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Report On the Archaeological Site Examination of the Entrance Drive, Carriage House, Greenhouse, Vegetable Garden, Flower Garden and Grapery at Gore Place, Waltham, Massachusetts

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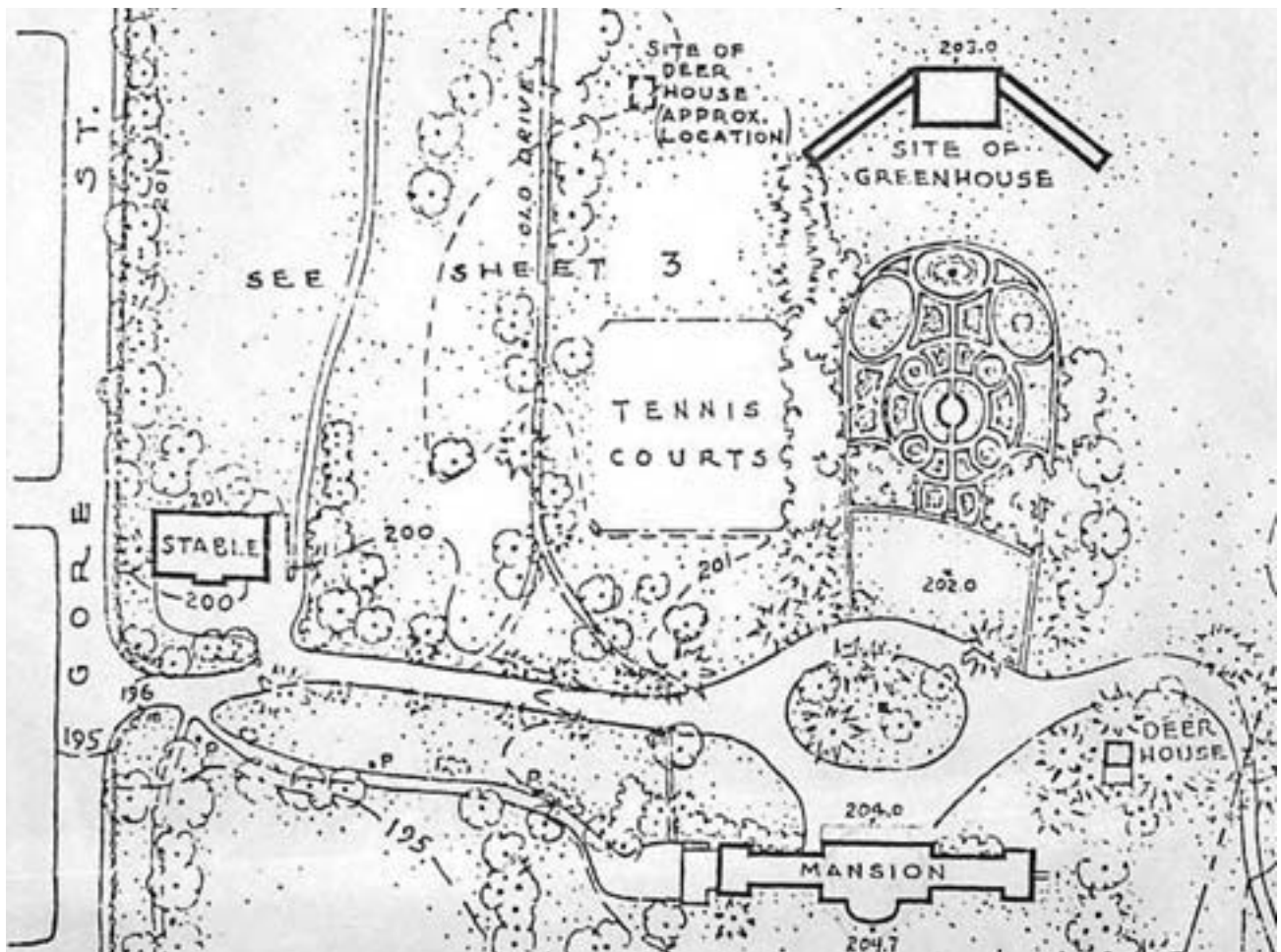
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ARCHAEOLOGICAL SITE EXAMINATION
OF THE ENTRANCE DRIVE, CARRIAGE HOUSE,
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AT GORE PLACE, WALTHAM, MASSACHUSETTS**



**FISKE CENTER FOR ARCHAEOLOGICAL RESEARCH
UNIVERSITY OF MASSACHUSETTS BOSTON**

CULTURAL RESOURCES MANAGEMENT STUDY NO. 17

2006

Cover Illustration: Detail of the Gore Place property as depicted by the Historic American Buildings Survey in 1936.

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**PREPARED FOR
GORE PLACE SOCIETY**

**BY
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Fiske Center for Archaeological Research

The Fiske Center for Archaeological Research (formerly the Center for Cultural and Environmental History) was established in 1996 with a mission that includes research, public service, and educational initiatives. The Center maintains archaeology and conservation laboratories and supports research in landscape and environmental archaeology, historical archaeology, and environmental history. Center projects often have an applied focus, seeking to promote

and protect the cultural heritage and historic landscape of the Commonwealth of Massachusetts and the surrounding region. As a public service unit of the Department of Anthropology, the FCAR also serves an important educational role at the University of Massachusetts, Boston by creating opportunities for students to participate in public service projects.

ABSTRACT

A landscape restoration plan for the 45-acre Gore Place property in Waltham and Watertown, MA, calls for restoration of grounds, gardens and structures to depict and interpret the late eighteenth- and early nineteenth-century occupation of Massachusetts governor and United States senator, Christopher Gore, and his wife, Rebecca. The restoration plan includes archaeological investigation to help identify the location and integrity of six historically documented features on the Gore Place grounds. Blocks and transects of shovel test pits at 5, 10 and 20 meter intervals along with 1 x 1 m excavation units and trenching were employed in the archaeological site examination of these areas. Testing in the area of the present entrance drive revealed evidence of significant landscape alteration characterized by a unique process of top soil removal followed by filling first with a layer of stone, then loamy sand and gravel and finally replacement of topsoil, all in an effort to create flat and well-drained yard space. The existing entrance drive is hypothesized to have been constructed during the Gore occupation as was a separate service drive. Work at the site of the 1793 carriage house succeeded in pinpointing the location of the original foundation, a task that contributes to the structure's relocation. The site of the Gore-period greenhouse was also identified by

architectural remains that include fragments of marble tile flooring identical to that in the Gore Mansion. A stone-lined drain, glass bell jar fragments as well as a soapstone brick possibly associated with the greenhouse heating system were also found. Investigations in the vegetable and flower gardens revealed intact soils and late eighteenth- / early nineteenth-century artifacts suggesting Gore-period garden features may be preserved and are potentially archaeologically identifiable. Work in the area of the grapery/fruitwall revealed remains of the large greenhouse that occupied the site from the second quarter of the nineteenth century until ca. 1921. Intact greenhouse soils and foundations suggest that the original fruitwall footing is preserved within the later greenhouse foundation. All of these features are well preserved and exhibit a high level of integrity. Those areas of the property not tested during the survey may be archaeologically sensitive and may require testing in advance of future proposed impacts. Recommendations specific to each area include options for grounds restoration and interpretation as well as additional archaeological investigations to proceed in tandem with proposed landscape changes. The report also includes a summary of scholarly research associated with design landscape archaeology with reference to Massachusetts.

MANAGEMENT SUMMARY

The Gore Place Society contacted the Center for Cultural and Environmental History at the University of Massachusetts, Boston to conduct an archaeological site examination at historic Gore Place in Waltham and Watertown, MA. A master landscape plan developed by Halvorson Design Partnership of Boston has as its goal the restoration of Gore Place grounds and structures to reflect the late eighteenth- and early nineteenth-century occupation of Christopher and Rebecca Gore. Archaeological investigations were recommended by the master plan to determine the location and assess the integrity of six areas or landscape features including the entrance drive area, carriage house, greenhouse,

vegetable and flower gardens and grapery/fruit-wall. The archaeological site examination conducted under State Archaeologist permit #2716 succeeded in identifying the Gore period entrance drive, original carriage house and greenhouse foundations, the location of the vegetable and flower gardens as well as that of the grapery area green house. All areas were found to maintain a high degree of archaeological integrity and are archaeologically sensitive Areas not tested by the survey may be archaeologically sensitive and may require testing prior to future proposed impacts. Recommendations call for additional archaeological investigation in each area to be coordinated with proposed landscape modifications and interpretive plans.

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I. INTRODUCTION

The Gore Place Society (GPS) owns and maintains Gore Place, the historic mansion and estate of Massachusetts Governor and U.S. Senator Christopher Gore and his wife Rebecca from 1786 to 1834. The Gore property, located at 52 Gore Street in the towns of Waltham and Watertown, Massachusetts (Fig. I.1), is a National Historic Landmark because of its historical connections to the Gore Family and its depiction of a Federal-period country estate. The

present mansion house is unique for its design by French architect, Jacques Guillaume Legrand. It is also known for its exemplary role in American labor history due to its association with the writings of house servant, Robert Roberts (1998 (1827)). The mansion with its extant 1793 carriage house and extensive grounds is one of a small number of Federal-period country seats in the greater Boston area that have been preserved for the purpose of public education and enjoyment.

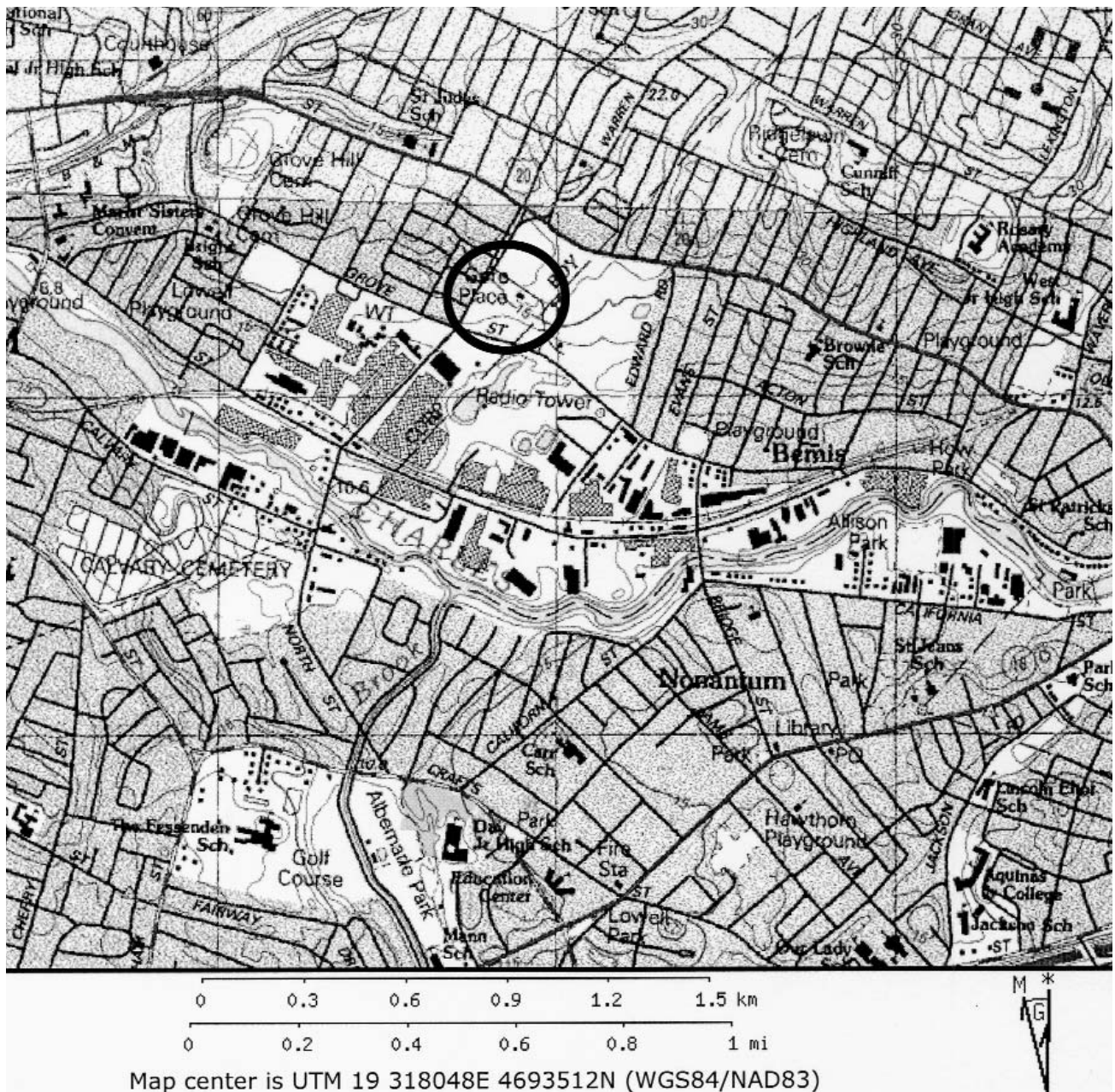


Figure I.1. Project Area on USGS Boston South Quadrangle.

The Gore Place Society hired Landscape Architects Halvorson Design Partnership Inc. (HDP) of Boston to create a landscape master plan for Gore Place that incorporates the Society's mission of preservation and maintenance of the 1806 mansion, its collections, out-buildings and grounds. This collaborative effort has as its central focus a unique commitment to use the surrounding landscape to enhance the story of the Gore Family. The landscape master plan, therefore, seeks to restore the existing landscape to its early nineteenth-century form to the extent practicable, and outlines procedures for preliminary investigation, rehabilitation and restoration that will occur in a series of phases. Phase one consists of historic background research that focuses on the identification of known Gore-period resources as well as unknown resources that could be impacted by implementation of the landscape plan. This phase was initiated by the completion of a detailed landscape history (Brockway 2001). Phase two calls for archival and archaeological research to identify subsurface features that will

aid in the landscape rehabilitation effort and continue the Society's mission of preservation.

Christopher Greene of HDP contacted the Center for Cultural and Environmental History (CCEH) at the University of Massachusetts, Boston in October 2004 to solicit archaeological services for the proposed landscape project. An archaeological site examination was carried out under State Archaeologist Permit No. 2716 between December 2004 and June 2005. The primary purpose of this preliminary work was to identify the locations and state of preservation of specific features associated with the occupation of the Gore Family. This work was performed in compliance with Section 106 of the National Historic Preservation Act of 1966 (36 CFR 800), Massachusetts General Laws Chapter 9, Sections 26-27C, as amended by Chapter 254 of the Acts of 1988 (950 CMR 71). University of Massachusetts staff and students who worked on the project included Amity and Greg Dubell, Jon Patton, Leith Smith and Tom Witt.

II. PROJECT LOCATION AND ENVIRONMENTAL CONTEXT

The Gore Place property is composed of 45 acres situated on the boundary between the towns of Waltham to the west and Watertown to the east in Middlesex County. It is bordered by Main Street (Route 20) on the north, Edward Road on the east, Grove Street on the south and Gore Street on the west. The property is approximately 2600 ft (800 m) north of the Charles River and lies at the geographic boundary between the upper Charles River flood plain and northern upland. The entire parcel slopes gently southward toward the river. The eastern portion of the property contains a small north-south stream that originates north of Main Street. Its course appears to have been altered by filling and channeling.

A. Soils

Soils in the project area are composed of two

types that correspond to the site's topography. The lower Charles River floodplain consists of Hinckley loamy sand with 3-5% slopes (USDA 1995). The Hinckley series ranges from a friable and gravelly or very gravelly sandy loam to a loamy coarse sand, both of which have rapid permeability making them excessively drained. The substratum at 12-30 in. consists of stratified sands and gravels. These soils form on gravelly and cobbly, coarse textured glacial outwash plains, terraces, kames and eskers. Soils that make up the upland portion of the property consist of Canton fine sandy loam with 3-8% slopes. The Canton series soils are characterized as friable fine sandy loam with moderately rapid permeability. The substratum between 18 in. and 36 in. is a loamy coarse sand. Canton soils form on well-drained upland glacial till and are typically stony, but this characteristic is generally absent from the northwestern upland portion of the property.

III BACKGROUND

A. Native American Cultural Context of Southern New England

The history of Native American occupation in the greater Boston area derives from numerous archaeological studies conducted in and around the region. Paleoenvironmental syntheses are derived primarily from work conducted in the Neponset River valley (Ritchie 1994) that utilizes palynological data collected within the middle Neponset drainage in Canton and Milton.

1. Paleo-Indian Period (ca 12,000-10,000 B.P.)

New England was first occupied by humans soon after the retreat of the Wisconsin ice sheet around 13,000 B.P. The environment at the time was rapidly changing as the glacial margins slowly moved northward. Forests came to be dominated by spruce, birch and alder. Fauna would have been characterized by cold adapted species including mastodon, mammoth, caribou, elk and a variety of birds and smaller mammals. While big game would have been an important source of food (Ritchie 1980, Snow 1980), smaller species probably made up the bulk of the diet along with a wide variety of plant foods (Curran 1987; Curran and Dincauze 1977; Dincauze 1990, Dincauze and Curran 1984; Donta et al 2002). Nothing is known of human social structure from this time, but it likely was characterized by small family groups that banded together to move frequently about the landscape in search of food. This mobile hunting and gathering lifeway led to living sites that were typically occupied for short periods of time. Artifact assemblages from such sites are dominated by stone tools that include fluted scraping tools, drills, graters projectile points and large quantities of flakes from stone working, some of which are utilized. Many of the tools are manufactured of exotic, fine grained stone that was carried for long distances from their sources of origin. With the exception of isolated finds (Elia and Mahlstedt 1982) few archaeological sites of this period have been found in New England (Loparto 1986). Bull Brook in Ipswich (Grimes

et. al. 1984), the Neponset site in Canton (Carty and Spiess 1992), and the Shattock Farm site in Andover (Spiess and Bradley 1996) are a few.

2. Early Archaic Period (ca 10,000-8,000 B.P.)

Although little is actually known of this phase due to a scarcity of well-documented sites, a lifeway characterized by mobile hunting and gathering is believed to have continued during the Early Archaic with an emphasis on seasonal settlement patterning (Ritchie 1980). The environment remained cool, but through a slow warming trend forest species in the Boston area came to be dominated by pine, oak and birch (Ritchie 1994). The manufacture of stone tools out of locally available materials suggests a trend toward occupation of particular regions with a decrease in long distance mobility and trade. Differences in the lithic tool kit characterized by the manufacture of bifurcate-base projectile points have been interpreted by some researchers to suggest a discontinuity with the preceding Paleoindian Period (Donta et al 2002, Ritchie 1969, Snow 1980), while others suggest a general continuum of development (Custer 1984).

3. Middle Archaic Period (ca 8,000-6,000 B.P.)

During the Middle Archaic the New England landscape began to resemble that of today with the establishment of a deciduous forest and increased diversity of plant and animal foods (Dincauze 1976, Dincauze and Mulholland 1977). The number of archaeological sites from this period increase dramatically in comparison with the past period, suggesting a significant rise in population. The Merrimack River Valley associated with northern Massachusetts and southern New Hampshire, in particular, contain the best known sites of the period. These include the Neville and Smyth sites in New Hampshire (Dincauze 1976, Kenyon 1983 and Shattuck Farm in Andover (Mahlstedt 1981, Leudtke 1985). Settlement in and exploitation of a variety of environments is clearly indicated by both faunal remains and tool kits and this was increasingly associated with seasonal resource availability (Dincauze and Mulholland 1977, Barber

1979). Andromous fishing at falls was clearly the primary attraction at a number of localities including the Neville site that revealed evidence of reoccupation over a period of time. The lithic tool kit during this period is characterized by three distinctive projectile point styles (Dincauze 1976). These include the Neville, Stark and Merrimack that are joined by atlatl weights, knives, perforators, axes, adzes, scrapers, abraders, ulus, gouges and harpoons (Donta et al 2002).

4. *Late Archaic Period (ca 6,000-3,000 B.P.)*

The greatest number of Native American archaeological sites in New England is associated with the Late Archaic. Seasonal temperatures were slightly higher than today and an oak-hickory forest came to dominate southern New England (Loparto 1986:7). The period is characterized by relatively high populations that occupied the entire range of available environments for the purpose of exploiting an equally wide range of plant and animal resources. Seasonal settlement patterns continued, but toward the end of the period populations became more settled on the landscape as evidenced by shell middens and fish weirs. Coupled with this sedentism was limited cultivation of plant foods such as squash, gourds and sunflower. Three different lithic traditions suggest the possible development of regional ethnic diversity (Dincauze 1974, 1975) or of differing tool kit functions. The Small-Stemmed point tradition is most widespread and is associated with indigenous populations that had long inhabited the region. The Laurentian tradition may represent a migration of peoples from the Great Lakes region where such tool kits are common. The Susquehanna tradition is generally associated with groups that derived from the Mid-Atlantic region. The mixture of these traditions in single sites suggests the coexistence of the three groups, exchange of technologies and functional specialization (Dincauze 1976; Ritchie 1969; Snow 1980; Custer 1984; Bourque 1995). Evidence of religious beliefs from burials becomes more common during this period due to the use of particular practices that

includes use of red ocher and burial goods.

5. *Early Woodland Period (ca 3,000-1,600 B.P.)*

The Early Woodland is generally associated with a period of population reduction and a clustering of sites in valleys along river courses, but this characterization may be a product of sampling error. An expansion of spruce and slight decline in oak may have been associated with a cooling trend (Ritchie 1994). Coastal resources, particularly fish and shellfish, take on greater importance, but the most significant development during this period is the transition from simple cultivation to horticulture, and the development of ceramic technology that coincided with an increasingly settled lifeway. The Small-Stemmed and Susquehanna projectile point traditions continue in this period and were joined by the more common Meadowood and Rossville projectile points. The latter is associated with indigenous development, while the former may derive from the western interior (Loparto 1986). The Early Woodland is also known for increasingly complex burial customs that incorporate artworks including gorgets, pottery pipes, copper beads as well as red ocher (Ritchie 1965; Ritchie and Funk 1973; Spence and Fox 1986). These goods imply a rich belief in the afterworld.

6. *Middle Woodland Period (ca 1,600-1,000 B.P.)*

The general lifeway established during the Early Woodland continues in the Middle with a subsistence and settlement focus on marine and riverine environments. Living sites by this time were semi-permanent or year-round habitations where surpluses of cultivated foods began to be preserved in storage pits (Donta et al 2002; Snow 1980). Ceramic use expanded and came to include the use of decoration, thought in some cases to signify ethnic identity. The major technological innovation of the period was that of the bow and arrow that ushered in a new repertoire of small projectile points.

7. *Late Woodland Period (ca 1,000-450 B.P.)*

By the Late Woodland Period Native populations

are living in settled communities, some of which were occupied throughout the year. Some seasonal movement continued to occur, particularly for the exploitation of migratory species. In addition, small groups may have traveled varying distances for the purpose of hunting as well as gathering of plant foods. While wild food resources remained a large component of the diet, cultivated species came to be produced in fields cleared specifically for that purpose. The development of regional home bases by this time also led to the formation of ethnic diversity reflected in the growth of linguistic and cultural traditions unique to individual groups. The Boston Harbor area came to be occupied by the Massachusett-speakers, while southeastern Massachusetts was home to the Wampanoag (Simmons 1986; Goddard and Bragdon 1988). The Nipmuc and Pawtucket (or Pennacook) were present to the north and west of the Massachusett, and to the west and south were the Narragansett and Pequot. Together these groups became known as the Eastern Algonquians.

8. Contact Period

The Contact Period commenced with the arrival of Europeans on the coast. Basque fishermen were among the first to arrive as early as the sixteenth century. These were followed by explorers such as Champlain in 1605 (Champlain 1907) and later by groups with the express purpose of settlement and exploitation of New World resources. Thus, the actual period of contact along the coast lasted for nearly a century. The period closes with the establishment of permanent settlements. For the Native American populations, this was a period of tremendous change and transition. European borne diseases for which the Natives had no immunity may have killed as much as ninety percent of New England populations (Spiess and Speiss 1987; Carlson et al. 1992). This tremendous loss in population had particularly negative effects on the ability of remaining community members to carry on long established traditions (Johnson 1997). This effort was made more difficult by the prejudicial European attitudes of Native peo-

ples as uncivilized, leading to restricted use of hunting grounds, enforced Christianization (Cogley 1999) and removal from traditionally occupied lands.

B. Native American Archaeological Sites Around the Project Area

Much of the landscape in the vicinity of Gore Place has been severely impacted by urban development. Nevertheless, evidence of Native American occupation has been found at a number of localities in the area. Three Native American archaeological sites are registered at the Massachusetts Historical Commission (MHC) for Waltham. The closest lies approximately 1 km due north of the project area and was identified by Late Archaic and Middle Woodland projectile points found near Clematis Brook. Three and a half kilometers to the southeast is a Middle and Late Archaic site that contained a drill and flaking debris adjacent to the Charles River. The third site reportedly was a stockaded village located several kilometers to the west. Many more sites are known to the southeast in close proximity to the Charles River in Watertown. The closest of these lies at a distance of 2 km from the project area. Clear evidence of Native occupation in the region, thus spans from at least the Middle Archaic to Late Woodland periods. No finds of Native cultural material have been made in the immediate vicinity of the Gore Place Society property.

C. Historic Development of Waltham and Watertown

Watertown was one of the original town grants given to the Massachusetts Bay Colony in 1630. The grant encompassed what was to become the town's of Waltham, Weston, Cambridge and Belmont. Initial settlement by 100 families was in the area of the Perkins Institute on the North side of the Charles River. Focus quickly shifted to the present Watertown Square area where a ford across the river was present, and where a small industrial center consisting of a corn mill and fish weir were established. By 1650 the numbers of families present in the area had

grown to 160. Agriculture provided the primary economic base coupled with grazing and fishing. Watertown Square remained the industrial center, while civic and residential development took place along Mt. Auburn-Belmont Streets. This area also served as a crossroads for important routes north (Warren, Common and Lexington Streets) and south via a bridge over the Charles River at Galen Street and east and west via Mt. Auburn, Grove, Belmont and Main Streets (Route 20) that came to be known as the Connecticut Path. By the latter seventeenth century the region's farms were providing vegetables to the more densely populated Boston along with mutton that had come to dominate over cattle. Timber was also transported from the head of navigation at Watertown Square via river barge to shipyards in Charlestown and Medford.

Population growth in the western portion of the Watertown grant led to the parceling off of Weston in 1692 and Waltham in 1720. Settlement in Waltham had commenced in the 1630s as farmsteads were established along the Connecticut Path (Route 20) and the Beaver-Lexington Street crossroads. Early improvements to the area included the erection of gristmills by 1679 on Stony Brook and 1690 on Chester Brook. The early economy of Waltham paralleled that of Watertown with many farms providing a wide range of goods including corn, a variety of grains, hay, wool, butter, fruit and vegetables as well as anadromous fish, mutton and beef for the local and Boston market. This agricultural base contributed to a relatively dispersed and slow rate of growth that was maintained through the early nineteenth century.

By the mid eighteenth century a distinct residential pattern had been established that consisted of a string of rural estates constructed by an elite gentry along the major east-west thoroughfares that paralleled the north side of the Charles River. These estates stretched intermittently westward from Brattle Street in Cambridge to Main Street in Waltham, and included the construction of a mansion house and barn on the

Gore Place property prior to 1744. More common residential dwellings and farms were located on some of these thoroughfares and at developing population centers that included Watertown Square and Piety Corner on Lexington Street in Waltham.

The region's centralized industrial heritage commenced with the construction of a paper mill on the Charles River at Farwell Street in Waltham in 1760. The establishment of additional paper mills followed between 1780 and 1801, including Bois Mill (1788) that later became the Boston MFG Co., Gore's Mill (1800) and Upham's Mill (1801). Textile manufacture was introduced in Waltham in 1810, resulting in the conversion of Gore's Mill to the Cotton and Woolen MFG Co. This company was bought out in 1813 by the Boston MFG Co. that expanded to the Bois Mill and erected two new five-storey mills in 1814. This company introduced the process of manufacturing cloth by starting with raw cotton and proceeding to finished cloth through use of the new power loom. These mill-related activities resulted in the creation of an important industrial center that led to a gradual shift from an agricultural economic base to one focused on industry. Mill development attracted not only new auxiliary businesses to the area, but also created jobs, resulting in an influx of Irish mill workers who contributed to an expanding population from 1014 in 1800 to 1677 in 1830.

These events were accompanied in Watertown by the expansion of gristmills on both sides of the Charles at Bridge and Galen Streets and by the improvement of Mill Creek as a source of waterpower. Further improvements during the latter eighteenth and early nineteenth centuries led to the introduction of large-scale cotton spinning (1803) resulting in the establishment of several textile-related industries. Other mills in Watertown produced paper, dyes, medicines, soap and candles (MHC 1980:4). Other industrial activities included the production of lace, using the first lace-making machines, and the relocation of the federal arsenal from

Charlestown to Watertown (1816). Many of the new mill jobs here were filled by immigrants from the English midlands.

By the early nineteenth century area neighborhoods were well established with a major focus north and south of Main Street (Route 20) and on the south side of the Charles (Moody Street Area) in Waltham, and in the Watertown Square area and east and west along the Boston turnpike in Watertown. Some suburban estates continued to be created by wealthy Bostonians, particularly in elevated settings. Transportation between Watertown/Waltham was improved by the extension of the railroad from Cambridge in 1847 and the addition of the horse railway via Mount Auburn Street ten years later. Waltham was connected to the railroad via the Fitchburg main line in 1845 that ran along Beaver Brook and the Charles River. The horse railway came to Waltham via Moody-Crescent Street from Newton in 1868.

Population in both towns rose steadily during the first half of the century, nearly doubling between 1830 and 1850. Growth was little influenced by the annexation of part of Newton in 1849 and the loss of town land through the establishment of Belmont in 1859. Immigrants by mid century came primarily from Ireland, helping the population of Waltham to reach over 9000 and over 4300 in Watertown by 1870. Mill and factory sites along the Charles River remained the focus of commercial and industrial activities throughout the century. At Watertown Square textiles including satinet, cotton duck and Hathaway shirts were made along with paper products. The Pratt foundry specialized in wood and later wood/coal stoves that became nationally known. Other metal work consisting of the casting of cannons, cannon balls and shells was performed at Arsenal Square. Factories and mills near Waltham Center produced chemicals as well as tar and other oil-based derivatives including kerosene. The textile industry was dominated by the production of cloth sheeting (Boston Manufacturing Co.) and other textile-related

businesses. By the 1860s timepieces were being produced by the famous Waltham Watch Company. Market farms located in the northern portion of town along Lexington-Lincoln and Trapello roads continued to produce agricultural products including vegetables, fruit, milk beef and pork for local and regional markets.

Residential development by mid century consisted of well-established working class districts adjacent to the industrial centers, while affluent areas came to characterize much of Mount Auburn-Common Streets in Watertown and the Main Street and Piety Corner area in Waltham. Accompanying this residential growth was the erection of many civic, commercial and institutional structures including banks, hotels and places of worship that still survive.

During the latter nineteenth and early twentieth centuries population continued to rise in the two towns, in part, as a result of improved streetcar and trolley service that linked Boston with Watertown-Waltham resulting in the formation of streetcar suburbs particularly in Watertown. Access was also improved by construction of new bridges in Waltham center. Population in Watertown soared to more than 16,500 by 1915. Foreign-born immigrants were dominated by Irish, Italians and toward the end of the century, Armenians. Helping to fuel this population boom was a period of prosperity and expansion of Watertown's industries. The largest of these was the Aetna Woolen Mills that by 1865 were producing \$938,000 worth of goods. A secondary, but equally important business was the Hood Rubber Company (1896) that by 1920 employed 10,000 workers. Additional businesses produced a range of products including paper (Hollingsworth and Whitney) that encouraged the further development of French dyeing and cleansing (Lewando's), the manufacture of laundry machinery that was used by Lewando's and the Metropolitan Laundry, and starch and soap production (Warren Soap Mfg. and Barker and Crystal Springs). Bicycles began to be produced in the 1880s leading to a number of design inno-

vations that included inflatable tires. The bicycle factory was later used for the production of photographic dry plates and steam-powered automobiles starting by 1897. Watertown retained a surprising tie to its agricultural past through the creation of Union Stock Yards, one of the largest facilities of its kind in the country. Cattle were shipped from here to Brighton for slaughter or were shipped for sale overseas. Activities at the Arsenal continued to be focused on weapons manufacture and materials analysis of metals.

The same period in Waltham followed a similar course of development. Access to the town was improved by the creation of new streetcar routes that connected Waltham Center to Watertown via Main Street, Lexington via Lexington Street and Newton via Moody-High Street. A number of trolley lines were also added. Industrial growth remained focused on textile production, principally by the Boston Mfg. Co. and also expanded to include the manufacture of watches and clocks that made Waltham nationally known as the "Watch City." Several competing manufactories arose, including the American Waltham Watch Co., the U.S. Watch Co., Columbia Watch Co., and Waltham Clock Co. A number of associated clock parts manufacturers were also established with centers on Rumford Ave. at Crescent Park. Additional industries included the Davis and Farnum Foundry that specialized in water and gas pipes, and a rivet and riveter factory that came to be one of the largest in the country. A button manufactory focusing on shell buttons was established ca. 1911 and this was followed in 1916 by a separate factory that produced products made of mica. The manufacture of bicycles by the Waltham Mfg. Co., also on Rumford Ave., and later the American Waltham Mfg. Co. commenced in 1894, making Waltham a major production and bicycling center. One of the founders of the parent company was Charles Metz, who owned and occupied Gore Place between 1909 and 1921, the period during which Metz had incorporated the Metz Co. that manufactured motorcycles and automobiles until

1926. This combined industrial success resulted in continued population growth, although not as great as that in Watertown. Immigrants to the town derived principally from Ireland and increasingly from Nova Scotia. Residential areas continued to expand, particularly north and west of the town, and many institutional and commercial structures were constructed such as those present on Moody Street at the town center.

The first half of the twentieth century saw the expansion of transportation thoroughfares into auto roadways and the filling of the few remaining areas in both towns by residential construction. Commercial centers remained focused at Watertown Square and in east Watertown along Grove Street. In Waltham, areas west and south of Waltham Square were heavily commercialized and filled with two and three family housing. Other commercial centers formed east of the center along River Street as well as Lake Street. The more affluent housing around Piety Corner expanded to Lexington-Beaver Streets and Lyman Street. Waltham Highlands and Prospect Hill in the western part of town also increased in affluence during the first half of the century. Middle classes came to dominate the Lakeview area around Hardy's Pond and in Cedarwood along Weston Street and Stony Brook. Only the northeast portion of town remained undeveloped until the 1940s and 1950s. The demand for land for residential development in both towns created pressure on the large estates established in the eighteenth and nineteenth centuries. As a result, many were sold and/or subdivided to provide room for housing, schools and country clubs. It was at this time (1921) that Gore Place became the Waltham Country Club with much of the grounds made into a golf course and other recreational facilities.

Industries remained centered within the Charles River corridor in both towns. By 1924 there were 24 manufacturing plants in Watertown and 94 in Waltham. Industry in the former was dom-

inated by the Hood Rubber Company that was bought out by B.F. Goodrich in 1929 and closed in 1959. Lewando's cleaning and dyeing company founded in the mid nineteenth century continued to expand, so that by 1930 it was the largest company of its type with its headquarters on Watertown Square. The greater number of Watertown's industries by this time came to be located east of the square in the Arsenal area. In 1931 General Electric opened a center for its electronics manufacture here. In neighboring Waltham, the watch industry remained the largest employer and this status was strengthened in 1929 by the ceasing of textile production by the Boston Mfg. Co. The Raytheon Mfg. Co. opened its doors in 1934, occupying and eventually replacing many of the older manufactories (Davis and Farnum Foundry, Boston Mfg. Co. bleachery, and the Howell and Son button manufactory) in the southeast part of town and south of Gore Place. Much of this factory complex remains in place today.

D. Summary History of the Gore Place Property

1. Seventeenth- and Early Eighteenth-Century Ownership/Occupation

The present Gore Place property was originally part of a tract of land granted to the Reverend George Phillips, co-founder with Sir Richard Saltonstall of Watertown, as early as the 1630s. In 1651 the parcel was sold by Phillips' heirs to Edward Garfield. The lands were sold by Samuel Garfield to Samuel Brown of Leicester, Massachusetts in 1742. Over the remainder of the year ownership passed through several hands, ultimately, ending with John and Hannah Brown who purchased "the mansion house and barn with 12 acres of plowing and pasture land." In 1744 the property was sold to James Davenport together with a "mansion house and barn and other buildings." Davenport kept an inn known as "Davenports Corner" that was located on the southeast corner of Main and Cross (renamed Gore) Streets. The property again changed hands in 1752 when Davenport

sold to John Gould, "with the mansion house, barn, and all other buildings." Gould held the property for investments, renting the inn to Thomas Wellington Jr., who ran it until 1769. The lands and inn were sold to Jonathan Brewer in 1770. The inn was known as "Brewer's Tavern" and according to an oral account by Benjamin Worcester and William Farwell in 1904, the tavern was built ca. 1745, was divided in half, and in 1834/5 one half was moved across Main Street and became the residence of Isaac Farwell. The remnants of that structure survived on the southeast corner of Gore and Main Streets until after 1922 (Hammond 1986). The widening of Gore Street in the late 1960s likely impacted much of the tavern site.

2. Gore Occupation ca. 1786-1834

The history of the Gore family in Waltham begins in 1786 when Christopher and Rebecca Gore purchased 50 acres of land from Aaron Dexter. This transfer consisted of a 33-acre parcel, known as the "mansion house lot," that contained a mansion house, barn and other outbuildings, and a separate parcel of 18 acres with no improvements. Additional acreage purchased by the Gores in 1791 included the 34 acre "homestead lot" or "forty acre lot" to the north and the 75-acre "Ward farm" that bordered the Charles River to the south. The acquisition of additional wood lots created a total of 197 acres owned by the Gores by 1834. The mansion house lot and an adjacent 12 acre parcel that was not actually owned by the Gores together make up the present 45-acre Gore Place estate (Fig. III.1).

The presence of an existing mansion house at the time of Gore's 1786 purchase suggests that he may have rehabilitated the old structure for his own mansion and at the same time (1793) constructed a new carriage house at the west end of the entrance drive. The mansion house consisted of a central block plan with flanking wings (Brockway 2001:23) situated on the crest of a glacial flood plain terrace of the Charles River. From 1796-1804, while the Gores were living in London, Rebecca Gore's brother, William Payne,

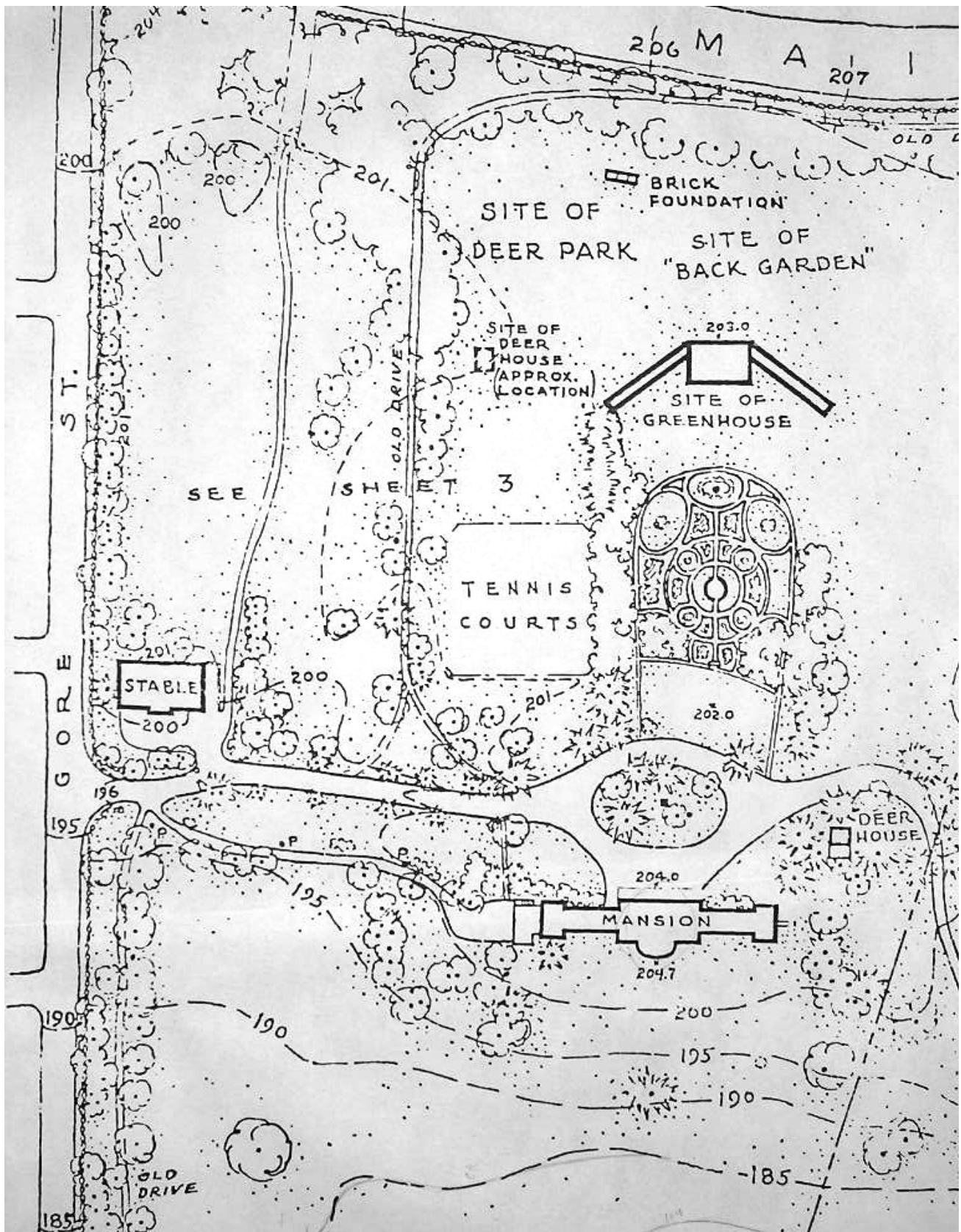


Figure III.1. Detail of Historic American Buildings Survey Plan of Gore Place Drawn in 1936.

served as caretaker of the mansion house and grounds, and he later claimed to have "laid out many of the present walks" (Hammond 1986). Waltham tax records for 1798 list a number of tracts of land owned by Christopher Gore as well as a barn, paper mill and house. The grapery/fruitwall that was located approximately 130 m (427 ft.) north of the mansion house was either present or constructed around this time as was the flower garden since both landscape features are aligned with the pre-1805 mansion house. A greenhouse was attached to the end of the east wing and it was here that a fire started in 1799 that destroyed all of the house but the west wing.

The Gores constructed a new brick mansion on the same site between 1805 and 1806. Other improvements made to the property around this time were construction of a greenhouse (probably located adjacent to the east end of the carriage house), a vegetable garden north of the carriage house (this may have existed previously), ice house and other support buildings (Brockway 2001:23). In addition, a 10-acre field was present northeast of the house and a twelve-acre field was to its south. The main farm complex lay across Main Street to the north, leaving much of the grounds surrounding the mansion house to be used for pleasure (Fig. III.2).

Actual occupation of the property by the Gores was intermittent between 1793 and 1834, during which time they also stayed in Boston, Paris and London. As noted, William Payne stayed at the house beginning in 1796 when the Gores left for seven years in London. William was living in the house at the time of the 1799 fire and may have remained on the property until the new house was completed in 1806. Other potential occupants of the property include house servants, slaves, gardeners and farm managers. Occupation by Rebecca after the death of Christopher in 1827 is unclear, but by the time of her death in 1834, Judge Charles Jackson was renting the property.

3. *Lyman Occupation ca. 1834-1838*

The parcel containing the "mansion house, stable, vinery and sheds" was purchased by Theodore Lyman Jr. in the same year (1834) (Fig. III.3). Theodore and his wife, Mary, maintained a keen interest in scientific agriculture and in further developing the pleasure gardens on the property. Changes made during their ownership included redesigning the formal flower garden north of the house following a modern European style that stressed curves over the earlier rectilinear forms of the eighteenth century. They also may have improved greenhouse facilities and the grapery and were responsible for painting the



Figure III.2. Detail of 1831 Hales Plan of Waltham Depicting Gore Place Property (Courtesy Massachusetts State Archives).

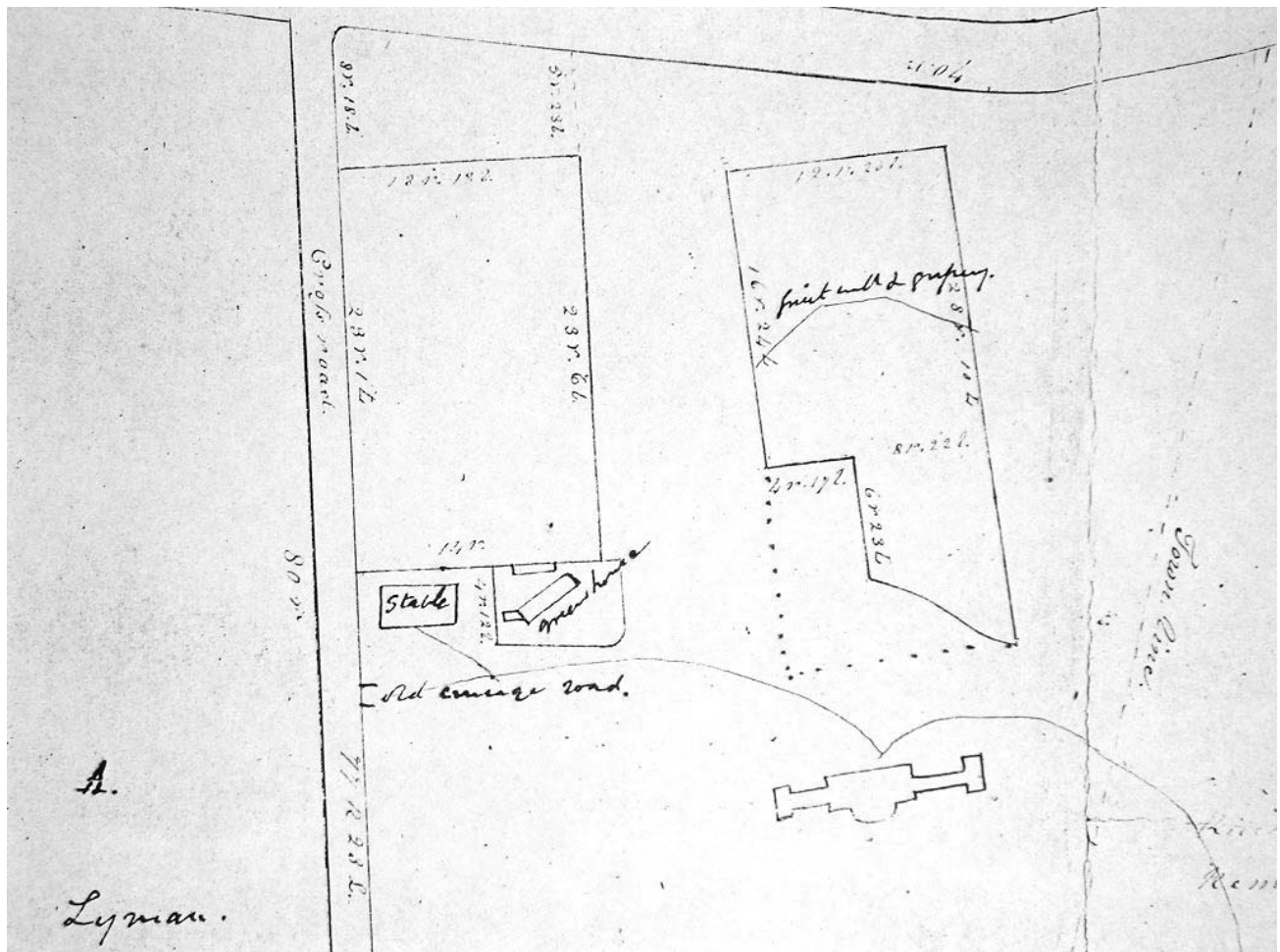


Figure III.3. Detail of the Estate of Theodore Lyman Drawn Between 1834 and 1838 (Courtesy GPS).

house white. Mary Lyman died in 1836 prompting Theodore to put the property up for auction.

4. Green Occupation ca. 1838-1856

John Singleton Copley Greene purchased the estate on October 23rd, 1838 and continued to employ a gardener and farm manager who maintained the pleasure garden character of the property. Cartographic evidence from an 1841 plan of the estate (Fig. III.4) provides the earliest clear depiction of the entrance and service drives, and it is not known if these were created during the Green occupation or earlier. Depiction of the greenhouse in this plan suggests this structure was still extant.

5. Walker Occupation ca. 1856-1907

The Greens sold the mansion house lot in 1856 to Theophilus Walker, who in turn sold it to his nieces, Mary Sophia and Harriet Sarah Walker in

1890 (Fig. III.5). A number of changes appear to have been made to the property during this period that include removal of the vegetable garden north of the carriage house and removal of the greenhouse east of the carriage house. This scenario is based on the absence of the greenhouse in the 1889 Eliot sketch of the property (Fig. III.6). It is possible that abundant tree growth depicted in the sketch so reduced sunlight as to render the greenhouse of little use. In such a scenario, greater efforts may have been made to maintain and/or even improve the grapery greenhouse with its superior solar exposure.

6. Episcopal Church Ownership ca. 1907-1911

Mary Sophia bequeathed the property to the Episcopal Church on October 10th, 1907. The church sold the property after only four years, but not before a company based in Colorado to whom the property had been leased, caused con-

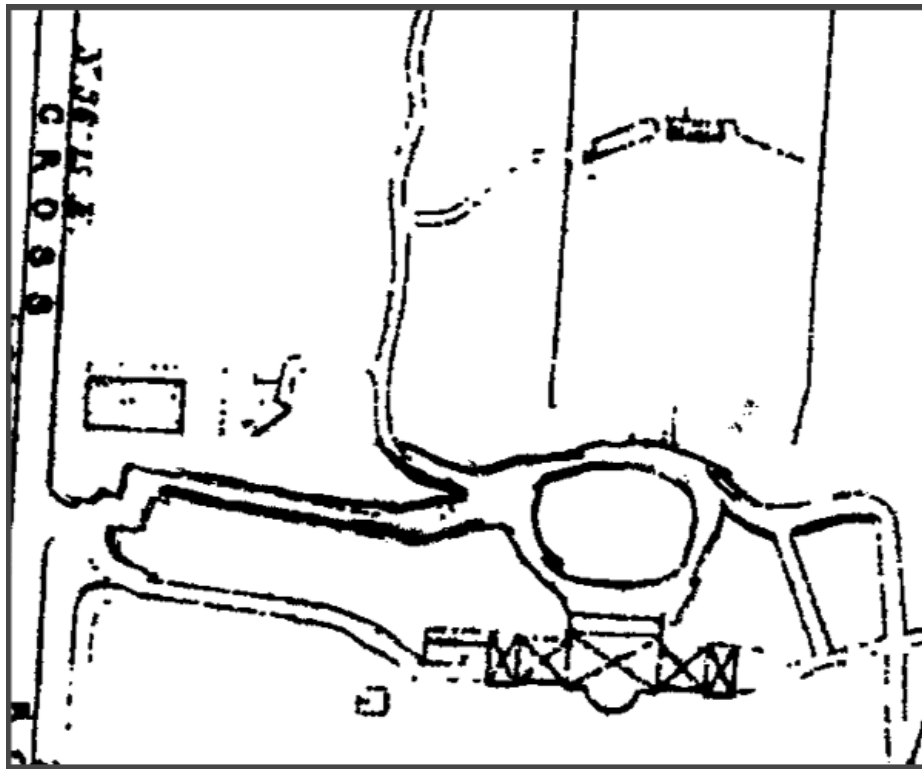


Figure III.4. Detail of the Estate of J.S. Copley Greene, Esq., Drawn in 1841 (Brockway 2001:37).



Figure III.5. Detail of Atlas of Middlesex County Depicting Walker Family Property. Gore Mansion is at Center Adjacent to Waltham/Watertown Line (Courtesy Waltham Public Library).

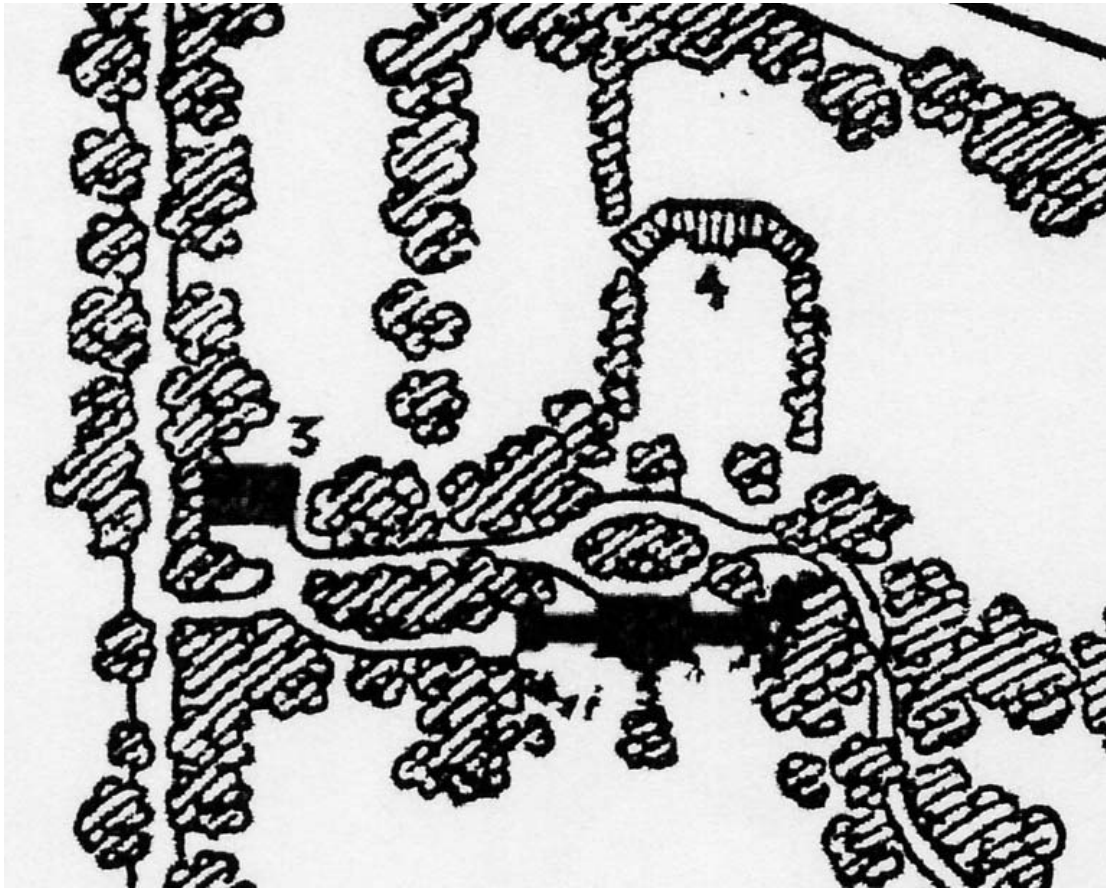


Figure III.6. Sketch of Gore Place Grounds Drawn by Charles Eliot in 1889 (Brockway 2001:40).

siderable damage by removing trees and household furnishings. The company set up a sawmill on the estate to cut down some of Copley Greene's "tasteless plantations" (Hammond 1986).

7. Metz Occupation ca. 1911-1921

The estate was purchased in 1911 by Charles H. Metz, who used the house for office and living space. Metz was one of the 1894 founders of the Waltham Mfg. Co. that produced bicycles, namely the "Orient" at the Rumford Avenue Plant. He later experimented with motorcycles and in 1909 incorporated the Metz Co. that produced automobiles until 1926. It was during Metz's ownership that the surrounding neighborhood saw significant change through the development of residential housing and the expansion of industrial buildings, including his own, along the Charles River to the south.

8. Waltham Country Club Occupation 1921-1935

On July 11th, 1921 "the old Gore estate" was sold to Henry Beal and the trustees of the Waltham Country Club (Hammond 1986). Substantial changes were made to the property during this period as much of the landscape was transformed into a golf course with additional recreational facilities (Fig. III.7).

9. Gore Place Society Occupation ca. 1935-Present

The Waltham Country Club went bankrupt in 1935 and the estate was sold to the newly formed Gore Place Society that has preserved and maintained the estate to the present.

E. Archaeological Potential of the Gore Place Society Property

Development of predictive models for the location of archaeological sites is predicated upon a

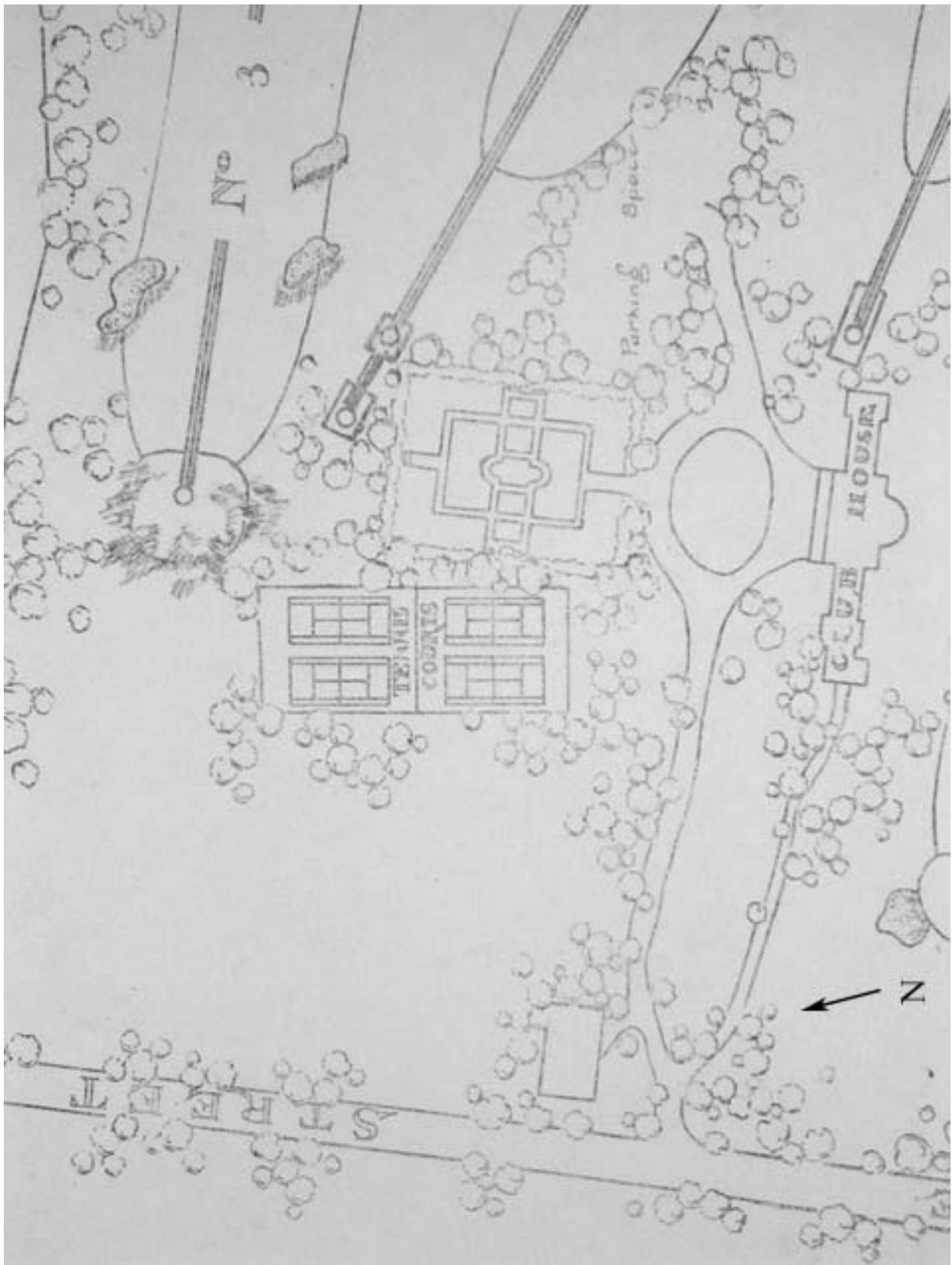


Figure III.7. Detail of Proposed Tennis Courts and Golf Tees North of the Gore Mansion House ca. 1921 during ownership by the Waltham Country Club (Courtesy GPS).

number of factors including known site locations and a general sense of past landscape use and its level of preservation.

1. Native American Sites

Evidence of Native American prehistoric occupation has been identified in New England in many types of settings, but these are most often found in particular environmental contexts that share a number of characteristics (Funk 1972; Root 1978; Thorbahn et al. 1980; McManamon 1984; Mulholland 1984; Thorbahn 1988, 1984; Nicholas 1988, 1990). Models of archaeological potential take these common characteristics into account to predict the location of prehistoric resources (Dincauze 1974; Hoffman 1985; Kenyon and McDowell 1983; Ritchie 1983). These models are generally based on three variables: topography, soil type and proximity to a source of fresh water. Variables offering the greatest potential for prehistoric settlement consist of flat to gently sloped topography, well-drained sandy soil, and a distance of under 300 m (1,000 ft) to fresh water. Localities of medium to low potential are, therefore, greater than 300 m (1,000 ft) from fresh water and/or have poorly drained or rocky soils on moderate to steep slopes. Factors that hold lesser importance, but nevertheless can contribute to site location include proximity to additional resources such as hunting grounds, fishing sites and seasonal food gathering localities, a south facing exposure for cold season occupation, lithic material for tool manufacture and even clay for pottery production. Access to transportation routes in the form of paths and rivers can also be influential.

The combination of these factors provides a framework within which prehistoric settlement has been analyzed. Findings to date suggest that Paleoindian and Early Archaic sites are frequently located around glacial lake margins. These sites are usually small and often represent single episodes or short-term occupations involving hunting and gathering as well as the processing of natural resources. Sites associated with the Middle and Late Archaic periods tend to be

located on the banks of major rivers such as the Assabet and Merrimack, and on the edges of upland wetlands and streams. The upland interior sites tend to be small, probably associated with exploitation of specific resources. Larger, repeatedly used sites tend to be present next to large wetlands and at fords or rapids in rivers to take advantage of anadromous fish runs. Occupation associated with the Late Archaic and Woodland periods is characterized by a trend toward exploitation of major river estuaries and coastal environments. In time this adaptation came to be characterized by long-term seasonal occupation of large settlements accompanied by short-term occupation of camps associated with seasonally available inland plant and animal resources potentially collected by family-based groups. Those sites that offered a southern exposure as protection from winter weather and consistent access to food sources came to be occupied throughout the year.

These generalized patterns suggest that Native occupation of the Charles River drainage is most likely to have occurred during the Archaic and Woodland periods. Primary food sources would have included fish from the Charles River and tributary streams, migratory birds, locally available small and large game, reptiles and numerous plant foods including nuts and cultivated products as the Woodland period progressed. The gently sloped and reasonably well-drained soils coupled with the southern exposure of the Gore Place setting represent ideal conditions for Native occupation. The only potentially limiting factor is the distance of around 800 m to a major river. Secondary water sources likely consisted of the stream on the eastern portion of the property and the wetland south of Grove Street that was later excavated to create a pond.

The assessment of known Native American archaeological sites in the Waltham/Watertown area reveals the presence of Middle Archaic through Late Woodland occupations that tend to be associated with the lower Charles River floodplain or upland streams. The combination

of locational characteristics and presence of known archaeological sites in the area suggests a medium to high potential for the presence of Archaic and Woodland period Native American sites. The fact that portions of the original ground surface within the property have been disturbed reduces the probability of intact cultural remains, but this does not negate the potential for their presence in undisturbed or minimally disturbed contexts.

2. *Historic Period Sites*

The same characteristics that made the project area potentially attractive to Native occupants were also attractive to Europeans. Throughout its history the property has been characterized as agricultural in the broader context of a rural estate established by at least the 1740s. The extensive documentary record that spans the eighteenth- through twentieth-centuries as well as resources that exist or are known to have been present on the site suggests a high potential for historic archaeological sites. The known eighteenth- and nineteenth-century habitation coupled with the establishment of the Gore's country seat suggests the project area has the potential to contain remains that could increase an understanding of:

- 1) a late eighteenth- and early nineteenth-century country estate that was associated with the Federalist interest in scientific agriculture and the development of both functional and recreational gardens,
- 2) late eighteenth- and early nineteenth-century domestic life of house servants and estate workers,
- 3) eighteenth- and nineteenth-century farming practices in the context of an elite country seat, and
- 4) mid to later eighteenth-century taverns

The fact that Gore Place is a National Historic Landmark listed on the National Register of Historic Places signifies that any intact archaeological remains present on the property are considered significant because they have the potential to provide data pertaining to the history and interpretation of the property.

F. Previous Investigations

The only previous archaeological investigations consist of a trench excavation in close proximity to the mansion house conducted by Dr. Stephen Pendery. A report of this work was not completed, but findings will be provided to the Gore Place Society once a copy of field notes is received from Dr. Pendery.

IV. ARCHAEOLOGICAL SITE EXAMINATION

A. Research Design

The Gore Place property, consisting of the mansion, 1793 carriage house and grounds, is one of two examples of an eighteenth- and nineteenth-century country estate in Waltham, and is one of a small number in the greater Boston region. The listing of the property on the National Register implies that any subsurface cultural remains are considered significant due to their potential to contribute data to the prehistoric and historic interpretation of the property. The goals of the archaeological site examination were to identify the presence of six features that were important components of the historical landscape and to determine their integrity and potential to represent resources that can be included in the present restoration and interpretative program. Of equal importance was the identification of intact archaeological deposits that might be impacted by proposed changes to the property.

By the eighteenth century, gardens had taken on a dual function that combined utilitarian needs with an increasingly popular colonial aesthetic that favored the creation of visually appealing landscapes. Over time the arrangement of plantings within the utilitarian vegetable garden was combined with fruit trees and shrubs to create spaces that were not only functional, but were also aesthetically pleasing. Thus, the concept of the garden was transformed from a place of work to a place of recreation and beauty. Because it was the wealthy who maintained the means of creating and maintaining such spaces, formal gardens and associated landscapes became synonymous with the image of the colonial gentleman and came to serve, in addition to the estate house, as a symbol of one's wealth and status (Yentsch 1996). The popularity of the garden with its romantic associations and its connection to a purer perception of the past (Beaudry 1996:3) extended the appreciation of landscape gardens through the nineteenth century.

Archaeology has become a valuable tool in the identification and restoration of such historically important landscape features (Kelso 1990; Leone 1984, 1988, Yentsch 1994). A multidisciplinary approach to landscape research that combines non-destructive remote sensing techniques along with documentary research, careful excavation and soil analysis, and detailed mapping of extant vegetation is now considered standard for such projects (Metheny et al. 1999; Yentsch 1994).

B. Scope of Work

An important component of the Landscape Master Plan is the consideration of historic Gore-period features, both extant and archaeological, that can contribute to the interpretation of the site's history as well as provide functional space. To this end archaeological investigations focused on six specific localities: the entrance drive area, original carriage house location, greenhouse area, vegetable garden, flower garden and the grapery/fruitwall. The present entrance road was believed to be in the general vicinity of the original drive, but the identification and restoration of the Gore-period roadbed is desired if it can be found. The carriage house was moved from its original foundation to the present location in the 1960s. The location of the original foundation is necessary so that the structure can be returned as closely as possible to its original setting. The greenhouse, known from depictions on historic maps, needs to be located and assessed for archaeological integrity and data potential, since its remains could be disturbed by the relocation of the carriage house. The vegetable garden located north of the original carriage house site is partially covered by parking lot and also runs the risk of being disturbed by movement of the carriage house. Determination of integrity of garden soils is necessary to assess this feature for its future interpretive potential. The flower garden located north of the mansion house survived into the early twentieth century, but the potential for intact Gore-period garden features is not known. Archaeological assessment here will focus on the overall integrity of the area and on its potential to

retain features associated with the Gore occupation. The grapery/fruitwall was transformed into a formal greenhouse over the course of its history. The question to be addressed in this area is whether any vestiges of the original feature remain intact and can contribute to a better understanding of its use and can provide information useful for its potential reconstruction and interpretation.

C. Field Methodology

Field methods employed for the investigation of the six areas are presented below by area.

1. Entrance Drive Area

The present entrance drive consists of a single lane of asphalt paving that extends approximately 100 m from a gate on Gore Street to an oval circle with a grassy center on the north side of the central block of the Gore mansion. Means of approaching the mansion are depicted on several historic maps. Three of these, the 1841 Copley Green Estate Map (see Fig. III.4), the 1889 Charles Eliot sketch (see Fig. III.6) and the 1936 HABS Plan (see Fig. III.1) show two separate

drives originating from a single entrance; one that approaches the circle on the north side of the mansion, and a second that is interpreted as a service road that terminates at the west end of the west wing. This approximate configuration remains in place today with the exception of the virtual disappearance of the service road. The 1881 Col. Henry Lee map (Fig. IV.1) depicts the entrance road as two parallel drives with little separation between, and that terminate at an open area presently occupied by the grassy circle. Given these cartographic differences, the question facing the landscape planners is which of these configurations is correct, and which is associated with the occupation of the Gores? The fact that the Lee Map was created in 1881 from recollections of an 1834 visit to the mansion left a serious question as to the accuracy of this particular depiction.

Past construction activity in the area of the entrance gate on Gore Street revealed buried cobblestones and a layer of crushed oyster shells that may have been associated with the entrance drives. This finding, combined with the carto-

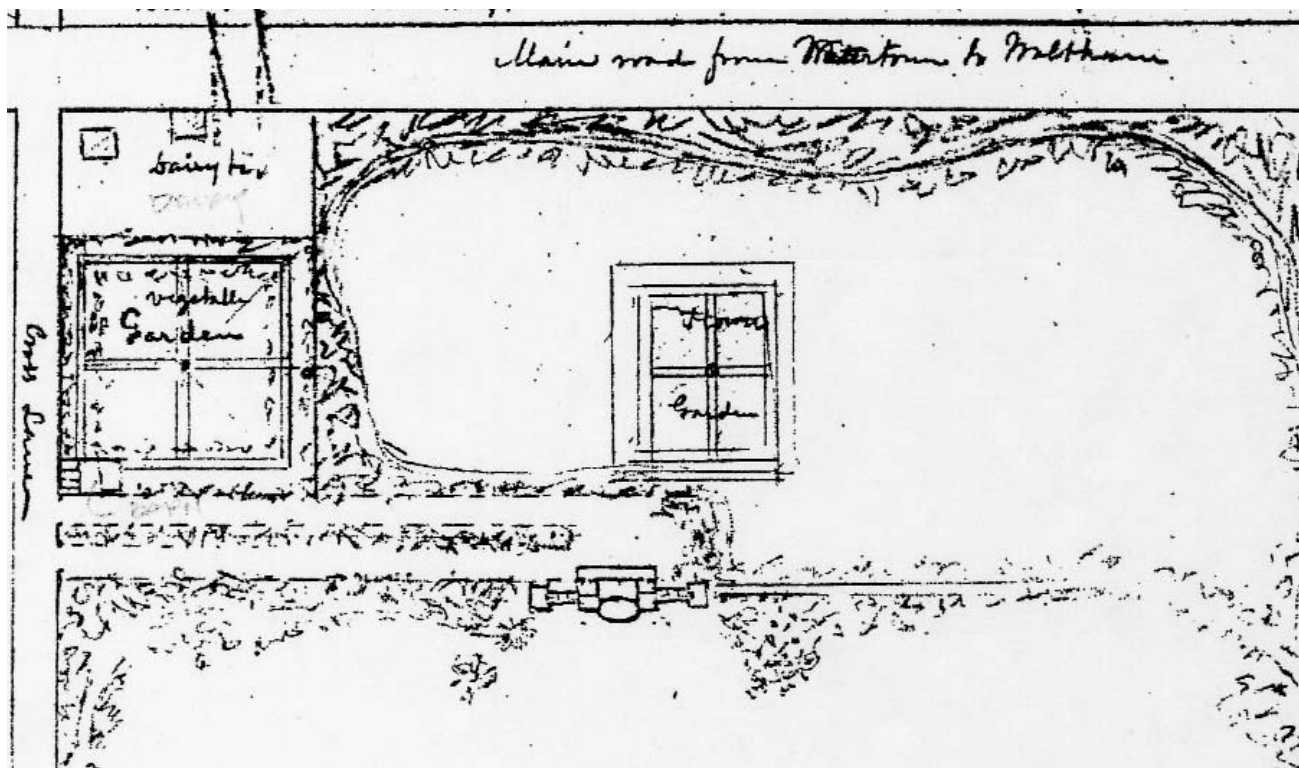


Figure IV.1. Gore Estate Sketched in 1881 by Col. Henry Lee from Memory of an 1834 Visit (Courtesy GPS).

graphic depictions, suggested that early entrance drives may be present below and/or adjacent to the present drive. Archaeological investigations in this area, therefore, focused on identifying the location and composition of historic entrance drives between Gore Street and the mansion house. This search was accomplished by the excavation of a series of 50 cm x 50 cm (20 in x 20 in) shovel test pits (STPs) arranged in five transects that extended perpendicular to and south of the existing asphalt drive. The transects were 20 m (65.6 ft) apart and consisted of three, four or five tests spaced at 5 m (16.4 ft) intervals (Fig. IV.2). The westernmost transect was located 5 m (16.4 ft) east of the western stone property wall adjacent to Gore Street. Two additional tests were completed on the edge of the paved asphalt drive; STP G1a located 3 m (9.8 ft) east of the knot garden walk, and STP E5 located 5 m (16.4 ft) east of D5 to search for the possible presence of early drive surfaces. An additional test was performed in the entrance drive itself to make sure that early roadbeds did not exist beneath the present drive. A small area of loose asphalt was removed with mechanical assistance so that a 1 m x 2 m (6.5 ft) test trench could be completed. This test was located between 7 m and 8 m (22.9 ft and 26.2 ft) west of STP D5 and extended 2 m (6.5 ft) northward from the south edge of the asphalt drive. The grassy drive circle was also slated for testing, but the observation of historic photographs that revealed extensive disturbance resulted in the decision to avoid this area. Although additional STPs and excavation units (EUs) were planned to clarify expected drive edges, only two extra STPs and two EUs were needed due to the consistent stratigraphic profile across the area and due to the absence of buried drives.

Table IV.1. Test Units Proposed and Completed for Entrance Drive Identification.

Quantity Proposed	Quantity Completed	Unit Type	Location
Up to 12	1	STP	North side of drive
Up to 20	16	STP	South side of drive
Up to 14	0	STP	Circle area
Up to 10	1	EU 1 m x 1 m	South side of drive
Up to 12	1	STP	South of drive area
0	1	EU 2 m x 2 m	Under asphalt drive

2. Carriage House

The carriage house is a large, three-bay structure measuring approximately 24 m x 14 m (78 ft x 46 ft). It was originally located immediately north of the entrance drive and adjacent to former Cross Road (Gore Street) (Fig. IV.3). It was constructed in 1793 at the time the Gores were occupying their first mansion house. An ell or shed appears to have been attached to the rear of the carriage house by 1900 and a separate stable was present immediately north of the adjacent greenhouse area (Atlas of Middlesex County 1900). Being some distance from the main house, the original carriage house survived the 1799 fire and remained at its original location until 1966-67. At that time a new avenue plan for Gore Street required construction of a roadway inside the western estate boundary (Fig. IV.4). The west half of the carriage house lay within the path of the proposed road, necessitating the removal of the structure to the northwest corner of the property where it remains today. The remaining cellar hole was filled and then covered with gravel to accommodate vehicle parking.

Landscape restoration plans call for moving the carriage house as closely as possible to its original location. Because the western portion of the carriage house foundation was lost to the 1960s road construction, the structure will have to be shifted east of its original location. Archaeological investigation was needed to identify the location of the original carriage house foundation and to identify additional cultural resources that have the potential to be impacted by the relocation project (see greenhouse below).

Work in this area commenced with the plotting of the approximate carriage house location on the ground based on observations of historic maps including the 1834-38 Lyman Plan, 1841 Green Plan, the 1936 (HABS) plan, and the ca. 1966 map of the proposed widening of Gore Street that depicted the western end of the barn. Field plotting required taking measurements

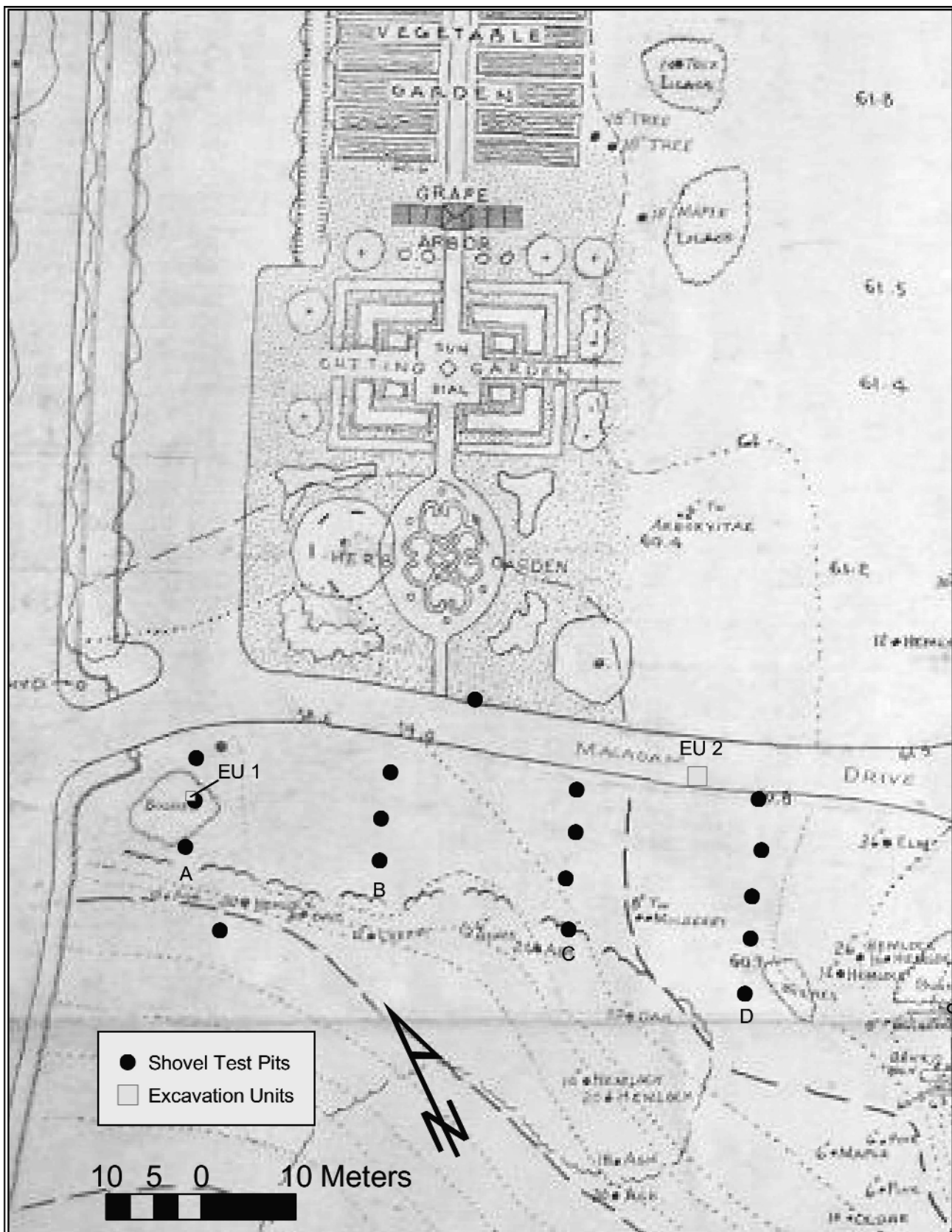


Figure IV.2. Archaeological Testing Plan in the Entrance Drive Area.

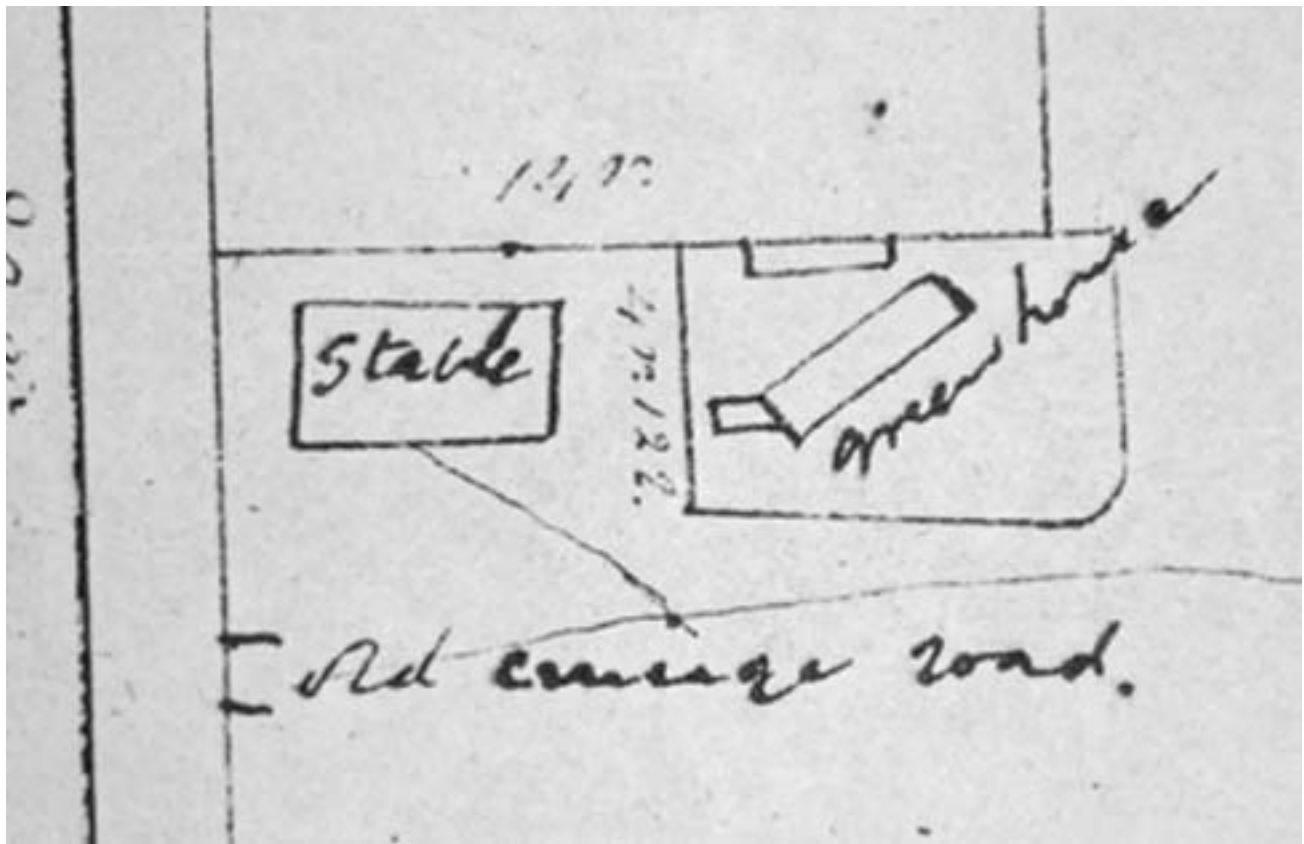


Figure IV.3. Detail of 1834-38 Lyman Estate Plan Depicting the Carriage House (Stable) and Greenhouse (Courtesy GPS).

from the original west boundary wall of the property now located in the median of Gore Street. The original north foundation wall was roughly aligned with the center of Richgrain Avenue. A single trench measuring approximately 2 m (6.56 ft.) in width (east-west) and 7.5 m (24.6 ft) long (north-south) was marked out in the snow-covered parking lot in hopes of encountering the north foundation wall close to its east end. Because the foundation area now lay within a raised gravel parking area, coupled with the possibility that the foundations were actually removed from the site, machine assisted trenching was determined to be necessary. Although as many as six trenches had been planned for the identification of the foundation, only one came to be needed.

Grounds superintendent, Scott Clarke, used his John Deere tractor with a 6 ft wide front-end loader to gently remove successive layers of parking area bedding and underlying fill

deposits. Loose foundation stones and a few brick fragments were encountered at a depth of approximately 90 cm (35.4 in) below the parking lot surface. An additional pass with the tractor followed by hand excavation revealed the carriage house north foundation wall right where it was supposed to be.

Table IV.2. Test Units Proposed and Completed for Carriage House Foundation Area

Quantity Proposed	Quantity Completed	Unit Type	Location
6	0	Trench, 1 m wide	N, S, E walls
12	0	STPs	N and S of carriage house
0	1	Trench, 2 m x 7.5 m	Northeast foundation wall

3. Greenhouse

Greenhouses have been an important component of Gore Place history since the eighteenth century, being a ubiquitous element of the Federalist interest in the American landscape garden and the development of scientific agriculture. The earliest greenhouse known to be on the property

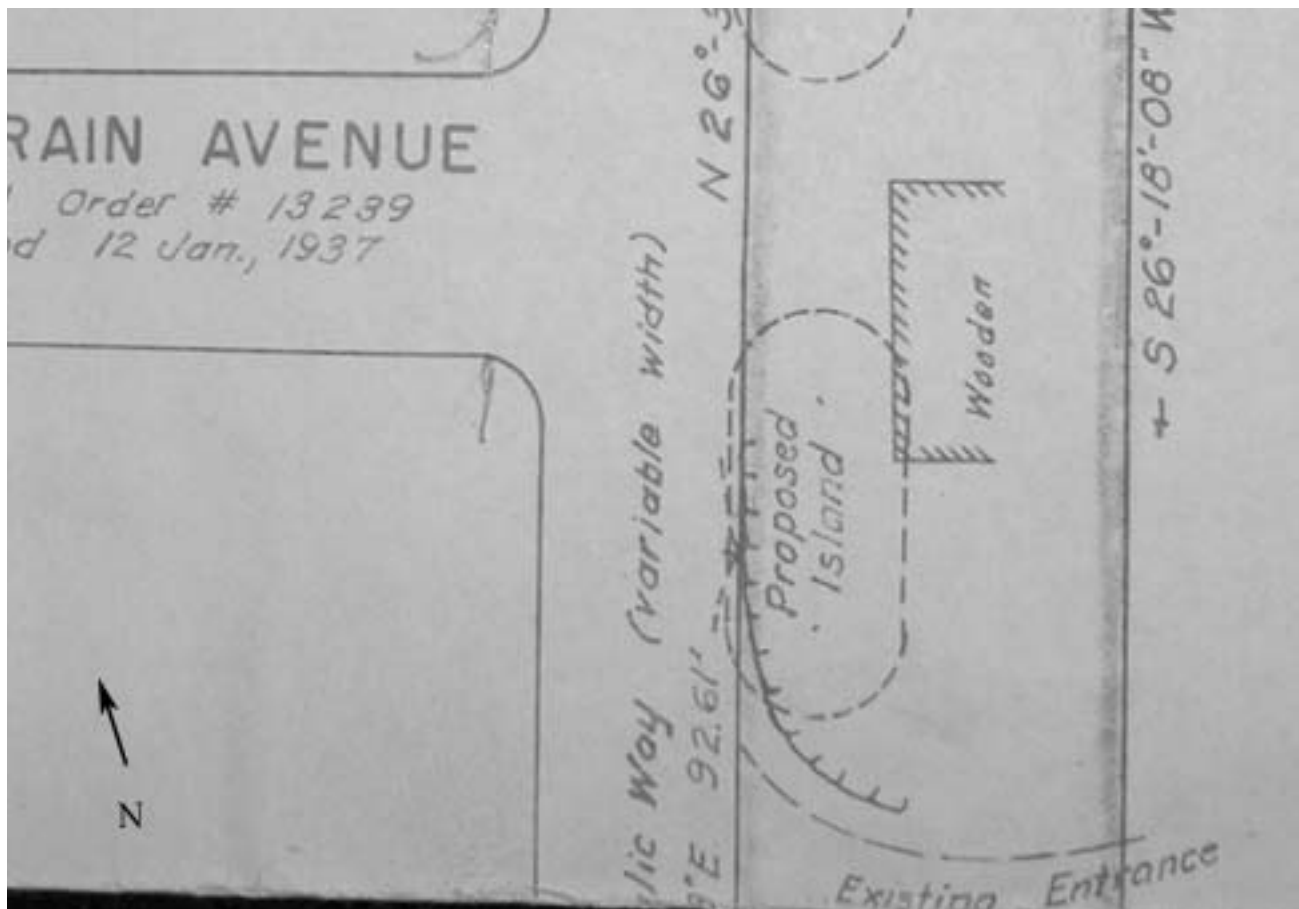


Figure IV.4. Plan of Proposed Changes to Gore Street ca. 1967 (Courtesy GPS).

was incorporated into the east wing of the Gore's first mansion. A fire that started in the greenhouse resulted in the destruction of all but the west wing of the mansion. A second greenhouse was erected some distance from the new 1806 Gore mansion and was sited immediately east of the carriage house.

All that is known about the greenhouse derives from the 1834-38 Lyman estate map (see Fig. IV.3) and the 1841 Greene estate plan (see Fig. III.4). Both of these sources depict a rectangular structure with its long axis facing due south, an orientation that is asymmetrical to other buildings and landscape features. This structure appears to be contained within a fenced yard or surround of plantings immediately east of the carriage house. Although its construction date is unknown, the greenhouse presence on the 1834-38 map strongly suggests an association with the Gore family. The Gore's intense interest in scientific agriculture coupled with a December 9th,

1834 advertisement for greenhouse plants support this association. Further indication of Gore family association is the recorded purchase of the late Mrs. Gore's orange and lime trees in the same year (Brockway 2001:26). The purchase of the estate by the Lymans between 1834 and 1838 undoubtedly resulted in continued use of the greenhouse due to their agricultural interests that included the growing of pineapples. The succeeding Greene family also maintained a strong interest in gardening and likely continued to use the structure into the 1850s. The following Walker family apparently did not share such an interest in gardening, suggesting the greenhouse may have gone into disuse between 1856 and 1907. The structure, in fact, may have been removed by the 1880s due to its absence on Charles Eliot's depiction of the estate grounds in 1889 (see Fig. III.6). The site of the greenhouse was transformed into a formal garden and lawn sometime during the twentieth century.

The area of this greenhouse is of particular interest because it has the potential to provide important information on early greenhouse construction and use, and is also expected to aid in understanding the relationship between this greenhouse and the greenhouse incorporated into the grapery (see below). The potential for intact archaeological deposits here has a direct impact on the relocation of the carriage house. Archaeological investigation of the greenhouse area was proposed to identify the location of the greenhouse structure and to determine the level of integrity of associated archaeological deposits.

Greenhouse investigations commenced with a determination of approximate location from study of the 1834-38 Lyman and 1841 Green estate maps. Subsurface testing was performed by the excavation of a 30 m x 30 m block of shovel tests spaced and staggered at 5 m intervals. The block was located immediately east of the original carriage house foundation. This strategy allowed for coverage of the entire greenhouse area including the central structure, the surrounding yard, and the south edge of the historic vegetable garden that was situated north of the greenhouse and carriage house (Fig. IV.5). The block consisted of 7 transects labeled A-G from west to east, and 1-7 from south to north. Although 46 STPs were planned, transect A was eliminated due to its location in a portion of the parking lot that appears to have been disturbed during removal of the carriage house.

Table IV.3. Test Units Proposed and Completed for Greenhouse Area.

Quantity Proposed	Quantity Completed	Unit Type	Location
46	40	STPs in 30 m x 30 m block	Greenhouse area
6	1	EUs (.50 m x 1 m)	Greenhouse area
4	3	EUs (1 m x 1 m)	Greenhouse area

4. Vegetable Garden

The Gore family kitchen or vegetable garden was located north of the carriage house, and as laid out by the Gores or previous occupants, likely assumed a rectilinear form characteristic of

the eighteenth century (see Fig. III.3). Both this and the flower garden are believed to have been redesigned by the Lymans between 1834 and 1838 following a more modern curvilinear form (Brockway 2001:31-32). The vegetable garden appears to have been removed during occupation by the Walker family in the second half of the nineteenth century, only to be incorporated into recreational golfing features by the Waltham Country Club. The western portion of the area was raised and covered with sand and gravel for vehicle parking after the carriage house was moved to its present location in 1966-67. Archaeological testing in the area of the vegetable garden was proposed to determine the integrity of soils and overall degree of preservation of this early landscape feature.

The garden boundaries as defined on the 1834-38 Lyman estate plan were plotted on the ground to determine the garden's approximate location. This was followed by excavation of a 20 m x 20 m block of 8 STPs spaced and staggered at 20 m intervals (Fig. IV.6). The westernmost 'A' transect of three tests lay in the raised gravel driveway approximately 7 m east of the western stone boundary wall, while transect B was situated immediately east of the parking area. Transect C lay on the east side of the present planting beds.

Table IV.4. Test Units Proposed and Completed for the Vegetable Garden.

Quantity Proposed	Quantity Completed	Unit Type	Location
8	8	STPs in 20m x 20m block	Vegetable Garden

5. Flower Garden

The flower garden was located north of the mansion house and circular drive and was immediately south of the grapery (see Figs. III.1 and III.3). It is believed to have been created during the occupation of the Gore family if not earlier, since it was included in the list of improvements in the 1834 estate sale to Theodore Lyman. The garden, as remembered by Col. Henry Lee during his 1834 visit, was designed in a four-square pattern with perimeter and central axial walks

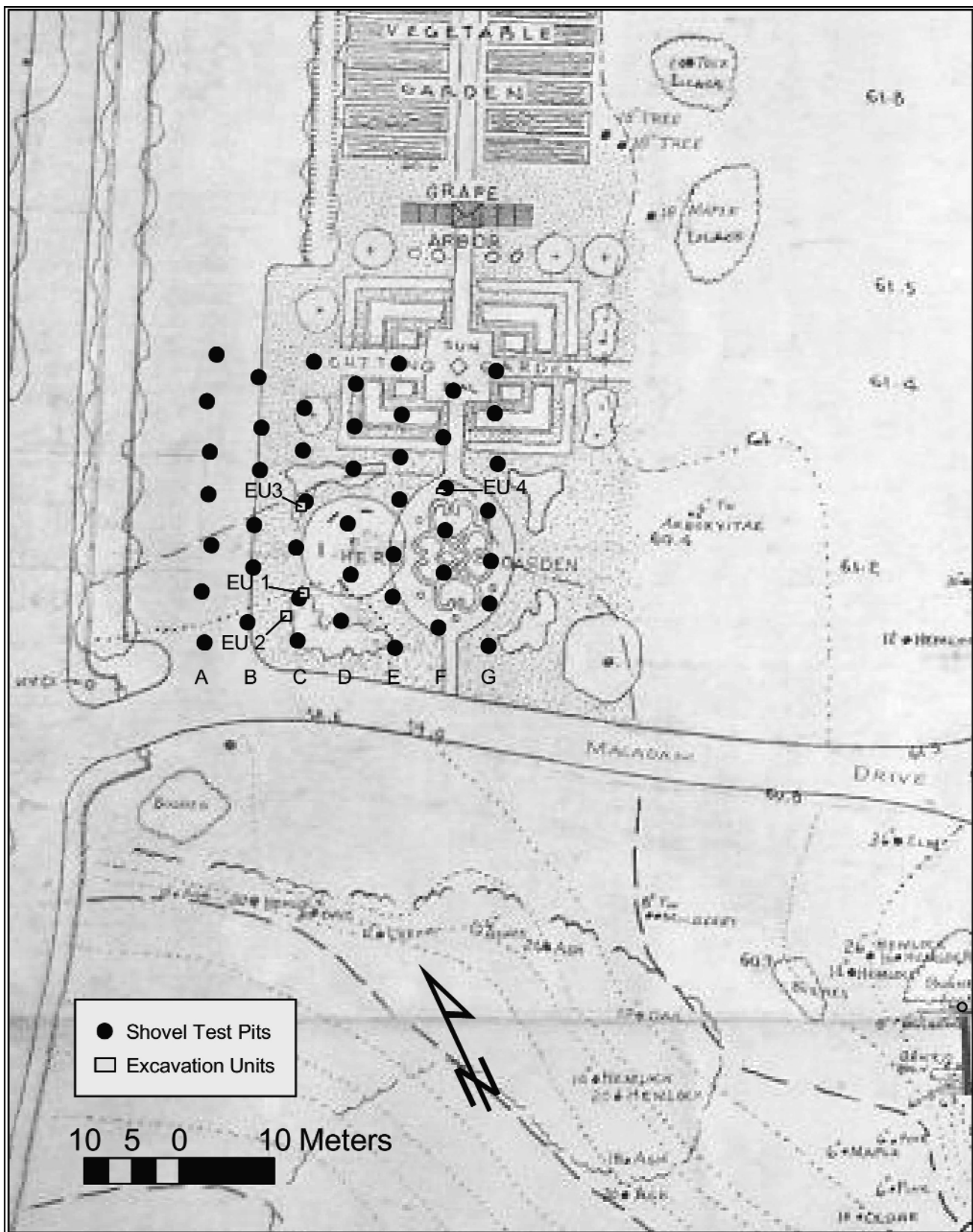


Figure IV.5. Archaeological Testing Plan in the Greenhouse Area.

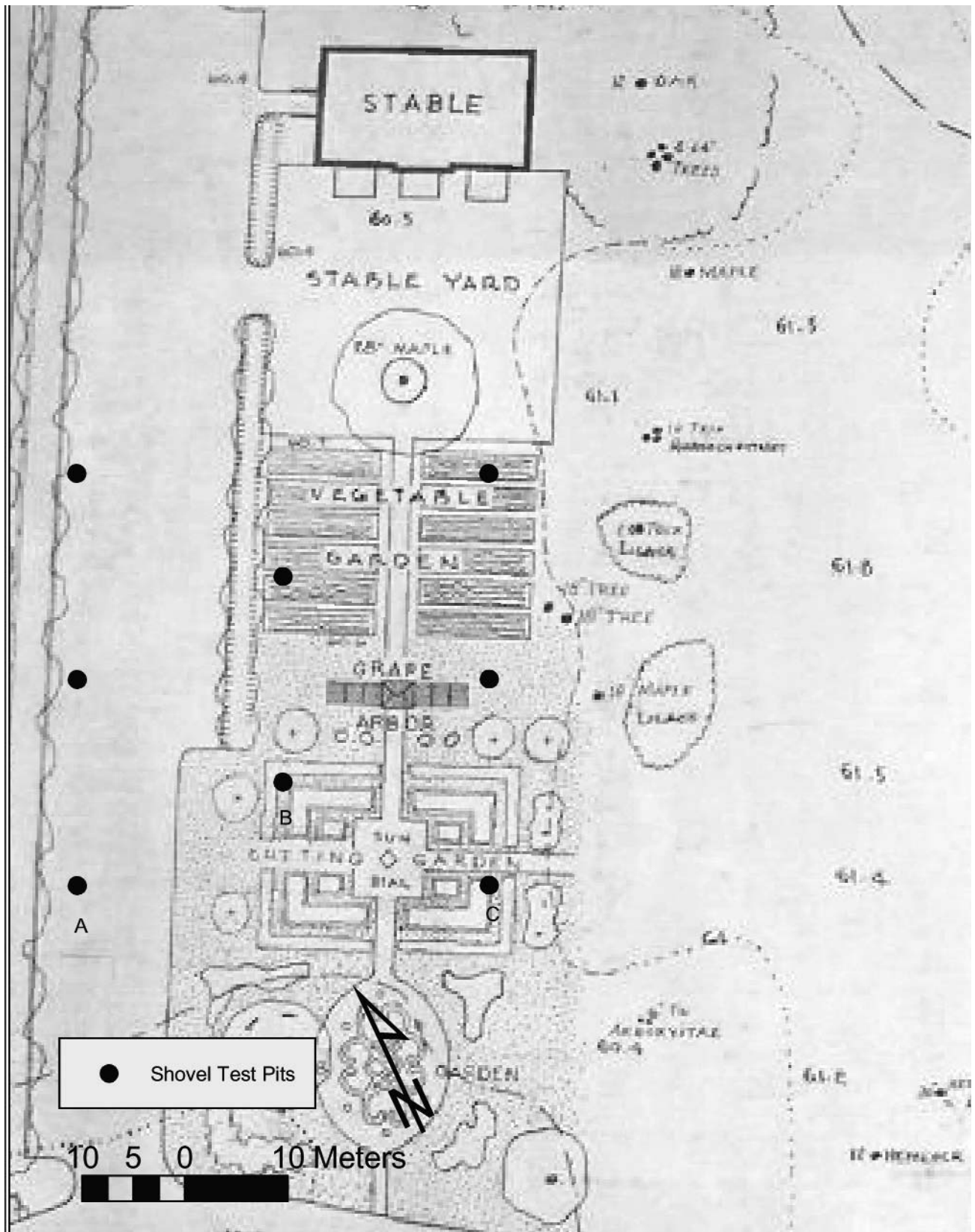


Figure IV.6. Archaeological Testing Plan for the Vegetable Garden

running north-south and east-west through the garden's center (see Fig. IV.1). This rectilinear form, characteristic of eighteenth-century designs, was modified by the Lymans with the help of landscape gardener Robert Murray beginning in 1835. The new design followed a more modern, curvilinear pattern and likely remained in place through the occupation of the Greene family as Murray continued to work on the estate until 1856. Although ownership shifted to the Walkers at that time, the garden continued to be maintained and was described by Charles Eliot in the 1880s as "carefully sheltered and quaintly laid out in geometric fashion, with great banks of shrubs at the sides, plenty of smooth grass, and large beds crowded with perennials in rich, old-fashioned array" (Brockway 2001:39). Garden maintenance appears to have ceased when the property was bequeathed to the Episcopal Church in 1907. The garden was probably sodded over around 1921 to become part of the golf course constructed by the Waltham Country Club.

Archaeological investigation of the flower garden held the potential to reveal evidence of both the earlier rectilinear and later curvilinear configurations. The potential stripping of topsoil in this area, however, was feared to have severely impacted garden deposits. The site examination, thus, sought to determine the potential presence of such deposits and their level of integrity. To this end a 40 m x 60 m block of eleven shovel tests staggered at 20 m intervals was completed (Fig. IV.7). Two transects (A and C) of four tests each paralleled the north-south tree lines on either side of the garden area, while transect B passed north-south close to its center.

Table IV.5. Test Units Proposed and Completed for the Flower Garden

Quantity Proposed	Quantity Completed	Unit Type	Location
11	11	STPs in 40 m x 60 m block	Flower Garden

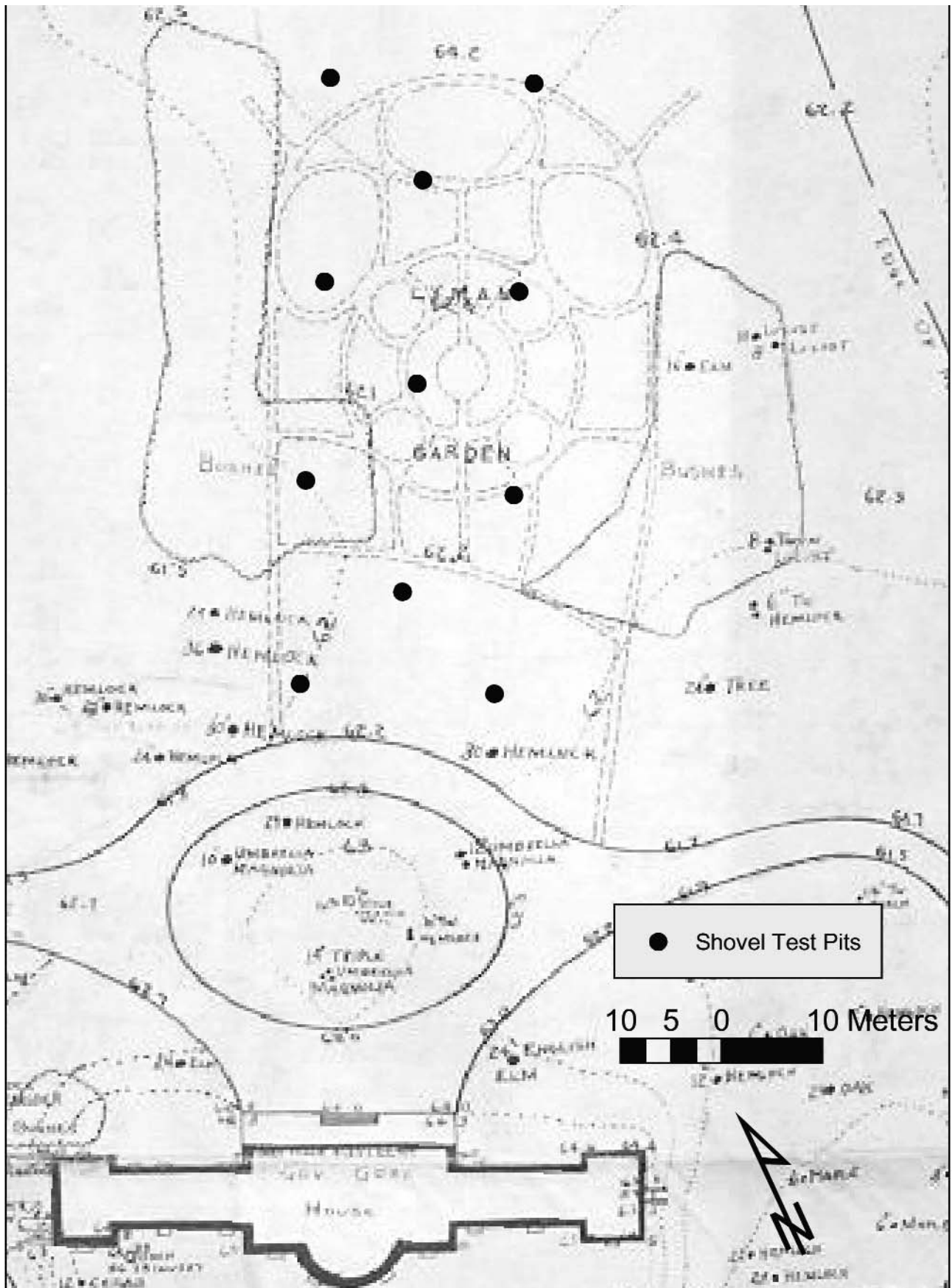
6. Grapery/Fruitwall

The grapery/fruitwall was located at the north end of the flower garden that was situated north

of the mansion house. The structure consisted of a central wall with two flanking wings, each set off at angles of approximately 30° from the central span. The entire structure was oriented with its long axis parallel and slightly offset to the east of the mansion house. The earliest depiction of the grapery appears on the 1834-38 Lyman estate plan that shows single lines to represent the central span and flanking fruit walls (see Fig. III.3). By the time of its next depiction on the 1841 Greene estate plan (see Fig. III.4), the walls appear as blocks, suggesting the structure consisted of three attached buildings that maintained the configuration of the original grapery walls. An approach road is also depicted at the structure's west end by this time. A similar configuration, but with a clearly enlarged central block, appears in the 1889 Charles Eliot sketch of the property (see Fig. III.6). Also by this time the structure is labeled as a greenhouse. Both this and the earlier depictions reveal the structure to be nearly as long as the mansion house itself. According to Brockway (2001:41), the grapery was removed from the property between 1907 and 1935 during the ownership by the Episcopal Church or during the use of the estate by the Waltham Country Club. The grapery definitely would have impeded golfing activities on the lawn.

According to grounds superintendent, Scott Clarke, portions of the grapery area were mined of topsoil that was used for landscaping in the past. In addition, some of the area was regularly plowed for crop production into the 1980s. This recent activity, particularly the deep plowing that would have resulted from the loss of topsoil may have severely impacted archaeological evidence of the structures. Nevertheless, the substantial size of the buildings suggested that foundations or post impressions may remain at the base of the plow zone.

The purpose of archeological testing in this area was to identify the location of the grapery/fruitwall with the intent of possible reconstruction, and to determine if intact archaeological deposits



were present. Investigations of the grapery commenced with a determination of its approximate location from map depictions. This exercise was followed by the laying out of a 30 m x 50 m block of 21 shovel tests staggered at 10 m intervals. The block consisted of six north-south oriented transects labeled A through F from west to east (Fig. IV.8). A single 1 m x 1 m excavation unit was completed immediately southwest of STP D1 to investigate architectural remains.

Table IV.6. Test Units Proposed and Completed in the Grapery/Fruitwall Area.

Quantity Proposed	Quantity Completed	Unit Type	Location
21	21	STPs in 30 m x 50 m block	Grapery
10	0	STPs (additional)	Grapery
6	0	EUs (.50 m x 1 m)	Grapery
8	1	EUs (1 m x 1 m)	Grapery

D. Site Examination Results

A total of 98 shovel test pits, 6 excavation units and one excavation trench were completed during the archaeological site examination. Historic period artifacts and features derived from 80 of the shovel tests and from all units and the trench. No evidence of Native American occupation was identified. Results of testing in each of the six areas is provided below.

1. Entrance Drives

Archaeological investigations in the area of the entrance drives revealed the existence of a single entrance drive and a separate service drive, as well as significant landscape modification across the entire area. All STPs and the single 1 m x 1 m EU revealed a redeposited dark brown loamy A-horizon with a low density of eighteenth- and early nineteenth-century artifacts. This soil overlies a deposit of coarse sand and gravel fill with an occasional oyster shell suggesting this material may have derived from Charles River gravel deposits (Fig. IV.9). The gravel, in turn, lies on a layer of field/cobble stones, also potentially derived from the river. The cobbles lie directly on the surface of the orangy-brown B-horizon or on a remnant truncated buried A-horizon that was only one to two centimeters in

thickness. These findings reveal that the original south sloping ground in this area was stripped of its topsoil and then filled with well-differentiated layers of stones, sandy gravel and landscaping loam respectively. These landscape changes succeeded in raising and leveling the yard surface. In addition, the entrance and service drives were created by these alterations through the addition of extra sand and gravel in the roadway areas.

The 2 m x 2 m test (EU2) under the asphalt of the present entrance drive revealed a series of sand, loam and gravel fills over the sand, gravel and cobbles that underlies the broader area. Below this fill were the remnants of a truncated dark brown sandy loam buried A-horizon over an orangy brown clay loam B-horizon (Fig. IV.10). Artifacts identified by the testing revealed a remarkably consistent, low-density scatter of fragmented ceramics including planting pots, creamware (ca. 1762-1820), and pearlware (ca. 1775-1830), as well as window glass and nails (Fig. IV.11). Also discovered in this area were utility lines consisting of a possible gas line encountered in EU1 and a rubber coated electric cable in STP A3 under the service drive.

2. Carriage House

The carriage house north foundation wall lies approximately 23.75 m (77.92 ft) north of the north entrance post and 1.25 m (4.10 ft) south of an electric utility pole (Fig. IV.12). The surface of the partially demolished wall lies between 1 m (3.28 ft) and 1.20 m (3.93 ft) below surface. Measurements suggested the cellar entrance in the east wall was just outside of the test trench that was located approximately 9 m (29.5 ft) east of the present western stone boundary wall. The foundation wall is constructed of large rounded boulders and angular foundation stones held together with mortar. Excavation revealed upper foundation stones to lie out of place on either side of the wall, with most having fallen or been pushed into the cellar's interior (Fig. IV.13). A small section of collapsed brick wall was also present in this area. Cellar fill consisted of a loose, medium brown sandy loam that also con-

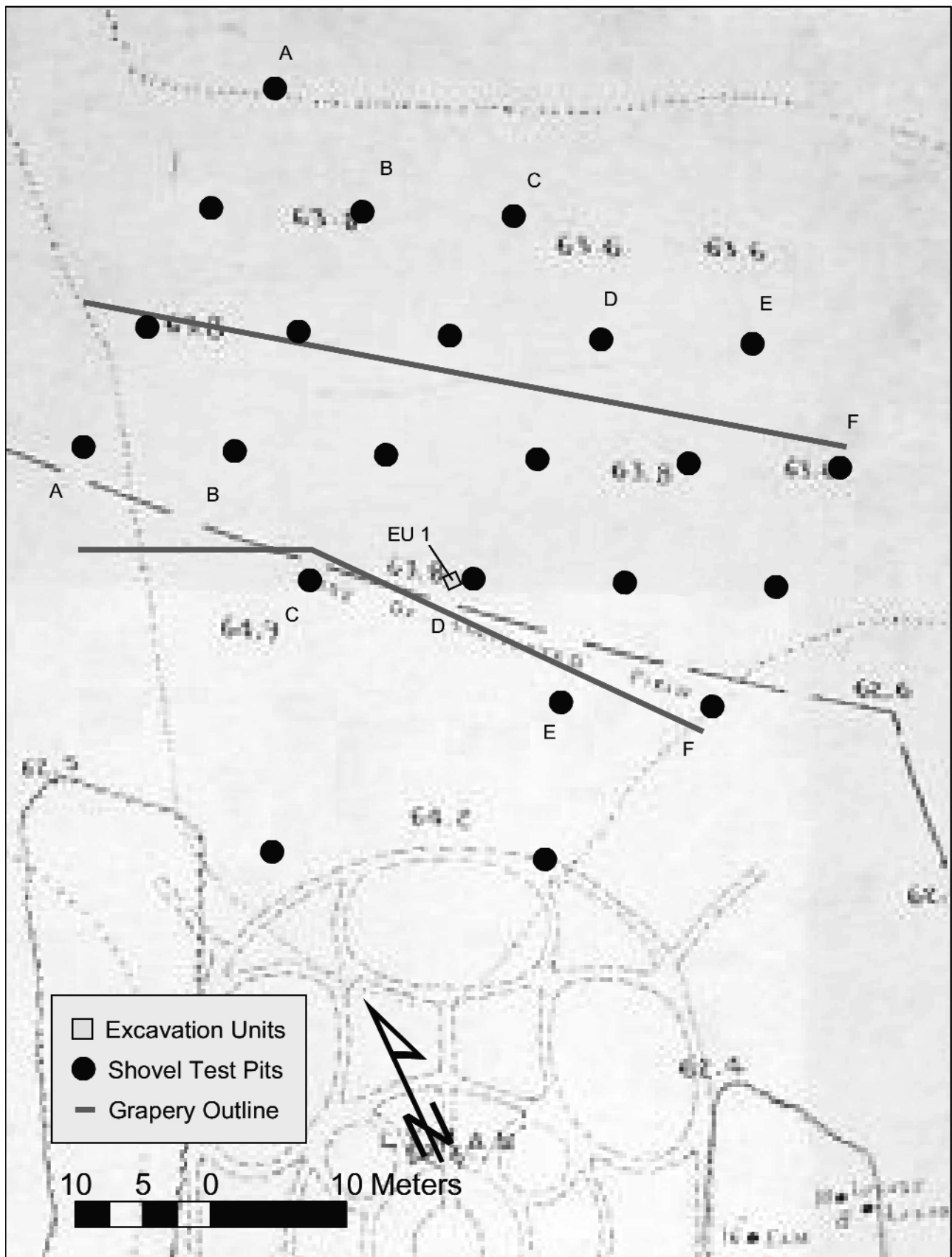


Figure IV.8. Archaeological Testing Plan in the Grapery/Fruitwall Area. Tests Between Lines Revealed Deep Grapery Greenhouse Soils.

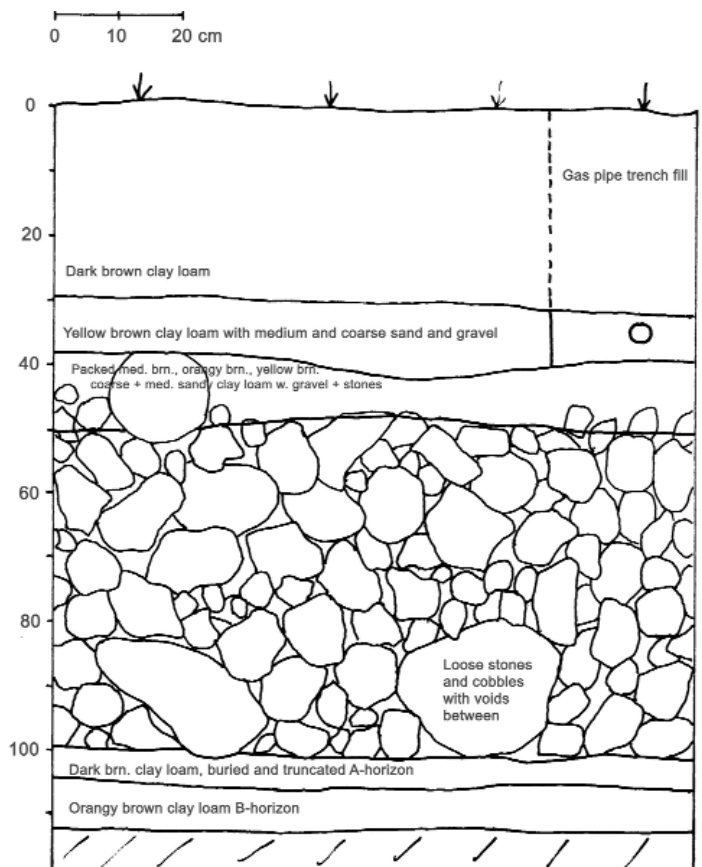


Figure IV.9. East Wall Profile of Excavation Unit 1 in the Entrance Drive Area.

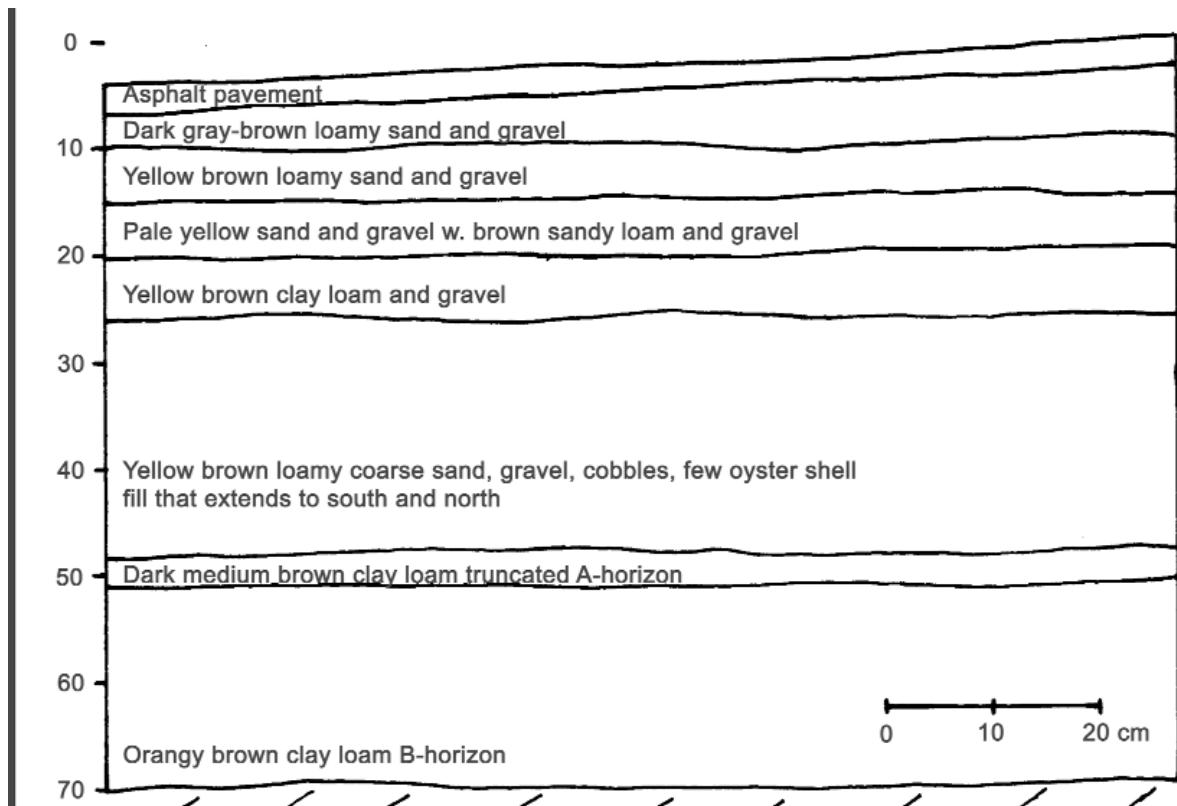


Figure IV.10. West Wall Profile of Excavation Unit 2 under the Asphalt Entrance Drive.



Figure IV.11. Artifacts Recovered from the Entrance Drive Area. 1)Tobacco Pipe Bowl, 2)British Brown Stoneware (1671-1775), 3)Nottingham Stoneware 1638-1810, 4)White Salt-Glazed Stoneware 1720-1805, 5)Aluminum pulltab (1962+), 6)Pearlware 1775-1830, 7)Wine Bottle Base, 8)Redware Planting Pot Fragments, 9)Lead-glazed Redware, 10)Lamp Chimney.

tained stones and a few pieces of asphalt pavement. A small deposit of artifacts consisting of later nineteenth-century bottle and some window glass was encountered on the north side of the foundation wall at an elevation between 70 cm (27.5 in) and 100 cm (39 in) below the parking lot surface. After the foundation wall's location was recorded the excavation trench was back-filled.

3. Greenhouse

The block of shovel tests revealed soils in the greenhouse area to consist of approximately 30-35 cm of dark brown sandy loam A-horizon overlying either a yellow-brown coarse sand, gravel and stones or a yellow-brown/orangy-brown clay loam B-horizon. The central portion of the block represented by test pits in transects

C, D, E and F revealed foundation stones and brick and mortar rubble between the A-horizon and underlying sand and gravel (see Fig. IV.5). This rubble area underlies the present oak tree, west bench and west and north edges of the present knot garden and a portion of the yew hedge north of the knot garden. Soils to the south and immediate east of the structure rubble are characterized by a thick A-horizon over a B-horizon, while tests further east contained sand and gravel below the A-horizon. The western portion of the area (Transect B) adjacent to the present gravel parking lot revealed a variety of soil types as well as a possible cobble surface.

Artifacts recovered from the greenhouse area were dominated by a low density scatter of fragmented planting pots (in 56% of STPs) window

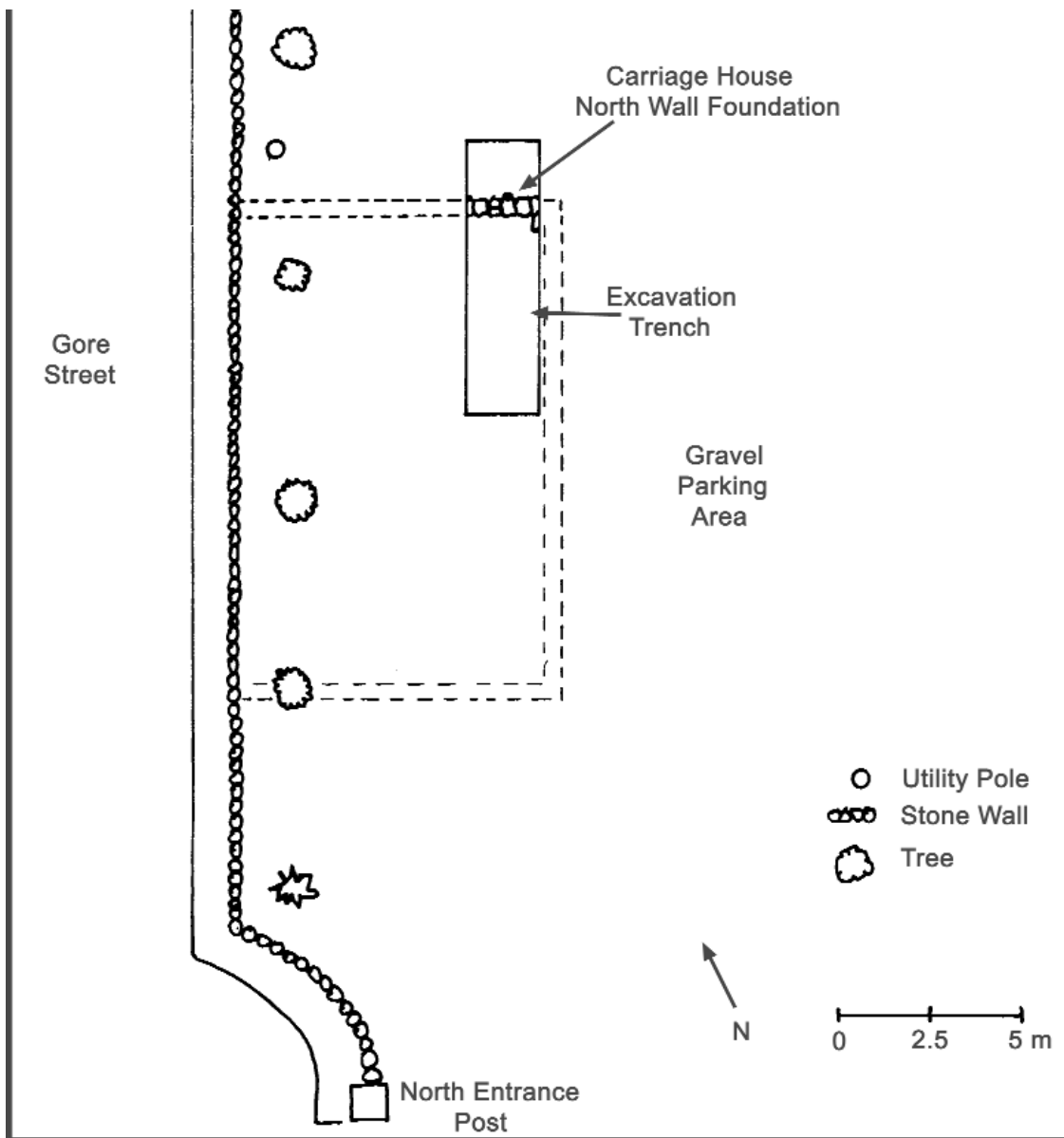


Figure IV.12. Location of Excavation Trench and Foundation Wall in the Carriage House Area.

glass, and lesser amounts of creamware/pearlware (in 53% of STPs) (Fig. IV.14). Other artifacts included brick and mortar, cut and wrought nails, bottle glass, oyster shell and smoking pipe fragments. Artifacts were distributed fairly evenly across the block with the exception of the tests in Transect B adjacent to the parking area that revealed a lower density.

Stones interpreted to be possible structure foundations were encountered in STP C2 and F4. Unit 1, measuring 1 m x 1 m, was excavated immediately east of C2 to further explore this anomaly. The upper 40 cm of dark brown medi-

um sandy loam contained scattered fragments of brick, mortar and foundation stone along with an assortment of artifacts common to the area as revealed by the shovel tests. A stone drain feature was encountered below 40 cmbs in the west portion of the unit. The drain consisted of two parallel lines of field stones covered with flat, rough paving stones and other stones that covered cracks and openings between the top stones (Fig. IV.15). The drain cavity is approximately 15 cm (6 in) deep and 25 cm (10 in) wide with an earthen floor. The parallel support stones were set into the upper portion of the yellow-brown sandy clay loam B-horizon soil. The interior



Figure IV.13. Carriage House Area Trench and Foundation Wall (facing north). Note post 1967 Carriage House location in background.

space was completely filled with dark brown fine sandy loam. The stones extended across the west portion of Unit 1 and the eastern portion of STP C1. The drain alignment is generally east-west and the feature was traced with a metal probe westward for over a meter and eastward to the yew hedge.

Unit 2 was excavated 1 m to the southwest to investigate a depression visible on the ground surface that was potentially located at the west end of the greenhouse, and to investigate what was believed to be the west end of the drain. The stratigraphy revealed in this unit was similar to that in Unit 1, consisting of a layer of landscaping loam over a dark brown sandy loam with some demolition rubble in the upper portion. The end of the stone drain was located in the northeast corner of the unit. Here, two and three stones, respectively, supported the flat top

stones. The base of the drain lay at 70 cm (27.5 in) below surface, 15 cm (6 in) below the surface of the B-horizon (Fig. IV.16). Dark brown silty loam filled the drain and excavation of the fill revealed fragments of a colorless glass bell jar.

Unit 3 was located immediately south of STP C4 to investigate a possible cobble pavement present between 52 cm (20.5 in) and 68 cm (27 in) below surface. Soils in this unit consisted of disturbed dark brown sandy loam that extended to a depth of 85 cm (33.4 in). Below this was a dark yellow-brown loamy sand and gravel. No evidence of the cobble surface was encountered and the area appears to have been disturbed possibly from carriage house moving activities.

Unit 4 consisted of a 90 cm (35.4 in) west extension of STP F4, located at the north end of the knot garden (see Fig. IV.5). Demolition rubble



Figure IV.14. Artifacts Recovered from the Greenhouse Area. 1)Redware Planting Pot Fragments, 2)Creamware Plate (1775-1820), 3)Blue Shell-edge Pearlware Plate (1800-1835), 4)Ballast Flint, 5)Tobacco Pipe Stem, 6)Tinglazed Ointment Pot Rim, 7)Chinese Export Porcelain, 8)Lead-glazed Redware, 9)Wine Bottle Neck. See Appendix A for context information.



Figure IV.15. Stone-lined Drain Revealed in Excavation Unit 1 in the Greenhouse Area.

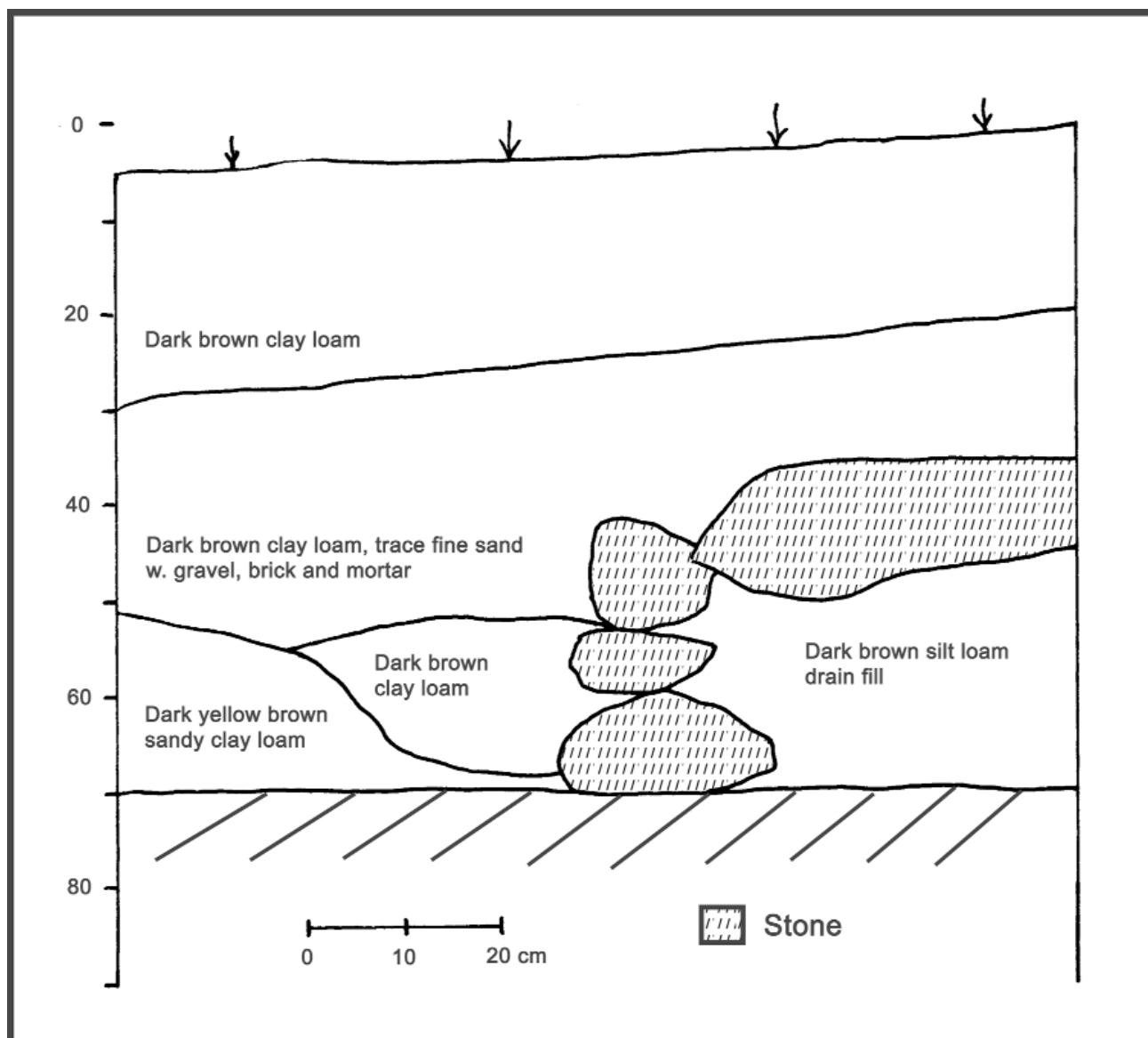


Figure IV.16. North Wall Profile of Excavation Unit 2 in the Greenhouse Area.

and possible foundation stones were first encountered in F4 at a depth of 18 cm (7 in) below surface. Work on the STP was halted until the unit could be expanded for further investigation. The completion of F4 and its extension revealed 25 cm (9.8 in) of medium brown clay loam containing demolition rubble consisting of fragmented plaster, mortar, brick, stones, gravel, possible large foundation stones and fragments of marble and slate floor tiles (Fig. IV.17). Also present was a low density of artifacts including planting pot and bottle fragments, nails, window glass, bone and coal. This was underlain by 2 cm (.8 in) of yellow sand that covered hard packed, brown coarse sandy clay loam with gravel and

small stones that graded to yellow brown coarse sand and gravel. This bottom layer extended beyond 78 cm (31 in) below surface and contained a single fragment of bottle glass. This layer is also the same fill soil that was deposited across the entrance drive area.

4. Vegetable Garden

The three tests located in the parking area (STPs A1-A3 in Fig. IV.6) revealed between 25 cm (9.8 in) and 40 cm (15.7 in) of a yellow, medium sand bedding below 10 cm (3.9 in) of gravel. A1 revealed gray-brown coarse sand and gravel fill to a depth of 60 cm (23.6 in), while A2 and A3 revealed dark brown clay loam that extended to

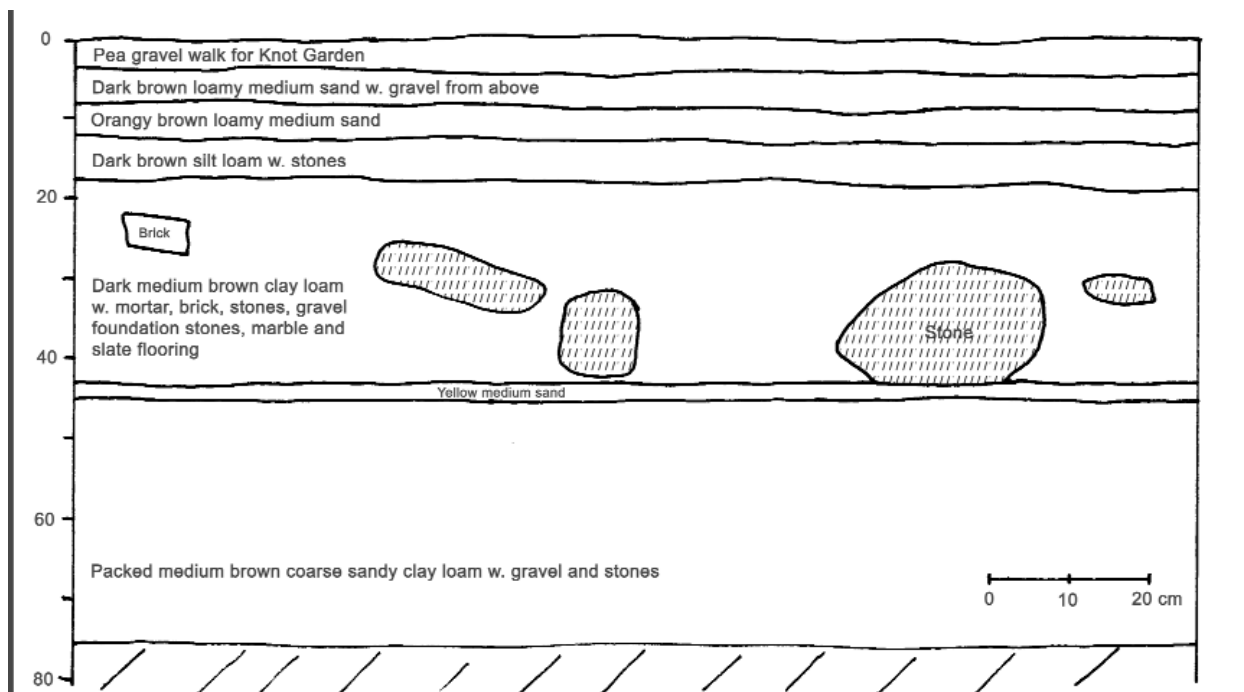


Figure IV.17. North Wall Profile of STP F4 Extension in the Greenhouse Area.

a depth of 70+ cm (27.5 in+) below surface. The B and C transects revealed A-horizons that varied in depth between 20 (7.8 in) and 45 cm (17.7 in). Strata below the A-horizon ranged between an A2 and a B-horizon consisting of yellow to orangy brown clay loam. The two tests that stood out as possibly containing features were B1 and C1, both of which fell within the transitional area between the greenhouse and vegetable garden and within the present yew-bordered garden. B1 that was further north revealed clean A-horizon clay loam over a sloped B-horizon surface between 35 (13.7 in) and 45 cm (17.7 in) below surface. STP C1 revealed medium brown clay loam A- and A2-horizons over two layers of mixed gray brown and yellow brown clay loam that were divided by a surface that sloped down to the north. The B-horizon here was hit at 53 cm (20.9 in) below surface. Soils in this test revealed more mixing than any of the other units. Another anomalous unit was C2 that revealed a possible buried A-horizon over a layer of mixed sand and gravel. Artifacts in the vegetable garden area consisted of the same low-density scatter of fragmented creamware, pearlware, window glass, vessel glass, a few nails and pieces of planting pots. No

artifacts were present in the soil from Transect A in the parking lot.

5. Flower Garden

Test excavation in the former flower garden revealed the presence of intact garden beds and walks that correspond with the 1936 HABS garden plan, and possibly with some features of the Gore period or pre-Gore period garden. Soil profiles within the garden beds consist of a dark brown clay loam A-horizon that is between 32 cm (12.6 in) and 46 cm (18 in) below surface. Underlying this is an orangy-brown or yellow-brown clay loam B-horizon. In some areas these soils are separated by a layer of mixed A- and B-horizon soil. Walks situated within the garden on the HABS plan were identified by a layer of coarse sand and gravel between 8 cm (3 in) and 13 cm (5 in) below surface in STP B2 and B3 (see Fig. IV.7). The west perimeter garden walk identified in STP A1 consisted of a coarse sand with gravel and coal between 16 cm (6.2 in) and 38 cm (15 in) below surface, below which was the surface of the B-horizon. The perimeter walk at the north end of the garden is represented by a 3 cm (1 in) lens of dark yellow brown coarse sand overlying a layer of orangy brown coarse

sandy loam and gravel. Below these layers was a 20 cm (7.1 in) thick deposit of cobble and fieldstones. The only other test unit to reveal a deposit of stones was STP B2. The function of stones at this location may be associated with a walk, but may also be associated with a central garden feature. Interestingly, a mortar fragment was found in association with the stones. The area south of the garden tested by STP B1 and C1 revealed a deep loamy A-horizon that extended to between 43 cm (17 in) and 45 cm (18 in) below surface. The surface of the orangy-brown

clay loam B-horizon revealed a possible garden planting feature consisting of a small depression containing dark brown loam and a brick fragment.

A consistent low-density scatter of artifacts was found in the flower garden area. These were dominated by planting pot fragments found in 10 of the 11 shovel tests, fragmented creamware or pearlware ceramics in 8 of the tests and window glass in 7 of the tests. A few of the artifacts revealed evidence of burning (Fig. IV.18).



Figure IV.18. Artifacts Recovered from the Flower Garden. 1) Pearlware (1775-1830) 2) Redware Planting Pot Fragments, 3) Lead-glazed Redware 4) Burned Creamware (1775-1820) 5) Slip-trailed Redware 6) Tobacco Pipe Stems. See Appendix A for specific context information.

6. *Grastery/Fruitwall*

Archaeological investigations in the grastery area revealed remnants of brick foundation in three of the shovel tests (C2, D1 and D2) and demolition debris in a number of others. Soil profiles also provided a general indication of areas that lay within and outside of the greenhouse structure (see Fig. IV.8). Tests believed to be located outside revealed a sandy loam A-horizon between 35 and 42 cm in depth. Below this was 10 cm (4 in) to 20 cm (7 in) of mixed transition sandy loam subsoil that overlay a sterile sand. These units were located across the north and northwest portion of the block. Shovel tests across much of the south and southeast portion of the block revealed deeper stratigraphic profiles and are believed to be located within the west wing of the greenhouse. Tests A1, A2 and B1 revealed a 70 cm (27.5 in) deep A-horizon that overlay mottled sandy loam. Tests immediately east (C2, D1 and D2) revealed foundation remains consisting of intact brick piers and possibly a stone foundation, while EU1 adjacent to D1 revealed a brick wall. These tests are believed to be located within the grastery greenhouse's central block. Tests E2, E3 and F1-F3 further east revealed an A-horizon between 50 cm (20 in) and 75 cm (29.5 in) in depth overlying a loamy sand subsoil. These tests may be inside the central block and/or east wing. Two of the southernmost tests, C1 and E1, revealed shallower stratigraphy amounting to an A-horizon 38-40 cm (14.9-15.7 in) in depth and these are believed to lie outside of the structure. A low density of historic artifacts was fairly evenly spread across the block of tests. Fragmented planting pots and window glass were present in all 21 tests. Creamware and/or pearlware was present in just under half of the tests, while whiteware was present in 17, amounting to 81% of the tests. Also present was a low density of burned glass and ceramic, as well as bottle glass, nails, and fragments of coal, oyster shell and bone (Fig. IV.20).

The discovery of a brick foundation pier in STP D1 prompted the excavation of EU1 to its southwest to identify additional foundation compo-

nents (Fig IV.21). The upper two strata consisted of 15 cm (5.9 in) of dark brown landscaping loam overlying 25 cm (9.8 in) of dark yellow-brown fine and medium sandy clay loam with stones and a small amount of demolition rubble. Below this was additional rubble and the surface of a brick wall and pier situated along the south unit wall. Excavation of the soil within (north of) the greenhouse foundation revealed 45 cm (17.7 in) of dark medium brown clay loam with a trace of fine sand. This matrix was mixed with oyster shell, charcoal, coarse yellow-brown sand and bone. Also present were a few brick fragments, roofing slate, window glass, stones and a few fragments of 4-5 in (10-12 cm) -diameter cast iron pipe. Below this was 4-5 cm (1.6-1.9 in) of medium brown clay loam with dark yellow brown coarse sand. The lowest soil deposit commencing at approximately 55 cm (21.6 in) was a dark medium brown loam slightly lighter in color than the main deposit above and contained fragments of brick, oyster and a few artifacts including a pipe stem and fragment of gray stoneware. This soil extends beyond a depth of 80 cm (31.5 in) from the top of the foundation wall and beyond 120 cm (47.2 in) from the present ground surface. All of the above soils are underlain by a dark yellow-brown, silty, coarse sand and gravel that extended as a flat surface northward from the base of the foundation wall and then dropped sharply downward (see Fig. IV.21).

The brick wall follows an east-west orientation and appears to represent the south foundation wall of the greenhouse's central block. The wall is two brick courses in thickness and is five courses in height, with the top course approximately 40 cm below the present ground surface. The wall was constructed on a stone sill topped with mortar. An interior brick pier extends approximately 46 cm. (18 in) northward from the wall, and what appears to be a separate brick pier is situated nearly 15 cm (5.9 in) to the northeast. The orientation of this second pier is slightly offset from the wall and pier immediately south, suggesting that it may have been constructed



Figure IV.19. Artifacts Recovered from the Grapery Area. 1)Window Glass, 2)Redware Planting Pot Fragment, 3)Nails, 4)Oyster Shell, 5)Animal Bone Fragments. See Appendix A for specific context information.

after the main structure. Unpointed mortar joints in the piers and interior wall suggest these sur-

faces were not intended to be seen and were probably covered by interior greenhouse soil.

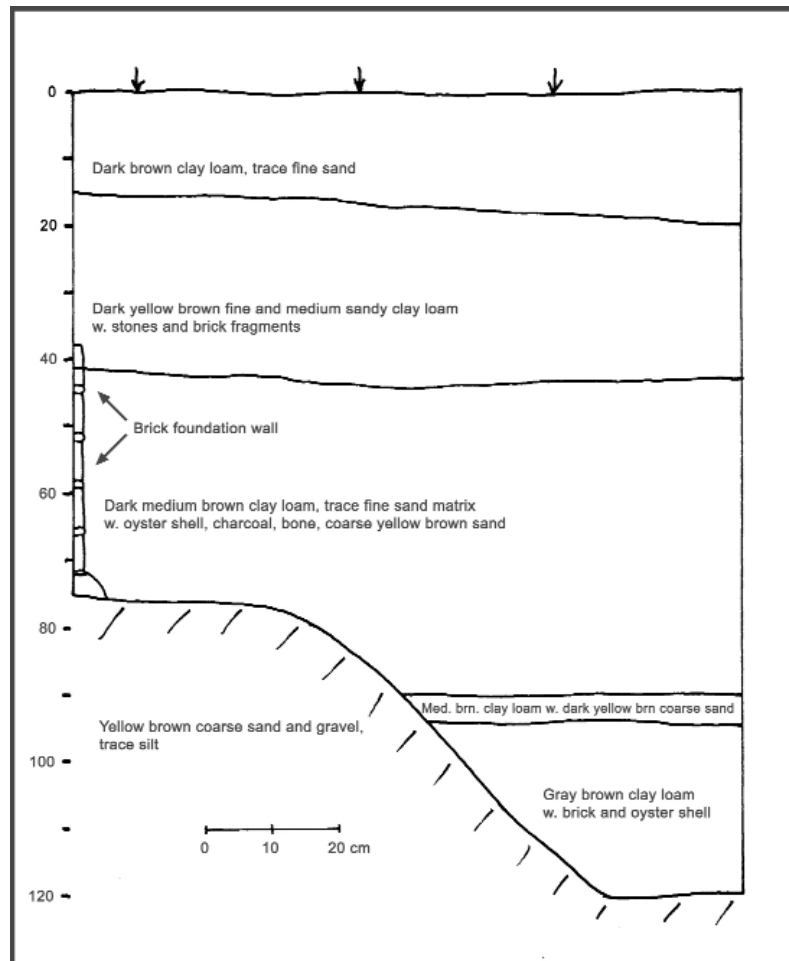


Figure IV.20. West Wall Profile of Excavation Unit 1 in the Grapery Area.

V. INTERPRETATIONS AND DISCUSSION

A. Entrance Drives

Investigations in the area of the entrance drives revealed that the original, gently south-sloping landscape here was significantly altered to create a formal, level approach to the mansion house from the west. The process of elevating the ground surface followed a specific plan that resulted in an expanded and flattened yard area that was also well drained. A reconstruction of the sequence of landscape modification is as follows.

1. The original south-sloping ground surface consisting of a dark brown clay loam A-horizon soil was stripped from a large area that extended roughly from present Gore Street nearly to the west side of the mansion, and from the tree line immediately south of the drive area northward to the original carriage house and green house locations north of the main entrance drive. This soil was removed down to the surface of the underlying orangy-brown B-horizon. One to two centimeters of the A-horizon loam was left in place in some areas. The newly exposed ground surface sloped gently southward toward the Charles River as had the original ground surface before the stripping. This same slope is presently observable immediately south of the present tree line and drive area. The stripping also removed all vestiges of the former eighteenth-century entrance drive. This original road may have been constructed of cobbles and/or oyster shell that was observed by workmen near the intersection of the entrance drive and Gore Street (Scott Clarke pers. com.).

2. The exposed B-horizon surface was then covered with a layer of large (30 cm (11.8 in) or more in diameter) and small, rounded field/cobble stones. The depth of the stones ranged from approximately 50 cm (20 in) at the west end of the area that was lowest in elevation to a single layer or sometimes merely scattered cobbles or no cobbles toward the area's higher east end as it approached the mansion. Similarly, the cobble layer was deeper along the south edge

of the drive area under the present tree line and lessened in depth toward the north. The upper surface created by the cobbles was relatively flat (see Fig. IV.9).

3. The cobble surface was then covered with 15-20 cm (6-8 in.) of mixed coarse sand and gravel in a yellow-brown clay loam matrix. This soil may have derived from the lower Charles River flood plain terrace or from river margins since a few oyster shells are present. The dumping of numerous cartloads of river gravel left unfilled voids between the underlying cobbles. Extra sand and gravel was laid down in the areas that were to become the entrance drive and service drive, resulting in roadbeds that were elevated above the surrounding sand and gravel.

4. Dark brown loam, likely the original stripped A-horizon soil, was then spread across the river gravel to a depth of between 17 cm and 30 cm (6.7 in and 12 in). The raised entrance and service roadbeds were not covered, leaving them with loam borders that were then planted with grass.

The question of when these extensive landscape modifications were made and by whom is best addressed by the artifacts encountered and, surprisingly, by the soil profiles in the area of the greenhouse. The only artifacts found below the cobbles in the truncated A-horizon consisted of three non-diagnostic pipe stem fragments. The only cultural material from the cobble layer was a brick fragment that is similar to the bricks of the present mansion house. No cultural material was present in the sand and gravel layer, but the overlying redeposited loam contained a small assortment of artifacts that date very closely to the Gore occupation (creamware, ca. 1762-1820 and pearlware, ca. 1775-1830), some or all of which can be characterized as sheet refuse likely associated with use of the greenhouse due to the added presence of planting pot fragments and window glass. Once the landscape in this area was reworked and became part of the formal grounds, the chance for deposition of artifacts was limited to activities associated with the greenhouse and possibly the carriage house.

This area continued to serve as a passageway with a low probability for refuse accumulation throughout the nineteenth and twentieth centuries.

The layer of sand and gravel that was put down over the cobbles in the entrance drive area was also deposited in portions of the greenhouse area (see greenhouse discussion). The fact that the structural remains of the greenhouse lie on top of this layer reveals that the landscape was modified prior to and very likely just prior to greenhouse construction. If the Greenhouse was indeed constructed by the Gores as all indicators seem to show, then the landscape was modified and the present entrance drives were created around the time the Gores were constructing their new mansion and greenhouse. No evidence was found for any other drives beyond what exists today as the main entrance drive and the more southerly service drive.

The layering of soil over sand and then cobbles reveals a very specific and carefully executed plan that not only leveled this portion of the grounds, but also ensured adequate drainage of the new, flat landscape that was created. The extensive changes that are known to have been made to the grounds and house by Gore, coupled with his keen interest in landscape design and knowledge of current agricultural developments all point to Gore as the architect of the changes to the entrance drive area and creator of the formal and service drives.

Archaeological investigations suggest that the configuration of the main entrance and service drives has remained unchanged (with the exception of the loss of the single entryway when Gore Street was widened) since they were created, most likely, during the Gore occupation. It is hypothesized that this portion of the property was relandscaped and the entrances were created around the same time that the carriage house was constructed (1793) to afford level and unimpeded access between the mansion and carriage house. Thus, the drive depictions on the 1841

Green Estate Plan, 1889 Eliot sketch and 1936 HABS plan are all correct. Not surprisingly and as anticipated, the 1881 Lee sketch provides the least accurate depiction and should be considered as a generalized recreation of the grounds. Close observation of the first three depictions reveals that the location of the west entrance to the property was slightly south of the present entrance. The original configuration provided a short entryway before the main drive curved to the left (north) and the service drive turned to the right (south) (Fig. V.1). Thus, when Gore Street was widened, the short entryway disappeared and the new entry was aligned with the existing main entrance drive (Fig. V.2). Access to the service drive was cut off and a new connection was never made, possibly because this passageway was little used by the late 1960s.

B. Carriage House

Because the purpose of testing in this area was to identify the location of the original carriage house foundation, little effort was made to discern construction details or to identify the elevation of the cellar floor. The foundation was constructed of both rounded fieldstones and angular foundation stones set in mortar. The upper courses of the foundation wall were missing so it is not clear what type of stones actually supported the structure's sill or their original elevation. It is very likely that the cut stones presently under the building derived from the original foundation. Although brick fragments were present in the cellar fill, it is unclear if these derived from the foundation itself. The small section of articulated bricks found inside the foundation may have come from a bricked-in opening in the wall or may have derived from cellar fill. The presence of asphalt in the fill suggests that some material may have derived from the adjacent roadwork or even from off site. The small trash deposit identified on the north side of the foundation wall likely represents accumulation from the later nineteenth and early twentieth centuries. It may have been created by ground's workers who knew the area was behind the carriage house and was more or less out of view.



Figure V.1. Gore Street Entrance in 1937 Showing the Intersection of the Main Drive (extending to the left), and Service Drive and Perimeter Path (extending to the right) (Courtesy GPS).

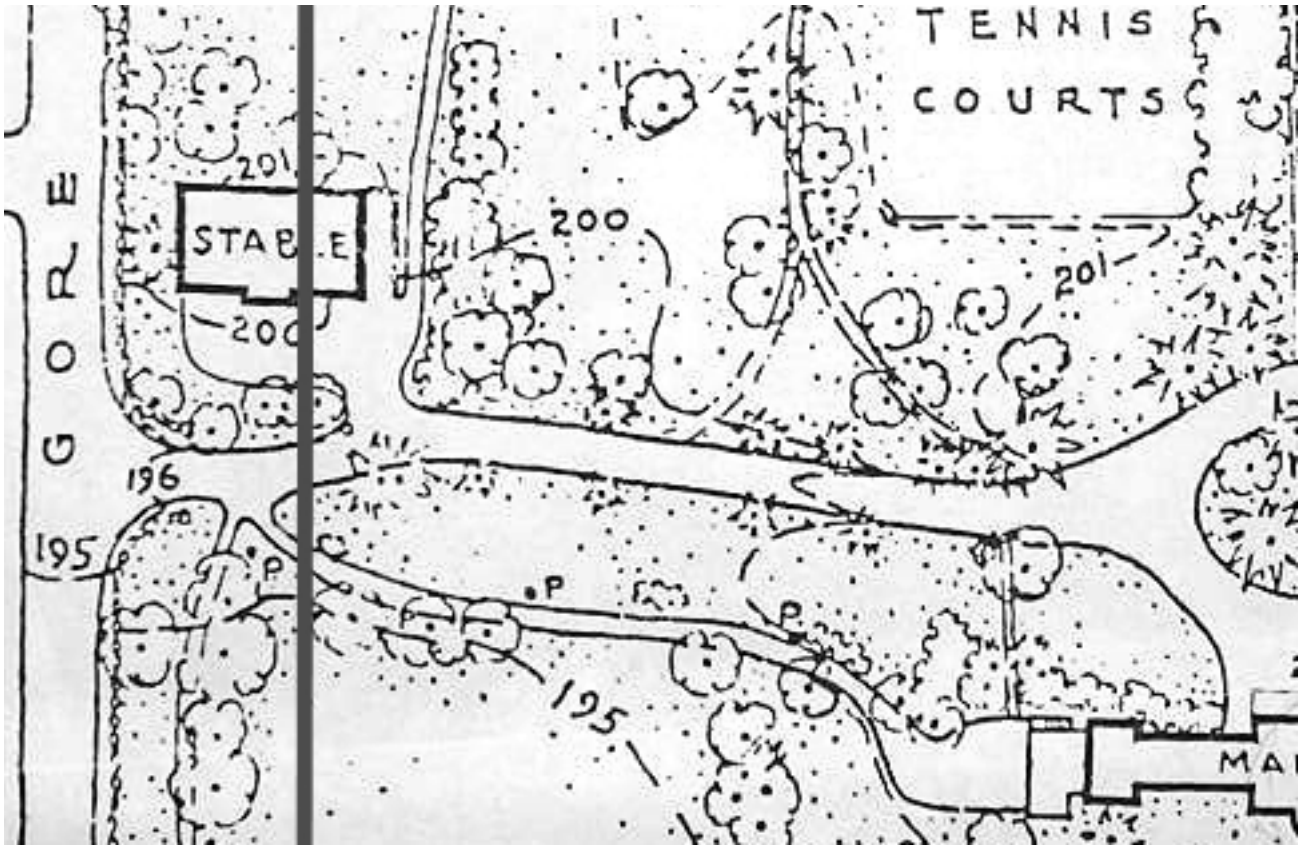


Figure V.2. Entrance Drive Area Depicting Main and Service Drive Locations with Superimposed Modern Curb Line on 1936 HABS Plan.

C Greenhouse

Archaeological investigation of the greenhouse area succeeded in identifying the structure's location as well as details of its construction and use. The combination of cartographic depictions and archaeological investigations reveal the greenhouse to take the form of an elongated rectangle approximately 20 m (65.5 ft) long and 10 m (32.8 ft) wide (Fig. V.3). The structure is essentially east-west oriented to provide a full southern exposure, and may have resembled a scaled down version of the greenhouse at the Vale (nearby Lyman estate) consisting of a tall, north brick wall and short south wall with a roof of glass panels. The floor of the structure appears to have been constructed of square, white Italian marble tiles (Fig. V.4) identical to those in the entryway and central hall of the mansion house (Fig. V.5). Fragments of finished black slate of a similar thickness with adhering mortar suggest the possibility of an alternating black and white tile floor. The slate may also have been used in a different capacity within the structure such as providing support for potted plants. The presence of such a refined floor as well as plastered walls provides an image of the structure as more of a formal conservatory, possibly with a state-of-the-art heating and humidity system rather than a simpler sand- or gravel-floored greenhouse. The subfloor consists of approximately 20 cm (7.9 in) of fragmented brick, mortar and foundation stone (possibly derived from mansion construction) that was covered with a layer of mortar that potentially held the floor tiles in place. While some greenhouses are heated via a subfloor hypercost (Yentsch 1994) similar to that designed by Gore for the main hall of the mansion, more excavation is needed before the presence of such a feature can be determined in the greenhouse.

While the heating design remains a question, the excavation revealed potentially important evidence of moisture creation within the greenhouse. Found within the structure's demolition rubble was the fragment of what appears to be a small or miniature brick made of cut soapstone

(Fig. V.6). Its length is unknown, but its thickness is 2.3 cm (.9 in) and width varies between 4.1 and 4.7 cm (1.6 and 1.85 in). The varied width creates a cross section that is trapezoidal in shape. The widest surface and narrow sides of the brick are covered with shallow parallel striations that run the length of the brick. The mineral composition of the brick would have made it resistant to expansion and contraction from exposure to fire. This miniature brick is hypothesized to be one of many that would have been tightly arranged on a stove surface or grate that allowed the bricks to be heated. The hot bricks may have been wetted with water to produce steam in the same manner as heated stones are used to produce steam in a sauna. While a source of heat was a necessary component of any greenhouse, particularly in a cold climate, moisture was also essential to maintain a high level of humidity and prevent drying of the plants. More research is needed before we can learn if such a technique for creating steam was used in greenhouse contexts and whether this was an innovative or standard practice.

Also discovered at the site was a stone-lined drain that appears to have extended beneath the long axis of the greenhouse (see Fig. V.3). Its presence is logical given the constant use of water in such a facility and given Gore's interest in designing adequate ventilation and drainage systems for the mansion house and grounds. Questions regarding access to this drain within the structure will need to be addressed by future investigations. The eastern extent of the drain is unknown. It is possible the drain also serviced the small structure northeast of the greenhouse that has been suggested to be a cold frame. The western extent of the drain is also enigmatic since it appears to terminate just outside of the greenhouse with no clear evidence for a catch or drainage basin other than a shallow depression. Soil staining that continued beyond the depression will need to be investigated further and may indicate that the drain structure was removed from this area.

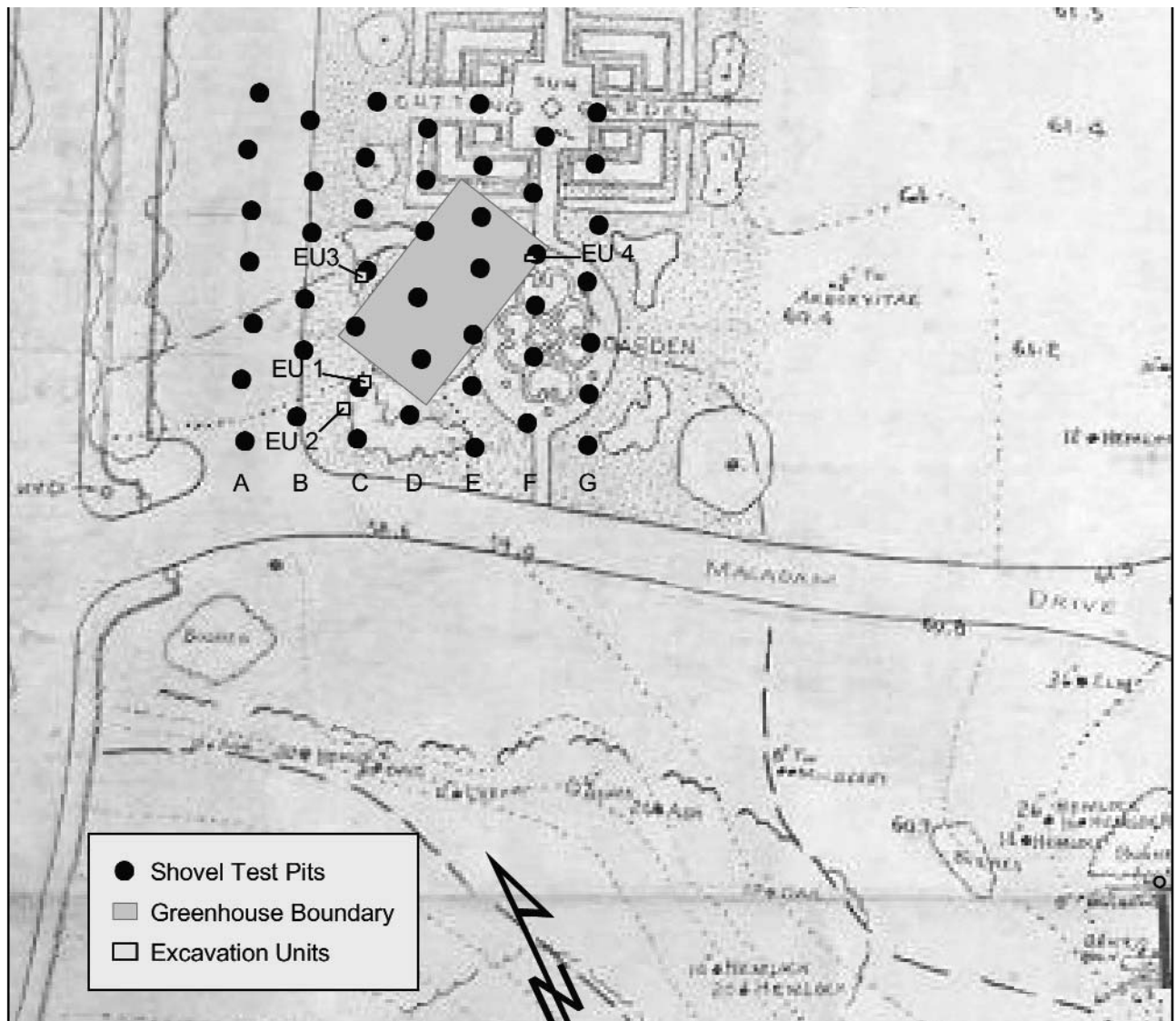


Figure V.3. Approximate Location of Greenhouse based upon Archaeological Findings.

Fragments of a glass bell jar that would have been used to cover moisture sensitive plants were found at the western end of the drain (Fig. V.7). The jar is of typical cylindrical form with a thin, sheared rim and thickened top or upper end that has a solid, oblong knob measuring 4.5 cm (1.25 in) in diameter. The jar's height is presently unknown. A cracked-off pontil scar is present at the top of the knob. The reason for the jar fragments at the end of the drain is unclear, but may have been placed there to help with drainage. The presence of the bell jar reveals the efforts to which the Gores and/or their gardener went to protect and propagate plants. It is not known if this jar was imported or produced locally, but such vessels were likely available

from the Boston Crown Glass Manufactory on Essex Street of which John Gore was one of the original proprietors. After 1809 such glass would have been available from the same firm renamed the Boston Glass Manufactory that was expanded by the addition of the South Boston Flint Glass Works ca. 1811. An additional source would have been the New England Glass Works after ca. 1818 (Smith et al. 2000). Gore noted in his account book on July 31, 1806 that he "paid the Proprietors of the Glass House in part \$423.68" and on Dec. 9 paid the "Glass House in full \$123.52" (Hammond 1982). No specific reference is made to the items being purchased from the New England Glass Co. of which Gore was a charter member. Such high



Figure V.4. Artifacts Recovered from the Greenhouse Area. 1)Marble Floor Tile Fragments, 2)Window Glass, 3)Nails, 4)Possible Slate Floor Tile Fragments, 5)Cuprous Latch.



Figure V.5. Marble Floor Tiles in the Central Hall of the Gore Mansion House.

costs may well have been for window glass for the mansion house and possibly for the greenhouse as well. Flat glass found in the context of the greenhouse includes both clear and light green tinted panes. It remains to be determined if these differences are meaningful, such as representing original panes versus replacement panes. Given Gore's attention to detail, it is possible that he insisted on colorless lead glass for the initial installation since this would maximize sun exposure.

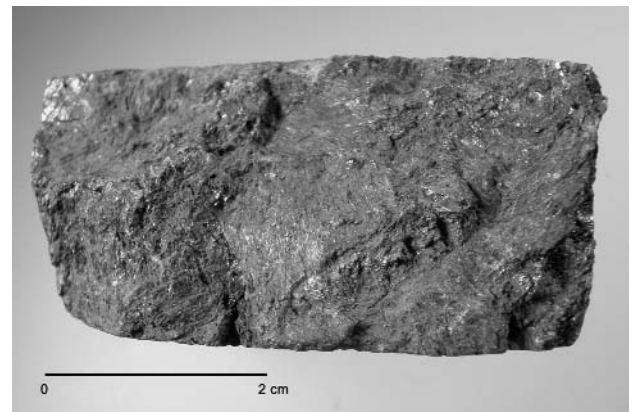
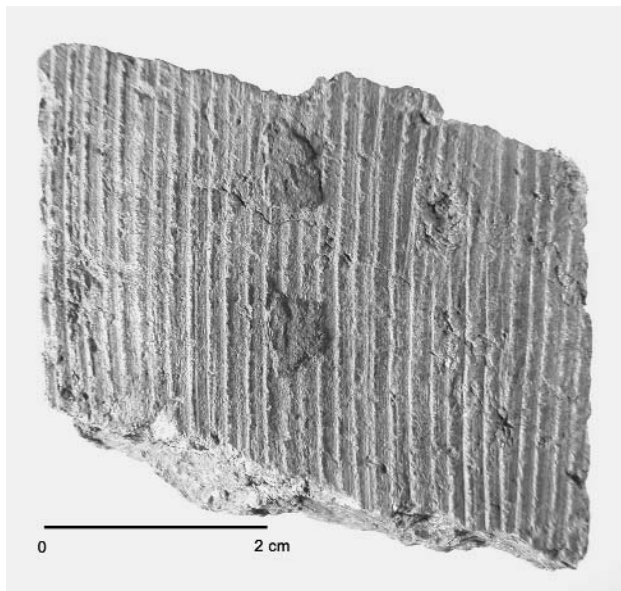


Figure V.6. Soapstone Brick Fragment Recovered from the Greenhouse Area. Striated surface (left) and brick profile (above).

Fragments of redware planting pots were common to most of the greenhouse area and indeed to most areas tested, again pointing out an intense agricultural focus. Planting pots are of such utilitarian use that they are commonly obtained from local potters rather than imported (Noel Hume 1969:223-227). The producers of

these vessels is not yet known, but future analysis may reveal a source such as the Hews Pottery in nearby Weston. It is clear that at least two pot sizes were used. The fact that planting pots continued to be used on the estate over a long period may provide the opportunity to identify diachronic changes in planting pot forms as well as specific use contexts of particular forms and sizes.

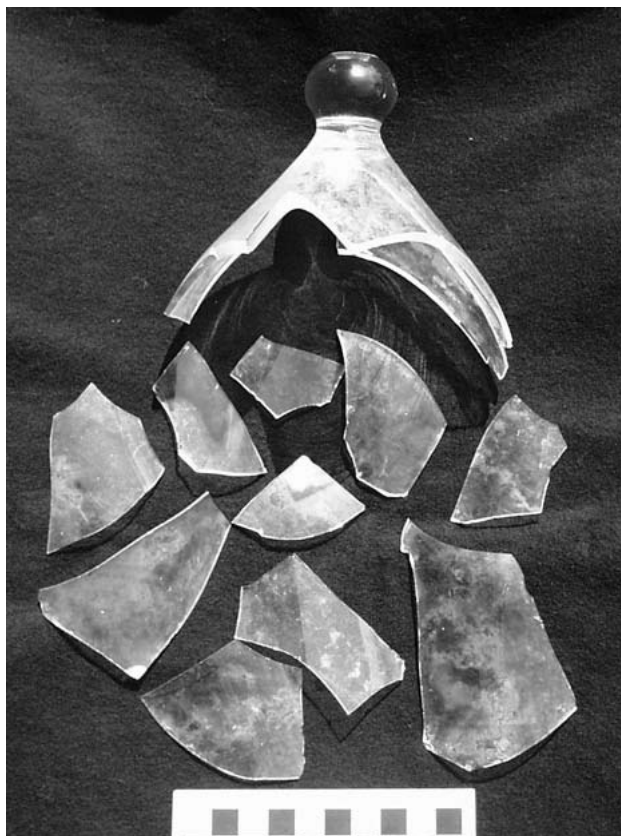


Figure V.7. Glass Bell Jar Fragments Recovered from the Greenhouse Area Drain.

Archaeological testing in much of the greenhouse yard revealed the same coarse sand and gravel layer that was found in the entrance drive area below the present surface loam. This sandy layer was probably extended northward to help level the landscape as well as provide drainage for the greenhouse area. The west portion of the greenhouse yard did not reveal these fill layers. The ground elevation in this area appears to have been raised and leveled by the addition of landscaping loam to the surface rather than by entirely reworking the soil structure as was done to the east and south. The reason for this different type of leveling may be due to the close proximity of the 1793 carriage house and/or may have been done in an effort to create deep loam bedding for plantings in the vicinity of the greenhouse.

Although no clear evidence of planting beds has been found in the yard area surrounding the greenhouse such as specific features or prepared

drainage surfaces (see Yentsch 1994, Brown and Samford 1990), a variety of artifacts hint at the possibility of specially prepared planting soils. A specific growing medium recommended in an 1806 (M'Mahon) manual of the Massachusetts Society for the Propagation of Agriculture of which Gore was a member, consisted of "fifty bushels of old bones, fifty bushels of pulverized charcoal, twenty-five bushels of oyster shells, a quantity of leather scrapings, twenty-five bushels of coal and leached ashes, twelve bushels of blacks with cinders and iron fillings, twelve wads of well-decomposed manure, well mixed together and filled in on the last of March." Many of these ingredients have been found in the greenhouse area, but their low density does not necessarily support the contention that prepared bedding surrounded the structure. More extensive excavations will help to resolve this issue. A slightly higher density of such materials was found in the bedding of the grapey greenhouse, pointing to the greater chance of prepared soils there (see grapey/fruitwall).

D. Vegetable Garden

Six of the eight STPs revealed relatively well-developed stratigraphic profiles that suggest the potential for identification of early garden features. The presence of an A2-horizon, in particular, suggests some differentiation of gardening levels may be possible. It is important to note, however, that the long history of vegetable production in this area coupled with the common practice of turning the soil prior to planting may have eliminated features associated with the Gore period use of the area. That being said, the layer of sand encountered in STP C2 may be associated with an early perimeter walk. The different soils encountered in STP C1 may indicate activities associated with the north portion of the greenhouse yard where a small structure of unknown function was located.

E. Flower Garden

Archaeological investigations along with documentary sources suggest that the larger nineteenth- and early twentieth-century configuration of the former flower garden is relatively intact below the sod surface (Figs. V.8 and V.9).

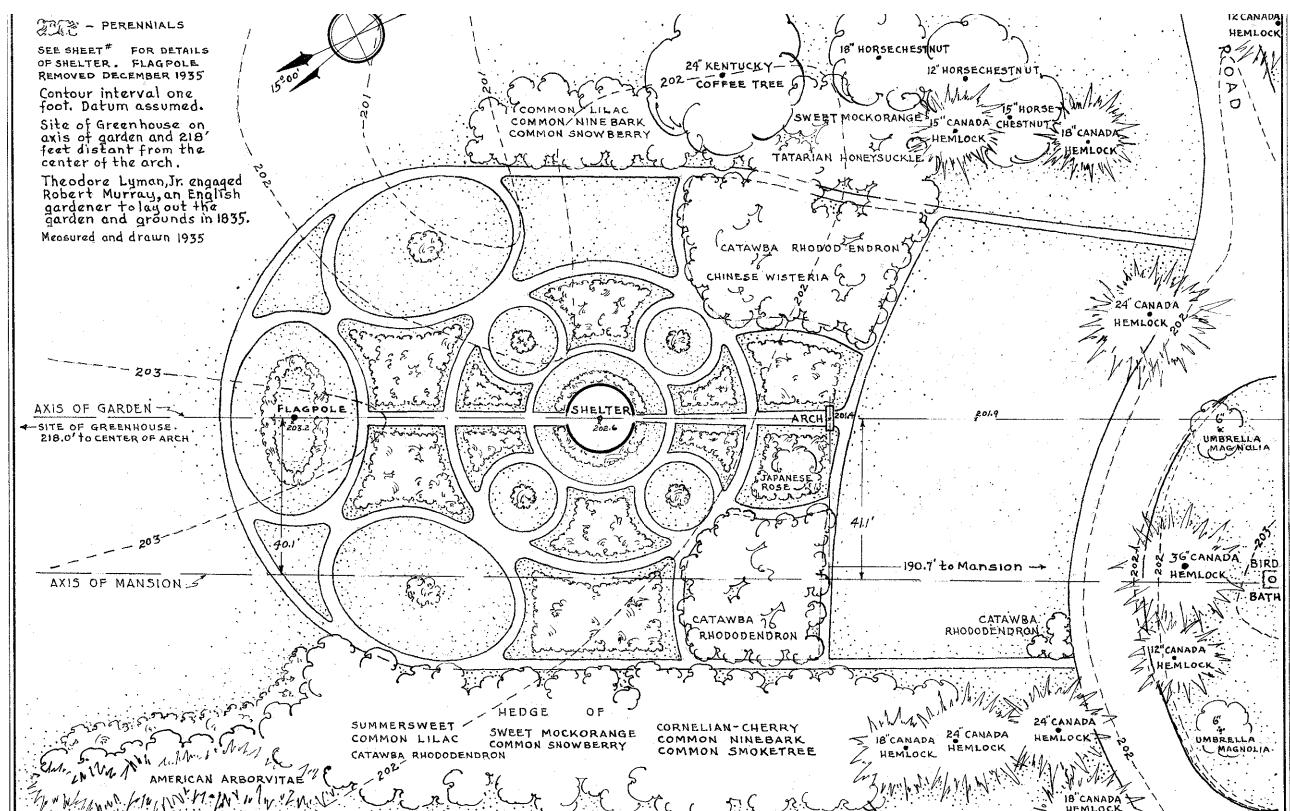


Figure V.8. HABS Plan (1936) of the Flower Garden.



Figure V.9. Flower Garden Taken ca. 1906 from the Grapery Greenhouse (facing southwest) (Courtesy GPS).

In fact, the location of the gravel paths can often be seen during summer months due to differences in drainage and associated grass growth (Scott Clarke pers. com.). The presence of eighteenth- and early nineteenth-century artifacts along with several soil layers and features suggest that at least some vestiges of the earlier Gore period or pre-Gore period garden are also present. This hypothesis is supported by the different characteristics of garden paths, one of which appears to have an underlying layer of stones that has been shown to be a possible signature of Gore's landscaping activities. The fact that some of the artifacts are burned suggests that ashes may have been added to garden soils as fertilizer during the Gore or pre-Gore period and/or that soil/ash associated with the mansion house fire may have been added to this area. The presence of nails in a number of tests may also be explained by such activities.

F. Grapery/Fruitwall

Cartographic and archaeological evidence suggests the grapery/fruitwall passed through a number of structural stages during its existence. The original grapery/fruitwall likely consisted of a tall wall similar to that at the Lyman Estate. The structure there is supported by a stone and masonry foundation (Lewis 1996). The same is expected at Gore Place. If the wall was constructed of wood, then deep wooden posts would have provided support and may be archaeologically identifiable. The position of the wall was aligned a little east of the central block of the 1806 mansion, creating a slightly asymmetrical relationship between the two structures. This offset position is best explained by the fact that the grapery was associated with the earlier mansion house that burned in 1799. The present brick house completed in 1806 likely is positioned slightly west of the earlier structure, thus

producing an angled line of sight to the earlier grapery.

The depiction of the grapery and fruit wall as three connected lines on the Lyman Estate map of 1834-38 (see Figure III.3) suggests the structure was not significantly changed during Gore's or Lyman's occupation. Its appearance on the 1841 plan of Green's estate (see Figure III.4), however, suggests substantial enlargement that resulted in what appear to be three connected buildings instead of single walls. Until further evidence is uncovered to clarify this issue, the structure probably was significantly improved between 1838 and 1841 during the Green's occupation, resulting in its transformation from a supportive wall to a formal greenhouse. The structure may have been further enlarged and modified between 1841 and 1889, for the Charles Eliot sketch (1889) depicts an enlarged central

block (see Figure III.6). This additional modification was made either by the Greens before they sold the property in 1856 or was made by Theophilus Walker before leaving the estate to his nieces in 1890 (Fig. V.10). The greenhouse is very likely to have been demolished around 1921. At that time the property was transformed into the Waltham Country Club that constructed a golf course across much of the property. Excavation of STP D1 and EU1 revealed a dark yellow-brown clay loam to directly overlie demolition rubble and a portion of the greenhouse's central block (see Fig. IV.20). This same soil was also used to create an elevated golf tee immediately south of the greenhouse site and north of the old flower garden. The fact that this soil directly overlies the demolition layer is highly suggestive that the greenhouse was demolished immediately before the creation of the tee.

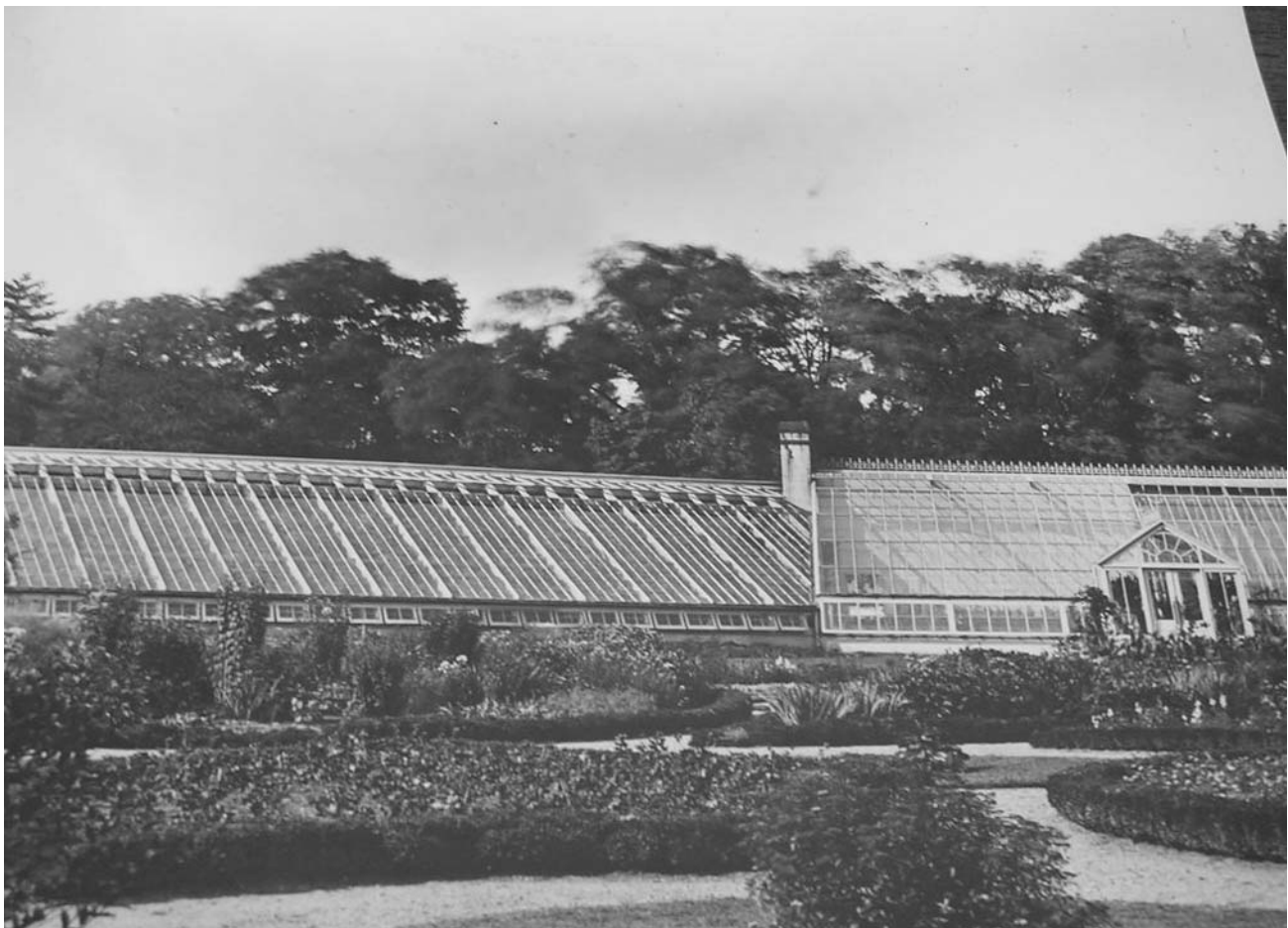


Figure V.10. West Wing and Central Block of the Grapery Greenhouse ca. 1906 (facing north, Courtesy GPS).

Archaeological investigations found the grapery/fruitwall area to maintain a high level of integrity due to the preservation of foundations, greenhouse soils and associated deposits. As noted above, the soil profiles revealed in the shovel tests provide an indication of the location of the greenhouse's central block and a portion of the west wing as well. A brick foundation wall and piers are believed to be associated with the structure's central block. Additional investigations are needed to confirm these observations. The deep greenhouse soils identified within the central block are intact, and reveal a specific mix of soil and other ingredients including bone, charcoal and shell. Such a formula for greenhouse soils dates to the early nineteenth century if not earlier (see greenhouse section above). The coarse sand below the soils is believed to have served for drainage. The presence of these deep soils within the central block suggest this portion of the greenhouse may have been used for larger trees with extensive root systems, while the slightly shallower soils in the wings may have supported smaller plantings. The presence of fragmented planting pots across the entire area provides no clue as to specific use locations.

Evidence of the original eighteenth- and early nineteenth-century grapery/fruitwall that was present during the occupation of the Gores likely would consist of post impressions if it was constructed of wood, or would consist of stone and/or brick foundation remains similar to construction of the fruitwall at the Lyman Estate. Although the incorporation of the original fruitwall into the greenhouse cannot yet be documented, the fact that the greenhouse followed the same or similar lines, size and orientation of the original fruitwall suggests a high likelihood that

the former structure was indeed incorporated into the later structure. A logical use of the fruitwall in the greenhouse would have been as a central support wall to take advantage of what can be assumed was a considerable height. In such a scenario, lower walls would have been constructed to the north and south. This plan, in part, assumes that the greenhouse was constructed similarly to the greenhouse at the nearby Lyman estate. Additional archaeological investigations are needed to identify the fruitwall foundation if it remains preserved within the later greenhouse foundation.

Documentary and archaeological investigations for this project raised the question of why a second greenhouse was constructed when one already existed adjacent to the carriage house. It is hypothesized that the trees lining the entrance drive planted by the Gores were beginning to reach a substantial height by the 1830s to 1840s. This growth may well have blocked sunlight from the greenhouse. The grapery/fruitwall, on the other hand, was ideally situated and received maximum solar exposure. At the same time the early nineteenth-century greenhouse may have become outdated due to its small size and design. Excavation in the area of the early greenhouse revealed no evidence of deep interior greenhouse soils, whereas these are clearly prevalent at the later site. If the propagation of new trees benefited from deeper greenhouse soils for example, then the apparent solid floor of the former structure would not have been conducive to this need. In addition, aging mullions exposed to outside weather and interior humidity may have begun to require replacement around this time, thus encouraging creation and use of a newer structure.

VI. RECOMMENDATIONS

A. Entrance Drives

Archaeological investigations suggest that the present entrance and service drives have been in place since their probable construction during the Gore occupation of the property. Both drives consist of coarse sand and gravel, possibly derived from the nearby Charles River. Removal of the present asphalt pavement revealed a layer of sand bedding under which are three layers of roadbed that overlie the original sand and stone fill that extends across the area. Restoration of the Gore period roadbed should include removal of the present asphalt surface to expose the underlying sand and gravel. This surface can be used as is, but may need an appropriate binder to create a more easily maintained bed that can withstand winter plowing.

In addition, the service drive should be reconnected to the main drive, but options exist as to how this can be done. The original west entrance formed a 'Y' such that a turn to the left provided access to the main drive, while a turn to the right provided access to the service drive. The widening of Gore Street resulted in the removal of the 'Y' and a shifting of the entrance northward to be aligned with the entrance drive (see Fig. V.2). This effectively cut off access to the service drive. The option exists either to leave the Gore Street entrance where it is and create a link to join the service drive, or to shift the entrance slightly southward and create a new 'Y' configuration similar to the original. Both plans require the creation of new roadbed to link both drives. The new roadbed can be created merely by removing the landscaping loam from the proposed route down to the sand and gravel fill, followed by replacement with appropriate sand and gravel. The service drive could benefit from the addition of some fresh sand and gravel since the present roadbed is low and lacks visibility. It is important to remember that a number of utility lines enter the property in this area, so any changes must be coordinated with utility identification.

B. Carriage House

The carriage house cannot be returned to its original site due to the destruction of the western two thirds of its foundation for the widening of Gore Street. As a result, the landscape master plan calls for its placement as close to the original site as possible. Two options are available for its siting. The first places the structure immediately east of the remaining foundation and possibly over the east end of the old foundation. Under this plan the structure would overlie most of the greenhouse and its west yard, would require the removal of the present English Oak that is sited on top of the greenhouse site, and would effectively eliminate both the opportunity to demarcate the greenhouse foundation on the ground and to interpret the structure at its original site. If this option is chosen then a complete archaeological mitigation (data recovery) of the greenhouse site is recommended. In addition, archaeological investigation as well as monitoring of the original carriage house area during preparation of the site for construction is recommended to record details of the original foundation and of the space that once existed between the carriage house and greenhouse that would also be impacted.

Option two consists of placing the carriage house north and east of the original foundation. This location would not only provide a small carriage yard similar to the original configuration, but would also preserve what remains of the original carriage house foundation as well as the site of the greenhouse, leaving open a number of possibilities for the future interpretation of both. In addition, the English Oak would remain unthreatened. Serious consideration must be given to the possibility of greenhouse reconstruction, for if this were to occur, then the carriage house should not lie immediately north, but should be placed so there is an adequate separation of space between the two structures. If there is little to no possibility of greenhouse reconstruction, then less space is needed between the carriage house and greenhouse site. The second option is considered to be most appropriate in

considering both the future use of the carriage house and long-term preservation and interpretation of the area. A second phase of archaeological work is recommended for option two to investigate the area that will be impacted by the new carriage house cellar and utility construction. This work would potentially include the northern portion of the greenhouse yard and southern portion of the vegetable garden. This area has the potential to contain important archaeological deposits associated with greenhouse related activities, carriage house related activities and the early design and use of the vegetable garden. Little known structures may have also occupied this area around the turn of the nineteenth century. Archaeological investigations would focus on the evolving use of each of these three areas and how they relate to one another.

C. Greenhouse

The greenhouse site is an historically important component of the landscape and agricultural history of Gore Place. The high level of integrity of the site points to the exceptional potential it maintains to provide significant data on the gardening and landscape history of the property and its important role in the nineteenth-century development of scientific agriculture. Further archaeological investigation of the site is contingent upon the eventual citing of the carriage house. If this structure is placed immediately east of its original foundation and over the greenhouse site, then complete mitigation (data recovery) of the site is recommended. This will involve examination of architectural remains to document details of its construction and function. Additional investigations will focus on the greenhouse yard to determine the historic use of this area. If the carriage house is located north of the greenhouse, then the north greenhouse yard will be investigated to document the presence and function of structures in this area and to identify the nature of the boundary between the greenhouse and vegetable garden. Both options will require the investigation of extensive areas with blocks of contiguous excavation units.

D. Vegetable Garden

If recreation of this garden becomes a component of the landscape master plan implementation, additional subsurface investigations for the purpose of defining bed boundaries and internal structure should be performed. The timing of this work in the southern portion of the garden is dependent upon citing decisions for the carriage house. Parts of the garden that will be impacted by construction of the new foundation will need to be investigated prior to the moving of the structure, while the remainder of the garden investigations can be performed at a later time. The work plan will be similar to that presented for the flower garden (see below), whereby garden paths will be the object of the initial search with interior bed areas to follow. An additional focus here will be definition of the boundary likely represented by fence lines between the carriage house and greenhouse yards and the vegetable garden. Investigation under the parking lot portion of the garden will commence with machine-assisted work to remove overlying fill.

The archaeological identification of garden features is contingent upon the presence and, thus, preservation of specific indicators. These can include differences in soil type, texture and elevation across the site, borders that are indicated by soil differences, the presence of walkways or edging that may appear as linear arrangements of post holes, bricks or other border materials, as well as indications of specific plant locations. Plant locations are generally defined by depressions or holes that have been backfilled with soil that can be differentiated from surrounding matrix due to obvious or subtle alterations in soil color, texture and composition. Occasionally, artifacts are incorporated into the backfill of planting holes and these aid in identification and dating.

E. Flower Garden

Identification of the general configuration and internal structure of the eighteenth- and early nineteenth-century flower garden appears to be possible given the results of preliminary archae-

ological investigations. Work in garden contexts typically focuses on more visible features such as walking paths and well-marked bed borders. Given an adequate state of preservation, less visible planting bed boundaries and planting holes can be detected as well, but this work requires extreme care to differentiate not only the presence of such features, but to determine their temporal associations. Such work at Gore Place will be a challenge due to the long history of gardening at the site and relatively shallow stratigraphy in the flower garden.

The Col. Henry Lee description of the garden as containing central north-south and east-west walks provides a starting point for archaeological investigations. It is recommended that a second phase of archaeological exploration focus on defining garden walks beginning with the more recent gravel paths associated with the mid and later nineteenth-century curvilinear garden identified in some of the shovel tests and known from the 1936 HABS plan and historic photographs. Once the configuration and elevations of these are known, then the search will continue for earlier walks. The latter, in theory, should lie below the later walks, should be linear in form and potentially constructed of different material than the later curvilinear walks. Once the rectilinear garden form has been defined, then work within the garden can begin. It is expected that interior bedding and plantings of the early garden will follow, at least to an extent, the rectilinear form established by the walks and perimeter. Such alignments will help to differentiate early planting patterns from later curvilinear configurations. Identification of the walks can be performed through the excavation of a series of 50 cm x 50 cm STPs and .5 m x 1 m and 1 m x 1 m units. Garden areas within the walks are best explored by the completion of small blocks of contiguous units. It is important to note that although the focus of garden restoration is on the late eighteenth- and early nineteenth-century Gore period, archaeological investigations must treat all periods equally, thus tracing the entire garden history.

F. Grapery/Fruitwall

The focus of the landscape masterplan on the Gore period calls for the identification of the early grapery/fruitwall prior to its transformation into a more substantial greenhouse structure. Now that the general location and state of preservation of the later greenhouse structure is known, additional archaeological investigations are recommended to locate the north greenhouse wall and to expose larger portions of the foundation remains as a means of identifying the potential presence of the original fruitwall. Because both the fruitwall and later greenhouse structures were so large, such an effort would best be performed by careful mechanical removal of fill deposits overlying specific portions of the later greenhouse foundation. In this way foundation walls and piers can be pinpointed prior to hand excavation. This recommendation is based on the hypothesis that because the later greenhouse mimicked the same configuration and alignment of the original grapery/fruitwall, it is very likely that this was incorporated in whole or in part into the walls of the later greenhouse. If the grapery walls were substantial, their identification may be possible in close association with the existing greenhouse foundation. Further archaeological investigation would also need to incorporate identification of planting areas, pathways and other structural remains that may be present around the perimeter of the existing greenhouse foundation. The research potential of this work should not be underestimated as it presents the rare opportunity to examine historic gardening activities including plant propagation practices within the context of the scientific agriculture movement and the creation of historic pleasure gardens potentially over a period in excess of 100 years.

It is also recommended that future reconstruction of the Gore period grapery/fruitwall should consider incorporating the footprint of the later greenhouse, since this was an impressive structure in its own right and was an important component of the site's history. The footprint could be marked on the ground surface by adding sev-

eral courses of brick to the existing foundation to bring the walls even with the ground surface. Another option would be to mark the foundation with stone dust or gravel bedding used for garden paths. Interpretive signage that includes a detail of the 1834-38 Lyman map and a copy of

an historic photograph of the greenhouse (see Fig. V.10) is also recommended. It should be noted that those areas of the property not tested during the survey may be archaeologically sensitive and should be tested in advance of future proposed impacts.

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APPENDIX A
ARTIFACT CATALOG