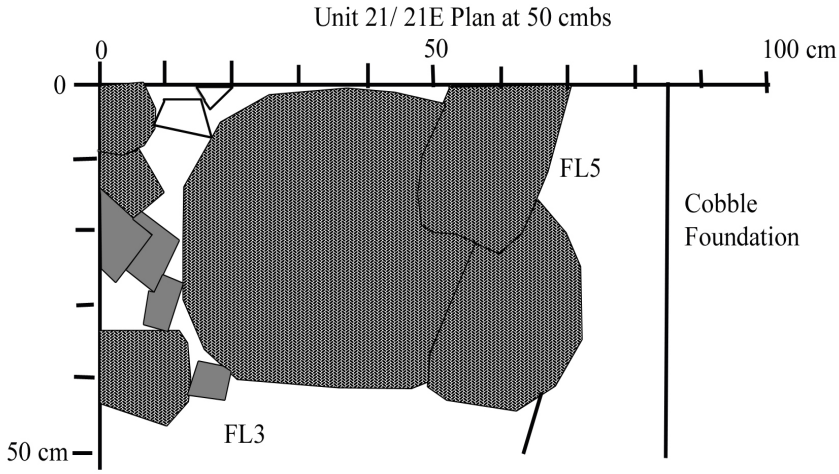
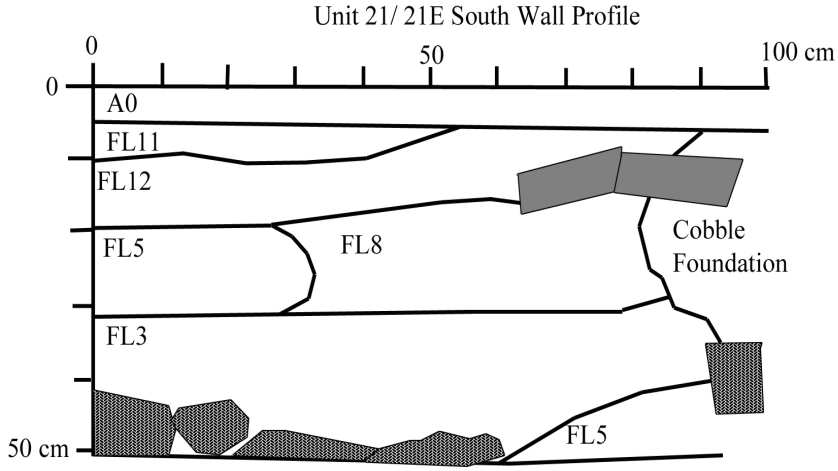
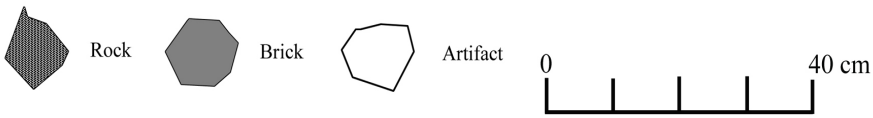


Figure 29. Feature 7 plan and profile







FL3- Fill Layer 3: Dark Brown (10YR3/3) Sandy Loam Lawn Dressing
FL5- Fill Layer 5: Mottled Yellow Brown (10YR5/6) and Dark Brown (10YR3/3) Sandy Loam
FL8- Fill Layer 8: Pale Yellow (2.5Y7/3) Coarse Sand
FL11- Fill Layer 11: Yellow Brown (10YR5/6) Sandy Loam
FL12- Fill Layer 12: Dark Olive Brown (2.5Y3/3)Silty Sand

Figure 30. Feature 8 plan and profile

The covering of the foundation discovered at 50 cmbs indicates that this foundation predated the 1830s landscaping, thus possibly putting it in the Watson occupation. This foundation is a continuation of the foundation found in the Unit 16 complex and represents the west wall of a large building measuring at least 15 meters long north to south. This building may have been a warehouse, summer kitchen barn or stable. The cobble foundation for the possible slave house structure also extended to the same level as this foundation, indicating that the two may be contemporaneous. Excavation ceased at 50 cmbs and the foundation was covered to preserve it. This structure may be contemporaneous with the foundation found in Unit 17. These foundations may represent a series of outbuildings located along what later became the property line. Alternately they may be part of a foundation for the extant 12 x 8' structure oriented with its long axis running north to south.

Feature 9

The portion of the midden that appeared to extend deeper in the western quarter from 250 to 300 cm west of the east wall was labeled Feature 9. This is believed to be the result of the turning of the structure from a gable end north to south orientation when it was built, to a gable-end east to west orientation in the early nineteenth century, back to a gable end north to south orientation in the later nineteenth century. Feature 9 extended an additional five centimeters deeper than Feature 10 and appeared to contain more eighteenth century artifacts as well. The presence of the eighteenth century artifacts may be a result of the excavation of Feature 10 through an earlier eighteenth century layer or it may represent a deposit relating to the cleaning out of the Watson house when the Jacksons occupied it in the first quarter of the nineteenth century if the house did not burn prior to that time.

Feature 10

Feature 10 consisted of a thin, 5-cm thick, early to late nineteenth midden layer overlaying Feature 9 on the inside of the 12 x 8' structure. This midden was divided into 50-cm square units, each of which were excavated separately. The south half of Feature 10 was left unexcavated. This midden was found to overlay a level that consisted predominantly eighteenth century material (Feature 11)

Feature 11

Feature 11 was a relatively clean deposit of fine silty sand found below the nineteenth century midden (Feature 10) in the eastern three quarters of the structure. Only eighteenth century artifacts were found within this fill deposit, making it probable that it represented a fill layer deposited in the eighteenth century as a way to build up the ground surface or to fill in beneath the 12 x 8' structure if it represented a box privy.

Feature 12

Feature 12 was identified in Units 8 and 10 in the eastern yard. The profile of Unit 8 consisted of a five centimeter thick A0/ duff horizon followed by a Fill Layer 3 horizon to a depth of 30 cmbs. Fill Layer 3 overlaid Fill Layer 6, a mottled layer of yellowish brown and light yellowish brown sand that is believed to represent a filled cellar hole associated with the structure that stood in this area in the late nineteenth to early twentieth centuries. This fill horizon was excavated to a depth of 90 cmbs with no change in composition. A mixture of prehistoric and nineteenth century artifacts were found within the fill horizon. The stratigraphy of Unit 10 matched that of Unit 8, located five meters to the north. Both of these sandy fill layers are believed to represent the filling of a cellar beneath the L-shaped house

shown on the late nineteenth century maps that was demolished when the library was built in the early twentieth century.

D. Artifact Analysis

A total of 39,042 artifacts were recovered from the testing conducted beneath and around the 12 x 8' structure. The majority of these are believed to date from the first half of the nineteenth century when the Jacksons removed the Watson house and erected their own. Most of these artifacts were found beneath the structure and in the immediate vicinity of it.

Prehistoric Artifacts

Excavators recovered a total of 196 prehistoric artifacts including chipping debris (n=37), shatter (n=58), bifaces (n=6), projectile points (n=6), lithic tools (n=4), a lithic core, and pottery (n=13) with most of the material coming from a 15 meter wide (east to west) by 12 meter long (north to south) area beneath and around the 12 x 8' structure (Table 4).

Table 4. Distribution of lithic artifacts recovered during Site Examination testing

Unit	Argl.	Chert	Granite	Hrnf	Mudst.	PJ	Quartz	QZTZ	Rhy
Interior					4		40		11
U01								1	
U02						1	1		
U03									
U04							4		1
U05				1			10	1	4
U06							9		5
U07						1	8	1	4
U08	1						5		3
U09							1		
U10		1					4	1	
U11							1		
U12									1
U13					1		4		3
U14							4		2
U15									
U16					1		8	1	1
U17					1		3		3
U18									

Table 4. (cont.)

Unit	Argl.	Chert	Granite	Hrnf	Mudst.	PJ	Quartz	QZTZ	Rhy
U19						1	4		1
U20							6		
U21							1		2
U22									
U23								1	1
U24			1				2	2	
U25							3		
U26							1		
Total	1	1	1	1	7	3	120	8	41

Argl- Argillite, Hrnf- Hornfels, Mudst.- Mudstone, PJ- Pennsylvania Jasper, QZTZ- Quartzite, Rhy- Rhyolite

Nine raw materials are represented in the lithic assemblage (Table 5). Some raw materials represent complete artifacts or partially finished bifaces transported to the site and subsequently either reworked or finished, leaving a small assemblage of flakes (Saugus Jasper, hornfels, mudstone) or discarded as broken items (argillite, chert, granite).

Table 5. Lithic artifacts recovered during Site Examination testing

Material	Flakes/ Fragments	Shatter	Core	Bifaces	Points	Tools	Totals
Argillite				1			1
Chert					Tip/ Midsection		1
Granite						Pestle	1
Hornfels	1						1
Mudstone	7						7
Pennsylvania Jasper	3						3
Quartz	54	58	1	3	Levanna 2 Small Stemmed	Scraper	120
Quartzite	6				Wayland Notched	Whetstone	8
Rhyolite	37			2	Levanna	Flake Tool	41

Argillite

Argillites are fine-grained sedimentary rocks (like mudstone and slate) metamorphosed to varying degrees. As a result, these stones are harder than their original sedimentary rock and thus suitable for limited stone knapping to produce tools. Unfortunately, argillites still maintain a degree of sedimentary platyness and have a tendency to flake in layers, making them somewhat difficult to work. Types of argillite include Black (originating in the Delaware River Valley of New Jersey and Pennsylvania),

Maroon (originating from the Chicopee shales in western Massachusetts), Blue-Grey, Tan, Grey (all originating from either the Cambridge slates in the Boston basin or Barrington, Rhode Island), Green Platy (originating in Barrington, Rhode Island and also occurring in glacial drift deposits in the Taunton River Basin), Banded (originating in the Cambridge slates in the Boston basin) and Coarse grained green (Originating in Hull, Massachusetts). Argillites are common in glacial drift deposits in many locals in eastern Massachusetts and occur predominantly in the Late Archaic, although they were also used to a lesser degree in other time periods.

A midsection fragment of one green gray parallel-sided argillite biface was recovered from Unit 8 to the northeast of the structure. The biface was 4.5 cm long, 3.5 cm wide, and .5 cm thick and may represent a blade dating from the Late Archaic period.

Chert

Cherts recovered from sites in New England arrived in the area through trade with Native people from New York state. New York State cherts include green (Normanskill, Stuyvesant Falls, Mt. Merino, Austin Glen, Deepkill, gray (Western Onondaga, Little Falls, Mt. Merino, Ticonderoga), brown and red (Indian River east of the Hudson River and north of the Hudson Valley), and black (Heldeberg, Glen Erie, Oriskany, Eastern Onondaga [along north and eastern escarpment of Allegheny Plateau]) (Hammer 1976: 54). Minor varieties include tan, which in the western Onondaga is a tan to khaki through light gray to milky light blue, in the Central Onondaga is cloudy dark to brownish blue, and in the eastern Onondaga formation is a dark brownish blue to blueish black to black with a general continuum of lighter blues and tans in the west to dark muddy blues and blacks in the east, and the red to red-brown (Hammer 1976:47). The red to red-brown is very similar in color to what is commonly referred to as "Pennsylvania Jasper" and occurs in substantial outcrops of in Washington and Duchess Counties (Hammer 1976: 54). This New York State red to red-brown chert may actually be the source of the "Pennsylvania Jasper" identified from New England sites.

The tip and midsection of one gray chert projectile point was recovered from Unit 10 to the east of the structure. The fragment bears a perverse fracture indicating that it was broken during manufacture or sharpening versus during use. It measured 1.5 cm long, 1.5 cm wide, and .3 cm thick. The form appears to be similar to Wayland Notched Transitional Archaic point styles.

Granite

The midsection of a gray granite pestle was recovered from Unit 24 to the north of the structure and associated with Foundation 2, the late building foundation removed in the first half of the nineteenth century. A fragment of a pestle was also recovered from deposits that Chan (2000) associated with the slaves living at the Royall House in Mendon. Chan assumed that this pestle may have held spiritual or magical significance for the slaves at this site. She did not discuss the association of other prehistoric material with the pestle so it is difficult to asses the significance of her association of this pestle with the historic period of slavery. The area where the pestle was found at the North Street site is also directly in the center of the concentration of prehistoric material so its association with the historic feature is more coincidental than significant. The pestle fragment is 4.5 cm wide and somewhat squared in cross-section.

Hornfels

Hornfels is a metamorphic rock that is formed though contact between a fine-grained sedimentary rock like mudstone or shale and a hot igneous rock. Due to a lack of heat and pressure during the metamorphose, the resulting hornfels lack any foliation, any layers being present in the original sedimentary rock being erased by the contact metamorphism, and is heat-altered equivalent of the parent rock. Hornfels fractures in a conoidal pattern making it useful for the production of knapped stone tools.

One 1.7 cm long hornfels flake with a 50° platform angle was recovered from Unit 5 to the north of the structure. Hornfels is often associated with the Middle Woodland period.

Metamorphosed Mudstone

The maroon to maroon purple colored metamorphosed mudstone, a fine-grained and compact homogeneous stone, is a lithic material that can be commonly found in the form of cobbles in the glacial drift represented on the beaches of Plymouth. Seven flakes or flake fragments were recovered from beneath the structure (n=4) and to the immediate north (n=2) with one other piece being found to the east. Platform angles on the flakes ranged from 30 to 75° with the average being 45° , indicating later stage reduction of bifaces that were initially reduced elsewhere. Complete flake lengths ranged from 1.6 to 2.7 cm with the average being 2.1 cm. This indicates earlier versus later, later stage reduction.

Pennsylvania Jasper

Pennsylvania Jasper is a cryptocrystalline or microcrystalline chert that is commonly a lustrous and waxy yellow, red or brown in color as a result of iron and other mineral inclusions. It is a sedimentary rock formed by the hydrothermal replacement of carbonates (limestone) by silica from quartzite. The major outcrops can be found at the Valley and Ridge province in Eastern Pennsylvania.

Three Pennsylvania Jasper flake fragments were recovered from north of the structure and from Feature 7 in the west yard. The fragments ranged from 1-2 cm in width and one had 55° striking platform angle. No cortex was present on any of the pieces. These flake fragments are believed to have been removed during sharpening, finishing or retouching of a bifacial tool. Pennsylvania Jasper is commonly found on Middle to early Late Woodland period sites. This material would have been acquired through trade from its Pennsylvanian source.

Quartzite

Quartzite is a hard, unfoliated metamorphic rock which the sedimentary rock sandstone was the parent material. The sedimentary parent rock was metamorphosed through heat and pressure and the resulting metamorphic rock is white or gray. Quartzite can also be found in colors ranging from pink to red and yellow to orange depending on the mineral inclusions.

A total of eight quartzite artifacts were recovered (one flake, flake fragments (n=5), a possible whetstone, and a Late Archaic Wayland Notched point), with the material being concentrated at Foundation 2 (n=4), and one piece being recovered from the North and East yards, and Foundation 1. The Wayland Notched point was recovered from the East Yard and the whetstone came from Foundation 2, making it possible that this may be a historic, versus a prehistoric artifact. Colors were

limited to gray to dark gray (flake, flake fragments, whetstone, projectile point), pink and gray (flake fragment), and purple brown (flake fragment). Quartzite of these colors can be obtained locally from drift deposits and from the beach. Flakes and flake fragments ranged in width from 1-4 cm and two bore intact striking platforms that measured 30 and 40° . Cortex was present on one flake fragment. The large size of one flake fragment and the presence of cortex indicates that quartzite was reduced locally on site. The Wayland Notched point bore two perverse (twisting) fractures indicating it was broken during bifacial reduction as the edge was being finished. This indicates that during the Late Archaic period, people were reducing quartzite on site for the production of projectile points.

Quartz

Quartz is a formed when silica rich solutions accumulate in underground cavities and fractures in other rocks. Quartz is one of the most common minerals and may include crystalline, milky or smoky varieties. The smooth planar surfaces reflect the symmetry of the crystal lattice and hexagonal crystals represent unobstructed growth in the cavities.

A total of 120 quartz artifacts (bifaces, projectile points, shatter, core, flakes, and flake fragments) were recovered from across the project area (Table 6). The majority of the quartz was recovered

Table 6. Distribution of quartz artifacts

Location	Flakes/ Frags.	Shatter	Core	Bifaces	Points	Tools	Totals
Under Structure	15	21	1	2	Small Stemmed (2)		41
Adjacent to Structure	7	4					11
East Yard	7	15	1				23
North Yard	9	5			Levanna		15
West Yard	3	2					5
Foundation 1	5	4		1		Scraper	11
Foundation 2	7	7					14

from beneath and adjacent to the structure (n=52), the East Yard, the North Yard, and Foundation 2. The paucity of material from the west yard may indicate an occupational focus more to the east than the west. Three projectile points were recovered, two Small Stemmed and one Levanna, indicating Late Archaic and late Woodland occupation. The Levanna bore an impact fracture, indicating it had possibly broken after having been fired, with the base and midsection subsequently being recovered still in haft.

Striking platform angles on quartz flakes and flake fragments ranged from 40-80° with the average being 58.2°. The complete flakes ranged in length from 1-2.9 cm with the average being 1.9 cm (Table 7). Cortex was present on a total of 20 artifacts (17% of the quartz total). The range of

Table 7. Quartz flake and flake fragment measurements

Unit	Platform Angle	Length
Interior	40° 50° 60° 60° 70° 80° 80°	1.8 cm 1.3 cm 1.3 cm 2.5 cm 2.9 cm 1.5 cm 2 cm
U06	40° 40° 50°	1 cm 1.6 cm Fragment
U07	65° 80°	1.5 cm 2 cm
U13	50° 70°	2.6 cm 2.4 cm
U16	65°	Fragment
U17	50°	1.5 cm
U24	55° 60°	2.6 cm 1.7 cm
U25	40°	2.2 cm

flake sizes and striking platform angles, including those above 70°, the presence of Stage I bifaces, shatter, and cores, and the presence of cortex on a significant portion of the quartz assemblage all indicate that quartz, in the form of rounded beach or drift cobbles, were being reduced for projectile point and tool production at the site. The lack of smaller flakes may indicate that tools were not resharpened or finished on site but that this was done elsewhere. The distribution of the quartz artifacts may indicate a Late Archaic reduction deposit existed beneath the structure.

Rhyolite

The terms felsite and rhyolite interchangeably used by archaeologists, leading to heated discussions about what is the correct term. Researchers use both to describe the same lithic type, intrusive volcanics formed by the rapid cooling of granite magma. Felsite/ rhyolites are fine-grained with dark or light crystals (phenocrysts), essentially bits of volcanic crystals, embedded within the matrix. They can have no visible phenocrysts (aphenytic felsite/ rhyolite) or have large, prominent ones (porphyritic felsite/ rhyolite). The phenocrysts are large or small and the raw material may also have banding. Felsite/ rhyolites commonly occur in glacial drift deposits and are often found as rounded cobbles on beaches. The original parent source of these stones appears to have been in the northeastern quarter of Massachusetts.

Felsite/ Rhyolites include Black with white phenocrysts (originating in the Newbury Volcanic Complex), Green Fine-Grained, a dark green felsite lacking visible phenocrysts (originating in the Lynn Volcanic Complex in Melrose, Massachusetts), Maroon/ Purple/ Red (originating in the Lynn Volcanic Complex in Marble head, Massachusetts), Grey with dark small phenocrysts (originating in the many volcanic complexes), Blue-Grey with dark phenocrysts (originating in the Blue Hills Complex in Braintree, Massachusetts), Cream and Rust Stained coarse-grained gray green to tan with pyrite crystals (originating in the Mattapan Volcanic Complex in the Sally Rock Quarry in Hyde Park), Red Banded with dark red to pink fine banding or swirls on a light red, tan or cream matrix, also called Mattapan Red Felsite (originating in the Mattapan Volcanic Complex on the Neponset River), Red to Maroon Porphyritic with dark red or white phenocrysts (outcropping in Hingham, Massachusetts), Green porphyritic visible dark glassy and white phenocrysts (outcropping at Mount Kineo on Moosehead lake in Maine), Red light red to pink with a coarse texture phenocrysts may be visible but are pink or tan feldspar or translucent silica glass, banding may occur in same composition as phenocrysts, also known as Attleboro Red Felsite (outcropping in Attleboro, Massachusetts), Banded and Other Porphyritic.

A total of 41 rhyolite artifacts (bifaces, flake tool, projectile point, flakes, and flake fragments) in a wide variety of colors were recovered **(Table 8, Figure 31)**. The majority of the rhyolite was dark

Table 8. Rhyolite recovery locations

Unit	Gy	Dk Gy	Vy Dk Gy	Ppl Gy	Dk Ppl Gy	Dk Mrn Ppl	Tn	Mrn Bn	Bn	Dk Gy Bn	Gy Gn
Int	CD	Biface	CD (2)		CD (5) CD Tool			CD			
U04								CD			
U05	CD (2)	CD									CD
U06					CD (3)			CD			CD
U07					CD (2)			CD (2)			
U08					CD		Levanna				
U12					CD						
U13					CD (2) Biface						
U14				CD	CD						
U16					CD						
U17					CD (3)						
U19	CD										
U21						CD				CD	
U23									CD		
Total	4	2	2	1	21	1	1	5	1	1	2

int- Interior of structure, CD- Chipping debris, Gy- Gray, Dk Gy- Dark Gray, Vy Dk Gy- Very Dark Gray, Ppl Gy- Purple Gray, Dk Ppl Gy- Dark Purple Gray, Dk Mrn Ppl- dark Maroon Purple, Tn- Tan,
Mrn Bn- Maroon Brown, Bn- Brown, Dk Gy Bn- dark Gray Brown, Gy Gn- Gray Green

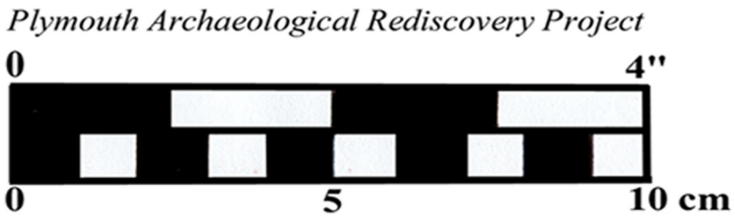


Figure 31. Prehistoric artifacts (Left to Right: Quartz Levanna [U5 30-40 cm], Argillite blade [U8 30-40 cm], Rhyolite biface [F.1 E1/2 matrix 45-50 cm])

purple gray to a variety of shades of gray with a smaller occurrence of other colors. The majority of the rhyolite artifacts were recovered from beneath and adjacent to the structure (n=18), from the East and North yards and from Foundation 1 (Table 9). Tools recovered were limited to one flake tool, one Levanna point, and one Stage I and one Stage II biface.

Table 9. Gross rhyolite distribution

Location	Flakes/ Fragments	Shatter	Core	Bifaces	Points	Tools	Totals
Under	9			1		1	11
Adjacent	7						7
East Yard	6			1	Levanna		8
North Yard	5						5
West Yard	1						1
Foundation 1	7						7
Foundation 2	2						2

Striking platform angles on quartz flakes and flake fragments ranged from 30-65° with the average being 51.3°. The complete flakes ranged in length from 1.5-4.2 cm with the average being 2.5 cm (Table 10). Cortex was present on a total of three artifacts (7.3% of the rhyolite total). The limited

Table 10. Rhyolite flake and flake fragment characteristics

Unit	Gy	Dk Ppl Gy	Dk Mrn Ppl	Mrn Bn	Gy Gn
Interior	55° 3.7 cm	55° 2.3 cm 60° 2.5 cm 40° Frag			
U05	50° Frag				30° Frag
U06		30° 3 cm 60° Frag			
U07		50° 2.6 cm	45° Frag	50° Frag	
U08		65° Frag			
U12		50° 2.2 cm			
U13		50° 1.5 cm 50° 1.6 cm			
U14		50° 3.1 cm			
U16		55° 2 cm			
U17		65° 4.2 cm 65° 1.8 cm			
Total	2	14	1	1	1

Gy- Gray, Dk Ppl Gy- Dark Purple Gray, Dk Mrn Ppl- Dark Purple Maroon, Mrn Bn- Maroon Brown, Gy Gn- Gray Green

range of flake sizes and striking platform angles, the presence of Stage I and Stage II bifaces, and the presence of a low amount cortex all indicate that rhyolite was being reduced for elsewhere and that secondary and final reduction were being carried out at the site. Rhyolite may have arrived at the site in the form of partially reduced Stage I or II bifaces that were subsequently finished as the need arose. The co-occurrence of rhyolite with the possible Late Archaic quartz assemblage from beneath the structure may indicate that at least part of the rhyolite assemblage originated from that period. The occurrence of one rhyolite Levanna base and midsection of a different color from the majority of the material recovered may indicate a different source for late woodland versus Late Archaic rhyolite.

The results of the analysis were compared to Sullivan and Rozen's findings from Arizona (Sullivan and Rozen 1985). In the series of Archaic sites that they examined, they found five varieties of assemblages characterized by varying proportions of the categories outlined above. These assemblages were identified as:

Group I: (core use only) which had a higher percentage of cores and complete flakes, a lower percentage of flakes and flake fragments and bore more evidence to core reduction.

Group IA: (unintensive core reduction) which had an extremely high percentage of cores and complete flakes, a very low percentage of broken flakes and flake fragments and was found to be an exaggerated expression of group I. Group IA flakes should be large, cortical, and thick assuming flakes become smaller, less cortical and relatively thinner once more reduction takes place.

Group IB1: where the percentage of debris was much lower than IB2 and appears to have not been the result of intensive core reduction and may in fact represent both core reduction and tool manufacture. The amount of flakes and flake-like pieces present in this group is expected to be intermediate between tool manufacture and core reduction with respect to flake size, relative thickness, cortex while the frequencies of platform lipping and faceting are expected to be lower than II but greater than IB2.

Group IB2: (intensive core reduction) which had a very high percentage of debris pieces with shattered striking platforms and the bulbs of percussion were increasing abundant as core reduction became more intensive and core platform angles increase. These were interpreted as the products of intensive core reduction rather than core reduction and tool maintenance. The amount of flakes and flake-like pieces present in this group is expected to be intermediate between tool manufacture and core reduction with respect to flake size, relative thickness, cortex while the frequencies of platform lipping and faceting are expected to be lower than II but less than IB1

Group II: (bifacial tool manufacture) which had the lowest percentage of cores and complete flakes, the highest percentage of broken flakes and flake fragments and appear to represent mainly the byproducts of tool manufacture. The flakes that are expected for this group are small, noncortical, and thin especially if soft hammer used and are characterized by abundant faceting and lipping. (Sullivan and Rozen 1985: 759-764).

It is hoped that the artifact categories identified at the sites will be able to be cautiously compared to those from Sullivan and Rozen's study (Table 11), to help determine what technology was the end result of the lithic reduction at the site.

Table 11. Artifact categories for each Technological group (Sullivan and Rozen 1985: 762).

	IA	IB1	IB2	II
Complete Flakes	53.4	32.9	30.2	21
Broken Flakes	6.7	13.4	8.1	16.8
Flake Fragments	16	35.3	34.7	51.3
Debris	6.1	7.9	23	7.3
Cores	14.7	2.8	2	.6
Retouched Flakes	3.1	7.5	2	3.1

When the quartz, rhyolite, and quartzite artifacts from the PAG Site were compared with Sullivan and Rozen's findings **(Figure 32)** it was found that the rhyolite class most closely matched Sullivan and Rozen's Group IB1 while the quartz and quartzite classes most closely matched Group II. This

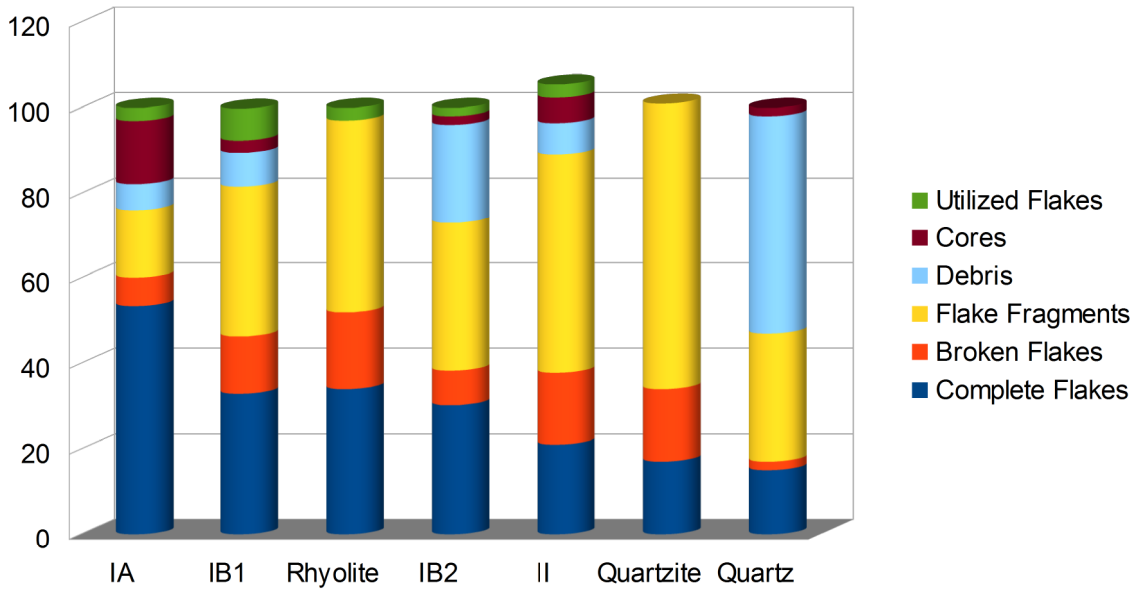


Figure 32. Comparison of Sullivan and Rozen (1985) with quartz, rhyolite, and quartzite from the PAG Site

is interpreted to mean that the rhyolite class was the result of both core reduction and tool manufacture. The quartz and quartzite classes appear to have been the result only of bifacial tool manufacture.

The results were then compared to Cowan's 1999 findings from his work in interior New York state. Cowan found a strong relationship between lithic technology strategies and the degree of mobility practiced by the populations who created the debitage (Cowan 1999:593). The variations in tool design and production can be used as clues to social organization in prehistoric settlement systems and to the organizational roles of the sites within settlement systems (Cowan 1999:593). Cowan's study focused on interior sites dating to the Late Archaic, Early Woodland and Late Woodland. Subsistence models previously developed predict that small interior sites played different roles during the three periods under consideration and are the result of different patterns of mobility. Because mobility places constraints on the technological options available to the society, predictions can be made for the kinds of tool production and use strategies that occur in different situations.

The lithic technology employed at these sites was expected to take the form of either the striking off of flakes from a core to use them as such, the reduction of a core to facilitate the creation of a biface or a combination of technologies. The flake tools struck from cores are easy to produce but they also have short use lives, the consume a large amount of raw material, they are difficult to haft, they have very little multifunctional utility and it is difficult to transport a large core to make more tools. On the other hand bifacial tools take a longer amount of time and require more skill to produce but they have a long use life, they consume a smaller amount of raw material, are easier to haft, can be used for a variety of functions and are easy to transport (Cowan 1999: 594). As a result of these advantages and disadvantages to the two forms of technology, the mobility of the users can be predicted. Interior Late

Archaic sites in New York have been found to be small and sparse in artifacts, representing a short term residential camp for a small group of people who were highly mobile (Cowan 1999:596). They are expected to have an eclectic tool kit present representing the diverse tool needs of these seasonal activity residential camps. Early Woodland interior camps were special purpose sites that were the focus of resource procurement activities and maintenance tasks that required a diverse mostly bifacial tool kit (Cowan 1999:597). Small Late Woodland interior sites have been found to be highly variable in function, structure and content with tool production and use strategies varying with the activities being preformed at the sites and whether or not the sites are seasonal base camps or short term task group sites (Cowan 1999:597). The expected assemblages at these sites were predicted as shown below:

Table 12. Cowan's expected tool production and use strategies (Cowan 1999:597)

Period	Site Role	Tool Production Strategy
Late Archaic	Residential Camps	Biface and moderate core use
Early Woodland	Logistical Camps	Bifaces
Late Woodland	Logistical Camps	Bifaces
Late Woodland	Seasonal Base Camps	Cores

In order to investigate these strategies, Cowan analyzed the assemblages by focusing on seven measures to summarize them. These were the proportions of cortex to non-cortex bearing flakes, proportion of flakes with angular or irregular dorsal surface cross sections, proportions of flakes with platforms edge (core face) trimming, proportion of flakes with platform edge grinding or abrasion, median flake thickness, median maximum-dimension-to-thickness ratios (Cowan 1999: 600). The presence of a large amount of thick flakes bearing cortex on their dorsal surface which were angular in cross-section and little or no platform preparation were found to be characteristic of Late Woodland seasonal base camps and to a moderate degree the Late Archaic camps. This indicated that these were sites where material was transported to the site as cores and thus worked down in situ. The Early Woodland and Late Woodland Logistical camps showed the opposite to be true. At these camps, cores were worked down elsewhere and the bifaces were finished at the site. This left a larger amount of thinner flakes bearing smaller cortical patches with well-formed platforms (Cowan 1999: 604). The logistical camps also showed a high presence of thin noncortical flakes with well formed platforms edges while the other sites yielded thick noncortical flakes that were angular in cross-section and cortical striking platforms, or a mixture of the two types (Cowan 1999:604).

Cowan's findings indicate that the Late Archaic people lived in small social groups that moved often to exploit a variety of resources with a mixed tool kit containing a broad range of tools and production methods. The resource being exploited and the tool that best suited the job determined the tools and methods used at various sites or times. Early Woodland populations were represented by extremely mobile groups that were exploiting resources and returning to a separate base camp. Their tool assemblages reflect this, being composed of bifaces and preforms without much core reduction. The Late Woodland seasonal base camps appear to have been occupied by small family groups tending crops near a main village while the logistical camps were used for the procurement and processing of game and other forest resources to be transported away from the sites (Cowan 1999:605).

At the PAG Site it was found that the quartz assemblage showed that cores were being reduced to produce bifaces in a manner similar to Cowan's Late Woodland Base Camps and Late Archaic Residential Camps. A high occurrence of artifacts with cortex were recovered, indicating primary reduction of cobbles on site to produce bifaces. Rhyolite appears to have been primarily reduced elsewhere with biface and flake tools being used. This was typical of Early Woodland and Late Woodland Logistical camps. It could also be interpreted that the rhyolite was being either quarried or collected somewhere away from the PAG site and that it was initially reduced at that location and that only Stage I bifaces were being returned to the site for further reduction and use. The comparison with Cowan's findings indicate that the lithic assemblage is consistent with both Late Archaic Residential and Late Woodland Base Camps, probably occupied by a small number of people who traveled away from the camp for resource extraction activities and returning to the camp to share and further process the resources.

It appears that the quartz Levanna points were broken in use but the overall quartz assemblage indicates a location where all stages of reduction- from cobble to biface- were carried out. This supports the identification of the site as a residential or base camp. Rhyolite showed breakage during production for the one Wayland Notched point and reduction from prepared bifaces for the remainder of the assemblage. This follows a production sequence more indicative of a highly mobile people utilizing the site as a special purpose camp (production of bifaces from a core). Unfortunately, because there are at least two occupations present (Late Archaic and Late Woodland) and neither can be definitely separated, it is difficult to determine exactly what is occurring at the site. The following model is presented for testing at other coastal locations: quartz, a very common component of drift deposits in coastal areas, was acquired locally in the form of cobbles, returned to the site and reduced from cobble to biface; rhyolite was acquired from a combination of quarried pieces and glacial drift cobbles, but in both cases appears to have been reduced to Stage I bifaces elsewhere with reduction from bifaces to final forms occurring on site; quartzite followed a similar pattern to rhyolite, arriving as at least Stage I bifaces that were subsequently finished; and exotic raw materials (chert, hornfels, Pennsylvania Jasper, and argillite) occur in small quantities and are believed to have arrived at the site as either finished or at least Stage III bifaces that were subjected to resharpening and finishing.

Pottery

People have made pottery vessels in southeastern Massachusetts since the Transitional Archaic. Probably Native American men were producing cooking bowls carved from large soapstone pieces from 6,000 to 3,000 years ago. Beginning approximately 3,000 years ago, women probably began producing clay pottery vessels which eventually replaced the soapstone pots. The earliest clay pots were straight-sided and pointed bases, possibly resembling basket styles common in these earlier periods (Braun 1994:63). By the seventeenth century, clay pots were "almost in the form of an egg, the top taken off" (Gookin 1972:11). The pots had shoulders and some bore a decorative style along their rims known as castellations, which some archaeologists believe that New England native people borrowed from Iroquois, who may have used it earlier than the people of southern New England.

The seventeenth century descriptions of Wampanoag people routinely note clay vessels used for cooking, but they are scarce in their descriptions of the pots themselves. The earliest European reference pertaining to the study area was by Edward Winslow who noted them in one of the houses he observed on Cape Cod in 1620 (Young 1974: 144). Winslow also noted pottery use in 1623 when he was visiting the ailing Massasoit. At that time Winslow observed, "They have earthen Pots of all sizes"

(Young 1974: 35). Thomas Morton adds a little more detail to this by stating in 1637 that "They have earthen potts of diverse sizes from 1 quart to 3 gallons, very strong but thin" (Morton 1972:41).

Dunford's study of Late Woodland pottery styles on the Middle to Outer portions of Cape Cod found that two types of pottery were being created: common undecorated or minimally decorated and cord marked wares, and highly decorated probable special occasion/ feast wares (Dunford 2001). Dunford had started his study with the goal of investigating the hypothesis that households within sachemships would copy the decorative styles of the sachem's house as a way of showing support, allegiance, and affiliation with that household (Dunford 2001: viii). While he was not able to demonstrate a difference in ceramic traditions between temporally contemporaneous sachemships on the Outer Cape, his study did lay the groundwork for future studies of Native pottery on Cape Cod as a whole.

A total of 13 pieces of shell or grit-tempered pottery was recovered. The grit-tempered pottery was concentrated in the east yard while the majority of the shell-tempered pottery was in the north yard (Table 13).

Table 13. Distribution of Native pottery

Location	Grit-Tempered	Shell-Tempered
Under Structure		2
Adjacent to Structure		1
East Yard	3	
North Yard	1	4
Foundation 1	1	1

The pottery remains from the site were sorted into a vessel lot that was based on the surface treatment and decoration on both the interior and exterior of the vessel, the kind, size, and density of the temper and the color, texture, and hardness of paste. This lot was analyzed in four different dimensions as outlined by Child (1981:154): morphology- the diameter of the rim, the rim angles and the lip and rim profile; decoration- the location of decoration, technique of decoration, and motif used; technology- the interior and exterior surface treatment, technique of manufacture, temper inclusions, minimum and maximum temper size, density, paste, texture, wall thickness, and rim and lip thickness; and function- which is basically the identification of any carbon residue.

It has been shown by Chilton that many of these attributes are related to how well a vessel works for specific tasks and can reveal production and use evidence. For example, she found that the optimal inclusion types in the temper should be such that during firing and use, it expands at the same rate or less than the clay itself. These types of tempers include grog (old pottery ground up), calcite, crushed or burned shell, feldspar and hornblende. Pottery tempered with these inclusions will be better suited to be used for cooking than ones tempered with quartz. This is due to quartz's tendency to expand quicker than the surrounding clay. A vessel tempered with quartz is not well suited for cooking as it has a low resistance to thermal shock, but would work better for storage or transport due to its high resistance to mechanical stress (Chilton 1999:110).

Thus sites with assemblages of thick quartz tempered pottery probably bear witness to the use of that pottery for a use other than the traditional assumed use of cooking. Surface treatment also affects the performance making vessels more resistant to thermal shock or more water resistant. Chilton found that Iroquoian and Algonquin pottery differed in a number of technological characterizes that were probably the result of their use for differing tasks. Thin-walled Iroquoian pottery that was not tempered with quartz served better for cooking while the often thick walled quartz tempered Algonquian pottery was better for storage and transport. Different temper types also would show that vessels might have been used for different purposes. The hypothesis that the grit-tempered pottery and the shell-tempered pottery were used for different purposes is one of the areas that the analysis will examine.

Temper was identified as fine or coarse using Bronitsky and Hamer's definitions of fine (<.5 mm) and coarse (>.1 mm) (Bronitsky and Hamer 1985:90). Bronitsky and Hamer's study of tempering materials found that pottery tempered with a variety of temper types withstood various types of stresses to varying degrees. Burned shell tempered pottery was more resilient to general breaking that sand or unburned shell tempered pottery. It was also more resilient to crack initiation from thermal shock, more shatter resistant and more resistant to stress caused by initial cracking than either of the others (Bronitsky and Hamer 1985:94). Fine sand tempered pottery was found to be more impact resistant than coarse tempered pottery as well as being more resistant to thermal shock (Bronitsky and Hamer 1985:96). In general it can be said that shell-tempered pottered pottery was better for cooking in as the use of shell appears to have made pottery more resistant to overall to cracking and especially to cracking caused by the use of the pottery on a fire for boiling.

The likelihood of thermal shock can be reduced by changing the clay composition, the wall thickness, the vessel size and shape, the firing temperatures and the surface treatment. If shell tempered pottery was a technological improvement on grit tempered pottery and not just the result of the availability of raw materials (as suggested by), then the use of shell temper may also be congruent with a decrease in wall thickness, a change in vessel size, differential use of surface treatment and possibly different firing temperatures. All of these variables were examined trough attribute analysis of the assemblage from the site. Wall thickness was measured using standard metric calipers with the probable original location of the fragment on the vessel being identified when possible. Vessel size was measured using a standard circumference chart to determine the diameter.

The presence of fine shell temper in this pottery and its relatively thin wall indicates that it was well-suited for use as a cooking vessel. The thin-walled nature of the vessel may also indicate that the people who made and used it either traveled less frequently, thus were less concerned about breaking a thin-walled vessel, or that they cached pots at each of the locations that they visited during a season so that they would not have had to transport them.

Differences in firing techniques and production techniques used by the potters at the site were examined by looking at the color of the shards and any evidence of mis-firing evident on the pieces. The color of the interior, exterior and center of the pottery sherds was recorded using the Munsell color charts. It has been found that sherds that are buff, light red, yellow or brown have been shown to have been the result of firing under oxidizing conditions in an open fire while those that are gray to black were fired under reducing conditions either in a pit or under some sort of covering such as a bark or piled grasses (Luedtke 1985:245).

Decorative techniques used on pottery has been extensively cited as a way to identify the period of manufacture for that piece. Following Chilton's lead, decorative technique will have less weight in our analysis that other attributes of the pieces, but the decoration will be recorded and compared with what is generally been found to be trends in pottery analysis. These trends include the use of exterior and interior cord marking, incised decoration and dentate stamping towards the end of the Early Woodland Period (Fowler 1966:53). The use of a wide variety of decorative techniques in the Middle Woodland Period including linear dentate stamping, rocker dentate, punctate, cord wrapped stick and incising. The Late Woodland also saw the limited use of cordmarked exteriors and decorative elements such as dentate stamping and interiors that are often extensively scraped.

The exterior of the grit-tempered pottery fragments bore traces of the following treatments: cordmarking, smoothing, dentate triangle stamping, and rocker stamping. The interiors were smoothed and in one case scraped (Table 14). The exterior surfaces of the shell-tempered pottery were smoothed, fabric or shell impressed, or bore wide incised lines (Table 14).

Table 14. Pottery sherd characteristics

Temper	Location	Exterior	Interior	Part	Diameter	Thickness
Grit	U04	Cordmarked	Smooth	Body		.8 cm
Grit	U08	Missing	Smooth	Body		
Grit	U08	Dentate Triangles	Smooth	Body	28 cm	.75 cm
Grit	U17	Rocker Stamped	Scraped	Body	24 cm	
Grit	U20	Smooth	Missing	Body		
Shell	Interior	Missing	Smooth	Body		
Shell	Interior	Burned	Burned	Body		
Shell	U02	Smooth	Smooth	Body		.5 cm
Shell	U03	Missing	Smooth	Body		
Shell	U04	Wide Incised	Missing	Body		
Shell	U05	Shell Impressed	Scraped	Body		.5 cm
Shell	U06	Smooth	Missing	Body		
Shell	U17	Fabric Impressed	Scraped	Rim/ Collar	22 cm	.6-.9 cm

Pottery dates as far back as 3600 years BP in southeastern New England and 3300 to 3100 years BP in southern New Hampshire (Sassaman 1999: 75). Archaeologists have termed the ceramic style that was indigenous to southeastern New England the Windsor Tradition and dated it from approximately 3000 to 300 BP (Lizee n.d). The focus for this tradition was southern New England and Native populations

such as the Niantic, Pequot, Narragansett, Massachusett, and most particularly for this study, the Wampanoag of southeastern Massachusetts practiced it. The changes that be seen in pottery styles throughout the period of use for Windsor Tradition ceramics reflect two separate but interrelated aspects of ceramic traditions: technological changes to create a longer lasting product that serves the specific, but changing, needs of a culture for pottery; a canvas for the expression of artistic and stylistic decorations and designs that reflect beliefs and socio-cognitive aspects of that culture. Functionality and cultural presentation are both reflected in the pottery used by a culture at a specific moment in time when people were using that pottery style (Lizee n.d.). The study of the technological and expressive aspects of Native pottery allows for an examination of changing needs for pottery and means of expression through this plastic medium. Pottery styles are very similar throughout much of the Eastern Woodlands for much of their existence. Similar forms, similar technology of manufacture and similar decoration exist for Early to Middle to Late Woodland styles. This conservatism and widespread similarity in pottery styles and decoration is reflective of widespread physical or at least idea exchange across much of the area for much of the Woodland Period. Beginning in the Late Woodland period, regional diversity, which was present at earlier times but not as strongly expressed, becomes dramatically apparent in the archaeological record. The increased regional diversity is reflective of decreasing degrees of pan-woodland interaction which is also reflective of other aspects material culture, most especially exotic lithic material exchange. It can be assumed that with a breakdown of exchange in lithic raw materials and a development of very distinctive regional styles, an increased sense of territoriality and group uniqueness may have developed. It is as if there was a sense of isolationism that developed between groups that formerly closely shared close material culture, linguistic and presumably genetic affiliations.

Archaeologists have named the earliest ceramic identified in the Eastern Woodlands **Vinette I**. It is generally believed that at least the gross technological ideas of pottery production spread to the north from the south, possibly from the same general areas as steatite bowl production. Excavations recovered Vinette I pottery in Connecticut associated with Susquehanna points (Lavin 1984:15; McBride 1984:123; Pfeiffer 1984:79). The earliest pots, termed were straight sided with pointed, concoidal bases and some archaeologists believe that these resemble basket styles common in these earlier periods (Braun 1994:63). This type was first identified in New York State but it is not confined to there. Archaeologists have recovered Vinette I pottery from all of New England, New York and New Jersey. This type of pottery is identified by its thick, straight wall and the use of abundant grit and grit as a tempering medium. Walls of Vinette I pottery range from .6-1.1 cm (Luedtke 1985: 240). The exterior and interior of Transitional Archaic to Early Woodland ceramics were commonly cord marked, a possible decorative technique resulting from the patting of the vessel with a cord wrapped paddle to help bond the coils together. Some smooth surfaces may also occur in some vessels either intentionally or accidentally.

Artisans manufactured Vinette I pottery until late Early Woodland Period. They replaced it by 2,500 BP with **Linear Dentate** (ca. 2500-1800 years BP) decorated pottery (Lizee n.d.). Potters tempered this pottery with shell or grit, with shell-tempering being more common on the coast, with sherd thickness ranging between 7 and 12 mm. Morphologically, Linear Dentate decorated pots are concoidal in shape with relatively straight walls and rim diameters ranging from 22-30 cm. Potters smoothed or cord-marked the exterior surfaces of these vessels while smoothing or scraping the interiors. Potters decorated it with square to rectangular shaped horizontally, and rarely vertically, linear dentate

stamping on the exterior near the rim. This ceramic type has also been called Vinette Dentate, Vinette Complex Dentate, Matinecock Point Stamped, and Clearview Stamped (Lavin 2002: 158). Linear Dentate pottery decoration forms one of two decorative style sin Lavin's "Dentate and Rocker-Stamped Ceramic Horizon" (Lavin 2002: 158).

The second decorative style of the "Dentate and Rocker-Stamped Ceramic Horizon" is **Rocker Stamped**, also called Rocker Dentate (2,000-1,400 BP) (Lizee n.d.). Rocker Dentate decorated pottery vessels are often found associated with Linear Dentate pottery. Technologically and morphologically Rocker Stamped vessels are the same as both Vinette I and Linear Dentate pottery with concoidal shaped bodies, straight to slightly everted rims and rim diameters averaging 26 cm. Temper occurrences and sherd thicknesses are also the same. The only difference is the use of the tool used to decorate the vessel. In Rocker Stamped vessels the tool is held perpendicular to the rim of the vessel and is gently rocked back and forth around the vessel, creating a jagged encircling border. The exterior and interiors are the same as Linear Dentate vessels.

Two types of plain vessels lacking any decoration aside from cord marking or brushing also coexist with the dentate stamping in the Middle Woodland period. The first type, **Windsor Cord Marked** (2700-1400 BP) (Lizee n.d.), potters cord marked the exteriors and smoothed or brushed the interiors. Dentate stamping occasionally occurs but is spatially limited to the lip. By 1,600 BP single horizontally oriented cord wrapped stick decoration occurred sparsely on some examples of this pottery type. Vessel shape remains the same as the other ceramic types- concoidal with generally a straight rim profile (later examples have slightly more developed shoulders, constricted necks and out-flaring rims). Researchers have recorded a variety of vessels sizes from 12 to 28 cm in diameter. This pottery type appears to represent the first occurrence of varying vessel sizes ranging from 12 to 28 cm in rim diameter, possibly indicating a wider role for pottery vessels within the household. Archaeologists call the second type of sparsely decorated ware **Windsor Brushed** (1400-600 BP) (Lizee n.d.). This pottery type was in use into the Late Woodland period. The main characteristic of this ware is a brushed interior and exterior surface with the brushing being used to create decorated areas below the rim. Brushing decoration consists of parallel horizontal, vertical and oblique lines which are ancestral to the Late Woodland incised designs characterizing wares such as Niantic. Vessel morphology is another notable change between these wares and earlier varieties. Potters made the vessels in an elongated conical form with everted rims, constricted necks, with later forms being more globular with defined shoulders and constricted necks. These wares also bear the first traces of collars and rudimentary castellations. These wares are more common in Rhode Island and Connecticut, possibly indicating the beginning of a sub-regionalization in pottery styles. Archaeologists have theorized the introduction of collars, castellations and constriction as being adaptive changes related to changes in diet and processing, possibly associated with maize horticulture introduction. Temper type and distribution remain the same as earlier periods. Rim diameters vary widely from 20-32 cm and sherd thickness varies from six to ten millimeters

Sebonac Stamped (1,300-500 BP) wares represent the first use of shell stamping as a decorative technique (Lizee n.d.). Archaeologists consider it distinctive of the late Middle Woodland and especially of the Late Woodland period with a limited distribution in riverine and coastal zones. The shell stamp used is scallop with the stamp itself oriented vertically or obliquely and stamping occuring in parallel horizontal bands. Potters placed the stamping over cord-marked or brushed exterior surfaces

while the interiors were brushed, cord-marked or fabric-marked. Vessel morphology hearkens back to earlier wares, being concoidal to elongated concoidal with straight to rarely out-flaring rims and constricted necks. Rim diameters are between 20 and 26 cm and the temper is exclusively shell. The vessel morphology may indicate that these vessels served a different purpose than the more globular shaped vessels with more constricted necks.

Hollister Stamped (1,250-450 BP) is a late Middle Woodland to Late Woodland dentate stamped ware (Lizee n.d.). The dentate decoration consists of four to 12 horizontal rows of dentate stamping around the vessel with vertically oriented rows rarely occurring. Dentate shape is round to oval, distinctively different from Linear and Rocker Dentate square dentates. Generally vessel surfaces are smooth. Vessel morphology is variable with shapes ranging from elongated to concoidal to globular, often paired with straight or everted crenelated rims. Rim diameters range from 22 to 32 cm and temper is mineral.

Seldon Island (1,200-800 BP) wares are another shell-stamped ware with a wider distribution than Sebonac Stamped wares, being found inland as well as on the coast and rivers (Lizee n.d.). Potters applied shell stamping using linear and rocker stamping techniques. Rocker stamping was done using the smooth edge of a quahog or oyster shell onto a smooth exterior. Potters smoothed or brushed the interior surfaces. Seldon Island wares are generally elongated concoidal with slight neck constrictions to straight-walled concoidal vessels, sometimes with low castellations. Vessel occur in a wide range of sizes with rim diameters ranging from 20 to 30 cm. Temper used was shell or medium to fine-grained grit with sherd thicknesses of five to eight mm.

Windsor Plain (1,200-450 BP) wares continue the simpler, less decorative tradition of wares such as Windsor cord marked and Windsor Brushed. Windsor Plain is a catch-all category that includes an earlier and later form (Lizee n.d.). Researchers believe both are more "utilitarian" due to their lack of decoration, although this is debatable (Lavin 1980). Potters smoothed the interior and exterior surfaces of vessels of this ware type and the vessel morphology is elongated concoidal in the earlier forms and globular in the later. Generally both forms lack shoulders and constricted necks although researchers have identified a few with sharply constricted necks and out-flaring rims. Surface colors may also vary between the earlier and later forms- earlier being brown to gray while the later are more tan to reddish (possibly representing different firing techniques). Rim diameters are slightly smaller than earlier vessels, averaging 15-26 cm with some miniature forms also being produced. Temper type is either shell or grit, but overall temper size is much finer than earlier wares. Sherd thickness ranges from four to 12 mm.

Shantok Cove Incised (1,100-850 BP) wares represent the earliest use of incised decoration in New England. The exterior of the vessels are cord marked and the interior is smoothed or brushed. Decoration consists of bands of vertical, horizontal or oblique incised lines often in criss-cross and rectangular forms in later examples. The vessel for in globular in shape with straight walls, rarely a crenulated lip and are shell-tempered. Sherd thickness is generally under 10 mm. This ware, as well as the following three, are part of what Lavin identifies as the "Collared-Incised Ceramic Horizon" (Lavin 2002:162). These styles share many similarities with pottery of Iroquoia to the west, but are less similar to pottery styles as one moves south.

By the late Late Woodland to Contact Periods (300-500 BP), archaeologist identified one final pan-regional pottery type, **Niantic Stamped** (450-300 BP). Researchers characterize these pots as having globular bodies, low relief collars and constricted necks with stamped punctate, stamp/ drag and incised decoration (Lizee n.d.). Decoration found on the pots consists of shell stamping and incised horizontal. vertical, and opposed oblique lines that often create a series of triangles on the collars. Castellations are rare or absent, temper is generally shell on the coast and grit in the interior while sherd thickness ranges between seven to 10 millimeters.

Evolving out of the Niantic tradition are the **Hackney Pond** (450-250 BP) and **Shantok Castellated** (350-250 BP). Hackney Pond ceramics have all the characteristics of the preceding Niantic, except that they are not shell-tempered and their fine compact paste lacks even grit temper. They also have thin walls, averaging three to nine millimeters in thickness. They represent a refinement of local ceramic traditions. Shantok Castellated on the other hand are almost always shell-tempered and, as the name implies, bear castellations on their rims. The castellations are sometimes decorated with appliqués/ effigies in the form of corn ears and, to the south and west of the Wampanoag homeland, faces. Shantok pottery has only been recovered from Contact Period sites.

An additional ware not included in the published descriptions of Windsor Tradition ceramics is **Point Peninsula Cord Wrapped Stick Stamped** (1350-450 BP) ware. Lavin identified ware from New York where archaeologists attribute it to the Point Peninsula (versus the Windsor) tradition. This horizon (Lavin 2002:160) shows the utilization of a cord-wrapped stick or the edge of a cord-wrapped paddle and often punctates, to decorate the exterior of vessels. Decorative styles include parallel horizontal or vertical rows encircling the rims with opposing rows above or below, herringbone design, and parallel plats.

A fabric impressed/ fabric stamped pottery was also recovered. Pottery decorated with this technique has not been widely reported in New England, but they did make up to 37% of the decorative technique utilized on vessels at the Muttock-Pauwating Site in Middleborough, Massachusetts (Chartier and Donta 2013). Fabric impressed ceramics were the next most common ceramic recovered. This decorative technique consisted of a section of finger-woven fabric, possibly the side of a soft bag or basket, that a potter pressed into the soft clay. This decorative technique does not have a corresponding type in the Windsor ceramic series and may be a more eastern and northern decorative technique. The present study determined that this technique dates to the Late Woodland period but predates incising and is contemporaneous with rocker stamping, dentate impressing, shell impressing and possibly cord-wrapped stick impressing.

Five sherds bore decorative elements that could be categorized to one of the above described techniques (Table 15). The decorative techniques found were Rocker Dentate (2,000-1,400 BP),

Table 15. Pottery decorative techniques identified

Temper	Location	Exterior	Interior	Part	Diameter	Thickness	Type
Grit	U08	Dentate Triangles	Smooth	Body	28 cm	.75 cm	Niantic Stamped
Grit	U17	Rocker Stamped	Scraped	Body	24 cm		Rocker Dentate
Shell	U04	Wide Incised	Missing	Body			Shantok Cove Incised
Shell	U05	Shell Impressed	Scraped	Body		.5 cm	Seldon Island
Shell	U17	Fabric Impressed	Scraped	Rim/ Collar	22 cm	.6-.9 cm	Late Woodland Fabric Impressed

Shantok Cove Incised (1,100-850 BP), Seldon Island (1,200-800 BP), and Niantic Stamped (450-300 BP). These decorative techniques dated from the Middle to late Woodland periods which supports the temporal distribution observed in the lithic assemblage.

Vessel diameters ranged from 22 to 28 cm, indicating that these were all full-sized cooking vessels with no miniature vessels being identified. Fragment thicknesses were consistent with Middle to late Woodland wares as well.

Historic Period Artifacts

A total of 38,846 historic period artifacts were recovered from Site Examination testing. Approximately half a dozen seventeenth century artifacts were recovered including pipe stem and bowl fragments and a solid silver doublet button with an embossed Tudor rose. Eighteenth century artifacts were mixed with early nineteenth century material beneath and immediately around the 12 x 8' structure. This may be a result of the Jacksons' cleaning out of the Watson house when they built their house ca. 1830. Eighteenth century artifacts were also found in Fill Layer 1 beneath the 12 x 8' structure in what was tentatively identified as an intact buried A1 horizon. Eighteenth century artifacts included wine bottle seals bearing the initials of George Watson, white salt glazed stoneware vessels, Iberian storage vessels, tobacco pipes, coins, and creamware vessels. Nineteenth century material appears to be related to food preparation and consumption with wine bottles, storage pots, porcelain tea and dinner wares being most abundant. Most of the nineteenth century material appears to date to the earliest phases of the Jackson occupation at circa 1818 to 1830.

Historic artifact analysis began with the separation of materials into the functional categories of **Household Equipment** (ceramics, glass, cooking and eating equipment, furniture hardware, sewing), **Personal Items** (tobacco pipes, clothing items, coins, tokens), **Construction Materials** (window glass, nails, building hardware [hinges, pintle, door lock], brick, mortar), **Labor and Technology Tools** (tools), and **Subsistence Items** (procurement equipment [gun equipment, fish hook], floral, faunal) (Table 16).

Table 16. Artifacts recovered from Site Examination testing

Artifact	**S**	**A**	**N**	**E**	**W**	**F1**	**F2**
HOUSEHOLD EQUIPMENT							
Historic Ceramics							
Earthenware	82	41		6	2	14	1
Jackfield	10	6				3	2
Redware	2520	987	36	114	49	316	366
Slipware- Staffordshire	114	26		3		5	1
Sgraffito						1	
Midlands Purple	2						
Stoneware- White Salt-Glazed	173	24	6	7	2	18	8
Stoneware- Nottingham	6		2		1	2	3
Stoneware- Westerwald	11		1	2		1	
Stoneware- Gray	19	3	2	1		12	
Stoneware- Fulham						1	
Stoneware- Buff	32	3				7	1
Stoneware- Rhenish	38	7	1		1		1
Stoneware- Albany Slipped	48	5				1	
Roso Antico				1			
Tin-Glazed	99	9	1	3	4	13	12
Faience							1
Borderware	1				1	1	
Iberian	27	6				3	3
North Devon Gravel Free		1	1				
English Mottled Ware						1	
Colonoware?				1			
Creamware	2003	748	13	59	13	280	134
Pearlware	1644	505	1	42	13	190	236
Ironstone	74	31			1	42	5
Whiteware	950	572	21	67	56	288	103
Yellowware	85	14		1		4	7
Rockingham	20	3	1	1			
Porcelain	169	48	12	5	3	55	36
Fiestaware		1					
Vessel Glass							
Bottles/ Glasses	3671	780	18	73	30	385	204

Table 16. (cont.)

Artifact	**S**	**A**	**N**	**E**	**W**	**F1**	**F2**
Milk Glass	1	8		1		2	2
Flask With Strap	2						
Cork	1						
Pewter Bottle Neck Ring	1						
Crown Bottle Cap	1						
Possible Bottle Label Plate	1						
Cooking/ Eating Equipment							
Kettle	3					2	2
Knife	2			1			
Fork	1						
Spoon							1
Pewter Cup Handle			1				
Fire Brick	1						
Barrel Hoop	12						
Sheet Iron Basin	131						
Can	72	21					
Iron Stove Handle	1						
Furniture							
Furniture tack				2		2	
Drawer Escutcheon	1						
Brass Grommet	1						
Sewing							
Sewing pin	1						
Heating Items							
Charcoal	176	450	33	60	5	74	28
Coal	481	573	146	346	72	848	322
PERSONAL ITEMS							
Coin/ Jetton						2	
Tobacco Pipes							
8/64” Stem Bore			2				
7/64” Stem Bore	1		1	1		1	2
6/64” Stem Bore							2
5/64” Stem Bore	5	1		1	2	1	2

Table 16. (cont.)

Artifact	**S**	**A**	**N**	**E**	**W**	**F1**	**F2**
4/64" Stem Bore	9	1	1	3	2	1	4
Stem Fragments		1			1		
Bowl Fragments	3			7	1	2	3
Wooden Pipe	1						
Clothing							
Buttons	5	1	3	1	2	1	1
Clothing Hook	2						
Safety Pin	1						
Earring		1					
Beads	1		1				
Buckle	1		2				1
Shoes Fragments	102	3					
Shoe Eyelet		1					
Cloth	1						
Canvas	1						
Lead Bale Seal	1						
Recreation							
Marble		2					
Rubber Ball	5						
Slate Pencil		1					
CONSTRUCTION ITEMS							
Brick	353	923	463	644	80	867	811
Mortar	160	40		4	3	45	14
Cement	3	45				1	1
Architectural Stone- Sandstone	1	1				3	
Architectural Stone- Slate	6	19	12	1	4	139	8
Soapstone	1						
Hand-Wrought Nails	81	71	26	44	27	76	98
Machine-Cut Nails	620	256	74	67	34	327	265
Nail Fragments		29	15	23			109
U-Nail	1	4				2	
Wire Nails	29	15	3	6	2	10	15
Wood Screw	9	2				1	
Screw Eye	1		1			1	

Table 16. (cont.)

Artifact	**S**	**A**	**N**	**E**	**W**	**F1**	**F2**
Square Nut							1
Wood	495				1		
Hinge							1
Door Hook	1						
Hook	3						
Tenter Hook	1						
Shutter Hardware	1						
Clay Daub or Mortar			1	1			
Flat Glass	774	396	18	75	21	158	196
Melted Glass	5						
Tin Flashing	15	1		1		1	4
Key	1	1					
LABOR AND TECHNOLOGY							
Transportation Equipment							
Horseshoe Nail							1
Harness Equipment	4						
Tools							
Wedge				1			
Awl						1	
File	1					1	
Ferrule	1						
SUBSISTENCE							
Procurement Items							
Flint Debitage		2			1		
Gunflint	1		1				
Faunal							
Bone	1447	251	16	82	28	173	110
Shell	3293	260	11	9	86	209	11
Floral							
Seeds	99		2			1	1
OTHER							
Iron Fragments	180	2					3
Flat Iron Fragments		44	3	1			9

Table 16. (cont.)

Artifact	**S**	**A**	**N**	**E**	**W**	**F1**	**F2**
Iron Loop	1						
Lead Fragments	2	1				1	
Brass Scrap		5					
Iron Square Rods	5						
Iron Threaded Rod	1	1					
Wire- Copper	1					1	
Wire- Iron	7			1		3	
MODERN	2	10				5	
Aluminum Buckle		1					
Aluminum Circle		1				10	1
Aluminum Foil		1					
Asphalt Shingle						3	
Lincoln Cent						2	1
.22 Cal Shell	1	1					
Copper Eye Hook		1					
Copper Paper Reinforcer		1					
Copper Wall Hook						1	
Graphite Battery Rod						1	
Iron Bag Clip						1	
Iron Pipe End Cap						1	
Plastic Camel						1	
PREHISTORIC							
Debitage	52	18	20	31	7	20	20
Tools	6		1	5		1	2
Core	1						
Pottery	2	1	5	3		2	

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

The artifact assemblage that was expected to be recovered from the Site Examination testing was analyzed within the context of the household and town histories. It was hoped that the artifacts can help to illuminate changing household composition, architectural renovations and subsistence activities. This contextual approach is based on an interpretative approach championed by Mary Beaudry, among others, which is a broad based and historically grounded way of studying household with an eye towards the analysis of household's changing form over time as well as changing relationship with exterior world on local, regional and global levels (Beaudry 1984: 27). The utilization of historical documents as aids in interpretation is key to understanding the artifacts that are recovered. Documents

that can be used include general ones which will help to place the site and assemblages within a larger context such as state and town histories and historical maps, and sources that will relate to the occupants of the site itself such as wills, probates, court records and family histories. This contextual approach to interpretation helps to link the household cycles and family histories to the archaeological and depositional histories of the site (Beaudry 1999: 117).

Distribution analysis

The household is described as an aggregation of individuals with the houselot (the collection of buildings, fences and yards) being both product and medium of household aggregate behavior (Gibb 1996:17).The houselot, the location of the domestic site and its architecture and landscaping, includes the artifacts that are the residue of how householders attempted to define and assert themselves as a group; features that represent the remains of occupation, as well as material expressions of how the householders perceived themselves in the physical and social world (Gibb 1996: 39). Also evident will be attempts at building expansion or simple maintenance, the active modification of landscape, and passive alteration through erosion/ decay (Wilk 1990). Analysis of these features and processes will provide evidence for perceived, real, and projected images of wealth of the occupants. King and Miller (1987) found that the organization of the homelot space reflects the occupation of the people who lived there and argued that social and functional changes will be reflected in refuse disposal patterns. Gibb and King (1991) further recognized that seventeenth century sites generally lack well-defined activity areas and little spatial differentiation in open areas around structures. They interpreted this as being a product of weakly defined gender roles and a small, relatively undifferentiated work force. By examining the distribution of material within and around the cellar hole it was possible to date the use and abandonment of the cellar hole and the superstructure above it and investigate any evidence of repair done to it. The analysis of the distribution of the material around the house also allows for an examination of changing patterns of refuse disposal over the course of the occupation of the house.

Seventeenth century artifacts (ceramics [Borderware, North Devon Gravel Free, Midlands Purple Sgraffito], tobacco pipes, silver button) were recovered from all tested sections of the project area (Table 17). The majority of the pieces were recovered in the vicinity of Foundation 2, in the North

Table 17. Recovered definite and probable 17th century artifacts

Artifact	**S**	**A**	**N**	**E**	**W**	**F1**	**F2**
HOUSEHOLD EQUIPMENT							
Historic Ceramics							
Midlands Purple	2						
Borderware	1				1	1	
North Devon Gravel Free		1	1				
PERSONAL ITEMS							
Tobacco Pipes							
8/64” Stem Bore			2				
7/64” Stem Bore	1		1	1		1	2

Table 17. (cont.)

Artifact	**S**	**A**	**N**	**E**	**W**	**F1**	**F2**
6/64" Stem Bore							2
Clothing							
Tudor Rose Button			1				
Total	**4**	**1**	**5**	**1**	**1**	**2**	**5**

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

Yard, and from under the structure. It is believed that this pattern indicates that the seventeenth century occupation was focused closer to North Street with the project area being a backyard of the original house. This house was either subsequently demolished or added to by the time Watson occupied the property in the eighteenth century.

Eighteenth century artifacts were concentrated beneath and directly around the structure to approximately two and one half meters to the north of it. The deposit beneath and directly around the structure are interpreted as a refuse midden created in the later eighteenth to early nineteenth century at the end of the Watson to the beginning of the Jackson occupation of the property. The deposit is believed to represent a midden originating from the kitchen of the Watson/ Jackson house. The ground was found to slope to the south beneath the structure and it is possible that the midden was filling a depression in the yard behind the house. Because the midden appears to border the edge of the Jackson period property line (the earlier Watson property line is believed to have extended to Middle Street), the midden is believed to have originated with the Jacksons.

The mixture of Watson and Jackson occupation material is interpreted as a result of the "cleaning out" of the house, especially the kitchen and stores areas, during the period when the ownership was in transition, ca. 1818-1830. It is also possible that Foundations 1 and 2 represent outbuildings that were removed during the 19th century and that the midden was originally located and accumulate, behind these structures. The 19th century refuse distribution paralleled that of the 18th century material. This indicates that the two accumulated in the same way and possibly as a result of the same household. Watson was reported to have had an extensive garden behind his house. The Jackson occupation which is associated with the dividing of the original Watson lot into two separate parcels, indicates that the yard may have ceased to have the social or status function it maintained during the Watson occupation. It may have become more of a working yard, a place with at least one outbuilding with a substantial foundation and a refuse midden along the south property line. A similar pattern of refuse disposal and outbuilding placement is evident at the Narbonne House in Salem. At this high status house, refuse disposal and outbuilding locations, especially malodorous buildings like privies, were placed along the back and side property lines (Moran et al 1982).

Detailed analysis of the recovered artifacts further helped to identify patterns and trends in the use and disposal of the material culture of the inhabitants of the site.

Household Equipment

Historic Ceramics

Ceramic analysis focused on functional and temporal analysis of the recovered wares. Functional

analysis includes the identification of the types of vessels present as well as how the wares can be used as socio-economic indicators. Ceramics in general have the potential to yield information on market distribution systems, food processing, preparation, consumption and other aspects of foodways behavior. Ceramics were also used for status display and possibly ideological statements (Spencer-Wood 1984: 33). The ceramics recovered from nineteenth century sites are assumed to largely have been acquired from those that were available at the local market economy with some percentage possibly being acquired as gifts, heirlooms or through some form of secondary recycling. The ceramics that are recovered archaeologically are the result of consumer choices of goods available in the market and the loss and selective discard patterns of the past inhabitants of the site (Spencer-Wood 1984: 33, 34). The types and styles of ceramics used by a household are influenced by an indeterminate number of interrelated factors including site location, availability of goods, occupation, ethnicity, economic level, social status, family status, religious and political affiliation and individual preferences (Spencer-Wood 1984: 34).

As a way of understanding the interrelationships between features and anomalies identified during the Site Examination, attempts were made to cross-mend sherds of vessels from various contexts across the site. Assemblages recovered from intact feature contexts were analyzed to determine a likely date of deposition for the material and to determine their probable function as part of the working household. It was hoped that enough feature contexts can be identified to examine the changing nature of the Samuel and Mary Fuller household overtime and to compare these changes to larger local, regional, and national trends.

In general, extraneous material comforts such as decorative, although not necessarily expensive, pressed glass, floral painted versus undecorated ceramics and the presence of tea wares indicates an economic expenditure towards indulgence, something more than just the penultimate basic needs, versus subsistence or utility. One can easily do with wooden bowls and no tea, so the presence of items such as fashionable decorated ceramics and tea wares must indicate a desire for something more than the basic necessities of life by the inhabitants of a site. For example, in the 1840s hand-painted pearlwares were nearly twice as expensive as undecorated pieces and transfer printed wares were over twice as expensive (Miller 1991). By purchasing transfer printed wares versus undecorated wares, the inhabitants (especially the women who were the primary purchasers of such goods) may have been trying to say something about their real or perceived status. The expenditure of household funds on items such as the latest in consumer goods is difficult to reconcile with a desire for self-sufficiency during the Victorian Age, it was not possible to aspire to be both self-sufficient and socially respectable.

Method

Analysis began with the identification of the ware (creamware, whiteware, pearlware, redware, etc.). Minimum vessel counts were generated for each class and a functional analysis of the types of vessels (cups, bowls, saucers, etc.) carried out. Additionally, the types of decorations (undecorated, hand-painting, transfer printing, etc.) present on the wares were examined and compared to determine if any matched sets are present or if the vessels present appear to be mis-matched sets. The presence of matched sets over mis-matched pieces may help to better assess the socio-economic status of the household over time. Matched sets may indicate a desire by the inhabitants to own proper service sets and likely indicate that the individuals purchased the pieces specifically for the motif and with the

desire to have a matched set. Mis-matched vessels may indicate that the pieces were either purchased with no real desire for the order and propriety implied by matched sets, that the pieces were purchased piece meal over an extended period of time, which may have resulted in the inability to find matching pieces when the time came to purchase another piece. Alternately, mis-matched sets may be a sign that the pieces were donated to the family and were not purchased at all. This would be especially true if the pieces were found to show a time lag between the occupation of the site and the types of ceramics present (i.e. older ceramics donated to a poorer family from a middle class family after that style had gone out of fashion).

There are three general classes that ceramics fall within, being distinguished by the amount of time that they have spent in the kiln. These are earthenwares, stonewares and porcelain with each being higher fired and thus more water resistant. Earthenware and stoneware were recovered from the Site Examination testing. Earthenwares can be characterized as being a ceramic class composed of glacial or alluvial clays that have been fired in a kiln at temperatures not exceeding 1200 degrees Celsius. Before the firing, the body may be, but was not always, covered with a powdered or later, a liquid lead oxide glaze. This glaze fused to the body and created a waterproof, glass-like surface.

Different paste textures, decorative techniques, and glazes produced different types of earthenware identified by the distinctions: redware; tin-enameled; slipware; North Devon gravel-tempered and gravel-free wares, slipware, and refined earthenwares such as creamware, pearlware, whiteware and ironstone. Some of these varieties have distinct temporal ranges, while others continued in production virtually unchanged for centuries.

Earthenware

Redware

Redware is the largest and most commonly occurring type of earthenware encountered on European Colonial sites. Redware itself has not received a great deal of careful and scholarly work to tightly date them. Apart from Laura Watkins' paramount work and Sarah Turnbaugh's 1985 treatise on the subject, there has not been much follow up work done to continue the scholarship. As a result, while redware makes up the greatest percentage of the assemblages looked at, they can not be closely dated, and must be given limited weight to the amount they can contribute to the identification of an early seventeenth century site. What can be said about them relates primarily to their glaze colors.

Studying the English ceramic traditions which formed the precedent for colonial potters work, Turnbaugh identified 12 redware traditions in England which she felt were perpetuated by New England potters (Turnbaugh 1985:216-217). Her date ranges for wares made in England date from ca. 1200 to 1795, and those in New England from ca. 1650 to 1815. Several Charlestown potters are known including John Parker, who, in 1750, is known to have sold to Barnstable and Harwich as well as Duxbury and Daniel Parker Jr. in 1832 (Watkins 1968: 45). Additionally it is known that Noah Bradford, son of Noah Bradford, potter, of Kingston, Massachusetts, operated a pottery in Barnstable from 1819-1830 that he had bought from Prince Nye (Watkins 1968: 45). People on Cape Cod also received pottery from Long Island in New York (Watkins 1968: 27).

Redwares were very utilitarian and the vessels recovered indicate that they were being used for food storage (pot), dairying (pot, milk pan), cooking (pan, tall pan), liquid serving and consumption (bottle,

cup, mug), hygiene (chamber pot), and decoration (flowerpot). A total of 4388 fragment of redware were recovered from across the project area (Table 18) with the majority being from beneath and adjacent to the structure. Redware comprised 31.6% of the ceramic total from the project area.

Table 18. Distribution of redware fragments across the project area.

Artifact	**S**	**A**	**N**	**E**	**W**	**F1**	**F2**
Redware	2520	987	36	114	49	316	366

H- Under House, A- Adjacent to House, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

Minimum Number of Vessels Calculation (MNV)

Fragments that had their interior and exterior surfaces missing and those that had their interior surfaces missing but were unglazed on the exterior were not used to calculate a minimum number of vessels for the redware. This was due to the fact that it could not be determined from which other category of surface characteristics those fragments came. A total of 2844 fragments were excluded from the MNV calculation due to the above characteristics (Table 19). Burned fragments were also not used to

Table 19. Surface characteristics of redware sherds

Surface Characteristic	**Count**
Interior and Exterior Unglazed	106
Pieces Excluded from MNV Calculation	2844
Interior and Exterior Glazed	722
Interior Glazed Exterior Unglazed	667
Interior Slip Decorated Exterior Unglazed	39
Interior Glazed Exterior Slip Decorated	10
Total	**4388**

calculate the minimum number of vessels. Four burned fragments, presumably discarded into the hearth and subsequently disposed of with the hearth ash, were recovered from beneath and adjacent to the structure. This may indicate that the midden encountered beneath the structure had its origins at least partially from kitchen waste. Vessel forms for the burned pieces were limited to a pan, possibly used for baking.

Identified redware forms consisted of pans, pots, chamberpots, mugs, cups, flowerpots, bottle, a jar, and a possible sugar mold (Table 20). Glazing on the interior and exterior of vessels was restricted to

Table 20. Calculated MNV for redware

Vessel	Surface Treatment	Color	Form	Location
1	Interior and Exterior Glazed	Very dark brown	Bottle	H, A
2	Interior and Exterior Glazed	Exterior Very dark brown Interior Dark yellowish brown	Chamberpot	H, E
3	Interior and Exterior Glazed	Green	Flowerpot	H, A
4	Interior and Exterior Glazed	Very dark brown	Bowl	H, A, F1, F2
5	Interior and Exterior Glazed	Exterior Yellow Red Interior Dark Red	Cup	H
6	Interior and Exterior Glazed	Red	Cup	H, A, F1
7	Interior and Exterior Glazed	Very dark brown	Cup	H, E, F1
8	Interior and Exterior Glazed	Yellow red	Cup	H, F2
9	Interior and Exterior Glazed	Dark red brown	Cup	H
10	Interior and Exterior Glazed	Exterior Very dark brown Interior Dark Yellowish brown	Cup	H
11	Interior and Exterior Glazed	Olive yellow	Cup	H, F2
12	Interior and Exterior Glazed	Dark red	Mug	H, A, W, N, F2
13	Interior and Exterior Glazed	Yellow Red	Cup	H, A
14	Interior and Exterior Glazed	Very dark brown	Mug	H, A, W, F2
15	Interior and Exterior Glazed	Very dark brown	Pitcher	A
16	Interior and Exterior Glazed	Very dark brown	Tea pot	H, A, F1
17	Interior and Exterior Glazed	Yellow red	Mug	H, A, N, F2
18	Interior and Exterior Glazed	Light olive brown	Mug	F1, F2
19	Interior and Exterior Glazed	Exterior Very dark brown Interior Dark yellowish brown	Chamberpot	H
20	Interior and Exterior Glazed	Exterior Dark red Interior Red yellow	Mug	H
21	Interior and Exterior Glazed	Exterior Very dark brown Interior Dark red brown	Mug	H, F2
22	Interior and Exterior Glazed	Yellow brown	Bottle	H
23	Exterior Slip Decorated	Yellow Red	Chamberpot	H
24	Exterior Slip Decorated	Red	Chamberpot	H
25	Interior Slip Decorated	Dark red	Pan	H, A, F1, F2
26	Interior Slip Decorated	Strong brown	Pan	H, A, F2
27	Interior Slip Decorated	Very dark brown	Pan	H, A
28	Interior Slip Decorated	Strong brown	Pan	H, A, W
29	Unglazed		Flowerpot	H, A
30	Unglazed		Flowerpot	H, A
31	Unglazed		Flowerpot	A
32	Unglazed		Jar	H

Table 20. (cont.)

Vessel	Surface Treatment	Color	Form	Location
33	Unglazed		Sugar mold	H, A, F1
34	Interior Glazed Exterior Unglazed	Brownish yellow	Pan	H, A
35	Interior Glazed Exterior Unglazed	Dark brown	Pot	F2, N
36	Interior Glazed Exterior Unglazed	Dark brown	Pan	H, A, F1, F2
37	Interior Glazed Exterior Unglazed	Dark red	Pan	H, A, F1, W
38	Interior Glazed Exterior Unglazed	Dark red brown	Pot	H, A, F1, F2, W
39	Interior Glazed Exterior Unglazed	Dark red brown	Pot	H
40	Interior Glazed Exterior Unglazed	Dark yellowish brown	Pan	H, A, F1, E
41	Interior Glazed Exterior Unglazed	Dark yellowish brown	Pot	H, A
42	Interior Glazed Exterior Unglazed	Light red	Pan	H
43	Interior Glazed Exterior Unglazed	Light yellowish brown	Pan	H
44	Interior Glazed Exterior Unglazed	Very dark brown	Pan	H, A, F1, F2, N, E
45	Interior Glazed Exterior Unglazed	Very dark brown	Pot	H, A, F1, E
46	Interior Glazed Exterior Unglazed	Strong brown	Pot	H, A
47	Interior Glazed Exterior Unglazed	Strong brown	Pan	F1
48	Interior Glazed Exterior Unglazed	Yellow brown	Pot	H, A, F1, F2, W, E

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

use on vessels that held liquids (cups, bottles, chamberpots, teapots, bowls, pitcher) and which were more commonly used on the table (except in the case of the chamberpot) and serving a more decorative function (such as the flowerpot). Vessels glazed on only the interior are most often associated food preparation (pan) and storage (pots). These are wares that are very utilitarian in function and were glazed to prevent liquids from wicking from the interior to the exterior. No milk pans were identified, indicating that dairy was probably not practiced at this urban site. Slip decorated redware was first made in the colonies in the 1680s and continued in use into the nineteenth century. The six slip decorated vessels are believed to date to the middle to late 18th century to early nineteenth century. Three unglazed flowerpots of various sizes were identified.

Two vessels that may have been used together were recovered. One, Vessel 32, is an unglazed jar and the other vessel is what is interpreted as a sugar mold for separating raw sugar cane into sugar and molasses. The sugar mold is a conical unglazed redware vessel that was placed inverted, apex side down into the mouth of a jar like a “tamarind jar”. Imported raw sugar and water that had been boiled in huge vats was poured into cone-shaped molds with wet clay placed on top. Water in the clay percolated through the sugar washing the syrup, molasses, into the jar. The molasses was used to make rum and the sugar was dried and sold in cone form as sugar for consumption. The recovery of the sugar mold, and the jar, indicates that Watson may have operated a sugar house in Plymouth

Tin-enameled

Tin-enameled wares (also called tin-glazed, or delftware) were produced in Spain, France, Portugal,

Holland and England as early as the 16th century and are commonly found on archaeological sites from the seventeenth through the end of the eighteenth century. Tin-enameled wares are semi-soft bodied earthenwares that were decorated with blue, orange, green and yellow painted glaze and were covered with a tin glaze or a lead glaze with tin added. This gave a white glaze to the vessel reminiscent of oriental porcelain, which they appear to have imitated. At present it seems that wares from England comprise the vast majority of those found on English colonial sites. The most common vessels for the early seventeenth century are chargers, flat broad platters, with floral or pomegranate decorations in the center and blue dash decoration along the rims (Hume 1969:108). These were made from ca.1620 to 1720. As with other ceramic types that lasted for a long period, the decoration of this ware degraded throughout the century as demand and availability of them increased. Bottle were produced between 1620 and 1680. Apothecary or drug pots were also made in England. These were rather tall and narrow vessels painted in bands on the exterior, often in blue, orange and purple (Hume 1969:205). These were produced from ca. 1580 to 1640. They were replaced by plain white pots of a squatter shape later in the century. Punch bowls were made after 1680 and continued in production until ca. 1780. Plates, the most common form recovered archaeologically were commonly produced after 1680 until ca. 1800. tankards represent a form that was produced throughout the seventeenth and eighteenth centuries (Noël Hume 1970, 1977; Britton 1982; Archer 1997). Small vessels such as teacups are rarely recovered from sites after 1750 due to a loss in popularity to refined earthenwares like creamware and fine stonewares like white salt glazed stoneware. These harder fired wares were preferred because the glaze on the edge of the rim would not chip and flake the way it would on the tin-enameled wares. (Noël Hume 1970, 1977; Britton 1982; Austin 1994; Archer 1997).

Decoration used on the vessels is a better chronological indicator than form. Plain white vessels were produced in England from the inception of its tin-enameled industry throughout the eighteenth century. After 1660, polychrome chargers with blue-dash edged and tulips or biblical scenes in their centers were popular. Chinese motifs were used after the 1630s (Noël Hume 1970; Black 2001). Earlier polychrome colors tend to be less vibrant than the post 1690 wares.

Another tin-enameled ceramic sparingly recovered from New England Colonial sites was a faience that was the product of France. French faience was produced from the sixteenth through the eighteenth centuries and are easily distinguished from other countries' tin-enameled products by its pink paste. Most of these wares were decorated in the famille verte and famille rose colors of Chinese porcelain with designs imitating those used on Chinese porcelain. In the second half of the eighteenth century rococo inspired elaborate scrolls and shells were introduced to the repertoire (Waselkov and Walthall 2002).

A total of 141 fragments were recovered, some of which (n=20) were completely missing their glaze. Fragments were concentrated under the structure, at Foundations 1 and 2, and adjacent to the structure (Table 21). Seventy-one fragments bore a bluish white to white enamel and did not appear to have

Table 21. Distribution of tin-enameled fragments

Artifact	**S**	**A**	**N**	**E**	**W**	**F1**	**F2**
Tin-Enameled	99	9	1	3	4	13	12

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

been decorated. The vessel forms for undecorated pieces were limited to a medicine cup with a 6 cm body diameter and a bowl with a 20 cm rim diameter, two unidentified holloware vessels, and a cup. The remaining pieces were decorated with blue and white hand painting and in one case, blue, white and black. Forms included at least two fireplace tiles, cup, a bowl, a dish, and at least 4 plates (Table 22).

Table 22. Tin-enameled vessels identified

Vessel	Surface Treatment	Color	Form	Location
1	Undecorated	Bluish White	Bowl	H
2	Undecorated	White	Medicine Cup	H
3	Undecorated	Bluish White	Holloware	H
4	Undecorated	Bluish White	Holloware	H, A, W
5	Undecorated	White	Cup	H, A
6	Hand Painted	Blue and White	Tile	F2
7	Hand Painted	Blue and White	Tile	H
8	Hand Painted	Blue and Bluish White	Bowl	H
9	Hand Painted	Dark Blue and Bluish White	Cup	F1
10	Hand Painted	Blue and White	Dish	H
11	Hand Painted	Blue and Bluish White	Plate	H, W
12	Hand Painted	Blue and White	Plate	E
13	Hand Painted	Black, Light Blue and White	Plate	F2
14	Hand Painted	Blue and White	Plate	F2, N
15	Undecorated Faience	White	Unknown	F2

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

Vessel 15 was a red bodied tin-enameled vessel of unknown form. It is interpreted as being a fragment of French Faience dating from the eighteenth century. One piece of French faience was also recovered at the Sparrow House in downtown Plymouth in a similar 18th-19th century context. The presence of French faience in Plymouth, especially at the site of two successive merchant family homes, indicates possible illegal trading with the French during the eighteenth century. Faience was also recovered from the Narbonne House in Salem (Moran et al 1982).

Jackfield

Jackfield was produced in England between 1745 and 1790. It is easily recognized by its purple or gray paste covered with a black glossy glaze. Jackfield ware was produced in Shropshire after 1750 by Maurice Thursfield and by Thomas Wheildon in Staffordshire (Noel Hume 1969: 123). Wheildon's Jackfield has red body and glossier glaze. The principal ware produced in Jackfield were tea wares and pitchers and they are common in America on sites dating to the 1760s (Noel Hume 1969: 123).

A total of 21 pieces of Jackfield were recovered, mainly from beneath and adjacent to the structure (n=16) but also from Foundation 1 (n=3) and Foundation 2 (n=2). Vessel forms were limited to a teapot and a cup. All of these fragments bore a dark purple to gray paste.

Slipware-Staffordshire

Slipwares are ceramics with an earthenware base and coated with a yellow lead glaze which is decorated with brown trailed or combed decoration. This ceramic type was produced first by the Romans but became popular during the reign of Charles I (1630-1685). Slipware produced in the Staffordshire region of England was exported to the North American colonies from the late seventeenth century until the American Revolution (c.1675-1775). It is a thin, buff-bodied earthenware that is coated with slips and decorated with trailed, combed and marbled designs. By the late seventeenth century, exported slipware was generally used by less affluent classes of society (poor to middle class) as well as in taverns and as a general rule, finely executed decorated examples date earlier than more coarsely decorated ones. Vessel forms included drinking vessels (cups, tygs, mugs, posset pots, puzzle jugs) and dishes/plates, as well as a wide variety of other forms that are less commonly recovered archaeologically (bowls, drug jars, honey pots, teapots, jugs, candlesticks, chamber pots) (Noël Hume 1970).

A total of 149 pieces of Staffordshire slipware were recovered. Eighty-seven of these fragments were from a red-bodied marbled slip decorated pan that were recovered from beneath and adjacent to the structure (n=83), from the east yard (n=1) and from Foundations 1 (n=2) and 2 (n=1). This pan bore a coggled rim and had a 30-32 cm diameter rim. Combed slip decorated vessels were limited to at least one posset pot, one cup and a pan. These fragments were recovered from beneath and adjacent to the structure (n=57), the east yard (n=2), and Foundation 2 (n=3).

Iberian

Iberian storage jars, also called Spanish olive jars, are one of the most widely occurring Spanish ceramic to be found in the New World having been used by the French and English as well as the Spanish (Deegan 1987:31). These vessels were used to transport, wine, olive oil, olives and fish. Generally, Iberian storage jars were either globular with a round or pointed bottom. Iberian storage jars have been recovered in New England from Pemaquid, Maine in an eighteenth century context and from the circa 1628 to 1676 Plymouth Colony trading house at Cushnoc in Augusta, Maine (Bradley and Camp 1994: 112-115; Cranmer 1990:86).

Thirty-nine fragments identified as probably being Iberian were recovered. The majority of the fragments were recovered from beneath and around the structure (Table 23). The remainder were recovered in association with Foundations 1 and 2.

Table 23. Iberian sherds recovered

Artifact	**S**	**A**	**N**	**E**	**W**	**F1**	**F2**
Iberian	27	6				3	3

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

Vessel forms were limited to an oil jar with at least a 30 cm body diameter and an interior light green slip, an unidentified holloware form with a 20 cm rim diameter that had its upper half burnished, a

bottle with burnished surfaces and a 10 cm rim diameter, a bowl that was lightly glazed on the interior and exterior, which had a 16 cm body diameter, and an unglazed possible jar with a gray core. All of these later vessels were recovered from beneath the structure. Fragments of the oil jar came from under and adjacent to the structure, and from Foundations 1 and 2.

One more interesting unglazed vessel was also found. This is an unglazed jar, a type colloquially referred to as a "Tamarind Jar" **(Figure 33)**. Deetz also saw the presence of the unglazed storage and transportation jars in one of the cellars as being important indicators of the African or at least the West Indies origin of the freed slaves. He described the jars as

> "Eighteen inches tall, of red, unglazed, well-fired clay, their shape and physical characteristics immediately set them apart from the entire Anglo-American ceramic tradition. These jars were made in the West Indies, and served as sugar containers for shipment to various colonial ports. They are also said to have been used at times for storing and shipping tamarind, a West African cultivated fruit that was grown in the West Indies. By a striking coincidence, during the same season as the Parting Ways dig and again a year later, similar vessels came to light. At least four were found in a contemporary trash pit in Salem, Massachusetts, and one came from a site in Portsmouth, New Hampshire. Their initial discovery at Parting Ways suggests that they might well relate to the African and West Indian background of the people who lived there. In the New Hampshire case, there were blacks living in the household represented by the site. And of course Salem was an important port town in the nineteenth century, dealing in a wide range of West Indian commodities." (Deetz 1977: 198-199).

Salem, of course, was not the only port town to deal with a wide range of West Indian commodities, as both Plymouth and Portsmouth were as well. This leads to the probability that the jars may be more reflective of merchant shipping and access by people to goods from locations such as the West Indies, versus indicating African affiliation. It is most probable that jars such as these will not be found in contemporaneous sites located away from the coastal ports, and as a corollary they should be most common in port town contexts. The excavators at the site in Salem, the Narbonne House, recovered fragments from at least six identical jars from three deposits dating to the 1790s (Moran et al 1982: 93). Noel Hume stated that the exact origin of these jars is unknown, but that an Iberian origin was suspected while the Narbonne House researchers found that similar vessels were used in Jamaica to collect and store rainwater (Noel Hume 1969:144; Moran et al 1982: 93). Even if they were used to ship tamarind, by the late eighteenth to nineteenth century, this was a product that was consumed by everyone, no matter what ancestry, eventually becoming one of the ingredients in Worcestershire sauce.

Figure 33. “Tamarind Jar” rim and shoulders (.5-1mS 1-1.5mW 5 cm)

Tamarind were first described in England in 1633 and by the late eighteenth to nineteenth century were widely grown in the West Indies where they were processed and stored in jars between layers of sugar (Phillips 1820: 344).

Creamware

While English folk and Colonial settlers were content to use redwares for their utilitarian needs, there was always a market for "white wares", beginning with the importation of Oriental porcelain. But porcelain was expensive and the availability was limited, which lead to the development of tin-glazed soft-bodied delft wares which copied the motifs and forms of the more expensive porcelains. By the middle eighteenth century, the English quest for a less expensive light-glazed ware similar to Chinese porcelain was brought one step closer by Josiah Wedgewood's perfection of Creamware in 1762 (Noel Hume 1970:125). This ceramic type was not pure white, but had a light to deep yellow tint to the glaze and pooled green in the crevices of the vessels. Creamware was produced until 1820 and was generally replaced by a whiter "pearlware" that began production in the late 18th century. Early Creamware had a deep yellow tint which, by 1775, was refined to a lighter yellow by the use of kaolin clays in the manufacturing process. Decoration on Creamware was limited to some molding, and hand painting and transfer printing to a much smaller degree.

A total of 3250 fragments of creamware were recovered from the project area. The majority of the fragments came from beneath and adjacent to the structure and from Foundations 1 and 2 (Table 24).

Table 24. Distribution of creamware fragments

Artifact	**S**	**A**	**N**	**E**	**W**	**F1**	**F2**
Creamware	2003	748	13	59	13	280	134

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

Creamware is one of the ceramic types that is very representative of the wealth of the Watson household. A total MNV of 57 vessels were identified with a wide variety of table and one hygiene related form being present (Table 25). Creamware is a common ceramic encountered on third quarter

Table 25. Creamware vessel forms

Vessel	Surface Treatment	Color	Form	Location
1	Undecorated	Cream	Teapot	H
2	Undecorated	Cream	Saucer	F2
3	Undecorated	Cream	Saucer	F1, W
4	Undecorated	Cream	Plate	A
5	Undecorated	Cream	Pitcher	H, A, N
6	Undecorated	Cream	Mug	F1
7	Undecorated	Cream	Dish	H
8	Undecorated	Cream	Cup	H, A, N, E
9	Undecorated	Cream	Cup	H, A, W, E
10	Undecorated	Cream	Cup	H, A

Table 25. (cont.)

Vessel	Surface Treatment	Color	Form	Location
11	Undecorated	Cream	Cup	F1
12	Undecorated	Cream	Cup	H
13	Undecorated	Cream	Chamberpot	H
14	Undecorated	Cream	Chamberpot	H, A
15	Undecorated	Cream	Chamberpot	A
16	Undecorated	Cream	Chamberpot	H
17	Undecorated	Cream	Bowl	H, A
18	Undecorated	Cream	Bowl	H
19	Undecorated	Cream	Bowl	H, F1
20	Undecorated	Cream	Bowl	F1
21	Undecorated	Cream	Bowl	A
22	Undecorated	Cream	Watercress Dish	A
23	Undecorated	Cream	Cup	H
24	Undecorated		Plate	F1
25	Undecorated		Plate	H
26	Undecorated		Plate	H
27	Transfer Printed	Black and Cream	Plate	E
28	Queen's Edge	Cream	Plate	H, A, W, F2
29	Molded pearls at Rim	Cream	Dish	H
30	Molded pearls at Rim	Cream	Bowl	H, A
31	Molded pearls at Rim	Cream	Cup	F1
32	Large Molded Pearls at Rim	Cream	Plate	H
33	Large Molded Pearls at Rim	Cream	Pitcher	H
34	Annular, Leeds	Blue, Gray, Cream	Teapot	H
35	Annular, Leeds	Blue, Gray, Cream	Cup	H
36	Incised Line Around Body	Cream	Cup	H
37	Molded	Cream	Cup	F1, E
38	Molded Panals	Cream	Cup	H
39	Molded Panals	Cream	Pitcher	H
40	Molded Scallop Edge	Cream	Plate	F1
41	Molded Ribs	Cream	Dish	H
42	Molded	Cream	Teapot	H
43	Molded	Cream	Cup	A
44	Molded	Cream	Bowl	H, A, F1

Table 25. (cont.)

Vessel	Surface Treatment	Color	Form	Location
45	Hand painted	Tan, Cream	Saucer	H
46	Hand painted	Brown, Cream	Saucer	E
47	Hand painted	Blue,Cream	Flatware	A
48	Hand painted	Orange, Brown, Cream	Cup	N
49	Hand painted	Brown, Green, Yellow, Cream	Cup	H
50	Hand painted	Tan, Brown, Cream	Pitcher	H
51	Hand painted	Black, Cream	Cup	H
52	Hand painted	Green, brown, Yellow, Orange, Cream	Child's Cup	H
53	Hand painted	Brown, Tan, Cream	Cup	H
54	Molded Feathers at Rim	Cream	Plate	H, A, F1, F2
55	Molded Feathers at Rim	Cream	Dish	H, A
56	Molded Feathers at Rim	Cream	Platter	H
57	Molded Feathers at Rim	Cream	Teapot	H, A

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

eighteenth century to first quarter nineteenth century sites, but it is rarely represented in the quantity, quality, and variety of forms and decorative techniques seen here. Forms ranged from plain undecorated chamberpots, cups, bowls, and plates to tablewares decorated with every technique from molded feathers, to hand painting, to annular banding, to one example of an early transfer print. A wide variety of tableware forms were also present: teapots, plates, saucers, cups, bowls, platters, dishes, and even a specialty food dish, the watercress dish. This latter vessel was used to serve watercress or berries on the table. The creamware assemblage provides an excellent example of one way to judge status through the material culture recovered through archaeology. The Watsons owned creamware, a ceramic type that, by the late eighteenth century, was replacing earlier high status wares such as white salt-glazed stoneware, and they owned a lot of it in a variety of forms. The decorative techniques included hand painting that one example of transfer printing, which, by the late eighteenth century was just coming into fashion. By the Watson's example, a high status third quarter to end of the eighteenth century creamware assemblage should be expected to contain a wide variety of table and undecorated forms, specialized vessel forms, and vessels decorated with the less common techniques such as hand painting, annular decoration, molding, and transfer printing. By contrast, most creamware assemblages from the less affluent commonly have creamware present but in a smaller quantity and more limited range of forms and decorative techniques.

Pearlware

Pearlware is said to be the most common type of ceramic encountered on early 19th century sites, being produced from 1774-1840 (Noël Hume 1970:130). Whereas when the glaze of creamware pooled green in the crevices of the foot ring on the bottoms of vessels, pearlware pooled blue. Pearlware was used on a wide variety of forms from chamberpots to eggcups but it is most frequently encountered in the form

of plates and saucers decorated with blue or green shell edging around their interior rims. Decorative techniques used on Pearlware and Whiteware, are more temporally sensitive than the wares themselves. One of the forms of decoration on pearlware took the form of annular bands on the exterior of pitchers, cups, mugs and bowls. These "annular wares" were produced from approximately 1795-1815 (Noël Hume 1970:131). Annular pearlware with a worm (a.k.a. Cabled) mocha pattern was produced from 1790 to 1820. Fragments of one annular pearlware cup with a worm mocha decoration was recovered from the North Yard Scatter.

Blue or green shell edge-decorated wares first appear in Wedgewood's 1775 and Leeds' 1783 pattern books and became one of the standard products of the Staffordshire potteries in the nineteenth century. This is believed to be due to the fact that they are the least expensive decorative table ware available (Miller and Hunter 1990). Initially both green and blue were used on the edges, but by 1840 green-edged had become rare with blue shell-edged remaining in production until the 1860s. By the later part of the nineteenth century the production of shell-edged wares had discontinued but blue-edging, edging that was just blue but that lacked the earlier molded edging, continued until the 1890s. Miller and Hunter summarized the production of blue and green edging in 1990:

1780-1810 Rocco Style, irregular scalloped rim and undecorated center
1800-1840 Evenly scalloped Shell Edge
1820-1840 Embossed Edge
1840-1870 Unscalloped Shell Edge with impressed pattern
1850-1890 Unscalloped and unmolded Shell Edge

Pearlware, and later whiteware, were also decorated by hand-painting. Two general types were used: thin-lined and broad-lined (Price 1979). Prior to 1835 polychrome hand-painted designs were executed in mustard yellow, mocha brown and burnt orange, but after 1835 brighter colors such as grass-green, golden yellow, red and powder blue were used. The singular use of blue painted designs, intended to mimic porcelain designs, occurred on earthenware from 1775-1840 and was eventually replaced by transfer printing by 1815. After 1820 until approximately 1830, blue floral designs were executed with a bolder stroke and are easily distinguished from the earlier technique.

Transfer printing was the decorative technique that replaced hand painting after the 1830s. This technique was first used in 1784 with the first colors being blue, black and sepia and was followed by red, yellow in 1848 and then brown and green in 1852 (Miller 1965). The earliest patterns were Chinese until 1805 when the development of copper plate engraving allowed the creation of finer lines and more variation in color tone. After 1830 the quality of design and color intensity declined and multicolor underglazing was developed in 1848. Color is considered the most temporally sensitive property of this decorative technique.

A total of 2631 pieces of pearlware were recovered with the majority being found beneath and adjacent to the structure and associated with Foundations 1 and 2 (Table 26).

Table 26. Pearlware gross distribution

Artifact	**S**	**A**	**N**	**E**	**W**	**F1**	**F2**
Pearlware	1644	505	1	42	13	190	236

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

A total MNV of 78 was generated for pearlware (Table 27). The majority of these vessels were blue or green edged (n=28), hand painted (n=19), or transfer printed (n=15). Plates, followed by cups, bowls, and saucers (n=18, 12, 13, 11) made up the majority of the vessel forms. Only two chamberpots were

Table 27. MNV for pearlware

Vessel	Surface Treatment	Color	Form	Location
1	Edged	Blue, White	Dish	H
2	Edged	Blue, White	Plate	H, A, W, F1, F2
3	Edged	Blue, White	Bowl	H
4	Edged	Blue, White	Platter	H
5	Edged	Blue, White	Saucer	H
6	Edged	Blue, White	Plate	H
7	Edged	Green, White	Dish	H
8	Edged	Blue, White	Plate	H, A, W
9	Edged	Blue, White	Bowl	A
10	Edged	Blue, White	Dish	H, A, F1
11	Edged	Blue, White	Plate	A
12	Edged	Blue, White	Dish	H
13	Edged	Blue, White	Bowl	H
14	Edged	Blue, White	Plate	H
15	Edged	Blue, White	Plate	H, A, F1, F2
16	Edged	Blue, White	Platter	A
17	Edged	Blue, White	Plate	H
18	Edged	Blue, White	Saucer	H
19	Edged	Blue, White	Plate	A
20	Edged	Blue, White	Plate	E
21	Edged	Blue, White	Plate	H, A, E
22	Edged	Green, White	Plate	H
23	Edged	Green, White	Plate	A
24	Edged	Green, White	Plate	H
25	Edged	Green, White	Dish	H
26	Edged	Blue, White	Egg Cup	H
27	Edged	Blue, White	Pitcher	H

Table 27. (cont.)

Vessel	Surface Treatment	Color	Form	Location
28	Edged	Blue, White	Platter	H
29	Hand painted	Blue, White Floral	Cup	H, A, F1, F2
30	Hand painted	Blue, White Floral	Saucer	H, A, E
31	Hand painted	Blue, Pink, White	Child's Cup	H
32	Hand painted	Blue, Tan, White	Teapot	H
33	Hand painted	Brown, White	Cup	H, A
34	Hand painted	Brown, White	Saucer	H
35	Hand painted	Brown, Blue, Green, Tan, White	Child's Cup	H
36	Hand painted	Brown, Green, Orange, White	Saucer	A
37	Hand painted	Brown, Green, Orange, White	Bowl	A
38	Hand painted	Brown, Tan, Blue, White	Teapot	H, F2
39	Hand painted	Brown, Tan, Blue, White	Cup	A
40	Hand painted	Brown, Tan, White	Saucer	H
41	Hand painted	Dark Blue, White	Saucer	H, A
42	Hand painted	Dark Blue, White	Cup	H, F1
43	Hand painted	Gray, White	Flatware	H
44	Hand painted	Green, Orange, Blue, White	Saucer	H
45	Hand painted	Green, Brown, Red, White	Cup	A
46	Hand painted	Light Blue, Green, Brown, White	Saucer	H
47	Hand painted	Blue, Green, White	Bowl	F2
48	Annular	Blue, White	Bowl	H, F1
49	Annular	Brown, Light Blue, White	Pitcher	H
50	Annular	Brown, Orange, Light Blue, White	Bowl	H, A
51	Annular	Light Blue, Luster Red	Pitcher	H
52	Annular	Light Blue, White	Bowl	H, A
53	Annular	Orange, White	Bowl	H
54	Annular	Orange, White	Cup	H
55	Annular	Orange, Light Blue, White	Pitcher	H
56	Annular	Brown, White	Cup	A
57	Annular	Brown, Green, Tan, White	Bowl	H
58	Mocha	Brown, Black, White	Bowl	H, A, F2

Table 27. (cont.)

Vessel	Surface Treatment	Color	Form	Location
59	Mocha	Blue, Tan, Black, White	Chamberpot	F1
60	Engine-Turned	Black, White	Mug	H
61	Engine-Turned	Black, Light Blue, White	Bowl	H, A, F1
62	Sponge Decorated	Blue, White	Cup	H, A, F1
63	Sponge Decorated	Blue, White	Saucer	H
64	Transfer Printed	Blue, White	Platter	H
65	Transfer Printed	Dark Blue, White	Chamberpot	H
66	Transfer Printed	Dark Blue, White	Cup	H, A, F1
67	Transfer Printed	Dark Blue, White	Plate	A
68	Transfer Printed	Dark Blue, White	Cup	H, A
69	Transfer Printed	Dark Blue, White	Dish	H
70	Transfer Printed	Dark Blue, White	Plate	H, A
71	Transfer Printed	Dark Blue, White	Basin	F1
72	Transfer Printed	Dark Blue, White	Bowl	H
73	Transfer Printed	Dark Blue, White	Cup	H, A, F1
74	Transfer Printed	Dark Blue, White	Cup	H
75	Transfer Printed	Dark Blue, White	Plate	A
76	Transfer Printed	Dark Blue, White	Plate	H
77	Transfer Printed	Dark Blue, White	Plate	H
78	Transfer Printed	Dark Blue, White	Saucer	H, A

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

represented by only two vessels. It appears that pearlware, especially edged plates and hand painted cups, saucers, and bowls, graced either the late Watson table or more probably the early Jackson's.

Whiteware

Pearlware was replaced in approximately 1820 by a very white refined earthenware commonly called whiteware. Whiteware continues to be produced today. Plain, undecorated whiteware was produced throughout the century, starting after 1820 and was considered the cheapest version of this type of whiteware. Blue and black florals covering most of the decorated surface predominated on hand painted whitewares in the first quarter of the nineteenth century. Slightly later, a finer sprig pattern in either monochromatic or polychromatic forms was produced until around 1890 with polychromes more popular, but less common, from 1830 to 1850 (Miller 1987). Blue edging, similar in execution and design to that used on pearlware, continued on whitewares most commonly with unscalloped unmolded or impressed rims, overall much simpler than the earlier pearlware versions.

Two thousand forty-three fragments of whiteware were recovered from Site Examination testing with the majority coming from beneath and adjacent to the structure and secondarily from Foundations 1

and 2 (Table 28). The whiteware distribution is another indication of the contemporaneity of all of these.

Table 28. Whiteware distribution

Artifact	**S**	**A**	**N**	**E**	**W**	**F1**	**F2**
Whiteware	950	572	21	67	56	288	103

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

A total of 101 whiteware vessels were identified with decorative techniques paralleling those seen in the pearlware (Table 29). Hand painting and transfer printing were the most common techniques and

Table 29. MNV for whiteware

Vessel	Surface Treatment	Color	Form	Location
1	Annular	Brown, White	Bowl	H, F1
2	Annular	Orange, Brown, Light Blue, White	Bowl	H, A
3	Annular	Brown, Light Blue, White	Bowl	H
4	Annular	Red, Green, White	Bowl	A
5	Annular	Green, Blue, White	Cup	H
6	Annular	Brown, White	Cup	F1
7	Annular	Brown, White	Plate	H
8	Edged	Green, White	Basin	H
9	Edged	Blue, White	Plate	F1
10	Edged	Blue, White	Plate	H, A
11	Edged	Blue, White	Plate	H
12	Edged	Blue, White	Plate	H, A, F1
13	Edged	Blue, White	Plate	A
14	Edged	Blue, White	Plate	H, A, F1
15	Engine Turned	Black, White	Mug	A
16	Gilded	Light Blue, Gold, White	Holloware	H
17	Hand painted	Brown, White	Bowl	A
18	Hand painted	Pink, White	Cup	H
19	Hand painted	Black, White	Cup	A
20	Hand painted	Blue, White	Cup	A
21	Hand painted	Brown, White	Cup	A
22	Hand painted	Dark Blue, White	Cup	F2
23	Hand painted	Gray, White	Cup	H
24	Hand painted	Green, White	Cup	H, F1
25	Hand painted	Red, White	Cup	H

Table 29. (cont.)

Vessel	Surface Treatment	Color	Form	Location
26	Hand painted	Brown, White	Dish	H
27	Hand painted	Brown, White	Flatware	A, F1
28	Hand painted	Black, White	Lid	A
29	Hand painted	Brown, White	Teapot	H
30	Hand painted	Black, White	Plate	H
31	Hand painted	Brown, White	Plate	H, A, F1
32	Hand painted	Blue, White	Saucer	H, A, W, F1
33	Hand painted	Brown, White	Saucer	H, A
34	Hand painted	Pink, White	Saucer	H
35	Hand painted	Red, Green, Black, White	Saucer	H, N
36	Hand painted	Gray, White	Saucer	H
37	Hand painted	Red, Green, White	Saucer	A
38	Molded	White	Bowl	A
39	Molded	White	Cup	A
40	Molded	Blue, White	Cup	E
41	Molded	White	Dish	H, A
42	Molded	White	Dish	A
43	Molded	White	Teapot	F1
44	Molded	White	Plate	H
45	Molded	White	Saucer	H
46	Sponge Decoration	Blue, White	Cup	H
47	Sponge Decoration	Blue, White	Saucer	H
48	Sponge Decoration	Blue, White	Vase	A
49	Transfer Printed	Black, White	Cup	H, A, E, F1, F2
50	Transfer Printed	Black, White	Saucer	H, A, E, W, F1
51	Transfer Printed	Blue, White	Bowl	H
52	Transfer Printed	Blue, White	Chamberpot	A, F1
53	Transfer Printed	Blue, White	Cup	H, A, N, W, F1
54	Transfer Printed	Blue, White	Plate	H, A
55	Transfer Printed	Blue, White	Plate	A
56	Transfer Printed	Blue, White	Saucer	F1
57	Transfer Printed Willow	Blue, White	Vase	H
58	Transfer Printed	Blue, Pink, White	Child's Cup	A
59	Transfer Printed	Brown, White	Cup	H, A

Table 29. (cont.)

Vessel	Surface Treatment	Color	Form	Location
60	Transfer Printed	Brown, White	Plate	A
61	Transfer Printed	Brown, White	Saucer	H
62	Transfer Printed	Dark Blue, White	Chamberpot	W
63	Transfer Printed	Dark Blue, White	Dish	A
64	Transfer Printed	Dark Blue, White	Cup	H, E, F
65	Transfer Printed Willow	Dark Blue, White	Cup	H
66	Transfer Printed Willow	Dark Blue, White	Plate	H, A
67	Transfer Printed	Dark Blue, White	Plate	W
68	Transfer Printed	Dark Blue, White	Plate	A
69	Transfer Printed	Dark Blue, White	Saucer	E, F1
70	Transfer Printed	Green, White	Cup	A
71	Transfer Printed	Green, White	Saucer	F2
72	Transfer Printed	Green, Black, White	Dish	H
73	Transfer Printed	Light Blue, White	Bowl	H
74	Transfer Printed	Light Blue, White	Cup	H, A, E, F1
75	Transfer Printed	Light Blue, White	Pitcher	W
76	Transfer Printed	Light Blue, White	Plate	H, A
77	Transfer Printed	Light Blue, White	Plate	H
78	Transfer Printed	Light Blue, White	Plate	H
79	Transfer Printed	Light Blue, White	Plate	H
80	Transfer Printed	Light Blue, White	Saucer	H, A, E, F1
81	Transfer Printed	Light Blue, White	Saucer	H
82	Transfer Printed	Light Blue, White	Teapot	A
83	Transfer Printed	Red, White	Cup	H, E
84	Transfer Printed	White	Teapot	A
85	Undecorated	White	Basin	H
86	Undecorated	White	Bowl	H
87	Undecorated	White	Bowl	H, A, F1
88	Undecorated	White	Bowl	A
89	Undecorated	White	Chamberpot	H, A, F1
90	Undecorated	White	Cup	H, A
91	Undecorated	White	Dish	A
92	Undecorated	White	Dish	A
93	Undecorated	White	Pitcher	A

Table 29. (cont.)

Vessel	Surface Treatment	Color	Form	Location
94	Undecorated	White	Plate	H, A, E, F1
95	Undecorated	White	Plate	H
96	Undecorated	White	Plate	H
97	Undecorated	White	Plate	A
98	Undecorated	White	Plate	A
99	Undecorated	White	Plate	E
100	Undecorated	White	Saucer	H, A, N, F1
101	Undecorated	White	Teapot	H

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

plates (n=26), cups (n=22), saucers (n=15), and bowls (n=11) were the most common forms. Two vases were represented as well as three chambperots, but overwhelmingly the vessels were tablewares.

Ironstone

Ironstone is a high-fired earthenware that approaches, but never quite reaches the hardness of stonewares. Ironstone was developed to compete with the whiteware market. With the final development of thin whiteware, the thicker ironstone was relegated to products such as plates, pitchers and bowls, chamber pots and other heavy utilitarian wares. Ironstone was first introduced by Charles Mason of Staffordshire, England in 1813 and was shipped to American markets by 1842. Ironstone was decorated in the same ways as Whiteware. Additionally it was often left plain or molded with leaves, ribs, or flowers. Plain wares were produced for the entire time span of Ironstone production, whereas molded ironstone with sharp angles, and hexagonal or octagonal body forms were popular from the 1840s through the 1880s. After 1860 embossed plant elements became popular and in the 1860s and 1870s, luster decorated "tea leaf" patterns were popular (Kovel 1973). Ironstone was often decorated with flowing transfer printed designs. This type of decoration was called "Flow Blue" or "Flow Mulberry" depending on the color. The earliest dates for flow decorated ironstone is 1839 (Collard 1967:118; Miller 1991:9).

One hundred fifty-three fragments of ironstone were recovered from the Site Examination testing. The majority of the fragments were found beneath and adjacent to the structure with another significant concentration at Foundation 1 (Table 30). No fragments were recovered from the North or East portions

Table 30. Ironstone fragment distribution

Artifact	**S**	**A**	**N**	**E**	**W**	**F1**	**F2**
Ironstone	74	31			1	42	5

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

of the yard and only one fragment was found in the West yard. The distribution indicates that the material found beneath and around the structure was part of the same deposit that was found around Foundation 1 and to a lesser extent, Foundation 2.

Nineteen vessels were identified, all of which, except possibly the strainer, were tablewares (Table 31). The presence of Flow Blue and Flow Mulberry vessels indicates a date of after 1840 for the deposition of these wares. Some of the vessels were decorated with molded floral elements, dating them to after 1860.

Table 31. MNV for ironstone

Vessel	Surface Treatment	Color	Form	Location
1	Flow Blue	Blue	Pitcher	H, A, F2
2	Flow Blue	Blue	Tea Pot	H, F1
3	Flow Blue	Blue	Saucer	A
4	Flow Blue	Blue	Basin	F1
5	Flow Blue	Blue	Plate	H, A, W, F1
6	Flow Mulberry	Purple	Strainer	H
7	Flow Mulberry	Purple	Plate	H
8	Molded	White	Plate	A
9	Molded	White	Bowl	H
10	Molded	White	Plate	H
11	Molded	White	Pitcher	A
12	Molded	White	Saucer	H
13	Undecorated	White	Bowl	H
14	Undecorated	White	Dish	H
15	Undecorated	White	Plate	H, A, F1, F2
16	Molded	White	Holloware	H
17	Undecorated	White	Dish	A
18	Undecorated	White	Dish	A
19	Undecorated	White	Platter	A

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

Yellowware/ Rockingham

Yellowware is earthenware produced to replace the unfashionable redware, as a new kitchen utility ware. It has a hard, pale yellow body that is covered with a yellow or a clear glaze and often with blue, black or brown and white bands. It may also have a blue, green, or black dendritic mocha decoration,or a dark mottled brown glaze. The annular decoration with or without the mocha was produced from 1840-1900.

Clear-glazed yellowware was produced in many utilitarian forms including bowls, plates, jugs, and bottles. Yellowware was introduced to America from England in the latter 1820s and eventually was produced by various firms in New Jersey, Pennsylvania, Ohio, Vermont, New York, and Maryland from the 1840s to the 1850s (Leibowitz 1985). The maximum popularity of yellowware was in the period from 1860-1870. Even though its popularity waned by 1900, it was continually produced into the

1930s. English-made yellowware has a yellow glaze, while American-made yellowware has a clear alkaline glaze. Four temporal trends have been identified for yellowwares (Leibowitz 1985):

1830	Plain no decoration, no foot formation, no lips, hand thrown
1840	Annular banded and dendritic (mocha) decoration
1850-1870	Coarse, heavy yellowware predominantly in the Midwest, cream and buff color to rich canary yellow
1860-1900	Pressed or molded yellowware, scenes and floral decoration

Excavations recovered 111 fragments of yellowware from beneath the structure and in the yard to the north (Table 32). The majority of the fragments (n=85/ 76.6%) came from the top 10 cm of the refuse

Table 32. Recovered yelloware and Rockingham

Artifact	**S**	**A**	**N**	**E**	**W**	**F1**	**F2**
Yellowware	85	14		1		4	7
Rockingham	20	3	1	1			

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

deposit beneath the structure. Two pieces of yellowware were also incorporated in the upper levels of Feature 1. Outside of the structure, most of the 26 fragments were found either adjacent to the foundations of the structure in units 9, 21, and 6 (n=14), associated with foundation 2 at unit 16, 23, 24, and 26 (n=7), or adjacent to foundation 3 at unit 17 (n=3).

The types of yellowware recovered consisted of undecorated and annular wares, the latter with dendritic and worm mocha decoration. The undecorated wares date to the 1830s while the annular wares date to the 1840s. The annular wares were concentrated in the upper layers beneath the structure (n=28 of 34 pieces of annular), adjacent to the foundation (n=5 of 34 pieces), and associated with Foundation 1 (N=1 of 34). Undecorated wares were more widely distributed. Like the annular decorated sherds, the majority coming from beneath the structure (n=57 of 77 undecorated sherds), and adjacent to it in Units 6, 9, and 21 (9 of 77 undecorated sherds). Sherds were also recovered in associated with Foundation 1 2 foundation (n=7 f 77 undecorated sherds), Foundation 2 (n=3 f 77 undecorated sherds), and from the east yard (n=1 f 77 undecorated sherds).

This distribution of yellowware indicates that the foundations for the structure were constructed through the refuse deposit that had yellowware on the surface. The most common type of decoration on the yellowware was annular banding around the body with blue dendritic mocha on a white background. This type of decorative technique dates from the first half of the nineteenth century possibly dating the erection of the structure on top of the refuse deposit at c. 1830-1840.

A total of seven vessels were identified with the majority being bowls and all of them being utilitarian wares (Table 33).

Table 33. MNV for yelloware

Vessel	Surface Treatment	Color	Form	Location
1	Annular	White, Black, Yellow	Bowl	H, A, F1
2	Annular	White, Black, Yellow	Pitcher	H, A
3	Annular- Mocha	White, Black, Yellow	Bowl	H
4	Annular-Mocha	White, Black, Yellow	Bowl	H
5	Annular	Blue, White, Yellow	Pitcher	H
6	Annular	Light Blue, White, Yellow	Chamberpot	H
7	Undecorated	Yellow	Cup	H, A, E, F2

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

Rockingham or Bennington-glaze yelloware has a thick brown, mottled glaze and a molded body and was most popular in America from 1840 to 1900. Rockingham was first produced by English potters in the Swinton District after 1788 with teapots being the most common form (Spargo 1926:170). By 1830, English potters had immigrated to American and began producing a larger variety of this type of ware. The center of production was Bennington, Vermont. From 1847 through 1865 the most common technique for applying the glaze was by spattering it on with a paddle, the result being that no two pieces appear the same.

A total of 25 pieces of Rockingham were recovered, chiefly from beneath the structure and adjacent to it. Only four vessels were identified: one bowl, one cup, one pitcher, and one teapot. The first three vessels came from beneath the structure while fragments of the fourth were found beneath and adjacent to the structure and in the east yard.

Other Earthenwares

Scattered fragments of several other ceramic types were recovered: Borderware, Sgraffito, North Devon Gravel free, Buff bodied earthenware, possible Colonoware, and English mottled ware, and fiestaware.

Borderware was produced in the various border areas of northeast Hampshire and West Surrey from the 16th and 17th centuries (Pearce 1992:1). Borderware was the second most common utilitarian cooking and serving ware in the early seventeenth century after redware. The body of the borderware is a fine sandy off-white earthenware and the interior and often the exterior is glazed with yellow, brown, green, or olive glazes. Borderware has been recovered from North American colonial sites that had occupations prior to the English Civil War in 1660. The war severely disrupted trade patterns with the New World and during this time many utilitarian ceramic forms that had formerly come from England were replaced by the developing New World colonial pottery industry. The recovery of Borderware at a site is very temporally diagnostic to the early seventeenth century, pointing to an occupation prior to 1660. Three pieces of borderware were recovered from Foundation 1, beneath the structure and the west yard. The fragment from Foundation 1 was glazed yellow on the interior and unglazed on the exterior. It was identified as a piece of a pipkin with a 16 cm diameter body. The piece from beneath the structure was glazed yellow and the exterior was unglazed. The form was identified as a poringer with a 12 cm body diameter. The final piece from the west yard was glazed green and yellow on the

interior and unglazed on the exterior. The form was an unidentified holloware with a 6+ cm diameter base.

The West Country of England, mainly around the towns of Barnstable, Biddeford and Great Torrington also produced a type of earthenware that has come to be known as North Devon gravel free ware. This ware is easily distinguished by the color of the exterior versus the interior. The exterior was fired in an oxidizing atmosphere in the kiln and as a result it attains an orange or red. These vessels were fired upside-down in the kilns, with result being the interior having been fired in a reducing atmosphere, free from oxygen. As a result the interior is often a gray fired body with a mottled yellow to olive brown glaze (Cranmer 1992:85). These vessels have long been thought to have only been produced during the late seventeenth century, but their recovery from sites such as the Plymouth trading post at Pentagoet (ca. 1629), Martin's Hundred in Virginia (1622)and from the wreck of the Sea Venture (1609) pushes their dates of manufacture back into the first quarter of the century (Cranmer 1992:85). Their recovery from sites throughout the century shows that they were produced for a long time range. Most of the vessels take the form of baluster jars. These vessels have a constricted neck on which a paper or cloth cover could be tied. It is theorized that these vessels were shipped either empty or filled with pickled fish to the colonies.

Two sherds of a North Devon gravel free possible baluster jar were recovered from adjacent to the structure and from the North Yard. The vessel had a 12 to 18 cm body diameter.

Sgraffito is another West Country ware that is found on seventeenth century colonial sites. Sgraffito ware is produced by incising decorations through a light colored glaze producing a contrast between the darker colored decoration and the lighter colored slip. One fragment that was identified as being sgraffito was recovered from Foundation 1. It was identified as having come from a flatware vessel.

English Mottled ware is a buff-bodied ceramic covered with a mottled lead glaze that is yellowish with dark streaks and speckles. The most common vessel form is mugs and table wares. English Mottled ware was produced in Staffordshire from the mid 1670-s to the 1780s with the peak period of popularity being the late seventeenth to early eighteenth century (Philpott 1985b:52-53; Elliott 1998:30). Three fragments were recovered from the Site Examination. One came from beneath the structure, one came from adjacent to it and one came from Foundation 1. The vessel form was a cup or mug.

Colonoware is a type of unglazed hand built pottery whose manufacture is ascribed to enslaved Africans and Native tribes in the south. The vessel forms mirror European shapes such as chamberpots, cups, and bowls.

One fragment of unglazed possibly hand thrown pottery was recovered from the west yard. The fragment came from a holloware vessel with a 10 cm body diameter. It is presented as possibly being an example of Colonoware.

Fiestaware was a type of whiteware first produced in the 1930s. It is glazed in mono-chromatic bright colors on the exterior and interior, with both surfaces being glazed the same color. One piece identified

as fiestaware was recovered from adjacent to the structure. This sherd was yellow in color and came from an unknown type of vessel.

Stoneware

Stoneware can be described as a ceramic type that is made of alluvial or glacial clays which is fired in a kiln at temperatures of 1200 to 1400 degrees Celsius. Firing the clays at these temperatures produces a dense, vitrified, waterproof body of a gray, brown or buff color. Vessels were often glazed by throwing handfuls of salt into the kiln at the peak of firing. This imparted a salt glaze, giving the exterior surface a waterproof glaze with an orange peel like texture. Stoneware products often took the form of heavy, utilitarian objects such as mugs, jugs, crocks, churns, pitchers, inkwells and oil lamps. Four general types of surface treatments can be present on stoneware: Unglazed/Plain, Salt-Glazed, Albany-Slipped and Bristol. Unglazed stoneware is considered relatively rare (Stelle 2001).

Albany Slipped

Salt glazing was commonly used in all periods of production and was often used in combination with Albany Slip, with salt glazing generally being less popular after the 1860s (Zilmer 1987:35). Albany Slip is described as a hard, chocolate brown glaze produced by natural clays found in the Albany region of New York (Stelle 2001).

A total of 54 fragments of Albany slipped stoneware were recovered, principally from beneath and adjacent to the structure (Table 34). Four vessels were represented: a bottle, a jar, a pot, and a lid for a pot. All fragments were slipped brown on the interior and bore an exterior salt glaze on a gray or tan body. It is believed that all of these vessels date from the first half of the nineteenth century.

Table 34. Albany slipped stoneware

Artifact	S	A	N	E	W	F1	F2
Stoneware- Albany Slipped	48	5				1	

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

White Salt-Glazed Stoneware

While Germany was the best known stoneware producer in the 17th and 18th centuries, other countries, especially England, began to try their hand at this craft. The most important development in England's stoneware industry was the perfection in 1720 of a thin bodied white salt-glazed stoneware. This ware became common tableware by the middle 18th century and soon took away much of the trade from the tin-enameled producers (Noël Hume 1970:115). Common shapes included plates with molded rim decorations and cup and saucers with a scratch blue decoration. This later decorative technique became popular in the mid to late 18th century, especially in the third quarter.

Excavations recovered a total of 238 fragments of white salt-glazed stoneware from the site. One hundred and seventy-two (72.3%) of these pieces were found beneath the structure, 25 (10.7%) were found outside but adjacent to it in the foundation deposits, 21 (8.9%) were associated with the foundations found to the north of the structure. Much lower percentages were found in the north (2.9%), east (2.9%) and west (.4%) yards (Table 35). This distribution indicates that this ceramic class was closely associated with the refuse pile in the south yard that was later located beneath the structure.

Table 35. White salt-glazed stoneware distribution

Artifact	**S**	**A**	**N**	**E**	**W**	**F1**	**F2**
Stoneware- White Salt-Glazed	173	24	6	7	2	18	8

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

Twenty-four vessels were identified with the majority being undecorated. Other decorative techniques that were found included molding on plates, scratch blue decoration on cups and saucers, and incised lines or molded bands encircling the body on hollowares (Table 36).

Table 36. MNV for white salt-glazed stoneware

Vessel	Surface Treatment	Color	Form	Location
1	Molded	White	Plate	H, N, A
2	Incised Line	White	Bowl	H, A
3	Incised Line	White	Chamberpot	H, F1, F2
4	Incised Line	White	Mug	H, A, E
5	Incised Line	White	Pitcher	H, F1
6	Molded Bands	White	Bowl	H
7	Molded Bands	White	Chamberpot	H
8	Molded Bands	White	Cup	F1
9	Molded Bands	White	Mug	H, A, F1
10	Molded	White	Plate	H, A, E, F1
11	Scratch Blue	Blue, White	Cup	H
12	Scratch Blue	Blue, White	Cup	H
13	Scratch Blue	Blue, White	Saucer	H
14	Undecorated	White	Basin	H
15	Undecorated	White	Bowl	H, A, W, N, F1
16	Undecorated	White	Bowl	H
17	Undecorated	White	Bowl	H, A
18	Undecorated	White	Chamberpot	H
19	Undecorated	White	Chamberpot	H
20	Undecorated	White	Cup	H
21	Undecorated	White	Mug	H, A, N
22	Undecorated	White	Mug	H
23	Undecorated	White	Pitcher	H
24	Undecorated	White	Teapot	A

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

Recovered white salt-glazed vessels were apparently used for both table service and hygiene, based on the vessels identified. This ceramic type was eventually replaced by creamware in the last quarter of the eighteenth century.

Westerwald

Another type of stoneware was a German product of the Westerwald region. These vessels were most commonly made in the form of jugs that were decorated with cobalt blue and a salt glaze on a gray stoneware body. Over time the finely executed decorations and lines on Westerwald vessels became degraded. By the late seventeenth and especially the eighteenth century, they were distinctly debased. After approximately 1660 manganese was also used in conjunction with cobalt in the decoration of these vessels (Hume 1969:281).

A total of 15 fragments of Westerwald stoneware representing a minimum of two vessels were recovered. Fragments of a mug and a chamberpot, both with cobalt decoration, were recovered from the beneath the structure, in the east and north yards, and from Foundation 1. Westerwald apparently was only minimally used by the Watsons who appear to have preferred English to German wares.

Fulham

The English stoneware type that truly kicked off Britain's entry into the stoneware market was produced by John Dwight of Fulham England in 1671. It is believed that Dwight was modeling his stoneware on the products of Germany's Rhineland and his best known products were small drinking mugs with reeded necks (Noël Hume 1970:112). Ceramics of this type of brown English stoneware continued to be made in England and America until circa 1775.

Forty-eight fragments of Fulham stoneware were recovered principally from beneath and adjacent to the structure with a light scatter to the north and west (Table 37). The vessel forms were a bottle and a large storage jar.

Table 37. Fulham distribution

Artifact	**S**	**A**	**N**	**E**	**W**	**F1**	**F2**
Stoneware- Fulham	38	7	1		1	1	1

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

Nottingham

Another potter began his own variety of stoneware in England in the late seventeenth century. James Morley, who was sued in 1685 by Dwight, began making a smooth brown stoneware with a glossy surface in the form of mugs, bowls, pitchers and double handled loving cups (Noël Hume 1970:114).While these wares were made initially in Nottingham, they were also produced throughout the 18th century in Burslem and other locations in Staffordshire and Derbyshire as well as Swinton in Yorkshire(Noël Hume 1970:114). Products of Nottingham are readily identifiable by a thin white to gray line separating the body and the glaze.

Fourteen fragments of Nottingham stoneware were recovered principally from beneath the structure and from Foundations 1 and 2 (Table 38). The fragments all appear to have come from a possible bowl, a possible jar, and a mug.

Table 38. Nottingham stoneware distribution

Artifact	**S**	**A**	**N**	**E**	**W**	**F1**	**F2**
Stoneware- Nottingham	6		2		1	2	3

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

Gray/ Buff Stoneware

Gray and buff stoneware was produced in England in the eighteenth to early twentieth centuries and in America from the nineteenth to twentieth centuries. The vessel forms were common utility forms (pots, jars) and blacking, beer, and other drink bottles.

Thirty-nine pieces of gray stoneware representing a minimum of five vessels (blacking bottle, bottle, jar, mug, small pot) were recovered from the project area (Table 39). Forty-three fragments of buff-

Table 39. Gray and Buff bodied stoneware distribution

Artifact	**S**	**A**	**N**	**E**	**W**	**F1**	**F2**
Stoneware- Gray	19	3	2	1		12	
Stoneware- Buff	32	3				7	1

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

bodied stoneware were recovered. The fragments represent a minimum of six vessels (two bottles, one blacking bottle, one pot lid, one pot, and one jar) (Table 40). Blacking bottles were used to hold blacking that was used on shoes and harnesses.

Table 40. Gray and Buff-bodied stoneware MNV

Vessel	Surface Treatment	Color	Form	Location
1	Salt Glazed	Tan, Gray	Blacking Bottle	F1, E
2	Salt Glazed	Brown, Gray	Bottle	H, A, F1
3	Salt Glazed	Tan, Gray	Jar	A
4	Salt Glazed	Gray	Mug	H
5	Salt Glazed	Gray	Small Pot	H
6	Salt Glazed	Brown, Tan	Lid	H
7	Salt Glazed	Brown, Gray	Bottle	A
8	Salt Glazed	Orange, Tan	Bottle	H
9	Salt Glazed	Tan	Pot	H
10	Salt Glazed	Tan	Blacking Bottle	F1
11	Salt Glazed	Gray, Tan	Jar	H

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

Midlands Purple

Midlands Purple is technically an earthenware, but it has all the characteristics of a stoneware so it is placed in that category for ceramic analysis. The body is very hard and is reddish purple to purple

brown (Hurst et al. 1986:100-101). The vessels are only glazed on the interior with a thick black glaze that extends from the base part of the way up the walls (Barker 1986:54). The only form that has been found on English colonial sites is the butter pot, but in England, the ware was used for pitchers, slipware dishes, bowls, skillets, crucibles, and mortars (Ford 1995:35). This ware was made from the late 14th or early 15th century and was produced into the 18th century (Ford 1995:35). Midlands purple is not commonly found on American colonial sites after 1650 although one butter pot was found in Virginia from a late seventeenth century context and another pot was found in Kingston at the Allerton/ Cushman site in a ca. 1690 context (Brown and Harpole 1997:104). The form continued to be made in the Midlands until about 1730 (Egan 1992:97).

Two fragments identified as Midlands Purple were recovered from beneath the structure. The vessel is a butter pot with an 18 cm base diameter and a 20 to 24 cm body diameter. It may date to the seventeenth or early eighteenth century.

Rosso Antico

Rosso Antico is a red, dry-bodied stoneware that was produced in England in the late seventeenth to eighteenth centuries. It mimics similar products from Yixing, China and was first produced at John Dwight's pottery kilns in Fulham (Hume 1982:120). A similar ware was also produced by the Elers brothers in Staffordshire around the same time. Both ceased production of this ware in the early eighteenth century. Red, dry-bodied stoneware was again produced in the mid eighteenth century by Josiah Wedgwood who called his ware Rosso Antico (Burton 1992:58-59; Copeland 2004:16). The most common vessel forms were tea and coffee vessels and he continued to make the ware until the early nineteenth century. It is considered a very high quality ceramic type. One fragment of a Rosso Antico tea pot was recovered from the east yard. The sherd is from a tea or coffe pot lid and is 10 cm in diameter.

Porcelain

Porcelain is the final class of ceramic. Porcelains are ceramics that have been fired to such high temperatures, over 1400 degrees Celsius, that they vitrify or become glass like. Ceramics of this type were produced in China as early as 1000 B.C.. It was not until 1708/ 09 that a porcelain industry was developed in Europe (Turnbaugh 1985:19). In lieu of the scarcity and high price of Chinese porcelains, many potters began experimenting with other ceramic type, such as tin-enameled, creamware, pearlware and white-salt-glazed stoneware, that mimicked porcelain's whiteness and decorative elements. Common types of porcelain encountered on seventeenth to nineteenth century sites include Dehua White China (1640-1750), a thick white porcelain decorated with applied elements; Ching Blue and White China (1644-1912), a thin porcelain decorated in blue with a rust colored band on top of the rim; Imari Porcelain (1700-1780), a thin porcelain decorated with underglaze blue and overglaze red enamel; Ching Polychrome (1700-1750), a thin porcelain decorated in overglaze red and gold; Batavian/ Brown Porcelain (1740-1780), decorated on the exterior with a brown glaaze and the interior with blue underglaze or polychrome overglaze decoration; Powder Blue Porcelain (1700-1750), decorated on the exterior with a blue glaze and on the interior with overglaze enamel painting; Polychrome Porcelain (1680-1850), decorated with opaque overglaze enamels and gilding in a variety of colors; English Soft Paste Porcelain (1742-1800), with a hard compact chalky appearing body and decorated with underglaze navy to dark blue; Bone China (1749-1900), a nearly translucent porcelain

decorated with overglaze polychrome, gilding, or left undecorated; and Canton Porcelain (1800-1860), a bluish white glazed porcelain decorated with distinctive blue underglaze decoration.

Three hundred twenty-eight fragments of porcelain were recovered from the project area. The majority was found beneath and adjacent to the house and around Foundations 1 and 2 (Table 41).

Table 41. Porcelain distribution

Artifact	**S**	**A**	**N**	**E**	**W**	**F1**	**F2**
Porcelain	169	48	12	5	3	55	36

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

A total of 59 vessels were identified, all either tablewares, decorative wares, or in one case, a small doll (Table 42). The majority of the vessels were either Canton or Bone China but Ching Blue and White,

Table 42. MNV for Porcelain

Vessel	Surface Treatment	Color	Form	Location
1	Canton Hand painted	Blue, Bluish White	Cup	H, F2
2	Canton Hand painted	Blue, Bluish White	Plate	H, A
3	Canton Hand painted	Blue, Bluish White	Plate	A
4	Canton Hand painted	Blue, Bluish White	Plate	F1
5	Canton Hand painted	Blue, Bluish White	Saucer	H, A, E, F1
6	Canton Hand painted	Blue, Bluish White	Saucer	A
7	Canton Hand painted	Blue, Bluish White	Bowl	H
8	Canton Hand painted	Blue, Bluish White	Cup	H, A, N, F1, F2
9	Canton Hand painted	Blue, Bluish White	Cup	F2
10	Canton Hand painted	Blue, Bluish White	Cup	H
11	Canton Hand painted	Blue, Bluish White	Dish	H, F1
12	Canton Hand painted	Blue, Bluish White	Plate	H
13	Canton Hand painted	Blue, Bluish White	Plate	H, F1
14	Canton Hand painted	Blue, Bluish White	Plate	A
15	Canton Hand painted	Blue, Bluish White	Plate	A
16	Canton Hand painted	Blue, Bluish White	Saucer	H, A, N, F1, F2
17	Canton Hand painted	Blue, Bluish White	Saucer	H, F2
18	Canton Hand painted	Blue, Bluish White	Saucer	F2
19	Canton Hand painted	Blue, Bluish White	Saucer	H
20	Canton Hand painted	Blue, Bluish White	Vase	H, A
21	Bone China	Gold, White	Saucer	H
22	Ching Blue and White	Tan, White	Saucer	H, A
23	Ching Polychrome	Gray, White	Saucer	A

Table 42. (cont.)

Vessel	Surface Treatment	Color	Form	Location
24	Bone China	Red, Black, White	Doll	W
25	Bone China	Red, Black, White	Cup	F1, F2
26	Bone China	Black, White	Plate	H
27	Bone China	Black, White	Saucer	H, F2
28	Ching Blue and White	Blue, Tan, White	Saucer	F2
29	Ching Blue and White	Blue, Brown, White	Saucer	H, A, F1
30	Bone China	Brown, Red, Gold, White	Saucer	H, A
31	Bone China	Blue, Red, Yellow, White	Cup	F1, H
32	Bone China	Brown, Red, White	Cup	F2
33	Bone China	Gold, Red, White	Flatware	A
34	Ching Polychrome	Gray, Orange, White	Saucer	H, F1, F2
35	Polychrome	Green, Red, Purple, White	Cup	H
36	Polychrome	Orange, Tan, Blue, Brown, White	Saucer	H, F1
37	Imari	Rink, Gray, White	Plate	H, F1, F2
38	Ching Polychrome	Purple, White	Saucer	A
39	Bone China	Purple, White	Cup	F1
40	Ching Polychrome	Red, White	Cup	H, A
41	Ching Polychrome	Red, White	Saucer	H, F1, F2
42	Ching Polychrome	Red, White	Plate	A
43	Bone China	Red, Black, White	Saucer	F2
44	Bone China	Red, Blue, Gold	Plate	H
45	Bone China	Red, Brown, White	Plate	H
46	Bone China	Red, Gold, Blue	Vase	H
47	Bone China	Red, Green, White	Saucer	H
48	Bone China	Red, Tan	Cup	H
49	Ching Polychrome	Red, White	Saucer	H
50	Bone China	Red, Gold, White	Teapot	F1
51	Bone China	Red, Gold, White	Saucer	A, F1
52	Polychrome China	Tan, White	Cup	F1
53	Polychrome China	Yellow, Blue, Green, White	Saucer	H
54	Bone China	White	Cup	H, A
55	Bone China	White	Cup	H
56	Bone China	White	Cup	A, F1
57	Bone China	White	Plate	H, A

Table 42. (Cont.)

Vessel	Surface Treatment	Color	Form	Location
58	Bone China	White	Saucer	H, A, F1, F2, W
59	Bone China	White	Teapot	F1

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

Ching polychrome, and Imari porcelains were also present. The occurrence of so much porcelain is not unexpected as the Watsons and Jacksons were both merchants, presumably with ready access to porcelains brought to America by the East India Company.

Ceramic Summary

A total of 456 vessels were identified (Table 43) with the majority (n=39) being for tea, followed by food serving, followed by liquid serving. The Watsons and Jacksons apparently placed a great

Table 43. Categories of ceramic vessels recovered

	Liquid Stor.	Liquid Serv.	Tea	Food Stor.	Food Prep.	Food Serv.	Hygiene	Dec.
Jackfield			2					
Redware	2	16	2	8	12		4	4
Slipware- Staffordshire		2			2			
Midlands Purple				1				
Stoneware- White Salt-Glazed		11	6			2	5	
Stoneware- Nottingham		2		1				
Stoneware- Westerwald		1					1	
Stoneware- Gray/ Buff	6	1		4				
Stoneware- Fulham	1			1				
Stoneware- Albany Slipped	1			3				
Roso Antico			1					
Tin-Glazed		2	2			5	1	2
Borderware					1	1		
Iberian	1	1		3				
North Devon Gravel Free				1				
English Mottled Ware		1						
Creamware		13	24			15	4	
Pearlware		20	26			29	3	
Ironstone		4	4			9	1	
Whiteware		15	43	1		33	5	2
Yellowware		5	1				1	
Rockingham		2	1					

Table 43. (Cont.)

	Liquid Stor.	Liquid Serv.	Tea	Food Stor.	Food Prep.	Food Serv.	Hygiene	Dec.
Porcelain		1	40			14		3
Totals	11	97	152	23	15	108	25	11

Stor.- Storage, Serv.-Serving, Dec.- Decorative

emphasis on serving tea and presentation at the table. Several sets of vessels were found indicating a preference for complete sets versus miscellaneous pieces. Food and liquid storage (jars, pots, bottles) were other important categories leading to the conclusion that may of these ceramics arrived at the midden where the structure was later placed, from the kitchen, pantry, and buttery of the house.

In an attempt to move beyond mere description when reporting ceramic occurrences from archaeological excavations (e.g. "15 pieces of creamware, 4 pieces of pearlware and one piece of ironstone were recovered") to an explanation of why they occurred, Dr. James Deetz formulated a series of propositions regarding the use and distribution of ceramics in Plymouth Colony between the years 1620 and 1835 (Deetz 1972). Deetz's propositions were based on ceramics recovered from numerous excavations he directed while at Plimoth Plantation in the 1950s to late 1960s. He stressed the relationship between behavior and its material products and how the acquisition, use and ultimate disposal of artifacts such as ceramics, all resulted from certain aspects of the lifeways of their owners (Deetz 1972: 15). Deetz's propositions were as follows:

1) Ceramics are a functional component of a cultural system

2) Three successive cultural systems were operative in New England in the period 1620-1835

3) In all three cultural systems the presence of ceramics is a function of four factors: availability, need, function, and social status

4) Ceramics in Plymouth will exhibit a threefold division in time, corresponding to the three successive cultural systems in operation in New England (1620-1660, 1660-1760, 1760-1835), and within each time period there will be greater internal consistency than between time periods.

5) The pattern of ceramic use for the first period will reflect ceramic usage of the Stuart yeomen foodways subsystem as well as that of the first settlers of Plymouth.

6) Ceramics of the second period will show differences in terms of use and type, reflecting divergences from the parent culture. They will also exhibit strong conservative tendencies in stylistic and functional trends.

7) Ceramics of the third period will show a greater homogeneity and will reflect a more structured pattern of use than those of the earlier period 1760-1835 which shows major shift in pottery types

8) There will be a marked increase in the rate of change in ceramic types during the third period, and domestically produced ceramics will decrease in relative quantity.

The colonists who settled in Plymouth arrived with the baggage of their medieval heritage and their Stuart yeoman ways. They were not totally representative but were basically less prosperous Stuart yeomen and husbandmen. They were conservative, potentially self-sufficient, and greatly influenced by religious attitudes. This way of life continued relatively unchanged and unchallenged for nearly a generation until the Puritan Revolution in the 1640s led to dramatic reduction in emigration. This lead to depressed economic conditions, shortages of imported goods and a cultural isolation that led to a slow but steady divergence from the earlier yeoman lifeways.

The century between 1660 and 1760 saw the isolated New Englanders develop a distinctive Anglo-American folk culture that was different from the English culture in the motherland. After 1760 and until 1835, American culture was impacted by the emergence of a Georgian tradition, which was Deetz's third period.

The Georgian tradition was characterized by symmetrical cognitive structures, homogeneity in material culture, progressive and innovative world view, and an insistence on order and balance that permeates all aspects of life and contrasted sharply with earlier medieval tradition (Deetz 1972: 18). This

Georgian tradition was truly the first popular culture in America and served to dissolve regional boundaries and re-Anglicize the American culture.

Three general groups of ceramics were identified by Deetz as having been excavated in Plymouth Colony:

Group 1 Fine imported wares

Frenchen stoneware, sgraffito, delftware, marbled slipware, trailed slipware, mottled ware, agateware, Wheildon type wares, Jackfield type wares, porcelains, creamware, pearlware

Group 2 coarse imported, undecorated wares

Borderware, North Devon gravel-tempered wares, undecorated redwares

Group 3 Coarse domestic redware

undecorated and later slip-painted and trailed types

Deetz's first period (1620-1660) was characterized by a low occurrence/ minimal need for ceramics within the Stuart yeoman foodways system. Wares that occur during this period were limited to Group 1 Frenchen stonewares, Group 2 Borderwares and undecorated redwares. Ceramics were limited to their use in dairying and as drinking vessels.

Deetz's second period (1660-1760) saw a marked increase in the occurrence of fine imported ceramics of Group 1(delftware, combed slipware, Westerwald stoneware predominantly, supplemented by mottled ware, dipped white stoneware, North Devonshire sgraffito ware), a decrease in Group 2 Borderwares with a concomitant increase in North Devon Gravel Tempered wares, and a growing increase in the use of Group 3 domestically produced redwares. Ceramics were still used for dairying, but by 1650 there was a marked shift in balance of power from the clergy to the merchants at which was indicative of growing trend toward secularization of certain aspects of the growing aspects of

culture (Deetz 1972: 27). Supplies were arriving in renewed quantities after the 1660 Restoration, and a greater variety of European ceramics being used in the colonies is not surprising. Another change was the increasing reliance on ceramics as flatwares, dishes and plates, versus their earlier use as hollowares.

Finally, the third period was characterized by a complete replacement of all the earlier types by the developing English refined earthenwares- creamware and then pearlware. The Georgian world view was of a more orderly relationship between man and his artifacts could account for it as well possibly creating a situation where there was now one plate, one cup, and one chamberpot relationship per person. Ceramic usage now conformed more closely to conform more closely to our 21st century concepts of the place of ceramics in culture (Deetz 1972: 32).

The ceramics from the North Street site exhibit characteristics of the first period, presence of Borderware and North Devon Gravel-Free, as well as an overwhelming expression of the third period. The first period relates to occupation by Cushman, Hellot, Lettis, and Clark. The third period relates to the occupation by the Watsons and Jacksons. Overall the ceramic assemblage bespeaks of a households or successive households that were well-off with a variety of imported ceramics being used on the tables and probable domestic wares serving in the kitchen and for hygiene purposes. The variety of social vessels- tea wares, cup and jugs- may indicate that the household served as a gathering place for people in the community as well as reflecting the merchant status of the inhabitants of both periods.

Findings from the Site Examination were also compared with archaeological findings from other sites in Massachusetts that have comparable occupation ranges. These sites include the Edward Humphries Jr. Homestead in Norwell, (Chartier 2007a), Smith and Daniel Fullers' homesites (Chartier 2007b), the Ebenezer Wood Homesite in Middleborough (Chartier 2007c), the Thwing/Haynes/Slade site in Newton (Donohue 2001, 2002), the Sophronia Young House site in Mashpee (Donohue and Smith 2003), and the Fuller Home sites in Kingston (Chartier and Donohue 2010), the Lighthouse site in Connecticut (Feder 1994), and the Taylor Bray Farm (Chartier and Clements 2013) also provided important comparative data.

The Ebenezer Woods site was occupied by a middle class farmer in the late 18th to early 19th-century. The Edward Humphries site was occupied by a bachelor farmer and possibly his mother and sister. The site was occupied from circa 1776 to 1830 when Edward Humphries Jr. died. The majority of the artifact assemblage from the site consisted of ceramic sherds. The Sophronia Young House Site dates from 1842 to circa 1878. Sophronia Young, a member of the Mashpee Tribe, lived at the site with her husband, John Young, a "black foreigner" from either New York or Virginia, and four children until her death in 1850. Following her death John is believed to have lived at the house site until 1852 when he remarried, and then returned to the house between 1874 and 1878. The Thwing/Haynes/Slade site, dating from 1806 to circa 1895, followed the development of the farming community of East Newton to the development of the suburban community of Chestnut Hill. Results from the Data Recovery conducted at the Thwing/Haynes/Slade site should provide a good basis for comparison. The Fuller sites in Kingston consist of three homesites occupied concurrently by three brothers and their families from 1830-ca 1892. The Fullers were all laborers whose estates were never valued more than $300.00. The Lighthouse Village site in Barkhamsted, Connecticut, was a community founded in the late eighteenth century by James and Molly Chaughum. The village was the location of the homes of

several families during the late eighteenth to early twentieth century and were described by Feder as living a literal and figurative marginal existence, even though the village was located just two miles outside of Barkhamstedt and one mile from Riverton on the West Center Hill Road, which was the turnpike for stage coach that ran right by village. In reality, they were not really physically isolated from their surrounding community and they were in fact well known, serving as the beacon (the lighthouse) for the stages along the road. The Taylor Bray Farm is a historic farm in Yarmouth, Massachusetts dating from the 1640s to the late eighteenth/ early nineteenth century. Site Examination testing was conducted around the cellar hole and location of the seventeenth and eighteenth century houses. The Taylor family appear to have been midddle class farmers with some fine wares.

Kenneth Feder in his work on the Lighthouse Site in Connecticut found that lower classes of society in the eighteenth and nineteenth centuries, especially poor African Americans, tended to use more serving bowls or holloware and a lower proportion of flatware and dishes (Feder 1994: 182). Serving bowls were used to serve soups, stews and pottages while flatwares were more often used to serve cuts of meat such as roasts in more formal settings. Stews and pottages are one way to stretch a family's food budget while also providing a more communal dining experience (Feder 1994: 183). Essentially, sites with a greater disproportion between the hollowares and flatwares may indicate a higher use of bowls over plates and thus a lower class, more communal foodways. Flatware serving and consumption vessels (plates, platters, saucers, and the generic flatware) were compared with holloware serving vessels (cup, bowls, mugs, tureens, and the generic holloware) (Table 44). Caution must be taken not

Table 44. Comparison of holloware versus flatwares vessel counts.

Site	Holloware	Flatware
North Street	69.70%	30.30%
Taylor Bray Farm	30%	70%
Humphries	50%	50%
Wood	41.1%	58.9%
Samuel Fuller	39%	60.9%
Smith Fuller	61.5%	38.5%
Daniel Fuller	0	100%
Sophronia Young	52.7%	47.3%
Thwing/Haynes/Slade	47.6%	52.4%
Lighthouse Village	39.9%	60.1%

to place too much emphasis on the assemblages from the Humphries, Daniel and Smith Fuller sites, as all of these were only investigated during intensive surveys. When these are removed from comparison, the Young, followed by the Thwing/Haynes/Slade sites yielded the highest occurrence of hollowares while the Samuel Fuller, Lighthouse, and especially the Taylor Bray Farm sites yielded the highest occurrence of flatwares.

Contrary to what Feder related in his work, when viewed in total, the Lighthouse Village vessel assemblage had more flatwares than hollowares, which would indicate by Feder's reasoning that they ate less communally than the Fullers or Sophronia Young's household. The sites that are known to have been occupied by families, the Wood, Young, Samuel Fuller and Smith Fuller sites, and the Lighthouse

Village, had the greatest number of plates represented in their assemblages (N=6, 22, 7, 2 and 120 respectively) which relates to the use of plates for serving and consumption. This is likely the result of the fact that Edward Humphries Jr. and Daniel Fuller were both bachelors, and thus would not have needed a large number of plates for serving multiple people. Tea cups and saucers were well represented at the Wood and Smith Fuller sites while the Samuel Fuller site yielded fragments of a tea pot. The Humphries and Samuel Fuller sites yielded fragments of one tea vessel each, possibly indicating less of an emphasis on this social and potentially ritualistic item. Alternately, the Fullers being so close in proximity and familial ties, may have shared teas, or, since Samuel Fuller died before Smith Fuller, Smith's family may have inherited Samuel's tea wares. Tea wares were well represented at the Richard and Ruth Taylor site with Wheildon and Jackfield tea pots and white salt glazed stoneware, creamware, whiteware, pearlware, and porcelain teawares being represented. Overall it would appear that the Taylor Site follows the pattern of more teawares in more ceramic types and a greater emphasis on flatwares, indicating a possible higher status than the other sites compared. The North Street site exhibited a pattern that was different than the others. Due to the high number of teawares in the hollowares category, this category contributed over 69% of the total holloware/ flatware sub-assemblage.

Glass

Glass artifacts that were expected to be encountered include flat glass from windows, mirrors, picture frames and lanterns, curved glass from bottles and hurricane lamp chimneys, pressed glass from candlesticks, oil lamps, tablewares, and decorative items and buttons. Glass fragments were analyzed in much the same way as the ceramics with vessel types and manufacturing techniques being identified and cross mending within and between contexts being attempted. The identification of patent medicines, fairly ubiquitous artifacts from sites occupied from the middle nineteenth to early twentieth centuries, represent shift from herbal remedies among rural inhabitants for those provided by medical science and may help to indicate the degree of market involvement by the inhabitants of the site.

A total of 5160 fragments were recovered (Table 45). The majority of these fragments were found beneath and adjacent to the structure and from Foundations 1 and 2. Associated with the vessel glass

Table 45. Vessel glass and related artifacts distribution

Artifact	**S**	**A**	**N**	**E**	**W**	**F1**	**F2**
Bottles/ Glasses	3671	780	18	73	30	385	204
Milk Glass	1	8		1		2	2
Flask With Strap	2						
Cork	1						
Pewter Bottle Neck Ring	1						
Crown Bottle Cap	1						
Possible Bottle Label Plate	1						

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

was a leather strap for a pocket flask, a cork, a pewter bottle neck ring, a 20th century crown bottle cap, and a possible label plate. The label plate bore the name "TO JACKSON", probably Thomas Otis Jackson, brother of Abraham Jackson who purchased the property in 1818.

A minimum of 131 glass vessels were identified (Table 46). The majority (n=44) were hand blown wine bottles of various sizes. These date to the eighteenth to nineteenth centuries. Several bottle seals

Table 46. Glass vessel fragment recoveries

Vessel	Manufacturing Technique	Color	Type	Notes
1	Mold Blown	Solarized	Bottle	6 cm body dia
2	Mold Blown	Solarized	Dish	Molded Ribs
3	Mold Blown	Solarized	Medicine Bottle	Panaled
4	Mold Blown	Solarized	Bottle	Thin
5	Mold Blown	Light Aqua	Bottle	
6	Aqua	Hand Blown	Case Bottle	7 cm body dia
7	Aqua	Mold Blown	Bottle	Thin
8	Aqua	Mold Blown	Bottle	10 cm base dioa
9	Machine-Made	Blue and White	Bottle	
10	Hand Blown	Blue/ Green	Wine Bottle	10 cm body dia
11	Hand Blown	Blue/ Green	Wine Bottle	
12	Machine-Made	Brown	Medicine Bottle	4 cm body dia
13	Machine-Made	Brown	Bottle	10 cm body dia
14	Machine-Made	Brown	Bottle	Embossed Decoration
15	Machine-Made	Brown	Bottle	8 cm body dia
16	Mold Blown	Clear	Bottle	Molded Ribs, 6 cm body dia
17	Hand Blown	Clear	Bottle	Folded Rim
18	Hand Blown	Clear	Bottle	Bulbous Body
19	Machine-Made	Clear	Bottle	Narrow Flutes
20	Machine-Made	Clear	Medicine Bottle	Small 2 cm body dia
21	Mold Blown	Clear	Bottle	Molded Encircling Bands
22	Machine-Made	Clear	Bottle	Molded Screw Threads
23	Machine-Made	Clear	Bottle	Embossed
24	Machine-Made	Clear	Whiskey Bottle	Embossed "WARRANTED"
25	Machine-Made	Clear	Bottle	
26	Mold Blown	Clear	Medicine Bottle	Paneled
27	Mold Blown	Clear	Bottle	Octagonal 6 x 2.5 cm bod dia Embossed
28	Mold Blown	Clear	Bottle	Octagonal 4 x 6.5 cm base dia

Table 46. (cont.)

Vessel	Manufacturing Technique	Color	Type	Notes
29	Mold Blown	Clear	Bottle	Square
30	Mold Blown	Clear	Decanter	10 cm base dia
31	Mold Blown	Clear	Dish	Molded Decoration Thick 22 cm base dia
32	Mold Blown	Clear	Drinking Glass	6 cm body dia 5 cm base dia
33	Mold Blown	Clear	Drinking Glass	Wide Flutes 10 cm body dia
34	Mold Blown	Clear	Drinking Glass	Closely Spaced Flutes
35	Mold Blown	Clear	Drinking Glass	Faceted Panels
36	Mold Blown	Clear	Drinking Glass	10 cm body dia Narrow Flutes
37	Hand Blown	Clear	Drinking Glass	Etched Floral 10 cm body dia
38	Mold Blown	Clear	Drinking Glass	Octagonal 5 cm base dia
39	Machine-Made	Clear	Jar	Lid
40	Mold Blown	Clear	Oil Lamp	6 cm body dia
41	Hand Blown	Clear	Pitcher	
42	Hand Blown	Clear	Tall Glass	7 cm base dia
43	Hand Blown	Clear	Wine Glass	6 cm base dia Folded Rim
44	Hand Blown	Clear, Yellow, White	Drinking Glass	Steigel 8 cm rim dia
45	Hand Blown	Cloudy Clear	Medicine Bottle	2 cm body dia
46	Mold Blown	Cloudy Clear	Medicine Bottle	Square 3.5 cm base dia
47	Mold Blown	Cloudy Clear	Dish	20 cm base dia
48	Mold Blown	Cloudy Clear	Drinking Glass	Molded Ribs 12 cm rim dia
49	Mold Blown	Dark Green	Bottle	Square
50	Mold Blown	Dark Green	Wine Bottle	7 cm base dia
51	Hand Blown	Dark Olive	Wine Bottle	10 cm base dia
52	Hand Blown	Dark Olive	Wine Bottle	16 cm base dia
53	Hand Blown	Dark Olive	Wine Bottle	12 cm base dia
54	Hand Blown	Dark Olive	Wine Bottle	8 cm base dia
55	Hand Blown	Dark Olive	Wine Bottle	10 cm base dia
56	Hand Blown	Dark Olive	Case Bottle	
57	Hand Blown	Dark Olive	Wine Bottle	9 cm base dia
58	Hand Blown	Dark Olive	Wine Bottle	11 cm base dia
59	Hand Blown	Dark Olive	Wine Bottle	
60	Hand Blown	Dark Olive	Wine Bottle	12 cm base dia
61	Hand Blown	Dark Olive	Wine Bottle	14 cm base dia

Table 46. (cont.)

Vessel	Manufacturing Technique	Color	Type	Notes
62	Hand Blown	Dark Olive	Wine Bottle	11 cm base dia
63	Hand Blown	Dark Olive	Wine Bottle	12 cm base dia
64	Hand Blown	Dark Olive	Wine Bottle	10 cm base dia
65	Hand Blown	Dark Olive	Wine Bottle	10 cm base dia
66	Hand Blown	Dark Olive	Wine Bottle	
67	Hand Blown	Dark Olive	Wine Bottle	
68	Hand Blown	Dark Olive	Wine Bottle	
69	Hand Blown	Dark Olive	Wine Bottle	
70	Hand Blown	Dark Olive	Wine Bottle	
71	Hand Blown	Dark Olive	Wine Bottle	
72	Hand Blown	Dark Olive	Wine Bottle	
73	Hand Blown	Dark Olive	Wine Bottle	
74	Hand Blown	Dark Olive	Case Bottle	10 cm base dia
75	Hand Blown	Dark Olive	Bottle	Octagonal 8 x 5 cm base dia
76	Hand Blown	Dark Olive	Wine Bottle	10 cm base dia
77	Hand Blown	Dark Olive	Wine Bottle	12 cm base dia
78	Hand Blown	Dark Olive	Wine Bottle	
79	Hand Blown	Dark Olive	Wine Bottle	
80	Hand Blown	Dark Olive	Wine Bottle	12 cm base dia
81	Hand Blown	Dark Olive	Wine Bottle	
82	Hand Blown	Dark Olive	Wine Bottle	
83	Hand Blown	Dark Olive	Wine Bottle	10 cm base dia
84	Hand Blown	Dark Olive	Wine Bottle	11 cm base dia
85	Hand Blown	Dark Olive	Wine Bottle	10 cm base dia
86	Hand Blown	Dark Olive	Wine Bottle	8 cm base dia
87	Hand Blown	Dark Olive	Whiskey Bottle	Embossed on base "DYOTTEVILLE GLASS" 9.5 cm base dia
88	Hand Blown	Dark Olive	Whiskey Bottle	Embossed on base "DYOTTEVILLE GLASS" 9.5 cm base dia
89	Hand Blown	Dark Olive	Whiskey Bottle	Embossed on base "DYOTTEVILLE GLASS" 9.5 cm base dia
90	Hand Blown	Dark Olive	Whiskey Bottle	Embossed on base "DYOTTEVILLE GLASS" 9.5 cm base dia
91	Hand Blown	Dark Olive	Whiskey Bottle	Embossed on base "DYOTTEVILLE GLASS" 9.5 cm base dia

Table 46. (cont.)

Vessel	Manufacturing Technique	Color	Type	Notes
92	Hand Blown	Dark Olive	Whiskey Bottle	Embossed on base "DYOTTEVILLE GLASS" 9.5 cm base dia
93	Hand Blown	Dark Olive	Wine Bottle	12 cm base dia
94	Hand Blown	Dark Olive	Wine Bottle	10 cm body dia
95	Hand Blown	Dark Olive	Wine Bottle	12 cm base dia
96	Hand Blown	Dark Olive	Wine Bottle	
97	Hand Blown	Dark Olive	Case Bottle	
98	Hand Blown	Dark Olive	Case Bottle	Large bottle
99	Hand Blown	Dark Olive	Balsam Bottle	Octagonal 2.5 cm base dia
100	Hand Blown	Dark Olive	Wine Bottle	
101	Hand Blown	Dark Olive	Wine Bottle	21 cm base dia
102	Hand Blown	Dark Olive	Wine Bottle	12 cm base dia
103	Hand Blown	Dark Olive	Wine Bottle	
104	Hand Blown	Dark Olive	Ink Bottle	6 cm base dia
105	Hand Blown	Dark Olive	Champagne Bottle	12 cm body dia
106	Machine-Made	Green	Bottle	
107	Machine-Made	Green	Drinking Glass	Hand painted White Flowers 10 cm body dia
108	Mold Blown	Light Aqua	Balsam Bottle	Octagonal 3 cm body dia
109	Mold Blown	Light Aqua	Bottle	Embossed Square 3.5 cm body dia
110	Mold Blown	Light Aqua	Bottle	Gothic
111	Mold Blown	Light Aqua	Bottle	Molded Ribs
112	Mold Blown	Light Aqua	Bottle	Oval
113	Mold Blown	Light Aqua	Bottle	Paneled
114	Mold Blown	Light Aqua	Bottle	Thick
115	Mold Blown	Light Aqua	Medicine Vial	Thin 4 cm body dia
116	Mold Blown	Light Aqua	Bottle	Waisted 6 cm base dia
117	Mold Blown	Light Aqua	Bottle	Wide Vertical Ribs 10 cm body dia
118	Mold Blown	Light Aqua	Bottle	Square
119	Mold Blown	Light Aqua	Jar	Mason Jar
120	Machine-Made	Light Blue	Bottle	Thin
121	Mold Blown	Light Green	Bottle	8 cm body dia
122	Mold Blown	Light Green	Medicine Vial	Thin
123	Mold Blown	Light Olive	Bottle	Paneled
124	Mold Blown	Light Olive	Medicine Vial	Thin 6 cm body dia
125	Mold Blown	Light Tan	Flask	Squared base 6 cm base dia

Table 46. (cont.)

Vessel	Manufacturing Technique	Color	Type	Notes
126	Hand Blown	Light Yellow	Bottle	
127	Mold Blown	Olive	Bottle	Embossed 8 cm body dia
128	Mold Blown	Clear	Dish	30 cm rim dia
129	Mold Blown	Clear	Dish	10 cm rim dia
130	Hand Blown	Clear	Wine Glass	Folded rim
131	Mold Blown	Dark Olive	Snuff Bottle	6 x 10 cm base dia

bearing the initials GW (George Watson) were recovered from beneath the structure **(Figure 34)**. The next most common bottle type were nineteenth century mold blown bottles (n=24) (Table 47).

Table 47. Glass vessel types identified

Glass Vessel Type	MNV Count
Ink Bottle	1
Machine Made Bottle	10
Mold Blown Bottle	26
Hand Blown Bottle	4
Wine Bottle	44
Whiskey Bottle	7
Drinking Glass	11
Pressed Dish	5
Case Bottle	5
Champagne Bottle	1
Decanter	1
Flask	1
Jar	2
Medicine Vial	8
Oil Lamp	1
Pitcher	1
Snuff Bottle	1
Wine Glass	2

Figure 34. Bottle Seal bearing George Watson's initials (1-1.5mS 2.5-3mW S1/2 5 cm)F

Color can be used as a dating tool for glass (Stelle 2001). Clear lead glass was first produced in the 1770 and continued to the present day. Lead glass was used for table wares such as pressed glass, wine and drinking glasses and lamps. Clear soda-lime glass was first used in 1860 and continues to the present. Soda-lime glass was used for bottles. Solarized glass, glass with a purple, pink or amethyst tint to it (a result of manganese being added to the glass) was first produced in 1880 and continued until 1918. Dark olive green "black" glass, which was only used for wine bottles, was produced until 1870.

Hurricane lamp chimney glass (post 1859) was found beneath and around the structure. Machine made bottle glass (dating after 1907) was found beneath and around the structure and around Foundations 1 and 2. The recovery of hurricane lamp glass from beneath and around the structure indicates that refuse continued to be deposited in this area in the middle nineteenth century.

Drinking glasses were wheel-etched, enameled and molded. One drinking glass with a wheel etched floral decoration on the exterior had a diameter of 10 cm and was similar to a vessel recovered from the Narbonne House in Salem where they were dated to 1750-1800. Noel Hume says that wheel etched vessels were popular in the eighteenth century with most dating between 1780 and 1820 (Hume 1969: 194). The enameled drinking glasses may have been a product of Henry William Steigel's glasshouse at Manheim, Pennsylvania (1763-1774).

Mold blown bottles are essentially bottles that are made by putting a gather of molten glass into a mold, blowing it up and snapping off the blowpipe at the base, and hand finishing the neck and rim. Bottles were made this way before the use of automatic bottle machines in 1903. Bottles bearing rough pontil scars on the base generally date before the Civil War while those with smooth bases date after the Civil War. All of the machine-made vessels date after 1903. Pressed (a.k.a molded) glass was a style of glassware that developed in the early 19th century when glass making changed from being a craft to being a factory-based process, thus making fancy-looking glass vessels available to a mass-market. By

the mid-nineteenth century, this glassware was the most inexpensive type of ware produced such as cup plates like those produced by the Sandwich Glass Company. Several pressed glass dishes were recovered from beneath the structure.

Six bottle bases were recovered from Feature 1 beneath the house. These bottles all bore DYOTTVILLE GLASSWORKS PHILA embossed on the underside of the base. The Dyottville Glass Works in Philadelphia, PA (c.1833-1900+) was previously known as the Kensington Glass Works. They are most famous for pictorial flasks and cylinder whiskeys (1850s-1880s). The recovery of several of these whiskey bottles from one pit beneath the structure indicates that the area continued to be used to dispose of rubbish in the middle nineteenth century.

Cooking equipment and eating utensils

Fragments of one cast iron kettle (n=7) with a 20-22 cm body diameter were found scattered between from beneath the structure to Foundations 1 and 2 (Table 48). Four fragments of at least two knives were recovered from beneath the structure, Foundation 1, and the east yard. Two fragments of the

Table 48. Cooking/ Eating Equipment distribution

Artifact	**S**	**A**	**N**	**E**	**W**	**F1**	**F2**
Cooking/ Eating Equipment							
Kettle	3					2	2
Knife	2			1		1	
Fork	1						
Spoon							1
Pewter Cup Handle			1				
Fire Brick	1						
Barrel Hoop	12						
Sheet Iron Basin	131						
Can	72	21					
Iron Stove Handle	1						

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

shank and handle of an iron knife was found beneath the structure, a brass rivet for attaching a wooden handle to a slab handled knife was recovered from the east yard, and the blade of a nineteenth to twentieth century pocket knife was found at Foundation 1. One two-tined knife was found in the north yard. The style dates from the middle to late eighteenth century. One nineteenth century iron spoon was found at Foundation 2.

Other cooking/ eating equipment that was recovered included a pewter cup handle from the north yard, a piece of fire brick from a wood stove and an iron handle, possibly from the same stove, from beneath the structure, barrel hoop fragments and a sheet iron basin were also found in the same location. Fragments of cans which originally would have held meat, fruit, or vegetables, were recovered from

beneath and adjacent to the structure. Cans came into widespread use by the middle of the nineteenth century, although they were available as early as 1796 (Busch 1981:95).

Furniture Hardware

This class was represented by four brass furniture or box tacks with 1 cm diameter heads, a drawer escutcheon, and a brass grommet. The tacks were found in the east yard and Foundation 1, the escutcheon and the grommet were found under the structure. The tacks were probably used either on a chair or more probably on a trunk or chest dating to the seventeenth to the nineteenth century to hold fabric or leather onto it. The brass grommet was most probably attached to a piece of canvas.

Sewing Equipment

One silver stick pin with a wound head was recovered from beneath the structure.

Heating Residue

A total of 826 fragments of charcoal and 2788 pieces of coal were recovered from across the project area (Table 49). Charcoal was concentrated beneath and adjacent to the structure while the coal was most common everywhere but the west and north yards. It is believed that the charcoal represents

Table 49. Heating residue distribution

Artifact	S	A	N	E	W	F1	F2
Heating Items							
Charcoal	176	450	33	60	5	74	28
Coal	481	573	146	346	72	848	322

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

residue from the hearth that was scattered in the yard and into the midden in the first half of the nineteenth century. The use of coal is believed to have become more common away from coal producing areas like Pennsylvania in the last half to quarter of the nineteenth century, after the expansion of the railroad allowed it to be shipped further from the mines. The use of coal is probably related to the structure that was built in the eastern half of the property in the later nineteenth century.

Personal

Coins

Two pre-twentieth century coins were found in association with Foundation 1. The first is a Spanish silver two reales coin dated 1777 **(Figure 35)**. The coin is what is referred to as a "portrait" or "modified pillar" design. It bears a picture of Charles III on the obverse and the Spanish arms between the two pillars on the reverse. The other coin is a very worn copper Liard De France coin. It appears to bear the image of the young Louis XIV, giving a possible date of 1654-58. The date range for the minting of these coins in general was 1654-1715. The presence of these coins at the site is not surprising given the fact that the Watsons and Jacksons were both merchants.

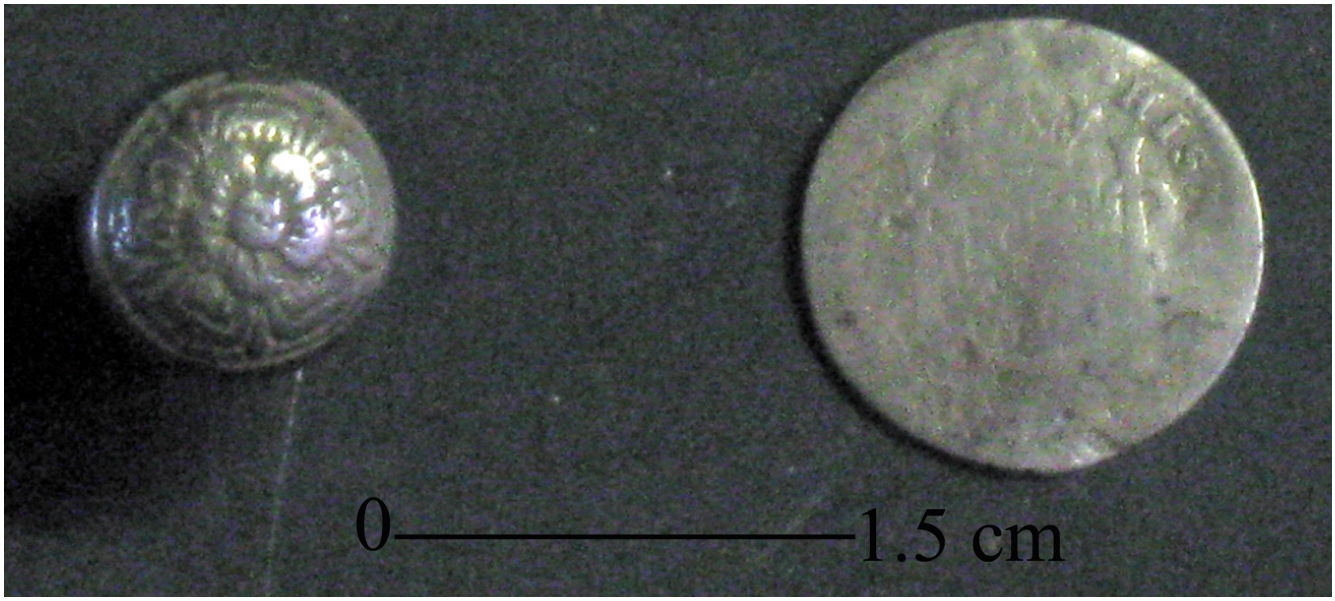


Figure 35. Silver doublet button (U5 30-40 cm)and 1777 Spanish two-reales coin (U7 20-30 cm)

Tobacco Pipes

Clay tobacco pipes are, to the archaeologist, one of the most commonly occurring objects on colonial sites and easily dated by their maker's marks and bowl styles. The stem bores of tobacco pipes gradually became smaller over the centuries since they were first produced in England. The stems of the pipes were slowly lengthened over time and as a result the bore of the stems became smaller. The stems from the 1580-1620 period are predominantly of a 9/64" bore while those of 1650-1680 are predominantly of a 7/64" bore. J.C. Harrington discovered this reduction sequence when he worked with clay pipes from Jamestown in the 1950s and it has been refined since.

9/64" 1580-1620
8/64" 1620-1650
7/64" 1650-1680
6/64" 1680-1710
5/64" 1710-1750
4/64" 1750-1800

This dating by stem bores was initially believed to be the answer to the problem of dating sites. Dating artifacts is never as easy as Harrington and Binford felt that it could be. This is especially true after 1800 when stems of the 4/64" and 5/64" bore were being made simultaneously, thus negating the use of stem bores for sites occupied after 1800.

Tobacco pipes can also bear maker marks in the form of a specific symbol used by a specific maker or the actual maker's name on the bowl or stem. Along with these makers' marks, certain styles that

appear to be indicative of specific countries of origin including England, Ireland, America or Canada large bored stems mainly of the 8/64" variety and small sized bowls similar to those shown in Hume's work (Noel Hume 1969: 303).

Archaeologists recovered a total of 61 pipe fragments during the Site Examination. Forty-three of these were stem fragments with measurable bore diameters (Table 50). The majority of the stems were

Table 50. Tobacco pipe fragment distribution

Artifact	**S**	**A**	**N**	**E**	**W**	**F1**	**F2**	**Total**
Tobacco Pipes								
8/64” Stem Bore			2					2
7/64” Stem Bore	1		1	1		1	2	6
6/64” Stem Bore							2	2
5/64” Stem Bore	5	1		1	2	1	2	12
4/64” Stem Bore	9	1	1	3	2	1	4	21
Stem Fragments		1			1			2
Bowl Fragments	3			7	1	2	3	16
Wooden Pipe	1							1
Totals	19	3	4	12	6	5	13	62

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

found beneath the structure, in the east yard, and associated with Foundation 2. Ten seventeenth century pipe stems were recovered, indicating occupation from before 1650 to the late seventeenth/ early eighteenth century, but the majority of the stems measured 4/64” (1750-1800) with 5/64” stems being second most common (1710-1750). The tobacco pipes reflect the early occupation of the property by Cushman, Hellot, Lettis, and Clark, followed by a period of little activity, then succeeded by the occupation by the Watsons and Jacksons in the eighteenth to nineteenth centuries.

No complete bowls were found, but the fragments recovered indicated the following styles:

Table 51. Datable tobacco stem/ bowl fragments

Style	Date	Location
Rouletted Bowl	Mid-late 17th century	F2
Embossed Tudor Rose on Heel	1640-1660	North Yard
Heeless Funnel	1720-1820	F2
Marked Spur	1780-1820	West Yard
TD in Rouletted Circle	1780-1820	East Yard
TD in Scroll Work	1780-1820	Beneath Structure
Stem Marked W.White/ Glasgow	1870-1890	Adjacent to Structure

The datable stems and bowls indicate the same occupation period as the stem bore distribution. Overall, the tobacco pipes indicate occupation of the site from the middle to late seventeenth century to the late eighteenth to early nineteenth century with the later period contributing the most to the archaeological record. Additionally, one late nineteenth to twentieth century wooden pipe bowl was also recovered from beneath the structure.

Clothing Items

Several clothing and apparel related artifacts were recovered, principally from beneath the structure with a widespread distribution of buttons across the project area (Table 52). Fourteen buttons were

Table 52. Clothing and Apparel related artifact distribution

Artifact	**S**	**A**	**N**	**E**	**W**	**F1**	**F2**
Clothing							
Buttons	5	1	3	1	2	1	1
Clothing Hook	2						
Safety Pin	1						
Earring		1					
Beads	1		1				
Buckle	1		2				1
Shoes	102	3					
Shoe Eyelet		1					
Cloth	1						
Canvas	1						
Lead Bale Seal	1						

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

recovered from across the project area. The styles recovered covered the entire occupation history of the site (Table 53). The earliest button is a silver doublet button from the middle to late seventeenth century **(Figure 35)**. A similar example is in the collection at Plimoth Plantation from the RM Site (ca.

Table 53. Buttons recovered during the Site Examination

Material	Location	Style	Diameter	Date Range	Use
Bone	F1	1-Hole	1.5 cm	19th century	Underwear
Bone	F2	4-Hole	1.7 cm	19th century	Underwear
Bone	H	4-Hole	1.7 cm	19th century	Underwear
Glass	W	4-Hole	1.1 cm	19th century	Underwear
Copper	N	4-Hole	1.7 cm	19th century	Underwear
Copper	H	Civil War Navy	2.5 cm	ca. 1860s	Man's Coat
Copper	H	Spherical	1.1 cm	19th century	Woman's Dress
Copper	H	Disc	1.9 cm	1770-1800	Man's Vest/ Woman's Coat

Table 53. (Cont.)

Material	Location	Style	Diameter	Date Range	Use
Iron	E	4-Hole	2 cm	19th century	Man's Pants
Iron	H	4-Hole	1.7 cm	19th century	Man's pants
Tin	N	2-Hole	1.3 cm	19th century	Underwear
Silver	N	Tudor Rose	1 cm	1640-1670	Doublet
Silver	A	Disc	1.7 cm	1770-1800	Man's Vest/ Woman's Coat
Silver	W	Disc	1.5 cm	1770-1800	Man's Vest/ Woman's Coat

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

1630-1676). The majority of the buttons dated to the nineteenth century and were used on men's underwear. Other buttons recovered were silver and copper discs that were used either on women's coats or men's vests. Additionally, one copper Navy coat button dating to the Civil War was recovered.

Miscellaneous small clothing / apparel finds were made beneath and adjacent to the structure. Two brass clothing hooks dating to the nineteenth century were recovered from beneath the structure. One safety pin from beneath the structure is believed to date after 1850. One glass earring part, a single black glass ball dangle, was found adjacent to the structure. It is believed to date to the nineteenth century. Two beads, one being one cm long and blue and white and one tan, 1.1 cm long bead, were found beneath and to the north, respectively, of the structure. Based on the context they are believed to date to the nineteenth century as well, but may be from the late eighteenth century. One piece of canvas, one piece of finely woven red and white cloth were both recovered from beneath the structure. Finally, one lead bale seal stamped "N.Y.N.H/ H.R.R//460, dating to the nineteenth century. This seal is from the New York New Haven/ Hartford Railroad company and is believed to be a packing seal for goods shipped by the railroad.

Buckles were used on hats, shoes, knees, belts, and harnesses in the eighteenth century (they were not used on hats until the later seventeenth century). After about 1815, the use of shoe, knee and hat buckles went out of fashion and were then used for belts and harnesses. A total of one shoe buckle tang and two iron harness buckles were recovered. The shoe buckle tang and one of the iron harness buckles came from beneath the structure while the other iron buckle was found at Foundation 2.

Shoe Leather

One hundred two fragments of shoe leather were recovered from beneath and adjacent to the structure. All of the shoes appear to be nineteenth century varieties, either hand stitched or machine stitched. Fragments recovered included uppers, soles and heels. One shoe eye was recovered from adjacent to the structure.

Recreation Class

A total of nine recreation related items were recovered. Two clay marbles were found adjacent to the structure, five fragments of a rubber ball were found under the structure, and two slate pencils were found adjacent to it.

Construction Class

This class of artifacts is composed of artifacts related to the construction kitting out of the structures that stand or have stood on the site. It consists of the following sub-classes: brick, mortar, cement, architectural stone, nails and screws, wood, clay, window glass, tin flashing, keys, and iron hardware (Table 54).

Table 54. Construction and architectural related artifacts

Artifact	**S**	**A**	**N**	**E**	**W**	**F1**	**F2**
CONSTRUCTION ITEMS							
Brick	353	923	463	644	80	867	811
Mortar	160	40		4	3	45	14
Cement	3	45				1	1
Architectural Stone- Sandstone	1	1				3	
Architectural Stone- Slate	6	19	12	1	4	139	8
Soapstone	1						
Hand-Wrought Nails	81	71	26	44	27	76	98
Machine-Cut Nails	620	256	74	67	34	327	265
Nail Fragments		29	15	23			109
U-Nail	1	4				2	
Wire Nails	29	15	3	6	2	10	15
Wood Screw	9	2				1	
Screw Eye	1		1			1	
Square Nut							1
Wood	495				1		
Hinge							1
Door Hook	1						
Hook	3						
Tenter Hook	1						
Shutter Hardware	1						
Clay Daub or Mortar			1	1			
Flat Glass	774	396	18	75	21	158	196
Melted Glass	5						
Tin Flashing	15	1		1		1	4
Key	1	1					

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

Bricks

As early as 1625 there were English laws regulating the dimensions for bricks as 9" by 4 1/2" by 3" high (22.9 x 11.4 x 7.6 cm), which was very similar to the 1700 dimensions for statute (a.k.a common) bricks which were 9 x 4 1/2 x 2 1/4" (22.9 x 11.4 x 5.7 cm)(Cummings 1979:118). The Massachusetts Bay Colony set regulations on brick sizes in 1679, stating that the molds for bricks must be 9" long, 4 1/2" wide and 2 1/4" high, but, as William Leybourn observed in 1668, molds of such size seldom produced bricks of such size due to drying and burning (Cummings 1979:118). The firing of a single brick clamp results in three different types of bricks: Clinker- those that lie closest the fire which have a glaze on them; those that lie next in the clamp which are of second quality; Samuel or Sandal-bricks- those that lie at the outside of the clamp and which are soft and will dissolve in the weather (Neve 1736).

The bricks used at the site were likely not made locally. As early as 1629, clamps were established in Salem, Massachusetts for the manufacture bricks and roof tiles, while in the same year there is a singular, unique record of 10,000 bricks being imported into the colony (Cummings 1979:119). Measurable bricks from the Allerton Cushman Site in Kingston, Massachusetts (c1650-1690), ranged in width from 9 to 11.5 cm , 4.8 to 6.1 cm in height, and 17 cm long. The single measurable brick from the the Ezra Perry II (Aptucxet Trading Post Museum Site) in Bourne (c. 1670-1720) measured 10 cm wide, 6.35 cm high, and 20 cm long. Later sites, such as the Lot Harding House in Truro, Massachusetts (1746 to present) had bricks measuring 8.6 to 10.9 cm wide, 4.3 to 5.7 cm high and 18.2 to 18.8 cm long and the Duxbury Second Meeting House (1708-1785) bricks were 8.5 to 11 cm wide, 4.3 to 6.2 cm high, and 14 cm long. All of these bricks roughly fit within the known seventeenth and eighteenth century brick regulations. The bricks recovered from the Wing Fort House averaged 16.5 to 19.7 cm long (6.5 to 7.7 inches), 7 to 11 cm wide (2.7 to 4.3 inches) and 3.7 to 6 cm high (1.5 to 2.4 cm). As a point of comparison, bricks from the nineteenth century Samuel Fuller House site in Kingston, Massachusetts measured between 18.2 to 18.8 cm long, 8.8 and 10.9 cm wide, and 4.3 to 5.5 cm high, very similar to the Lot Harding bricks.

A total of 4,141 brick fragments were recovered during the Site Examination testing. One hundred twenty-eight fragments could be measured for either width or height. One mostly complete brick was recovered and a single measurements for length was obtained. Brick fragments were concentrated outside of the structure, especially in the east yard and associated with Foundations 1 and 2. This may indicate that many of the bricks came from the demolition of the structures associated with these foundations as well as the structure that once stood in the east yard in the later nineteenth century.

When compared with the bricks recovered from the other sites discussed above (Table 55) it can be seen that the bricks from the house most closely match those from the Samuel Fuller house and the Richard and Ruth Taylor site. This offers support for 18th century and 19th century builds at the site.

Table 55. Comparison of brick sizes between 17th to 19th century sites

Site	Length Range	Width Range	Height Range
Allerton/ Cushman Site (1650-1690)	17 cm	9-11.5 cm	4.8-6.1 cm
Ezra Perry II (1670-1720)	20 cm	10 cm	6.35 cm
Lot Harding Site (1746-Present)	18.2-18.8 cm	8.6-10.9 cm	4.3-5.7 cm
Duxbury Second Meeting House (1708-1785)	14 cm	8.5-11 cm	4.3-6.2 cm
Samuel Fuller House (1830-1890)	18.2-18.8	8.8-10.9 cm	4.3-5.5 cm
Richard and Ruth Taylor (1640-1800)	20 cm	8-13.5 cm	4-7 cm
North St. (1780-1850)	18.5 cm	7.7-11 cm	3.5-6.5 cm

Two hundred sixty-six fragments of mortar that once secured bricks together were recovered. The mortar is all made with sand and lime without the use of burned shell as was the standard practice in the seventeenth and early eighteenth centuries. Fifty fragments of cement were recovered in association with the foundation below the structure and associated with Foundations 1 and 2. Also recovered were two pieces of clay or possibly daub from the north and east yards.

Five pieces of architectural sandstone were recovered from beneath and adjacent to the structure and from Foundation 1. The sandstone may have been used as part of a foundation or staircase on the exterior of either the Watson house or the later nineteenth century structure that stood on the eastern portion of the property. One piece of soapstone was recovered from beneath the structure. The piece is rectangular and relatively thin, possibly indicating it was from either a stove or a table top.

One hundred eighty-nine pieces of slate, possibly from roofing slates, were recovered across the project area and especially in association with Foundation 1. This may indicate either that this building was

roofed with slate or that slate was used in some fashion associated with it. No nail holes were identified perforating the slate pieces, possibly arguing against their use as roofing slate.

Nails and fasteners

Nails are designated by their "penny" size, which refers to how much it costs to purchase 100 of each nail size. A two penny nail would cost two pennies to purchase 100 while a 10 penny nail, due to its larger size, would cost 10 pennies to purchase 100. The abbreviation "d" is used for penny, thus a "10 penny" nail is abbreviated "10d". The "d" used in the abbreviation comes from the Roman word for a coin, denarius, thus the "d". Fourteen sizes of hand-wrought nails were identified at the site. These range in size from small brads to 30d nails. The majority of the nails were of the 3d (1 1/4" long) size.

Hand-wrought nails were made by specific craftspeople called "nailers" in the seventeenth and eighteenth centuries. Nailers took long thin rods of iron and hand formed each individual nail. The resulting nail is distinctive from later machine-made nails in that the shank of the former is square in cross-section and tapers to a sharp point. The heads of hand-wrought nails are large and broad, often with four distinct blows of the headers hammer visible, giving them a distinctive "rose head" appearance.

The shanks of machine-cut nails are rectangular in cross section, which is a result of the cutting of nail blanks from a flat sheet of iron versus hand hammering each nail. Machine cut nails initially were individually headed but later, by the 1820s, had roughly rectangular machine-stamped heads. While hand-wrought nails and spikes were produced since ancient times, by the late eighteenth century they were replaced by partially machine cut nails between 1790 and 1825, with the machine cutting the nail shanks and a human finisher applying the heads by hand. By 1825 machines had been developed to crudely make the heads and by 1840 the heads and shanks were completely machine-made. Machine-cut nails continue to be produced until the present time. Eventually, by 1890s, round-shanked wire nails, which were first produced in the 1850s, began to dominate the nail market, replacing the machine-cut nails and continuing in use to this day.

A total 2146 nails and nail fragments were recovered during the Site Examination. Hand wrought nails made up 19.7% of the nail assemblage while machine-cut nails made up 76.6% of it. A total of 423 hand-wrought nails or hand-wrought nail fragments were recovered. The overall total included nail shank fragments with intact heads and 98 complete hand-wrought nails.

The majority of the hand wrought, machine cut, and wire nails were recovered from beneath and around the structure and in associations with Foundations 1 and 2 (Table 56). This may indicate contemporaneity between these deposits.

Table 56. Nail and fastener recovery distribution

Artifact	**S**	**A**	**N**	**E**	**W**	**F1**	**F2**
CONSTRUCTION ITEMS							
Hand-Wrought Nails	80	71	27	43	27	76	98
Machine-Cut Nails	602	256	74	66	34	327	265
Nail Fragments		29	15	23			109
U-Nail	1	4				2	
Wire Nails	29	15	3	6	2	10	15
Wood Screw	9	2				1	
Screw Eye	1		1			1	
Square Nut							1

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

Both whole nails, nail shank fragments and nail shanks with heads attached were recovered. A minimum number count of nails based on a count of the whole nails and the nail shanks with heads attached gives a figure of 368 hand wrought nails and 1,283 machine cut nails being present in the collection. Other fasteners and nail fragments that could not be identified to type were also recovered, as can be seen in Table 56.

Nail sizes correspond to their uses, with smaller nails used for fastening thinner wood and larger nails used for fastening thicker wood. A modern day rule of thumb is that in fastening sheathing, shingles, clapboard, etc., the nail should be at least three times longer than the thickness of the sheet or board

being fastened. This means that the 2d to 6d nails, the majority of those recovered, were being used for fastening wood that was .3 to .6" thick, which would be appropriate for clapboards or shingles with the smallest size used on lathe as well. The larger nails would have been used for larger pieces of wood. It is generally recommended that 8d nails should be used to nail 1" stock, sheathing, rough flooring and window and door trim. The use of 10d nails is limited to toe-nailing frames, and framing in general. Other sizes used in framing are 16d, 20d and 60d. Larger stock, such as 2-3" thick pieces, are nailed with 16-60d nails. The paucity of hand wrought nails of 10-30d size may be related to the use of treenails/ trunnels and the vertical plank construction used for the earliest phases of the house.

As can be seen in Table 57, the most common size hand wrought nails recovered were in the 3d, and 7-9d range. For the machine-cut nails, they were in the 3d and the 5-12d range. This may indicate

Table 57. Lengths of measurable hand wrought and machine-cut nails from the Site Examination

Size	Hand Wrought	Machine cut
2.5 cm/ 2d	1	1
3 cm/ 3d	4	14
3.5 cm/ 3d	15	93
4 cm/ 4d	9	7
4.5 cm/ 5d	1	5
5 cm/ 6d	8	13
5.5 cm/ 7d	8	14
6 cm/ 7d	12	17
6.5 cm/ 8d	14	18
7 cm/ 9d	17	36
7.5 cm/ 10d	1	16
8 cm/ 12d	3	17
8.5 cm/ 16d	2	4
9 cm/ 16d	1	1
9.5 cm/ 20d	0	1
10 cm/ 20d	2	4
11 cm/ 30d	0	2
12 cm/ 40d	0	2
13 cm/ 50d	0	3
Totals	98	268

different uses for nails in different periods. It is possible that, since earlier framing utilized more treenails and less larger size nails, the emphasis on smaller size nails for the hand wrought nails can be accounted for by this. Machine-cut nail use began in the late eighteenth and was common by the early nineteenth century. By this time treenails were no longer in common use and as a result, larger nails were now more common. The presence of 3d nails is a result of their use for shingling and fastening clapboards to the exteriors of buildings.

Table 58 shows a comparison of hand wrought nail sizes between various Plymouth Colony sites. It can be seen that the North Street hand wrought nail sub assemblage appears very similar to all of the other

Table 58. Comparison of the hand wrought nail assemblage from the North St. site with other Plymouth Colony Sites

Size	North St.	Wing Fort House	Water St. House	2nd Mtg House	Taylor Bray Farm	John Howland
1.5 cm/ Brad		1		1		1
2-2.5 cm/ 2d	1	7	2	4		3
3-3.5 cm/ 3d	19	42	53	14	4	91
4 cm/ 4d	9	3	7	3		32
4.5 cm/ 5d	1	2	10	2		37
5 cm/ 6d	8	10	10	3	13	50
5.5-6 cm/ 7d	20	11	20	1	7	182
6.5 cm/ 8d	14	2	17	1	12	20
7 cm/ 9d	17	2	23		17	44
7.5 cm/ 10d	1	1	4		4	6
8 cm/ 12d	3	1	1		6	12
8.5-9 cm/ 16d	3	1	1		1	6
9.5-10 cm/ 20d	2	1			1	7
11 cm/ 30d	0	1			1	
12 cm/ 40d	0					2
13 cm/ 50d	0					
18 cm						1
Totals	98	85	148	29	66	494

seventeenth to early eighteenth century sites it was compared to. This may indicate that the hand wrought nail assemblage originated from the early house that occupied the site, a house that may have been continually occupied from the seventeenth to early nineteenth century when it was removed by the Jacksons.

A total of 496 architectural wood fragments were recovered from beneath the structure and from the west yard. The pieces from beneath the structure are believed to have originated when the floor and joists were replaced in the late nineteenth to twentieth century.

Architectural hardware was limited to one butt hinge fragment from Foundation 2, and five hooks and a shutter hook from beneath the structure. A total of 1,638 pieces of flat window glass and five pieces of melted flat glass were recovered from the project area (Table 59). The flat glass was concentrated beneath and adjacent to the structure and also in association with Foundations 1 and 2.

Table 59. Flat glass and tin flashing distribution

Artifact	**S**	**A**	**N**	**E**	**W**	**F1**	**F2**
CONSTRUCTION ITEMS							
Flat Glass	774	396	18	75	21	158	196
Melted Glass	5						
Tin Flashing	15	1		1		1	4

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

Twenty-two pieces of tin flashing, believed to be from the roof of the original or the later nineteenth century house in the eastern portion of the property, were recovered from beneath and adjacent to the structure, from the east yard, and in association with Foundations 1 and 2 (Table 59). Two padlocks keys that may be related to locks placed on the structure were recovered from beneath and adjacent to it. One brass key was marked "W.BORMAN/ BROOKLYN NY". Borman was making padlocks in the late nineteenth century.

Labor and Technology

Transportation Equipment

Transportation equipment was limited to one horseshoe nail recovered from Foundation 2 and fragments of horse bridle leather and guide rings from beneath the structure. It is expected that the Watsons and Jacksons may have had a separate stable located either on their property or somewhere in the vicinity. As a result, transportation related artifacts, wagon parts, horse tack related items, would be expected to be found there and not in the domestic refuse pile.

Tools

Tools were limited to one possible iron wedge from the east yard, one awl from Foundation 1, two small files from beneath the structure and Foundation 1, and one possible tool ferrule from beneath the structure. It is expected that tools would have been used by hired workmen and not by the family themselves, so the recovery of few traces of tools is not surprising.

Subsistence

Procurement Equipment

Five procurement items were recovered, three fragments of flint, and two gunflints. The flint fragments were recovered from adjacent to the structure and in the west yard. One fragment is burned gray, one is a tan colored flint and one is dark gray. The flint fragments may have come from the reduction of ballast flint for gunflint or more probably for use as strike-a-lights. The gunflints are both of the spall variety. The gunspall was a product of England which was replaced, circa 1780, by the blade technology for producing gunflints. Gunspalls result when short flakes are struck either from the concave or convex surface of a flint core. They are bulbous near the point of impact, taper to a feather edge , and have been described as wedge shaped. The flake is usually trimmed about the sides and near

the bulb forming a rounded heel while the termination is usually left thin and square. The thin termination strikes the battery. Witthoft feels the Dutch were the main producers of them, and that they date from 1650 to 1700. While Witthoft's assertion that they were produced only by the Dutch as been overruled, the date he gives for their introduction is felt to be essentially correct. These were felt to have replaced the bifacial gunflints as lithic technology became more time efficient in producing a working gunflint in the shortest amount of time. The gunspalls from the Site Examination are 2 and 2.2 cm wide and 2 and 1.5 cm long. Gunspalls of this size would have been used for a musket. Both are made of gray flint.

Faunal Remains: Bone and Shell

Analysis of the faunal remains sought to examine the site inhabitants' involvement in the larger local and regional markets by examining the degree to which the inhabitants raised and butchered their own livestock versus what they may have purchased from neighbors or from the larger markets in Plymouth. The recovery of a wide variety of elements (cranium to tail vertebrae, upper and lower elements of legs, phalanges) from a species likely indicates that the species was raised on site and butchered there or that it was purchased whole and butchered on site. The faunal elements recovered when species are butchered and consumed on site differ markedly from instances where only specific elements are purchased at a market or from a neighbor. In the latter case, only specific elements are present with many of the less desirable elements (tail vertebrae, lower legs, phalanges) being absent.

The faunal remains were used to investigate questions of self-sufficiency and dietary habits, butchery practices and the stock raising methods of the inhabitants. Analysis of the remains focused on the examination of the cultural and taphonomic processes that altered the faunal record prior to and following deposition. Analysis will attempt to identification the taxon and elements present, aging of elements, and the identification and analysis of the evidence of butchery present on the elements.

Evidence of the vertebrate and invertebrate portion of the diet of the occupants of the site was represented by both bone and shell remains. A total of 3,879 fragments of shellfish and 2,107 fragments of animal bone were recovered (Table 60). The majority of both the shellfish and vertebrate remains were recovered from beneath and adjacent to the structure, at Foundations 1 and 2 for the bone remains and in the west yard and at Foundation 1 for the shellfish.

Table 60. Distribution of faunal remains

SUBSISTENCE	**S**	**A**	**N**	**E**	**W**	**F1**	**F2**
Faunal							
Bone	1447	251	16	82	28	173	110
Shell	3293	260	11	9	86	209	11

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

Shellfish

Shellfish were represented by primarily by bivalve species but also by two gastropod species (Table 61). It appears that oysters and soft shell clams were the principle species consumed with other

Table 61. Recovered shellfish species

Species	Beneath House	Adjacent to House	North	East	West	F1	F2
Periwinkle	2						
Conch	2						
Blue Mussel	13					1	
Oyster	1048	186	10	22	69	152	8
Scallop	1						
Surf Clam	4	5				1	1
Soft Shell Clam	2221	69	1		5	55	2
Totals	3291	260	11	22	74	209	11

species such as the periwinkles, conchs, scallop, and blue mussel possibly being incidental. These species could have arrived at the site in seaweed that was used as fertilizer on garden beds or for keeping the shellfish wet. The majority of the species were recovered from either under the structure, adjacent to it, or from Foundation 1. This indicates that all of these deposits were probably contemporary. The dearth of shellfish remains from Foundation 2, the east yard, and the north yard may indicate that these were active areas of refuse disposal. The paucity in association with Foundation 2 may indicate that it was filled either before or after the deposits were made to the immediate east and south of it. Most of these species would have been available from Plymouth Harbor except the oysters, which were not found here in any appreciable quantities.

Bone

Excavations recovered a total of 2107 pieces of bone from across the project area. This total includes 98 pieces of calcined or burned bone.

Calcined Bones

Calcined bone is bone that has been heated to such a degree that all of its combustible organic compounds have burned away leaving the inorganic non-conbustibles. Calcined bones range in color from indigo-blue to white (completely calcined). The heat range that causes bones to become burned is from 130-340 degrees Celsius with the bones becoming black at 240-340 degrees Celsius. Bones begin to become calcined between 440-600+ degrees Celsius. Basically bones which are burned white had to have been in a fire which was at least 600 degrees. Bones which were burned were either from a fire which was either under 600 degrees or the fire was 600+ degrees but the bones did not spend a great deal of time in the fire. The presence of calcined and burned bone at a site is indicative of the disposal of hearth and cooking waste.

Ninety-eight pieces of burned or calcined bone were recovered from the project area (Table 62). The majority of the burned and calcined bone was recovered from beneath the structure and at Foundation 1, with secondary concentrations in the east and west yards. The overall disposal pattern for the

Table 62. Burned and calcined bone fragment distribution

	S	A	N	E	W	F1	F2
Burned Medium Mammal Flatbone	4	3				2	
Burned Medium Mammal Longbone		1		1		3	
Burned Large Mammal Longbone	2						
Burned Large Bird Longbone						1	
Calcined Bone				1			
Calcined Cattle Lumbar Vertebra					1		
Calcined Chicken Quadrate						1	
Calcined Large Mammal Rib	2						1
Calcined Medium Mammal Flatbone	14	2	3	4	6	10	1
Calcined Medium Mammal Longbone	3	4	3	6	4	6	3
Calcined Medium Mammal Rib				1	2	1	
Calcined Sheep Radius				1			
Calcined Sheep Thoracic vertebra						1	
Totals	25	10	6	14	13	24	5

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

burned and calcined bone indicates that material was dumped to the south away from the house with most of it being deposited beneath the structure, and at Foundation 1. The paucity of burned and calcined bone at Foundation 2 may indicate that it was still standing when most of the material was deposited.

The majority of the bones were calcined to the point of being white. This indicates that they were in the fire for an extended period of time, probably the result of being discarded into the cooking hearth fire and subsequently thrown into the refuse area of the yard. The majority of the remains were of medium mammals, possibly indicating that these remains received additional processing around the hearth that resulted in the bones or bone fragments being discarded into the fire more often cattle bones. This may indicate that medium-sized mammal bones were broken and boiled in soups with the bone fragments subsequently being discarded either from the plates or directly from the pot into the fire when the product was consumed or served. Large mammal bones and bird bones may not have received such treatment as often.

Non-Calcined Bones

The species represented by non-calcined remains were dominated by domestic mammals (cattle, swine, and sheep), domestic and possibly wild birds (chicken, duck, goose, and turkey), and wild fish (bluefish, haddock, mackerel) (Table 63). Additional species, the Norway rat, the mouse, the squirrel,

Table 63. Faunal species recovered

Species	S	A	N	E	W	F1	F2
Mammal	1		1				
Small Mammal	6	2			1	1	
Squirrel	4	1				1	
Rat	29	6				4	
Mouse	1						
Med. Mam.	523	90	8	23	5	65	33
Sheep	222	41	1	4	2	29	21
Swine	86	49		3	1	10	5
Large Mam.	22	6				9	2
Cattle	126	9		5	1	18	9
Fish	83	9			3	8	1
Small Fish	1						
Bluefish	1						
Mackerel	1						
Haddock						2	
Bird	30	3			4	2	
Large Bird	18	1					20
Medium Bird	108	13				2	
Small Bird	9	1		31			
Chicken	79	7				1	
Duck	16	1					
Goose	25						
Turkey	22	2				4	8
Painted Turtle	8						
Totals	1421	241	10	66	17	156	99

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

the turtle, the small bird (which appears to have been the burial of a complete small bird [a pet?] in the east yard) were presumably not consumed but existed as a commensal species living on the property. The small mammals appear to have lived in the space beneath the structure.

Wild Mammals

The rat and mouse definitely were not consumed and are commensal species. Commensal species are those that live with people and may accidentally enter the archaeological record by happening to die at a site or be killed by the inhabitants and thrown into refuse area. The raccoon and skunk may also have just happened to die in the cellar and the unidentified bird may have been carried in by a cat. There is the possibility that, because only a few elements from these species' skeletons are present, that they

may have been consumed. Usually, commensal species are represented in assemblages by rather complete skeletons due to the fact that they usually die and are deposited into the archaeological record whole since they are not food species.

The recovery of the rodent bones from beneath and around the structure are indicative of a common problem in Plymouth during the eighteenth to nineteenth centuries. The rats, through not specifically the Norway rat, appear to have been a problem in the town since 1739 when a bounty of three pence per head was placed on them (RTP 1739:331). Gnaw marks from rats were noted on a number of mammal bones and seeds recovered during Site Examination testing.

Domestic Mammals

Three hundred forty fragments from domestic mammals (cattle, swine, caprine [sheep/ goat]) were recovered (Table 63). The overall assemblage was dominated by cattle remains, which provided the majority of meat in most contexts. Swine and caprine occurred fairly equally throughout. The majority of the remains were recovered from the cellar hole and the North Yard Scatter and represent cellar fill and kitchen waste.

Determining the age at which individuals represented in an assemblage were killed can provide information on economic aspects such as hunting capability, origin of domestication and mode of exploiting livestock (Davis 1987:39). Generally, two different types of techniques are used: the fusion states of the epiphysis, and tooth eruption and wear sequences. It has been found that there is little variation between breeds, sexes and individuals and this helps to make this an important technique (Davis 1987: 39).

The use of teeth is based on the fact that teeth undergo a sequence of eruption, wear and loss, subsequent wear, and can be used to establish relative or approximate age of adult animals (Wrexham 1994:10). The use of epiphyseal fusion states is based on the fact that in young animals ends of longbones are attached to their shafts by cartilage that become converted to bone over time. Ossification takes place in different joints at different ages from soon after birth to five years old. By comparing the variety of bones that fuse at different times in a young animal's life, the kill profile or kill-off pattern practiced by those who raised or hunted the animals can be determined. The problem with this technique is the fact that the bones of very young animals that may have been harvested generally suffer from more post mortem damage and loss due to softer and more immature nature of the bones. This may induce a source of bias towards older animals. Also, when only single fragment occurs, the age can only be estimated as “older than” or “younger than” (Wrexham 1994:12).

One of the uses for kill-off patterns in this study will be the investigation into the husbandry practices that provided the domestic mammal meat to the diet of the inhabitants. This portion of the study is based on the observation that the raising of animals for different purposes produces different kill-off patterns.

Cattle husbandry for meat production might involve a herd or flock in which excess young males are removed to market at their optimum size with only a limited number left to breed. An assemblage with a high proportion of animals 1-2 years old, a number of old animals and a few veal calves may be interpreted as reflecting the consumer or market end of a husbandry geared towards meat production.

Dairy cow production produces a profile where very young animals, mainly males, may be killed once lactation has been established in the female. The herd is made up of adult females producing milk which are only slaughtered when they fail to reproduce, and a small number of breeding males. This would predict high numbers of animals under 6 months and an adult sample dominated by females up to 12 years old (Bowen Gaynor 1986: 26).

If farmers are raising a combination of dairy and beef herd it would be expected that the resulting kill-off pattern would consist of a fair number of very young individuals, a very large number of between 18 to 24 months old and a large number of old dairy cows, beef breeders, oxen and bulls (Bowen Gaynor 1986: 26)

When sheep are raised solely for meat, it has been found that 25% die the first year either from infant mortality or for lamb meat if market demand is high; 40% are killed in the second to third years for mutton, consisting of wethers and females not needed for breeding and 35% after the third year which are old males and worn out females (Bowen Gaynor 1986:26).

When they are raised for wool 25% die or are killed the first year as a result of infant mortality and lamb meat; 60% from the second to sixth year and 15% are killed after the sixth due to low wool quality. Production for wool fleece begins in earnest between 2 and 6 years because the wool is finest when the animals are young and it gets worse as the animals age. This produces a herd profile where young males are castrated with only a few rams left intact and both sexes kept until wool quality drops. The slaughter pattern would be almost exclusively of adults including females and castrated males.

When sheep are raised for milk the young that are not needed are slaughtered soon after the "yield of milk is not endangered" (Bowen Gaynor 1986: 26). Generally, the sheep are slaughtered in second to third year.

Because pigs are not a multipurpose animal, the kill-off patterns are somewhat simpler than for other species. It has been found that if the sows are practicing a pattern of once a year farrowing in spring, then the piglets are most often killed at 9-10 months old. If the sows are part of a double farrowing system, in spring and fall, then the fall pigs are killed between 1 ½ and 2 years.

Cattle

One hundred sixty-eight fragments of cattle bones representing a minimum of four individuals were recovered. The four individuals present were aged under 10 months, two under 48 months and one over 9 years. Essentially there was at least one calf, two younger individuals, and one older individual consumed in the household.

Joann Bowen in 1994 concluded an in depth study of Chesapeake versus Plymouth Colony foodways and found that this was a common pattern in the eighteenth to nineteenth centuries (Bowen 1994:157). Looking at Bowen's 1994 work, this would indicate that either the inhabitants of the house were practicing a livestock management program consistent with a combination dairying and beef production or that they were purchasing meat from a market that was providing such. Dairying practices led to a selling of young bull calves for veal and of older cows not producing milk whereas beef production saw few veal calves and more animals being killed at the prime age of slaughter, 18-24

months (Bowen 1994:26).The cattle skeletal elements present in the assemblage seem to indicate that the consumers in the house were purchasing their meat cuts rather than raising their own cattle and slaughtering them.

As can be seen in Table 64, all elements, except for phalanges and atlas and axis vertebra were recovered. The bones from the thorax were the most numerous followed by upper front leg and lower and upper back legs. It appears that the inhabitants were purchasing complete or nearly complete carcasses or that they purchased cuts from the entire animal for consumption.

Table 64. Element occurrence and distribution

Element	**Cattle**	**Swine**	**Caprine**
Cranial	25	52	18
Atlas Vertebra		3	
Axis Veretebra			1
Cervical Vertebra	5	4	3
Rib	30	26	65
Thoracic Vertebra	12	3	13
Pelvis	6	7	18
Lumbar Vertebra	22	4	33
Sacrum	3		3
Caudal Vertebra	1		1
Scapula	9	1	1
Humerus	2	7	9
Radius	3	2	6
Ulna		5	2
Carpals/ Tarsals	11		12
Metapodium	3	7	7
Femur	13	11	40
Tibia	12	5	24
Fibula		1	
Patella		1	3
Calcaneus	3		13
Astragelous	2	1	8
Phalanges		14	10

Pig

One hundred fifty-four fragments of pig bones representing a minimum of two individuals were recovered. The two individuals present were under twelve months and one was over 24 months, as evidenced by the degree of epiphiseal fusion on the ends of some of the bones. The fact that one

unerupted third molar was recovered indicates that at least one was under 22 months old while the presence of an erupted second molar and it wear stage indicates that the individual was over 13 months old and probably between 14and 26 months old. Pig cranial, rib, humerus and back legs were the most common elements present.

Sheep

Three hundred twenty fragments of sheep bones representing a minimum of seven individuals were recovered. At least one individual was under 16 months old and at least two were over 5 years old. It appears that the households that generated these faunal remains consumed lambs and mutton. The most common elements present were ribs, and back legs, the latter probably representing leg of lamb or mutton.

David Landon published an extensive study of faunal remains from rural versus urban archaeological sites in and around Boston, Massachusetts (Landon 1996). Landon used collections from four historical sites in Massachusetts which spanned the years 1630 to 1825: the Winslow Site in Marshfield (1650-1700), the Paddy's Alley/ Cross Street (late 17th to early nineteenth century), the Wilkinson Backlot site (1650-1825), and the Spencer-Pierce-Little site (late eighteenth century) (Landon 1996: 19-28). Landon's analysis focused on differences in rural versus urban assemblages in terms of butchery patterns, ages and seasons of slaughter and how these differences reflected how fauna were raised, butchered and consumed in and around Boston. Landon focused more on broader patterns of urban supply and distributions versus the ethnicity and socioeconomic examinations commonly carried outwith faunal remains (Landon 1996:2). The amount of meat consumed by occupants of a site has been found to be reflective of the relative wealth of the occupants of the site (Landon 1996:1). Unfortunately, the amount of preserved (boneless) meat consumed at a site cannot be controlled for. This has been determined to be a potential source of difficulty in interpreting the amount of meat consumed by the occupants of a site (Landon1996: 2).

The high occurrence of faunal remains at the site is probably a reflection of the occupants' upper class status. It is interpreted that at least part of the assemblage came from single purchases of whole or almost whole animals, and that part of it came from smaller purchases of cuts of meat with those purchases spread during at least two periods of occupation at the site.

Taphonomically, the assemblages from the site showed a moderate to moderate amount of post-use damage in the form of both carnivore chewing and rodent gnawing. A total of 46 bones were found to have been altered by gnawing (n=34) or chewing (n=12) with sheep bones being the most common species to be chewed (n=9) or gnawed (n=28). Most of the bones that had been gnawed or chewed came from beneath or adjacent to the structure (n=42) with the remainder coming from the east yard (n=1) and Foundation 1 (n=2).

The evidence of butchery and consumption marks on the faunal remains indicate the occupants either purchased their meat cuts or purchased complete carcasses and subdivided them. Chop, saw, and to a limited degree, cut marks were present on the bones. Cattle and sheep bones were more commonly chopped than swine bones but cattle and swine were more commonly sawn than sheep (Table 65). Cut marks were rare on all species.

Table 65. Butchery mark occurrence

	Cattle	Swine	Sheep
Chop	64/ 38%*	28/ 18.2%	79/ 24.6%
Saw	23/ 13.7%	7/ 4.5%	3/ .9%
Cut	0	1/ .7%	1/ .3%

*Fragment Count/ % of total Fragment Count for Each Species

Similar elements showed similar butchery evidence between species. Sawing is presumed to have been used by the professional butcher to subdivide the larger carcass into salable parts, representing primary and secondary butchery. These parts were then further subdivided by chopping, into more manageable sized pieces for roasting or boiling,which represents tertiary butchery. The occurrence of chop and saw marks in the assemblages may indicate that both purchased and home butchered meat cuts were present The paucity of cut marks on the elements indicates a likely preference for boiled versus roasted meats. Boiling bone-in meat would relieve the bone of its meat while adding all the fats and grease present in the meat and bone into the stew, broth or soup. As the meat is removed from the bone by means of boiling, there would be a lack of marks caused by knives on the bones.

Landon found in his analysis that the largest (the trunk, consisting of the scapula, ribs, vertebrae, and pelvis) and meatiest elements of the body (humerus, and femur) logically had the highest percentage of butchery evidence (Landon 1996: 61). Saw marks were found to show an increase in frequency of occurrence over time in all of the urban and rural assemblages studied, rising to 75% by the end of the nineteenth century. Landon interpreted this as coinciding with the rise in the production of standardized and discrete cuts of meat that characterized the butchering industry by the end of the nineteenth century and continues today (Landon 1996: 65). The butchery marks present on the Harlow Old Fort House cellar bone are all represented by examples from Landon's work as well: chopping of the mandible to remove the tongue and jowl meat; lateral splitting of the vertebral column representing initial subdivision of the carcass and further subdivision into cuts; the subdivision of the scapula to create steaks or roasts; finer scale subdivision of the humerus again into cuts; horizontal sawing of ribs to produce slabs; sawing of the pelvis with the proximal end of the femur possibly articulated as one cut; and the subdivision of the tibia and its possible articulation with the distal end of the femur (Landon 1996 68-95). Excavations in the early 1970s in downtown Plymouth by Plimoth Plantation on the lot located between Main and School streets (C-13A site), encountered three privies that were filled between 1790 and 1835. Faunal remains from this site indicate a possible shift in the use of domestic species overtime. Cattle use remained constant but the use of swine showed a continuous and steady decline in the popularity with an inverse rise in the popularity of sheep (Anonymous 1974). The shift from swine to sheep was interpreted as possibly being a result of the gradual deforestation in the Plymouth area with the result being a shift in husbandry approaches to grazing versus foraging species.

Fish

One hundred seven fragments of fish bone were recovered from across the project area with the majority being concentrated beneath and around the structure and at Foundation 1 (Table 66). Due to

Table 66. Fish remains recovered

Species	S	A	N	E	W	F1	F2
Fish	83	9			3	8	1
Small Fish	1						
Bluefish	1						
Mackerel	1						
Haddock						2	

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

the fragmented nature of the remains, only three species of fish were identified: Bluefish, mackerel, and haddock. All of the fish remains are believed to have come from the market and were not caught by the inhabitants.

Birds

A total of 407 pieces of avian bone were recovered from across the project area with the majority coming from beneath and around the structure and at Foundation 2 (Table 67). Thirty-one pieces of bird

Table 67. Recovered avian remains

Species	S	A	N	E	W	F1	F2
Bird	30	3			4	2	
Large Bird	18	1					20
Medium Bird	108	13				2	
Small Bird	9	1		31			
Chicken	79	7				1	
Duck	16	1					
Goose	25						
Turkey	22	2				4	8

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

bone were recovered from the east yard but these were found to all be from a single individual small bird which appears to have been purposefully buried. The bird may have been a pet. The identified species are all believed to have been purchased at the Plymouth market versus having been raised on site.

Reptiles

Fragments of one painted turtle were recovered from beneath the structure. This individual may haven been a pet that was disposed of here, it may have been dragged there by an animal to be consumed, or it may have crawled in here and died.

Painted turtles (*Chrysemys picta*) live in virtually any permanent body of water that has suitable basking sites (logs, banks, or rocks). They prefer muddy bottoms such as those found in rivers, lakes and ponds, making Town Brook a likely source for this turtle. Painted turtles reach an average adult

size of 5 to 8" and would provide approximately ½ pound of meat. Painted turtles are active from April to October, emerging in April.

Faunal Summary

The faunal remains recovered came principally from beneath and adjacent to the structure and from Foundations 1 and 2. The majority was fractured to the point that it could only be identified only to the level of medium or large mammal. The protected environment beneath the structure resulted in a wider range of species, skeletal elements, and identifiable pieces than other contexts. It appears that the eighteenth and nineteenth century inhabitants of the site consumed cattle, sheep, and swine as well as a variety of fish and fowl, all of which are believed to have been purchased from Plymouth markets.

Consumption practices appear to have favored the use of both young and old individuals, with an special preference for sheep. Cattle and sheep were slaughtered either when they were too old to be productive or occasionally at a very young age. Swine were slaughtered either close to the ideal age of slaughter (18 months) or when they were old. Enough of a variety of skeletal elements were present in the assemblage to determine that either complete carcasses or at least half carcasses were consumed on site. The occurrence of rat bones beneath the structure indicates that this species cohabited with the human occupants of the house and that it was an endemic pest around Plymouth. The occurrence of carnivore chew marks on several bones may indicate that cats, skunks, or other commensal species had access to the bones when they were disposed of.

Seeds

One hundred three seeds and nuts were recovered, chiefly from beneath the structure (n=99) but also from Foundation 1 (n=1), Foundation 2 (n=1), and the north yard (n=2). Thirteen species were identified (Table 68). Most, if not all of the seeds and nuts are believed to have been collected by

Table 68. Seeds and nuts recovered

Species	Count
Apricot	1
Black Walnut	30
Cherry	6
English Walnut	7
Hickory	1
Linden	1
Olive	1
Peach	8
Pecan	2
Plum	19
Pumpkin	5
Squash	3

Table 68. (Cont.)

Species	Count
Watermelon	19
Total	103

animals to be consumed under the structure in dens. Three species were probably not consumed by the inhabitants: Clack walnut, linden, hickory. The remaining species represent fruits and nuts consumed by the inhabitants with the shells and pits being subsequently discarded. These remains provide an interesting glimpse into the kinds of fruits and nuts being consumed during the nineteenth century and, of the kinds of trees present in the vicinity at the time.

Other Artifacts

A variety of other unidentifiable or modern artifacts were also recovered during Site Examination testing (Table 69). These artifacts were deposited at the site during its entire occupation history, but most could not be identified to specific periods or for specific functions.

Table 69. Miscellaneous unidentified and modern materials recovered

	S	A	N	E	W	F1	F2
OTHER							
Iron Fragments	180	2					3
Flat Iron Fragments		44	3	1			9
Iron Loop	1						
Lead Fragments	2	1				1	
Brass Scrap		5					
Iron Square Rods	5						
Iron Threaded Rod	1	1					
Wire- Copper	1					1	
Wire- Iron	7			1		3	
MODERN	2	10				5	
Aluminum Buckle		1					
Aluminum Circle		1				10	1
Aluminum Foil		1					
Asphalt Shingle						3	
Lincoln Cent						2	1
.22 Cal Shell	1	1					
Copper Eye Hook		1					
Copper Paper Reinforcer		1					
Copper Wall Hook						1	

Table 69. (cont.)

	S	A	N	E	W	F1	F2
Graphite Battery Rod						1	
Iron Bag Clip						1	
Iron Pipe End Cap						1	
Plastic Camel						1	

S- Under Structure, A- Adjacent to Structure, N- North Yard, E- East Yard, F1- Feature 1, F2- Feature 2

VIII. RAMP INSTALLATION

Installation of the posts for the handicap accessibility ramp at the Plymouth Center for the Arts at 11 North Street had the potential for disturbing significant archaeological deposit located during the recent site examination testing conducted by the Plymouth Archaeological Rediscovery project (PARP) in 2012. The subsurface disturbance caused by the ramp's construction consisted on the excavation of 10, 110 to 120 cm (43-48 inches) deep post holes measuring approximately 40 cm (15 inches) in diameter **(Figure 36).**

The post holes were dug in areas that had been previously tested by PARP during the site examination **(Figure 37)**. Recording of the soil profiles and a preliminary scan of the excavated soils showed that post holes 1 to 4 were dug into a late nineteenth to early twentieth century building foundation or cellar hole while the remaining post holes were excavated in undisturbed locations. The profiles of all of the post holes have been photographed and drawn. Soil profiles appeared consistent with those recorded during the site examination and no significant artifacts were visible in the backdirt.

Figure 36. Ramp installation location

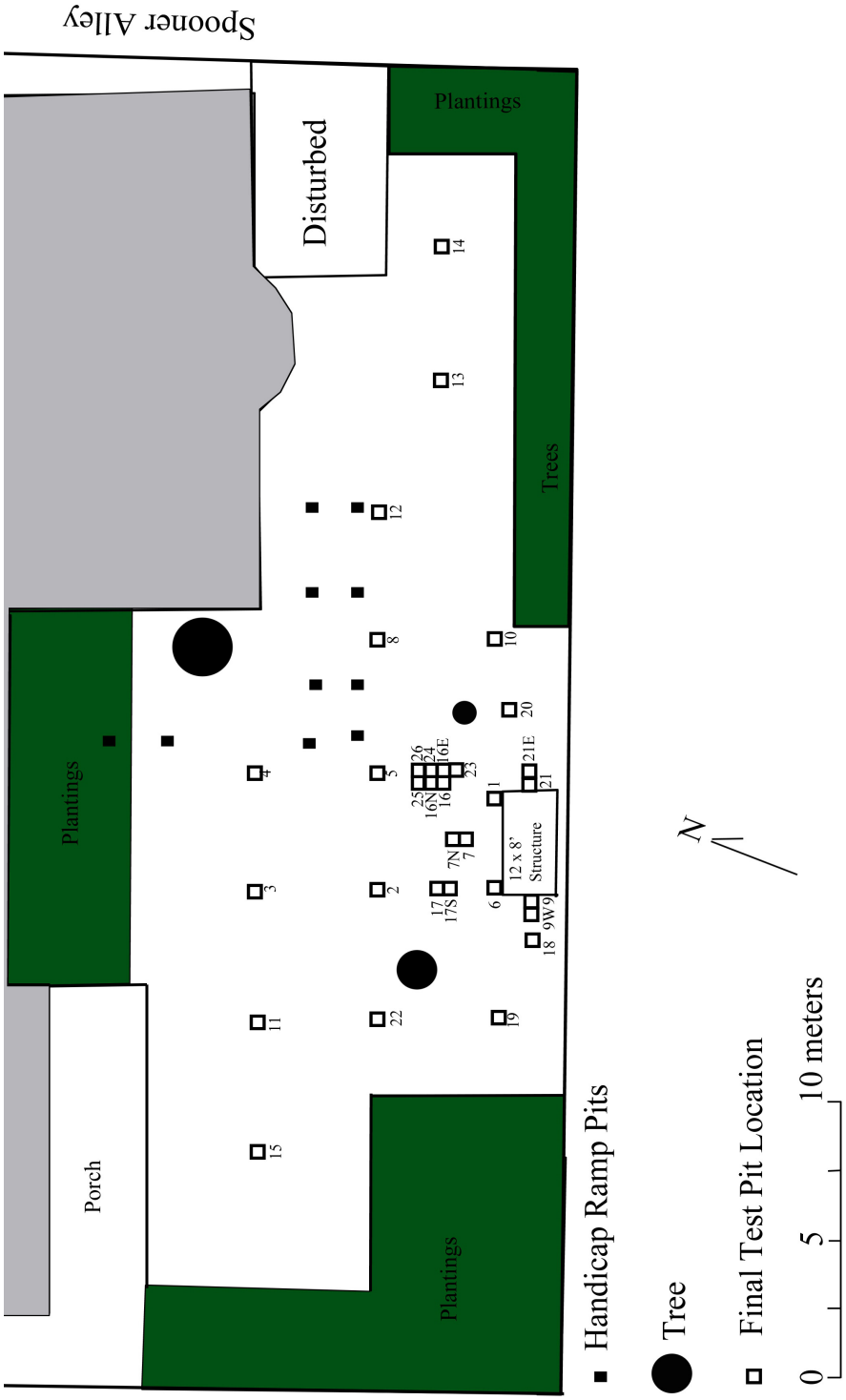


Figure 37. Site examination testing and ramp location

IX. CONCLUSIONS

Determination of Site Significance

The determination of the significance of the Plymouth Art Guild (PAG) and the Watson/ Jackson sites was made by examining the size, data contents, and spatial arrangement of artifacts and features with the final product being a recommendation regarding the potential eligibility of the site for inclusion in the National Register (950 CMR 70.04: MHC).

Site Boundaries

PARP archaeologists identified the boundaries of the site by a combination of artifact concentrations established through shovel test pit excavation and the property bounds. The PAG site was found to cover an area measuring 15 meter wide (east to west) by 12 meter long (north to south) area beneath and around the 12 x 8' structure. The PAG site is believed to be a small component of a larger village site that extends along Water Street from Town Brook north to at least the project area.

The Watson/ Jackson site was found to extend across the entire project area of the back yard of 11 North Street.

Site Integrity

A preliminary assessment of the site's integrity was made through the excavation of the 50 shovel test pits along the five-meter grid pattern across the property area. The PAG Site was found to be intact with minimal evidence of post occupation disturbance. One intact possible Late Woodland feature was identified. The Watson/ Jackson Site was also found to be intact with 17th through 20th century components present. Site integrity was refined during the Site Examination through the determination of the presence or absence of intact subsurface features and deposits. The site was found to contain several intact features consisting of 18th-19th century foundations and refuse deposits and evidence of 19th century landscaping. Judgments regarding the integrity of the site were based upon the content and extent of the intact activity areas, stratigraphy or horizontal separation of materials, and the preservation of features and organic material. Given the content and preservation of the spatial arrangement of artifacts and feature, the site is identified as having a high research potential and significance.

Research Potential

Research potential for this site was assessed by examining how individual artifact classes, and the site as a whole, can add to what is known and what can potentially be known about prehistoric and historic sites and how they relate to local, regional, national and international historical and archaeological trends from the Late Archaic to the 19th century. This site is believed to have important research value to add on a local, regional or national level. It is considered significant because it has intact, spatially and temporally distinct features with a good documentary record of the historical occupants living at the site.

Research Questions

1. **What traces of the Native occupation of this part of Plymouth are present at the site and how do these relate to the evidence of native occupation found elsewhere in Plymouth? Can the prehistoric material recovered be used to investigate the economy of the Native inhabitants and the degree of sedentism represented at this site?**

A total of 196 prehistoric artifacts were recovered from a 15 meter wide (east to west) by 12 meter long (north to south) area beneath and around the 12 x 8' structure. One prehistoric feature (Feature 7) which appeared to represent a shallow basin feature was identified as well. The recovered material dates to the Late Archaic and Late Woodland periods, based on projectile point styles and recovered pottery. Analysis of the flake striking platforms and the breakage patterns on the projectile points indicates that the project area was being used for early stage lithic reduction and the production of bifaces and projectile points in the Late Archaic. The nature of the occupation during the Late Woodland period appears to have been different with projectile points that were broken during the hunt being brought back to this location and subsequently discarded.

The findings from the Site Examination indicate that the PAG Site was part of a larger base camp during the Late Archaic and the Late Woodland periods. Other base camps have been identified within a few kilometers of the project area including one at Poorhouse Pond, one on Wellingsly Brook, one on the Eel River, and to the north of the project area at Bay Farm in Kingston. The base camps identified archaeologically correspond well with the Native house locations depicted on Champlain's 1605 map of Plymouth. Champlain may have used the symbol of the Native house to represent community locations and not just house locations. These base camps may have all been part of one large community called Pawtucxet, or more probably, they each represented their own separate community with its own name and leadership.

2. **What traces of the pre-Watson occupation of the site are present and is it possible to infer anything about the earlier inhabitants of the property from the material encountered?**

Approximately half a dozen seventeenth century artifacts were recovered including pipe stem and bowl fragments and a solid silver doublet button with an embossed Tudor rose. These artifacts are believed to date to the middle to late seventeenth century when the property was owned by various families, at least one of whom was a merchant. The seventeenth century occupation is believed to have been focused closer to North Street, so the material recovered represents yard scatter behind the house. It is not known if the house that Watson lived in was built by him when he acquired the property or if he continued to live in the seventeenth century house that was originally here.

3. **What was the socio-economic level of the Watsons and/ or the Jacksons as reflected in their consumer choices (ceramics, glass, and faunal)?**

The Watsons and the Jacksons are both known to have been very wealthy merchant families. The ceramics show an abundance of individual vessels, vessels of higher quality, and diversity of forms. Significant vessel forms that may relate directly to the Watson and Jacksons status as merchants include shipping and storage containers (including the “Tamarind jar”) and the possible sugar mold. Glassware also reflected their status with a large number of vessels, a large number of wine and alcohol bottles,

etched glass oil lamp chimneys/ globes, bottles bearing embossed personal seals (for George Watson), and numerous drinking glasses. Faunal remains did not reflect the family status as easily as the ceramic and glass classes did because, while there were abundant faunal remains recovered, they appeared to represent whole animals that were butchered at home versus purchased cuts of meat. The Watsons and Jacksons may have had farms that they owned that they acquired their meat from versus purchasing it from local butchers. One of the aspects of the faunal remains that was possibly indicative of their status was the abundance of lamb and mutton represented, and represented mainly by hind legs cuts. This was species that may have been more often purchased versus raised.

4. To what degree was the family self-sufficient and to what degree did they rely on the larger local, regional, national and international markets? What was the nature of the relationship between the Watson and Jackson households and their neighborhood and town spheres of interaction?

Being merchant families, the Watsons' and Jacksons' material culture assemblage was reflective of goods shipped from elsewhere versus those produced locally. English and Chinese ceramics dominated the ceramic assemblage with local wares serving as baking pans and utilitarian kitchen and hygiene items versus tablewares. As stated previously, the faunal remains indicate that the families most probably purchased some, or possibly most, of the shellfish and vertebrate fauna, but they also may have raised cattle and possibly swine, based on the distribution of a wide range of elements from the entire animal versus selected cuts or elements. It is also possible that they purchased either complete carcasses or half carcasses as butchered them further in their kitchen.

5. Does the architectural style of the 12 x 8' structure suggest an African origin for it? Is there any evidence (documentary or archaeological) that can link it to either the Watson occupation or more specifically to the slaves that they were known to have owned? If it is not associated with the Watson's slaves, what function did it serve?

The architecture of the structure does not match any known slave dwelling from New England or the South. It is believed that the structure was initially identified as a slave house based on the dimensions, which, in the 1970s when it was registered, were thought to relate to African inspired dwellings such as those that were interpreted at the time to have existed at the Parting Ways Site in Plymouth. Subsequently, it has been found that the 12' dimension that was felt in the 1970s to be a hallmark of African inspired architecture, is not. It is probable that the structure existed during the period that slaves were associated with the site, although it appears to have been used as an outhouse and not as their place of habitation. Well-finished outhouses are known from the Mid-Atlantic and South and this building fits well with that tradition. Architecturally the elements of the house appear to possibly date it as early as ca. 1750. It was probably retained on the property throughout the property's history due to its solid construction and usefulness, first as an outhouse and later as a shed and bunkhouse.

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APPENDIX: Artifact Catalog