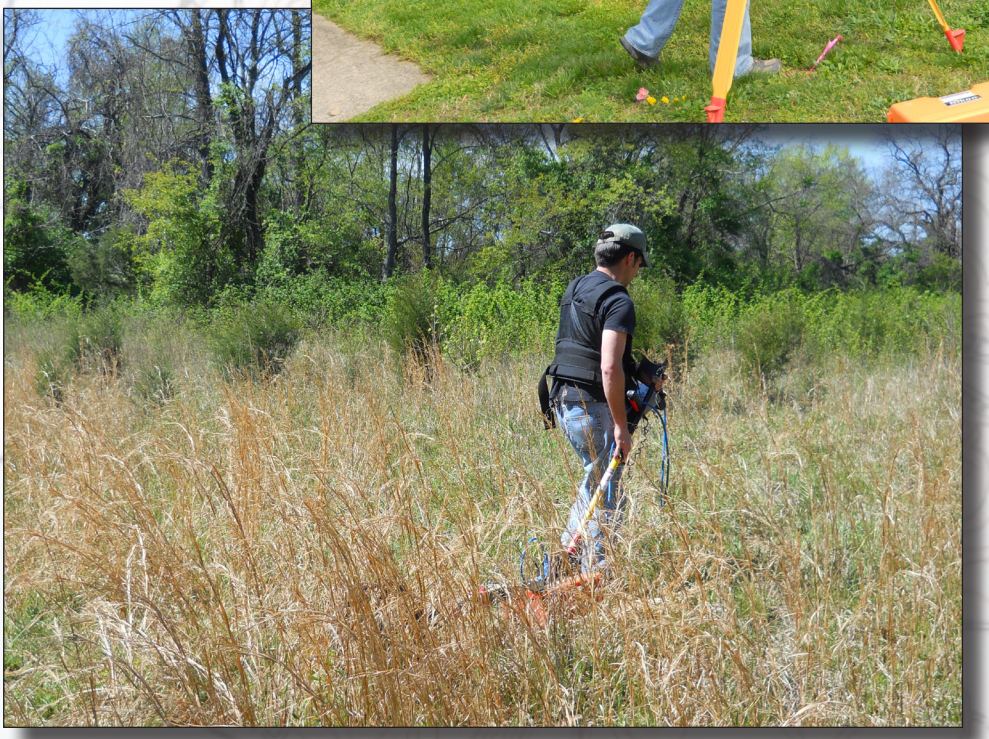
Grave Marker Assessment and Ground Penetrating Radar Survey of the Woodlawn Baptist Church Cemetery

Fairfax County, Virginia



NEW SOUTH ASSOCIATES, INC.

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Fairfax County, Virginia

Report submitted to:

Federal Highway Administration, Eastern Federal Lands Highway Division •
21400 Ridgetop Circle • Sterling, Virginia 20166-6511

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New South Associates Technical Report 2062

ABSTRACT

New South Associates conducted a detailed grave marker assessment and ground penetrating radar (GPR) survey of the Woodlawn Baptist Church cemetery in Fairfax County, Virginia. The study was funded by the Federal Highway Administration, Eastern Federal Lands Highway Division. The scope of work for this project required detailed mapping and inventory of all grave markers and associated cemetery features, as well as a GPR survey to identify the extent and distributions of possible unmarked graves. Archival research was conducted to develop a history of the cemetery.

During the grave marker assessment part of this survey, 133 unique grave markers representing 179 individuals were documented. Many of the markers commemorate multiple individuals. Formal markers indicate a period of use from the 1870s to the 1990s. No burials were documented from the 2000s. Additional attributes from the marker inventory were used to generate detailed information about the cemetery. In brief, the patterns observed in the attribute data fit well with a formal cemetery that is well maintained.

The GPR results correlate very well with the number of graves as documented from the marker inventory and suggest there are few unmarked graves present. The GPR results indicated approximately 176 potential graves, including those associated with existing markers, as well as probable unmarked graves. The total number of graves, as indicated from marker data and GPR, is between 176-179.

ACKNOWLEDGEMENTS

Multiple individuals contributed to different phases of this project. Ryan Kimberley at FHWA provided contract management and technical oversight for the conduct of this study and helped to coordinate our work with the Woodlawn Baptist Church congregation. Pastor Travis Hilton of Woodlawn Baptist Church supported the field efforts and his assistance is greatly appreciated.

At New South Associates, Brad Botwick conducted the archival research, Shawn Patch and Sarah Lowry completed the ground penetrating radar (GPR) survey and total station mapping, and Valerie Davis and Lain Graham conducted the marker inventory. Jennifer Wilson edited the report and David Diener produced the graphics. Dr. J.W. Joseph, RPA, served as Project Manager. All are thanked for their efforts.

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I. INTRODUCTION

New South Associates conducted historical research and a detailed grave marker assessment and ground penetrating radar (GPR) survey of the Woodlawn Baptist Church cemetery in Fairfax County, Virginia (Figure 1). The Federal Highway Administration (FHWA), Eastern Federal Lands Highway Division, funded the study. Archival research was conducted in March and April 2012 by Brad Botwick and was followed by fieldwork. In April 2012, fieldwork was conducted in two stages: Valerie Davis and Lain Graham conducted a marker inventory, while Shawn Patch and Sarah Lowry did the mapping and the GPR survey, while.

The scope of work for this project required detailed mapping and inventory of all grave markers and associated cemetery features, as well as a ground penetrating radar (GPR) survey to identify the extent and distributions of possible unmarked graves.

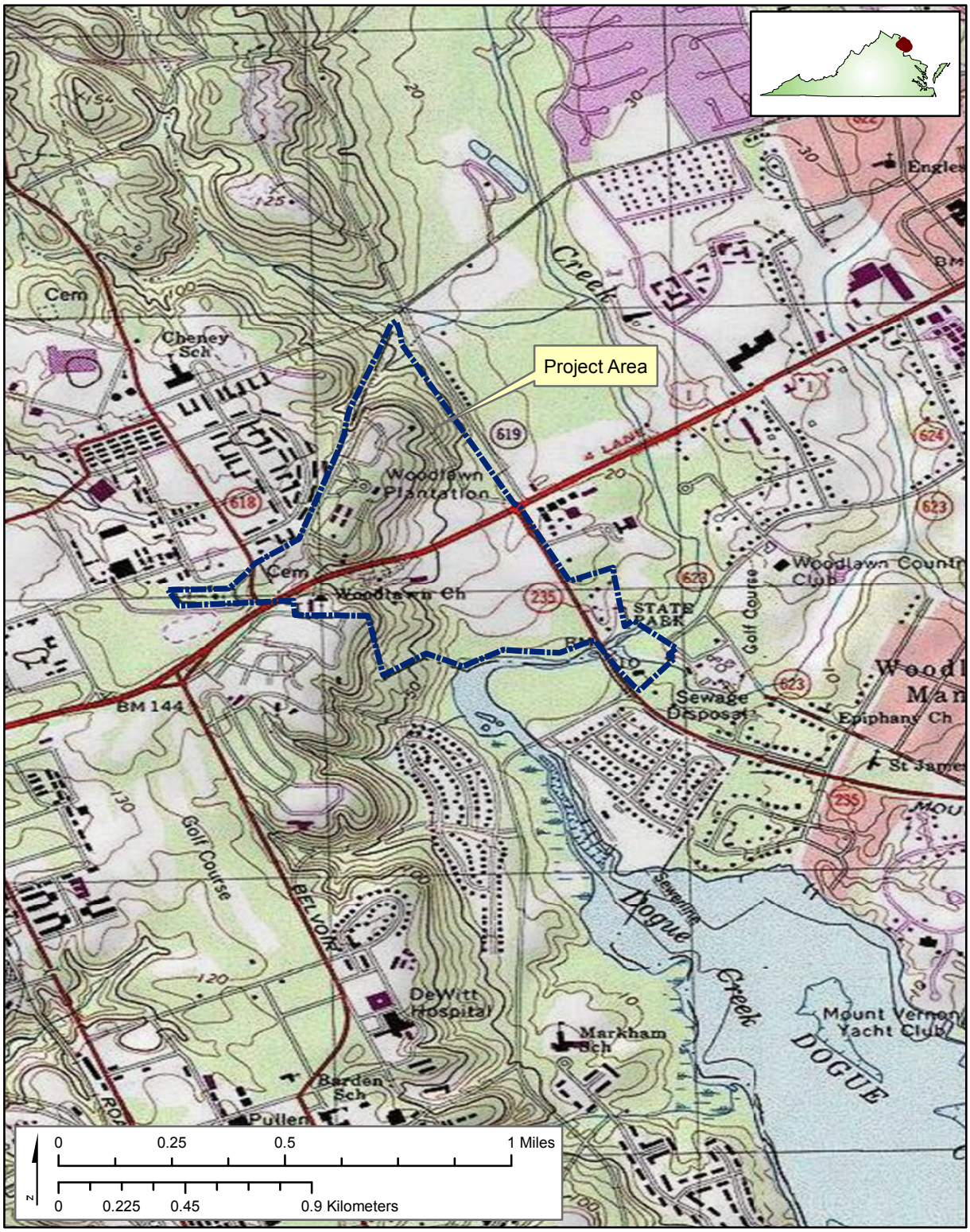
The cemetery is approximately one acre in size and located on a prominent landform. Landscaping is open, with several mature hardwood trees, and the setting is well maintained. The church driveway divides the cemetery into two distinct sections, with older graves on the western side and more recent graves on the eastern side.

During the grave marker assessment part of this survey, 133 unique grave markers representing 179 individuals were documented. Many of the markers commemorate multiple individuals. Formal markers indicate a period of use from the 1870s to the 1990s. No burials were documented from the 2000s. Additional attributes from the marker inventory were used to generate detailed information about the cemetery. In brief, the patterns observed in the attribute data fit well with a formal cemetery that is well maintained.

The GPR results correlate very well with the number of graves as documented from the marker inventory and suggest there are few unmarked graves present. The GPR results indicated approximately 176 potential graves, including those associated with existing markers, as well as probable unmarked graves. The total number of graves, as indicated from marker data and GPR, is between 176-179.

The remainder of this report includes a discussion of the environmental setting (Chapter II), historic context (Chapter III), methods (Chapter IV), results (Chapter V), and conclusions and recommendations (Chapter VI). Appendices include a cemetery marker inventory, as well as amplitude slice maps and selected profiles of the GPR data.

Figure 1.
Location of the Project Area



Source: USGS Fort Belvoir and Mount Vernon, Virginia Quadrangle

II. ENVIRONMENTAL CONTEXT

This chapter reviews the cemetery's environmental context, primarily soils, that may influence the survey results.

The project area is located in the embayed section of the Coastal Plain physiographic province of northern Virginia. Soils in the cemetery survey area are classified to four types (USDA 2012). Kingstowne sandy clay loam, 0-45 percent slopes, is located on shoulders, summits, and backslopes and formed from earthy fill of fluviomarine deposits. It is well drained with a water table located between 24 and 79 inches. A typical profile consists of sandy clay loam (0-4 in.) and clay loam (4-60 in.). This soil type comprises the central portion of the cemetery. Matapeake silt loam, 2-7 percent slopes, is located in the southwest portion of the cemetery. It is found on summits and has parent material of fluivomarine deposits. It is well drained, with a water table at more than 80 inches. A typical profile consists of silt loam (0-16 in.), silt loam (16-34 in.), and sandy loam (34-62 in.). Sassafras-Marumsco complex, 7-15 percent slopes, is located on the extreme eastern fringe of the cemetery. It is found on summits and shoulders and has parent material of fluviomarine deposits. It is well drained with a water table at more than 80 inches. A typical profile consists of sandy loam (0-9 in.), sandy clay loam (9-40 in.), and gravelly sandy loam (40-70 in.). Small portions of the western cemetery boundary are classified as Urban Land. In general, these soil types are suitable for GPR survey, although signal attenuation may be higher than expected given the high clay content.

III. WOODLAWN BAPTIST CHURCH AND CEMETERY HISTORY

The Woodlawn Baptist Church congregation was established during the late 1860s, and the original church building was erected in 1872. The first burials in the cemetery took place shortly afterward. The church and cemetery thus date to the Reconstruction and Growth (1865-1917) time period of the Northern Neck of Virginia. The property the church parcel was taken from, however, once formed part of the Woodlawn Plantation, and before that was a part of George Washington's Mount Vernon estate. U.S. Route 1, which form's one boundary of the cemetery, was also an important historic transportation corridor, beginning as an Indian path and later evolving into the primary automobile route along the east coast before the interstate. The following historic overview describes the general historic context of the church and cemetery as well as the specific property history.

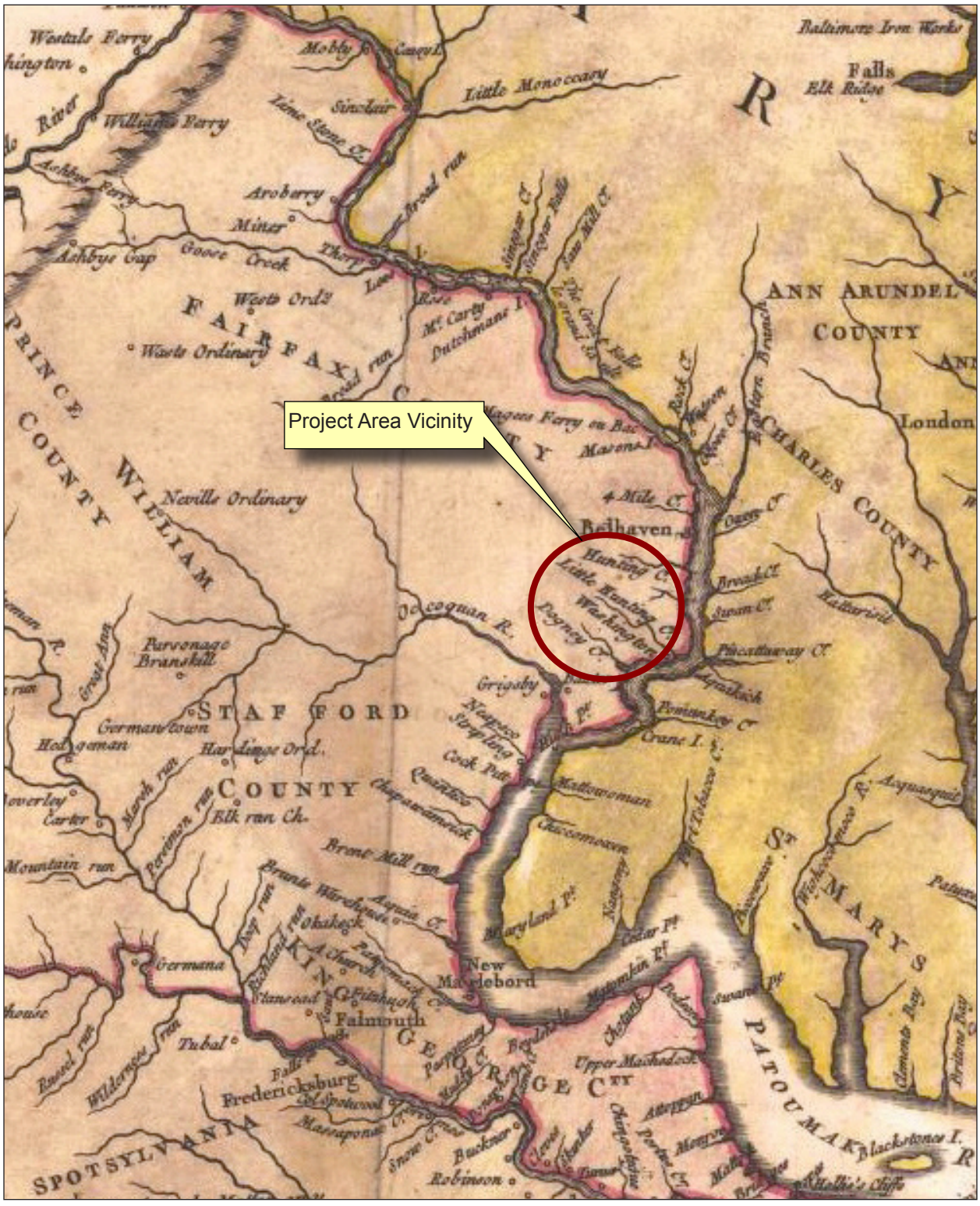
FAIRFAX COUNTY HISTORY

The Woodlawn Baptist Church and cemetery lie along U.S. Route 1 near the head of Dogue Creek, a short tidal embayment of the Potomac River. This location is in southeastern Fairfax County near the Potomac River. The Potomac forms the northern boundary of the Northern Neck of Virginia, with the Rappahannock being the southern boundary.

The Northern Neck, containing roughly 5,000,000 acres, was originally held as a proprietary by a group of six Englishmen who received a grant to the territory in 1649 as a reward for their support of King Charles II during his exile. Eventually, in 1692, the Fairfax family obtained control of the entire proprietary, in part though marriages to the Culpepers. Thomas, Lord Fairfax, appointed Robert Carter his agent in 1702 and charged him with placing tenants on the Northern Neck for nominal quitrents (Cooke et al. 2001:11; Bryant and Sperling 2007:14).

The Virginia Assembly originally included the entire Northern Neck in a single large county called Northumberland. As population expanded, requiring smaller divisions with separate courthouses, Northumberland was divided up, the majority of its northern portion becoming Westmoreland County in 1653. Stafford County was carved from the northern part of Westmoreland in 1664. Over the next 60 years, population grew enough to require the division

Figure 2.
1755 Map of Virginia and Maryland, Showing Fairfax and Adjacent Counties.
Washington's Mt. Vernon Estate is Shown Between Little Hunting and Dogue Creeks



Source: Robert de Vaugody 1755

of additional counties. In 1730, the Assembly created Hamilton Parish in the northern part of Stafford County and, using the parish boundaries, established Prince William County in 1731. The following year, the Assembly separated the northern part of Hamilton Parish to form Truro Parish, which became Fairfax County in 1742 (Netherton et al. 1978) (Figure 2).

Settlement was slow to get underway in the Northern Neck and only began in earnest during the first part of the eighteenth century. Treaties with the local indigenous tribes restricted early settlement along the Potomac Valley. A 1648 treaty, however, opened the region beyond the James River Valley for colonization. Initial settlement (by Europeans) was sparse, and much of the initial landholding involved speculation rather than actual settlement. Nevertheless, people moved into the area and by the time Fairfax County was established, it contained three Anglican churches, tobacco warehouses, small farms, and large plantations. In the northern part of the county, the settlement on Great Hunting Creek, later Alexandria, contained the houses of factors for Scottish merchants. The county economy was based on tobacco produced by slaves and tenant farmers (Netherton et al. 1978:11).

Tobacco emerged as the dominant staple of the Chesapeake region over the course of the colonial period, and it had profound influences on aspects of the economy, settlement, and society. The crop was the chief export of the region and sometimes served as a medium of exchange. The search for fresh land instigated European expansion up the Potomac Valley and contributed to the sparse settlement pattern because the tobacco cultivation required the accumulation of large land holdings so that new fields could be continuously opened (Carr 1987:5-6). After the initial tenants, who were placed there to secure patents, wealthy tobacco planters came to dominate the county, bringing with them slaves and indentured servants (Netherton et al. 1978:22; Meinig 1986:149; Cooke et al. 2001:11).

Life during the first years of settlement was difficult and characterized by harsh and rudimentary conditions. Documentary and archaeological evidence indicate early dwellings were small and insubstantial earthfast structures. These rough shelters housed settlers of all economic and social ranks. Larger, more durable and elaborate structures did not appear until well into the eighteenth century (Carr 1987; Wells 1987). Material culture was also basic and crude, with the belongings of even the wealthiest Chesapeake residents being only as good as those owned by the lowest economic groups in England (Horn 1988). To sailors and new arrivals, the occupants of the region looked like Englishmen living in “dangerous and squalid exile” (Meinig 1986:150). As people adapted to conditions, though, greater economic and social stability emerged. These led to higher standards of living and increased social stratification. By the later seventeenth century, refined lifestyles (for some residents) based on land wealth, tobacco production, and slave labor had started to materialize (Carr 1987:21; Pogue 1993).

By 1780, dispersed large estates and small farms typified the landscape and the general character of the region was rural. Trade was conducted through hundreds of collections points consisting of private landings or storehouses that served local areas (Meinig 1986:154-156). Regional market towns or focal points were rare and local capitals were busy only during political seasons. County seats, for example, often consisted of a court building with a few related structures sitting alone at a crossroads. These locations only became busy when court was in session, times that were occasionally combined with markets or special social events (Netherton and Waldeck 1977:1).

Except for river travel, transportation was primitive through this era. Roads were underdeveloped, although Fairfax County residents did not require many because of the access to water transportation. As settlement spread inland, however, the road network developed, with roads extending from river landings and connecting churches and courthouses. As networks developed further, the roads often followed old Indian paths, animal trails, or other paths with less resistance, such as natural ridge crests. One of these, the Potomac Path, began as an Indian trail along the natural ridge between the Potomac and Rappahannock rivers. A branch of this road that ran closer to the Potomac to serve the plantations here later became the Potomac Path and was ultimately incorporated into U.S. Route 1 (Netherton et al. 1978:20; Frisbee 1969:1). In 1773, the road became an official postal route and its name changed to King's Highway. The road gained prominence during the American Revolution as a major route for American and French forces heading south toward Yorktown (Cooke et al. 2001:12).

Another outcome of the Revolution was the change in land ownership. Residents of Virginia were considered to be British subjects, and therefore enemy aliens, had their personal property, including slaves, confiscated beginning in 1777. Land in the Northern Neck belonging to Fairfax family heirs was taken and given to American citizens in possession of it upon obtaining a certificate from the Governor, completing a Northern Neck survey, and paying a small fee (Bryant and Sperling 2007:15).

In the last quarter of the eighteenth century, the county's economy began to transition from tobacco to wheat, rye, corn, and related processing activities (i.e., milling). This switch was a consequence of the tobacco fields becoming exhausted and increased duties on tobacco, with a simultaneous increase in the demand for wheat in England (Bryant and Sperling 2007:15). Market demand caused the Chesapeake to emerge as the pre-eminent wheat producer in the country during the first part of the nineteenth century and contributed to the growth of the port of Alexandria at this time (Cooke et al. 2001:13). Outmoded farming methods combined with general depletion of the soils led to an economic depression in the county during the early 1800s, however, and damage to Alexandria during the War of 1812 exacerbated the situation. Many

northern Virginia residents migrated westward, leaving their farms to go fallow. An outcome of the sagging economy was an influx of northern farmers into northeastern Virginia who took over abandoned farms and introduced new agricultural practices, such as resting the soil, crop rotation, and deep plowing (Bryant and Sperling 2007:17; Cooke et al. 2001:14).

The project site was part of one such area, having been bought up by a partnership of Quaker lumbermen from Philadelphia and neighboring New Jersey who later subdivided portions of it into farms of between about 50 and 200 acres and sold them to fellow Friends from the northeast. This practice gave rise to a community of Quakers and the establishment of the Woodlawn Friends Meetinghouse around 1853 (Muir 1943; Frisbee 1969:1). The town of Accotink, situated on King's Highway at the ford of Accotink Creek (southwest of Woodlawn Cemetery), became the business center for this community. The town served as a post village and had an official post office by 1853. The arrival of the Friends to the area led to improvements being made to the old gristmill here as well as the addition of a sawmill, stores, a blacksmith shop, and a carriage maker (Muir 1943:84-85).

After struggling through economic hardships early in the century, the county experienced an upswing in the late antebellum period along with rising population rates. Commercial fertilizers, growing urban markets, transportation upgrades, and agricultural diversification contributed to the improved circumstances (Netherton et al. 1978; Lowery 1973; Rubin 1984:121; Cooke et al. 2001:15). The region's society at this time was highly stratified on the basis of wealth, ethnicity, gender, and legal status (King 1994:238). The Quaker settlement was an exception, however. In addition to acquiring timber, the Troth-Gillingham Company had an interest in demonstrating to the local aristocracy the workability of farming the land with free labor. Land sales were thus made not only to northeastern Quakers, but also to Baptists from New England, such as John Mason who acquired the project site in 1850, as well as local families, including former slaves. Temperance was another point of interest to the community, and deeds to properties that the company sold included the proviso that no intoxicants could be sold from the properties (Frisbee 1969:4; Tuminaro 1998:21).

Because the area was heavily populated by northerners, many of who were Quakers, the Accotink district was overwhelmingly opposed to the Ordinance of Secession of 1861. When war broke out, many of the Union sympathizers evacuated. Those who remained faced various hardships. Paul Hillman Troth, one of the original members of the northern Quakers to arrive and buy land, was taken prisoner and sent to Richmond (Frisbee 1969:5). Although the only major fighting in Fairfax County were the two Battles of Manassas, the overall region was the scene of considerable disruption from both sides during the war. After First Manassas, Confederate forces occupied various parts of the county, including the area around Accotink

where forward troops were placed in defense of the main army in Manassas (Figure 3). In late 1861 and early 1862, Union troops were camped in the vicinity of the project site. Chalkley Gillingham, another of the first Quaker settlers, "entertained" three Union officers and two privates for dinner at his farm near Mount Vernon on New Year's Day, 1862. He reported 15,000 Union infantry and cavalry camped within four miles of the farm and complained about the damage and mess they created at the Friends' meetinghouse, which they converted into their headquarters. Because of the proximity of the forces, there were frequent clashes in the county, and much of the military activity during the first years of the war involved troop movements, skirmishes, raids, and ambushes. In 1863 and 1864, operations turned mostly to guerilla warfare as Confederate forces engaged in hit and run attacks on Union supply and communication lines. Mosby's Virginia Rangers were the most well-known and successful of these groups (Mauro 2006).

The war ended Virginia's economic recovery and overturned established social hierarchies. Fairfax County residents turned back to agriculture, producing dairy products, livestock, poultry, and flour as well as fruit, vegetables, and flowers, which were marketable in Washington D.C. Despite the potential market, the county's economy remained depressed through the 1870s. The Quaker community centered on Accotink and the meetinghouse just west of the study site prospered, however, and the meetinghouse was expanded during the 1860s to handle increased membership (Lautzenheiser and Hall 2007:17).

Additional local developments included the establishment of the Woodlawn Baptist Church Congregation and construction of the church building during the late 1860s and early 1870s. In 1850, New Hampshire-born John Mason purchased the remaining acreage of the Woodlawn plantation and moved into the mansion with his family. His wife Rachel established a Baptist Sunday School there in 1859. A formal congregation based at the Woodlawn plantation was established in 1868. In 1869 the congregation was received into the body of the Potomac Baptist Association of the Southern Baptist Convention (Woodlawn Baptist Church 1968) (Figure 4).

Also during this period, institutions oriented toward the many African-American farmers in the vicinity emerged. These included an African-American school, the Woodlawn Methodist Church and cemetery, and the Mount Vernon Enterprise Lodge of the Odd Fellows (Lautzenheiser and Hall 2007:17).

A significant political development was the establishment of the Fairfax County Board of Supervisors in 1870. The Board took over county property, which had been handled by the courts, as well as worked to pay off the county's debt, promoted agriculture, implemented plans to improve transportation, and established a county school system (Netherton et al. 1978; Cooke et al. 2001:16).

Figure 3.
Union and Confederate Pickets in the Vicinity of Accotink, 1862

Source: Sneden 1862

Figure 4.
Woodlawn Baptist Church and Vicinity, 1870s

Source: Hopkins 1879

Transportation was also an important theme during the last part of the nineteenth century. Railroads had been established in the county during the 1850s, and improved travel and haulage within the county's interior as well as better economic conditions. By the 1870s, three rail companies operated lines within the county and were significant influences on economic development (Cooke et al. 2001:17). Later in the century, trolley lines enhanced commuter travel, although these did not greatly affect the areas further from the major cities. The project vicinity, like most of the county, remained rural until the twentieth century, and in some instances localities promoted themselves as healthful retreats from the nearby cities (Bryant and Sperling 2007:21, 24).

During the first part of the twentieth century, the county became proactive with respect to growth and development in an effort to attract Washington, D.C. residents. Taking advantage of access to electric rail lines, bus lines, and improved roads, land developers started building housing for middle-class residents. Despite these efforts, development did not extend very far into the Washington hinterland until after World War II (Bryant and Sperling 2007:24). The county's fortunes remained tied to agriculture, as it became a significant dairy producer. The dairy economy contributed to enhanced transportation as improvements were made to better serve Washington, D.C. markets (Cooke et al. 2001:17). The railroads remained viable transportation modes though the middle part of the century, but after World War II, they mostly ceased providing passenger service (Bryant and Sperling 2007:24).

U.S. Route 1, however, which runs past the Woodlawn Baptist Church and cemetery, became more prominent during this period. As noted, this road began as an Indian path and later developed into a major post road and turnpike. Eventually, by the early twentieth century, it became part of the major north-south road along the east coast of the United States until Interstate 95 replaced it (Frisbee 1969:1).

An important event in the project vicinity during the early part of the twentieth century was the establishment of Fort Belvoir. This military installation occupied the lands associated with Belvoir Manor, the eighteenth-century tobacco plantation of William Fairfax, which lay between Accotink and Dogue creeks. Fairfax was a cousin of Thomas, Sixth Lord Fairfax, who obtained the Northern Neck proprietary in the 1730s. The Belvoir manor house was destroyed in the 1780s and was never rebuilt. By the 1840s, the estate was essentially abandoned and came under the ownership of a German-born Quaker Philip Otterback, who developed some of the property for agriculture and let the remainder revert to forest. By the turn of the twentieth-century, the former Belvoir estate lands were generally undeveloped and rural. The Federal Government purchased 1,500 acres of the property for use as a children's reformatory in 1910, but local opposition caused the abandonment of this plan. The land was subsequently transferred

to the War Department for use as an Engineer School, the original school being squeezed out of its original location in Washington, D.C. and named Camp Belvoir. When the U.S. entered World War I in 1917, the installation was renamed Camp Andrew A. Humphreys and expanded into a training cantonment for engineer soldiers. By 1918, the government obtained the remainder of the Belvoir estate. Following the First World War, the installation remained open as the permanent Army Engineer School. It was renamed Fort Humphreys in 1922 and then Fort Belvoir in 1935 (Price and Joseph 2007:9-11) (Figure 5).

Following the First World War, the county's economic situation worsened, as prices on farm produce declined and prevented farmers from purchasing supplies and equipment. Moreover, the expansion of the Federal Government caused the county's cities to grow. County government turned its attention toward growth in urban centers and neglected the concerns of the farming community (Cooke et al. 2001:17-18).

Through the period leading to World War II, Fort Belvoir continued to develop. The Corps of Engineers Board there coordinated efforts to develop and test new forms of equipment and materials. In 1940, the Engineer Board obtained the Fort Belvoir Engineer Proving Ground, located about 1.5 miles northwest of the main installation for testing landmines. This post was subsequently expanded for a variety of other programs (Price and Joseph 2007:11).

After the Second World War, the county underwent substantial growth, doubling in population between 1940 and 1950. Nevertheless, nearly half the land in the county remained farmland through 1950, with development and change toward suburban land use intensifying afterwards. The county population nearly tripled in the decade leading up to 1960 (Bryant and Sperling 2007:29) (Figure 6). Urban and suburban development expanded quickly, requiring new schools, libraries, paved streets, utilities, and other amenities. The growth of the District of Columbia and the county's emergence as one of its principal suburbs led to the extension of public transportation systems into the county. Ultimately, Fairfax County has grown into one of the most populous and affluent counties in Virginia (Cooke et al. 2001:18).

LAND OWNERSHIP HISTORY

Woodlawn Baptist Church and cemetery occupies land whose ownership stemmed from grants made during the seventeenth century, and that later became part of George Washington's Mount Vernon estate. When King Charles I was deposed in 1648, seven loyal supporters crowned his son King Charles II. In thanks, Charles II granted these seven the Northern Neck proprietary. Thomas, Second Lord Culpeper and one of the grantees, became governor of Virginia in 1677 and by 1681 had bought the Northern Neck interests of the other six grantees.

Figure 5.
Fort Belvoir Established on the Grounds of Belvoir Plantation in 1917

Source: USGS 1965

Figure 6.
Suburban Growth in the Project Area Vicinity, Circa 1955

Source: USGS 1956

After his death in 1689, most of his interest in the territory went to his daughter, Katherine Culpeper, who married Thomas, the fifth Lord of Fairfax. Thomas's son, also Thomas, the sixth Lord Fairfax, took over the entire proprietary in 1719 and appointed his cousin William Fairfax as collector of customs for the South Potomac River. William established Belvoir plantation, which ultimately became incorporated into Fort Belvoir (Cooke et al. 2001:11).

Prior to this, in 1674, Lord Culpeper granted 5,000 acres to John Washington and Nicholas Spencer as payment for settling immigrants under the headright system. Spencer, an English merchant and 1650s emigrant to Virginia, was a cousin of the Culpepers and served as their agent in the colony. Washington, George's great-grandfather, settled in Virginia in the 1650s, established himself as a planter in the Northern Neck, and eventually also became a member of the House of Burgesses.

Their shared grant faced the Potomac River on the south and covered land bounded by Little Hunting and Epsewasson (later Dogue) creeks, with a line drawn between the two creeks as its north boundary. John Washington died in 1677, leaving his share of the grant to his son Lawrence. In 1690, the Washingtons and Spencers divided the grant, each family receiving a share with one half Potomac Riverfront and one half of the backlot. The Washingtons took the west half with Dogue Creek as its west boundary. Lawrence died in 1698, leaving the land, known as the Little Hunting Creek property, to his daughter Mildred, which she then leased to her brother Augustine (George Washington's father). In 1726, Augustine bought the property outright from his sister for $900 (Muir 1943:16-17).

Augustine Washington was a planter, land speculator, and iron producer with interests in various locations in the Northern Neck. He appears to have been the first to establish a permanent homestead on the Little Hunting Creek property, known then as "Epsewasson," in 1735. The house, which burned in 1739, later became the foundation of George Washington's Mount Vernon mansion. Among other improvements, Augustine built a gristmill on Dogue Creek. With the destruction of the house, Augustine moved the family to Ferry Farm on the Rappahannock River, which was close to his iron interests near Fredericksburg. When he died in 1743, the Little Hunting Creek land went to his son Lawrence, half brother of George (Muir 1943:18; Ferling 1988:2-4).

With his wife Anne Fairfax—of Belvoir Plantation—Lawrence took up residence on the Little Hunting Creek estate in 1743. He soon renamed the estate Mount Vernon in honor of Admiral Edward Vernon, with whom he had served in Cartagena de Indias (Colombia) during the War of Jenkins Ear. Lawrence put up a new house, which became the central portion of the larger and more sprawling mansion that his brother George built. Lawrence died in 1752,

leaving the estate to his infant daughter Sarah, with the provision that his wife should have a life interest in the estate. In the event that Sarah died childless, the estate would pass to George Washington, who had become a protégé of his older brother. Sarah died less than two years after her father, leaving the estate in the hands of Anne Washington for her lifetime. Within the next few years, Anne married George Lee. George Washington, 20 years old when his brother died, had been leasing the property from Anne since the late 1750s, and 1761, after her remarriage, he bought out her interest, promising her husband the annual sum or quantity of 15,000 pounds of tobacco in 15 hogsheads or cash in the amount of 12 shillings and sixpence "for every hundred weight of tobacco." The agreement left George Washington clear title to Mount Vernon (Wilstach 1916).

Washington spent considerable time improving the estate and accumulating land. His most active period in this regard was between 1757 and 1774. By the time of his death, the Mount Vernon estate totaled over 6,000 acres, which he had divided into five farms: Mansion House Farm, Union Farm, Muddy Hole Farm, Dogue Run Farm, and River Farm (Figure 7). Portions of these became Woodlawn Plantation, which Washington gave his foster daughter (in actuality his step-granddaughter from Martha's first marriage) Eleanor (Nellie) Custis upon her marriage to Lawrence Lewis, George's nephew (son of his sister Betty) in 1799 (Muir 1943). Washington's will, dated July 9, 1799 and probated January 20, 1800, described the property as ". . . the residue of my Mount Vernon Estate, not already devised to my Nephew Bushrod Washington-comprehended within the following description, viz, all the land North of the Road leading from the ford of Dogue Run to the Gum Spring as described in the devise of the other part of the tract to Bushrod Washington, until it comes to the Stone & three red or Spanish Oaks on the knowl [sic]; thence with the rectangular line to the back line (between Mr. Mason & me); thence with that line westerly along the new double ditch to Dogue run, the tumbling Dam of my Mill; thence with the said run to the ford aforementioned; to which I add all the Land I possess West of the said Dogue Run, and Dogue Creek bounded Easterly and Southerly thereby; together with the Mill, Distillery, and all other houses and improvements on the premises, making together about two thousands acres be it more or less" (Washington, 1799). The acreage included portions of Muddy Hole Farm, Union Farm, and all of Dogue Run Farm (Muir 1943:26).

The Lewis' continued to live at Mount Vernon, Nellie's childhood home, until Woodlawn Mansion was built between 1800 and 1805 on Gray's Hill, a prominent ridgeline that commanded the surrounding area. Reportedly designed by William Thornton, first architect of the U.S. Capitol, the house included a central portion with two flanking wings and connecting hyphens. At present, it remains largely unchanged, except for the hyphens and wings being raised between 1902 and 1920 (Frisbee 1969; Fairfax County Division of Planning 1971; National Park Service 2005).

Source: Washington 1801

Figure 7.
Map of Washington's Mount Vernon Estate

The Woodlawn property remained in the Lewis family's hands until 1848. Lawrence and Nellie Lewis deeded the estate to their son, Lorenzo, on May 20, 1820 for $10. The transaction made Charles Calvert Stewart the trustee of the property until Lorenzo turned 23, at which time Stewart or his heirs would convey the premises to Lorenzo in fee free from all encumbrances (Fairfax County n.d., Deed Book S-2:169). The objective of this transaction was to establish a trust to protect the property or its value until Lorenzo could take possession upon turning 23. The relationship between the Lewis family and Stewart was not made explicit in the transaction, and it was not clear what his responsibilities, other than custodial, he had under the arrangement. He did not take possession of the property, however, as the Lewises remained in residence until Lawrence died in 1839. By that time, Lorenzo (b. 1803) was around 36 and Stuart no longer had any involvement with the property, insofar as is known. Lawrence's will, dated December 28, 1839, did not mention the earlier transaction (Fairfax County Will Book T-1:127).

Following Lawrence Lewis' death, Nellie moved out of the mansion and spent the rest of her life (she died in 1852) with her son Lorenzo and his wife, Esther Maria Coxe Lewis, at their plantation Audley in Clarke County, Virginia, where they moved soon after their marriage. Woodlawn was closed up and the grounds were left uncultivated and unmaintained for seven years. In 1846, Lorenzo decided to sell the property but found no takers at a public auction (Muir 1943:33; Frisbee 1969:3).

Soon after, however, a group of Quaker businessmen from Philadelphia and neighboring Camden County, New Jersey, agreed to purchase the estate. The four partners in the transaction, Chalkley (sometimes Chalkey) Gillingham and Jacob Troth, of New Jersey, and Lucas Gillingham and Paul Hillman Troth (Jacob's son), residents of Fairfax County by 1848, were lumber merchants whose principal business was supplying Philadelphia shipyards. As timber sources in Pennsylvania, Maryland, New Jersey, and Delaware had started to thin out, lumbermen began searching for new stocks and discovered a supply of white oak at Woodlawn.

Although Lorenzo had entered an agreement to sell the land to Joseph Gillingham and Chalkley Gillingham, he died in 1847 before finalizing the transaction and before the transfer could be finalized, Esther Lewis, his wife and executrix, filed a lawsuit in Chancery Court against the heirs of Charles Calvert Stuart to clear the title. Evidently, Stuart had never executed a conveyance to Lorenzo as per the terms of the trust he held for Woodlawn and the legal title vested to his adult and underage heirs. Ultimately, the suit was merely a formality and the title was cleared without any animosity (Fairfax County Chancery Records Case CFF98X).

The land sale was made on August 26, 1848, between Grantors Lawrence B. Taylor, a commissioner appointed by the County Clerk, and Esther Maria Lewis, still residing in Clarke County, and Grantees Jacob Troth, Chalkley Gillingham, Lucas Gillingham, and Paul Hillman Troth for $16,630 (Fairfax County n.d. Deed Book N-3:102). Joseph Gillingham, Chalkley's uncle, who had entered the original agreement with Lorenzo Lewis had dropped out because he was unable to comply with the terms of the deal and Chalkley took on the other three as partners. Together, this group formed the firm of Troth-Gillingham Company (later renamed Gillingham & Troth) with the intention of producing lumber for Philadelphia shipyards and bark for local tanneries, as well as selling land (Muir 1943:36-38; Frisbee 1969:3). The partners mortgaged the property with Mahlon Gillingham and Joseph Gillingham in 1849 (Fairfax County n.d. Deed Book O-3:331).

Subsequent land transactions over the next few years involved Troth-Gillingham dividing off tracts that had been cleared and selling them as small farms of around 50-200 acres. Buyers were often Quaker or Baptist immigrants from the Philadelphia area and New England, but also included local whites and former slaves. Terms of sale always reserved timber rights and easements to operate and maintain the millrace associated with Washington's old gristmill on Dogue Creek (e.g., Fairfax County n.d. Deed Book V-3:328) (Frisbee 1969). The grants also contained the provision that no one could sell intoxicants from the land (Muir 1943:40).

Three months after the Gillinghams and Troths jointly purchased Woodlawn, they divided it between the two families. The deed, dated November 17, 1848, indicated that Chalkley Gillingham and Lucas Gillingham (Party of the First Part) and Jacob Troth and Paul Hillman Troth (Second Part) decided to partition their rights and interests in Woodlawn, and for this purpose had opened a road through the land in a northwesterly direction between Spencer's Corner and a tract of land called "Muddy Hole." The Gillinghams received the land north of the new road, "which has been called 'the National Road'" and the Troths took the land to the south, except for lots that had been previously sold and a seven-acre parcel that included the mill, water rights, timber, and the oyster shell landing on Dogue Creek. The acreage and financial consideration involved were not specified (Fairfax County n.d. Deed Book O-3:395). Muir (1943:53), however, stated that each "partner" (as opposed to family) received 450 acres.

Comparison of the partition description with the accompanying plat and later transactions confuses how the land was distributed. Although the deed describes the new or National Road as running northwesterly, in fact it extends from southwest to northeast. Moreover, while the deed described the land south of the road as going to the Troths, later information suggest the Troths had possession of Woodlawn Mansion, which lay north of the road.

Through these transactions, the Woodlawn Mansion had remained largely uninhabited. The Troth-Gillingham Company used it as a headquarters and it was evidently occupied as a residence on a temporary basis by new arrivals from the northeast until they could build their own houses (Frisbee 1969:4). Paul Hillman Troth and his wife Hannah Maria, for example, moved into the mansion in the late 1840s (Muir 1943:59).

On March 25, 1850, Jacob and Paul Troth formally divided their joint holdings of the former Woodlawn estate. Jacob Troth and his wife Rebecca, still residents of Camden County, New Jersey, sold their 539.3-acre share of Woodlawn to their son Paul Hillman Troth and his Wife Hannah Maria for $1. In the same deed, Paul and Hannah sold two tracts, one containing 255.05 acres and the other 100.25 acres, to Jacob for $1 (Fairfax County n.d. Deed Book O-3:329). This transaction gave clear title of the Woodlawn Mansion to Paul Troth, and immediately afterwards, on April 9, 1850, Paul and Hannah sold the parcel just acquired, but described as containing 546.3 acres, to John Mason for $3,700 (with restrictions on timber and water rights). The parcel also contained the Woodlawn Mansion (Fairfax County n.d. Deed Book O3:361).

In January 1855, several transactions documented an apparent series of agreements concerning the consolidation of the remaining Woodlawn estate under the ownership of John Mason. On January 1, Paul H. and Hannah M. Troth sold a half part of a tract, totaling 546.31 acres, to Chalkley Gillingham for $6,000. The exact location of this parcel was not clear but the acreage is consistent with other deals involving Woodlawn (Fairfax County n.d. Deed Book V-3:317). On the same day, Chalkley and his wife Keziah sold a 460-acre parcel to John Mason for $5,000. The deed described this tract as the same sold to Chalkley by Paul and Hannah Troth on January 1, 1855 (Fairfax County n.d. Deed Book V-3:328).

A third deed dated to January 1 involved John Mason and his wife Rachel selling Paul H. Troth an easement for $1. The deed described the tract as the one on which John Mason now resides and being the land Mason acquired from Paul H. Troth and his wife and Chalkley Gillingham and his wife. This particular agreement gave Troth-Gillingham and Company rights of access to the waterpower from Dogue Creek, to the use of the road to the old mill, the mill race, and 20 feet of land on both sides to allow for maintenance. The document further indicated that the tract was subject to two deeds of mortgage executed between Mason and Benjamin Dalton of Parsonfield, York County, Maine and Peter G. Mason, Tamworth, Carrol County, New Hampshire (Fairfax County n.d. Deed Book V-3:339). In a final transaction, dated three weeks later on January 24, 1855, Paul and Hannah Troth signed a quitclaim to “that tract of land . . . known by the name of ‘Woodlawn’” (Fairfax County n.d. Deed Book V-3:320). At this point, John Mason held the remaining portions of Woodlawn plantation (Figure 8).

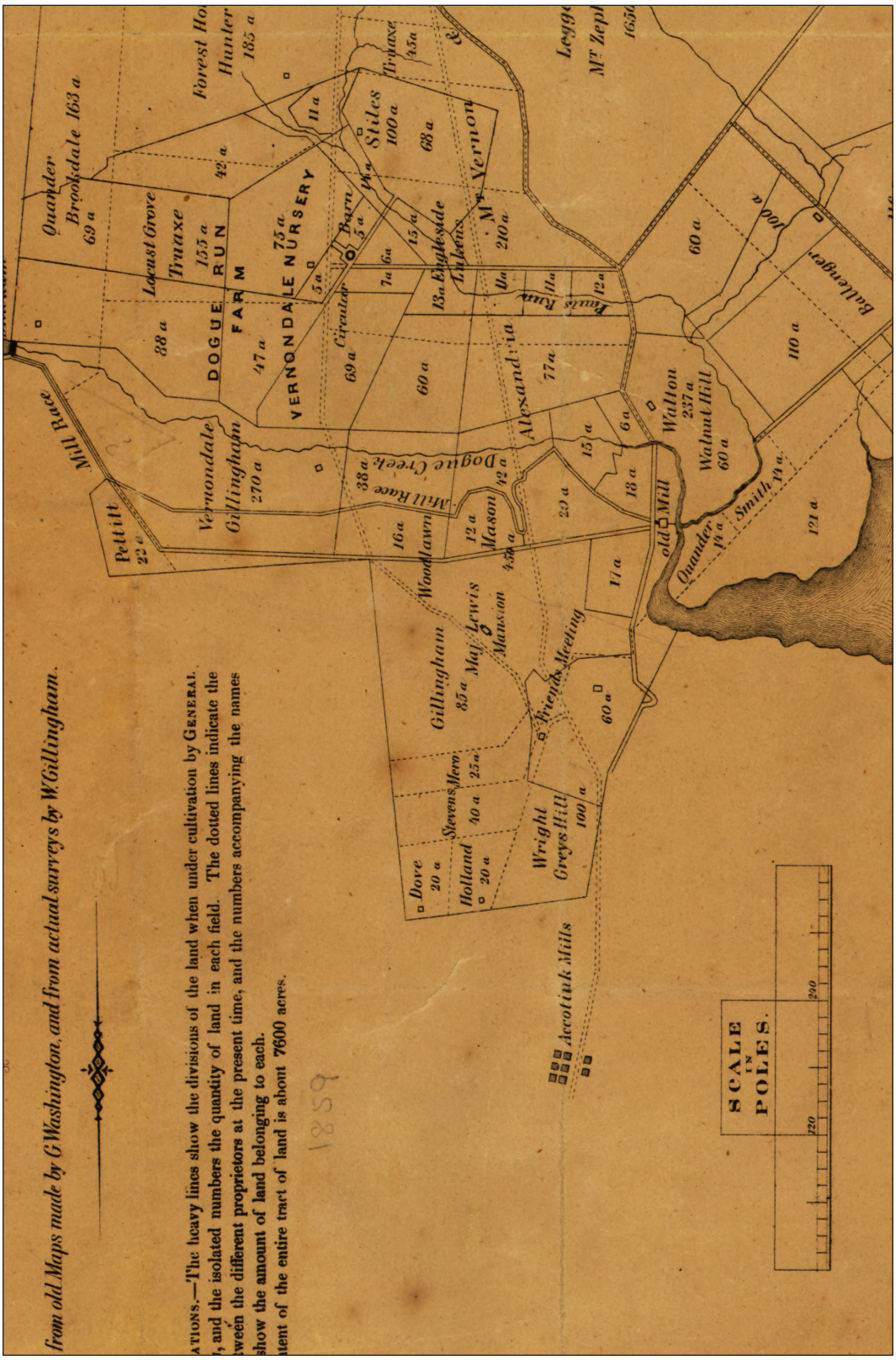


Figure 8.
Part of Mount Vernon Estate Showing Property Owners and Landmarks Associated with Woodlawn, Circa 1860

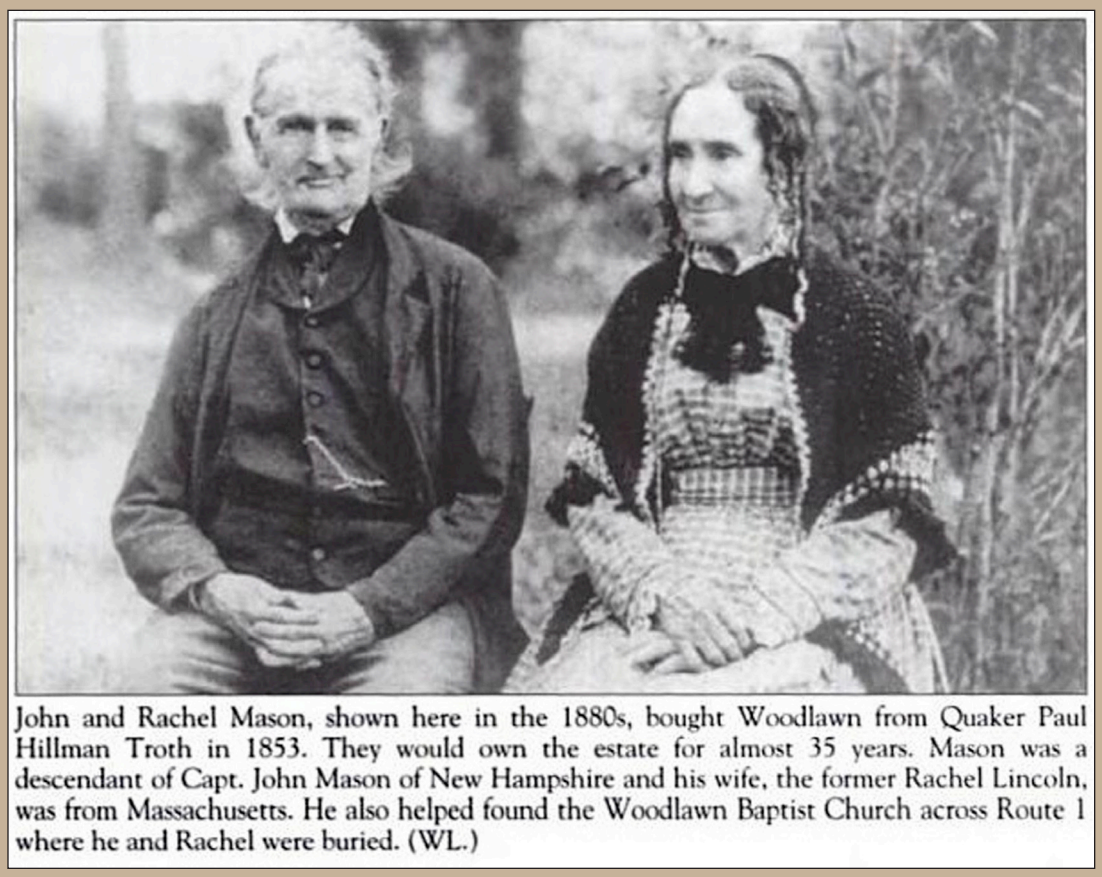
Source: Gillingham 1859

The Mason family was significant in the history of Woodlawn Baptist Church. John Mason was born in New Hampshire in 1799. Trained as a tanner, he switched to commerce, first as an itinerant peddler in remote Maine settlements and then opening a grocery in the town of Industry, Maine. Owing to "an unfortunate turn in a love affair," he became a partner in a freighter sailing routes in New England, Virginia, and the West Indies. He seems to have been generally successful in all of his undertakings but was ruined by the Panic of 1837 and in the aftermath, moved his family to Haddenfield, New Jersey, a town in Camden County (Hatch 1893:234-236; Brown 1903:V:395). It is not clear how he decided to acquire Woodlawn, but there were several connections between Mason and the Virginia site, including activity in shipping and his having relocated to the same area where several of the Quaker emigrants originated. By 1850, he had arrived in Virginia and began purchasing the remnants of the Woodlawn estate and restoring the house and farm fields (Frisbee 1969:5). U.S. Census records from 1850 to 1870 list his occupation as "Farmer," indicating his main focus had switched from commerce. He remained in residence at Woodlawn until his death in 1888 (Woodlawn Baptist Church 1968) (Figure 9).

Mason joined the Baptist Church in 1828, a year after he married Rachel Lincoln in Eastport, Maine (Hatch 1893:234). Once settled into Woodlawn, Rachel organized a Sunday school, which operated out of the mansion parlor, while John served as the school's superintendent, a role he continued to his death, at which point their oldest son Ebben (Ebenezer) took it over (Woodlawn Baptist Church 1968). Frisbee (1969) implied that the Masons arrived in the area with other Baptists in the same sort of communal migration as the Quakers. Although the timing and circumstances are not entirely clear, enough Baptist families arrived over the next few years to form the beginnings of a congregation. This group, which met in the parlor of Woodlawn Mansion, drew the notice of a retired Washington D.C. minister, William F. Nelson, who with several other members of the Calvary Baptist Church in Washington, assisted the community in organizing what evolved into the Woodlawn Baptist Church. The congregation was formally established in 1868 and for the first few years continued to meet in the Woodlawn parlor (Woodlawn Baptist Church 1968; Frisbee 1969:19).

The property associated with Woodlawn Baptist Church and cemetery was separated out of the larger Woodlawn estate during these years. John and Rachel Mason began dividing portions of Woodlawn among their children in the 1860s. On January 1, 1865, their second son Otis, then about 26 years old, purchased a 62-acre tract separated from the southwestern portion of the Woodlawn estate for $1,500 from John Mason, plus an additional $1 for Rachel Mason (Fairfax County n.d. Deed Book F4:196). Otis built a house on the site, which remains standing, although by this time he was already residing in Washington, D.C. and apparently used the house as a part-time residence (Tuminaro 1998:23).

Figure 9.
John and Rachel Mason, Founders of Woodlawn Baptist Church



John and Rachel Mason, shown here in the 1880s, bought Woodlawn from Quaker Paul Hillman Troth in 1853. They would own the estate for almost 35 years. Mason was a descendant of Capt. John Mason of New Hampshire and his wife, the former Rachel Lincoln, was from Massachusetts. He also helped found the Woodlawn Baptist Church across Route 1 where he and Rachel were buried. (WL.)

Source: O'Neill 2003

Although he was directly affiliated with the founding of Woodlawn Baptist Church, Otis Tufton Mason was ultimately more renowned for his ethnographic and anthropological work. Born in his mother's hometown, Eastport, Maine, in 1838, he moved with his family to New Jersey and then Woodlawn in 1850. Between 1856 and 1861 he studied at Columbian College (now George Washington University) in Washington, D.C. and married Sarah Henderson of Alexandria in 1862. After finishing at Columbian he obtained a position as a teacher and principal in its Preparatory Department, which he held until 1884. His scholarly activities focused on the culture and history of the eastern Mediterranean. In 1872, he became affiliated with the U.S. National Museum (now the Smithsonian) as a collaborator in ethnology and became the Curator of Ethnology in 1884, at which position he remained until 1902 when he became Acting Head Curator in the Department of Anthropology. During this time, his research interests switched from Oriental studies to the culture of the Americas. The "Acting" designation was removed in 1905 and he remained in this post until his death in 1908. Both Mason and his wife Sarah (d. 1900) are buried in Oak Hill Cemetery, Washington, D.C. (Brown 1903:V:395; Hough 1908; Coen and Baxter 1983).

In 1872, Otis T. Mason and his wife Sallie, residents of the District of Columbia, sold a two-acre parcel taken from their 62-acre share of Woodlawn to a group made up of O.T. Mason, William H. Mason (Otis' younger brother), Charles Clear, John Haislip, Thomas Williamson, and David T. Frost, Trustees for the Woodlawn Baptist Church. The sale, dated August 31, was for $1 and was made on the condition that the said Baptist church would, within a reasonable time, put up a suitable house of worship. Additionally, the land could never be leased, transferred, or assigned to anyone or used for any purpose other than a "regular" Baptist church, "that is to say a church whose principles are redemption by the blood of Jesus Christ, Baptism by Immersion upon a profession of faith and communion with those thus baptized only and if at any time the said land and premises shall cease to be occupied and used for the purposes above mentioned then said lot of ground shall revert to said Otis T. Mason, his heirs, and assigns" (Fairfax County n.d. Deed Book Q-4:100).

The first church building and cemetery were established on this two-acre property. According to Frisbee (1969:19), Reverend Nelson and John and Otis Mason had encouraged the congregation to build a formal church building. The structure was designed by Reverend Nelson and completed the same year as the title transfer. Little is known about the overall operations of the congregation during this period but the original structure stood for about 25 years without significant alterations. This building consisted of a simple frame vernacular church with a rectangular floor plan (Figure 10). The exterior was clad in weatherboards and the original roof was probably wood shingles. The east and west sides each had three 9/9 windows while the

Figure 10.
Woodlawn Baptist Church, 1966

Photo by: W.E. Bprrett. Source: Middleton 1987

north gable end had single 9/9 windows flanking the central double door. The south face was removed for alterations in the twentieth century and no records of its structure or appearance remained. The north end was the main entrance to the church and the two windows here were originally topped with cornices; no similar feature was on the side windows, although these had once been fitted with shutters or blinds. The north wall also featured a nine-light window set at an angle to form a diamond insert in the tympanum (Neblett 1991:3-4).

The interior of the church originally measured 30x45 feet and was divided into four spaces: a large auditorium at the south, a vestibule in the north, and two flanking rooms on either side of the vestibule. A notable feature of the interior was the use of diagonally set beaded boards on the ceiling to create diamonds and triangles. Three central diamonds ran down the middle of the ceiling to form medallions for light fixtures. The walls were sheathed with beaded boards in a tripartite pattern popular during the last part of the 1800s. The system incorporated three elements: wainscot, field, and frieze, which were delineated by wood moldings, a dado cap atop the wainscot, and a picture rail (Neblett 1991:4-5).

The church underwent several alterations during its first 100 years. The first took place in 1900 when congregation member Edward Johnson added a pulpit. Described as a three-sided bay with a single window in the south side of the building, it remained in place until the educational building and baptistery were added after World War II. In 1939, the church added a basement, which was excavated beneath the entire structure and required underpinning the perimeter with a concrete block and brick wall and steel basement sashes underneath the existing windows. The center of the building was supported with three steel columns along the long axis of the building. One of the small rooms flanking the vestibule was converted for a staircase and a furnace room was added to the northeast corner of the basement. This allowed the two stoves and brick flues to be taken out of the auditorium. The remainder of the basement space was left open and served as a fellowship hall (Neblett 1991:2).

Further changes took place soon afterward. In 1941, a bell tower was added atop the roof at its north end. This housed a bell that was dedicated in 1941 in memorial to congregant Nettie E. Dove. An exterior vestibule was added during the next few years to replace a simple wooden platform. After the war, the educational building and baptistery were added to the south end, which involved removing a considerable part of the original wall to accommodate a new pulpit, choir area, and baptismal tank. The addition involved important structural and visual changes as well. The new structure was concrete block with a stucco exterior. To make the original structure match, the remaining three walls were covered with metal lathe and covered with stucco at the same time (Neblett 1991:3). In 1948, a Hammond organ was installed (Woodlawn Baptist Church 1968).

In 1955, the auditorium was enlarged with an addition on its east side. Also built of stucco-covered concrete block, the addition caused the removal of the south end of the original east wall along with two original windows. A planned matching addition on the west side was never built. The original pews were also replaced at this time (Neblett 1991:3).

Finally, in 1962, the church decided to build an entirely new facility to serve its congregation of 600 members. This involved a land transfer from Fort Belvoir as the new and larger facility would expand southward beyond the existing property line. After the U.S. Congress enacted Private Law 88-292 (H.R. 11064, *An act to provide for the conveyance of certain real property of the United States situated in the State of Virginia*), on August 14, 1964, the General Services Administration, with a quitclaim, transferred just under three acres to Woodlawn Baptist Church on March 3, 1965 for a cost of $11,916 (Fairfax County n.d. Deed Book 2581:364). The congressional act indicated that the church was leasing the property at the time of the transfer. As part of the agreement, the government retained the rights to operate and maintain existing utilities on the premises unless the church relocated them.

In May 1969, with a deed of dedication, the church trustees committed to public use for street purposes a 10-foot wide parcel along the south boundary of U.S. Route 1, which comprised the northerly boundary of the property of Woodlawn Baptist Church (Fairfax County n.d. Deed Book 4157:174). Later that year, heirs of Otis and Sallie Mason began appearing to quit and/or sell their claims to the property. In an affidavit dated October 17, Emily Pollard of Orange County, North Carolina, declared herself the unmarried daughter of Emily Mason Pollard and Dr. Edward B. Pollard. Her mother was the only surviving child of Otis T. and Sallie Mason. Her two brothers were Otis Mason Pollard and Edward Bagby Pollard, II. Otis died unmarried while Edward, also deceased, married Dorothy and they produced a son Edward Bagby Pollard, III, whose whereabouts was not made clear in the document. Emily further declared herself the sole surviving heir of her grandparents, who had conveyed the land the church occupied (Fairfax County n.d. Deed Book 5728:1445). A subsequent document, also dated October 17, 1969, recorded that Emily L. Pollard sold her interest in the property to the Trustees for Woodlawn Baptist Church for $10 and other good and valuable consideration (Fairfax County n.d. Deed Book 5728:1446).

Soon afterward, on May 6, 1970, Mrs. Dorothy MacIntosh Yeakel and her husband George Yeakel, came forward with a quitclaim from Bucks County, Pennsylvania, which she submitted to the trustees for $10. According to the transaction, Mrs. MacIntosh was married in 1926 to Edward Bagby Pollard, II and divorced in Lancaster, Pennsylvania in 1937. She then married George Yeakel. Further, her son Edward Bagby Pollard, III, an heir to Otis and Sarah Mason, was alive and a resident of in Butner, North Carolina (Fairfax County n.d. Deed Book 5728:1448).

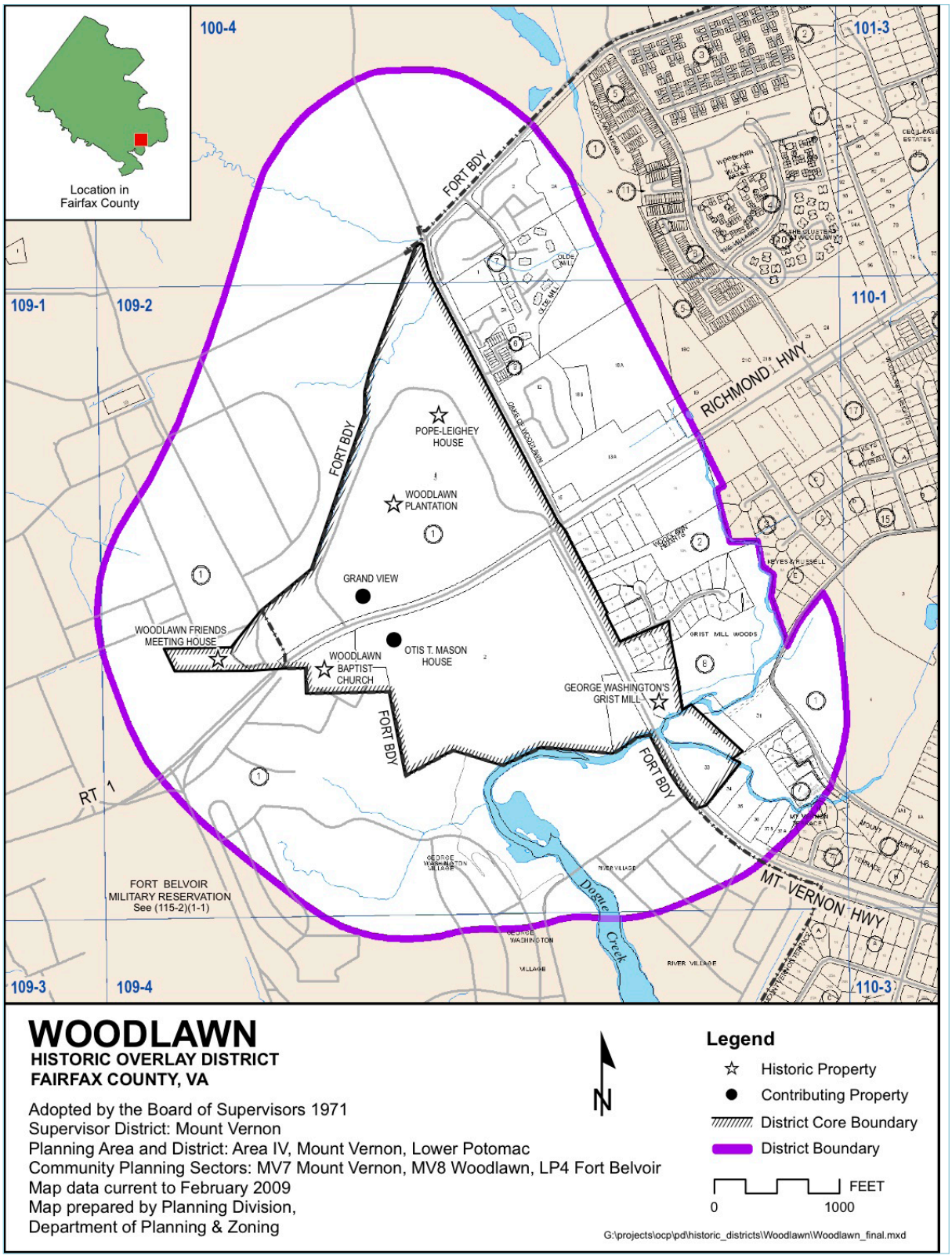
The news that Edward Bagby Pollard, III was still alive led the church trustees to file a lawsuit to clear the title to the land. The deed that recorded the outcome of a 1984 Fairfax County Circuit Court decision (Chancery No. 79953; Woodlawn Baptist Church et al. v. Edward Bagby Pollard, III, et al.) indicated that the church had gone to court against Edward Pollard, III and persons unknown who might be living heirs of Otis T. and Sallie Mason and who had not conveyed their interest in the subject property. The court appointed a special commissioner, Timothy J. Callahan, to prepare, execute, and deliver a deed conveying the property to the church. The transaction, for the sum of $450.00 paid to the commissioner, gave the church, forever, with special warranty, all the inchoate reversionary interest in the parcel originally conveyed by the Masons (Fairfax County n.d.: Deed Book 6288:329).

Plans for expansion moved forward with the acquisition of the new parcel from the U.S. Government. The two-story red brick education building was completed in 1970 as the first phase of the new facility. The improvements stopped at this point, leading to about 20 years of stability.

In the late 1960s and early 1970s, plans emerged to incorporate Woodlawn Plantation and surrounding buildings and grounds into a historic district. A citizens group, the Woodlawn Public Foundation, ultimately obtained the remaining portions of the estate and, in the interest of preservation, turned it over to the National Trust in the 1950s (Frisbee 1969:6). In recognition that increasing development was filling in open space and encroaching on the several historic properties in the Woodlawn vicinity, the Fairfax County Division of Planning developed a proposal for the Woodlawn Historic District, which would focus on the mansion and Washington's gristmill. Although these two buildings were already protected, the historic districting was deemed necessary to preserve and enhance the visual and aesthetic environment associated with them. Ultimately, six structures on the Fairfax County Historic Commission's Master Inventory were included: along with Woodlawn and the gristmill, these included Grand View, an 1858 residence located south of the mansion, Woodlawn Friends Meeting House, Woodlawn Baptist Church, and the Pope-Leighey House, a twentieth-century residence designed by Frank Lloyd Wright and moved to the mansion grounds in the 1960s. These landmarks were judged to relate to one another visually and historically and permitted the creation of an identifiable and cohesive area (Frisbee 1969; Fairfax County Division of Planning 1971; Neblett 1991). These properties now comprise the Woodlawn National Register Eligible District (VDHR #029-5181) (Figure 11).

Even as these developments took place, the original Woodlawn Church building was on track to be demolished. The congregation had expected this to happen since at least the early 1960s, and the proposal for including it in the historic district acknowledged as much, indicating

Figure 11.
Woodlawn Historic District



Source: Fairfax County Department of Planning 2012

its importance lay in its historical rather than architectural qualities. The property's historical significance derived from its relationship to Woodlawn plantation, but the building did not relate to the mansion visually, architecturally, or spatially (Neblett 1991:1). Ultimately, the church property was recorded as a historic structure (VDHR# 029-0070) in 1969 and archaeological site (44FX1212) in 1987.

During the period between about 1970 and the early 1990s, the church site remained relatively stable. The congregation met in the original church building through 1988, when it went out of service and was used mainly for storage (Neblett 1991:6), and services were switched to the 1940s education building. In 1989, plans moved forward to replace the original building and fundraising began (Woodlawn Baptist Church 2012). The process of raising money also included establishing a trust for $300,000 in 1994 to finance the new sanctuary building and associated project costs (Fairfax County n.d. Deed Book 9248:1634). A second deed of trust for a $60,000 credit line was established in 1997 to complete the project (Fairfax County n.d. Deed Book 9918:193). Construction began in 1996 and was completed the next year. The original structure and 1940s educational wing were demolished in 1998 (Woodlawn Baptist Church 2012).

The cemetery associated with Woodlawn Baptist church has been in place almost as long as the church building. The oldest marked graves date to the late 1870s, just a few years after the church obtained the property. Historic reports describing the church generally do not provide any information regarding the cemetery, suggesting it did not have any significance to people interested in recording the church's history or landscape. In conducting a Phase I cultural resources survey of U.S. Route 1 improvements, Cooke et al. (2001:44) characterized the site as not eligible for the National Register of Historic Places under Criterion C. The other NR criteria were not discussed.

Among the burials at Woodlawn Church Cemetery are several members of the Mason family, including church founders John and Rachel Mason, who died about eight months apart in September 1888 and April 1889, respectively. Their gravesite is marked by an obelisk. Several of their children, their spouses, and grandchildren are also interred there, symbolizing the link between the cemetery and its historical roots. Described by Hatch as a "zealous reformer of public morals and religion," John Mason helped establish a church for his community to worship in, and when he died, "his neighbors put an anchor of roses on his breast, emblem of his early life; a sheaf of wheat upon his folded hands, token of a ripened career. On his feet were palm branches, suggestive of immortal rest. Then they laid him in the little cemetery under the very oak tree he had selected to shade his grave" (Hatch 1893:234).

IV. METHODS

ARCHIVAL RESEARCH

Historical and background research was conducted at various locations in Fairfax County. Primary records on the land history of the Woodlawn Baptist Church were examined at the Fairfax County Circuit Court in Fairfax. Primary and secondary sources, as well as historic maps, were reviewed at the Virginia Room of the City of Fairfax Regional Library. The Fairfax County Department of Cultural Resources Management provided archaeological and historic structures information about Woodlawn Baptist Church as well as information on prior cultural resources studies in the project vicinity. Ancestry.com was reviewed for United States census data pertinent to the project.

CEMETERY MAPPING

Field mapping was conducted with a Nikon DTM-32 total station and TDS Recon data collector (Figure 12). A primary map station was established near the parking lot on the southern border of cemetery. Coordinates (UTM Zone 18, NAD83) for this point were then collected with a Trimble GeoXT global positioning system (GPS). These coordinates were entered into the data collector so the total station data could be incorporated into the GIS. Additional map stations were established as necessary in other parts of the cemetery.

All grave markers and other cemetery features such as plots, roads, trees, and fences were recorded. Grave markers were identified with four points, one on each corner, to provide the maximum degree of accuracy and each was assigned a unique number in the field. The associated number for each grave feature was then displayed on subsequent maps prepared for the inventory phase.

All total station data were imported in ArcGIS for map production. Individual shapefiles were then created for each feature class (e.g., grave marker, tree, fence). These data were used in the production of a detailed map that was overlaid with other spatial data (e.g., aerial imagery, topography).

Figure 12.
Total Station Data Collection

GRAVE MARKER INVENTORY

Each marker within the project area was inventoried and examined. A Microsoft *Access* database was used to document multiple attributes of each marker. Characteristics including construction material, monument shape, inscriptions and epitaphs, military service, grave landscaping, and adornment types were recorded.

Each marker was given a unique inventory number that designated the number of monuments and number of individuals. In cases where multiple individuals were memorialized by a single marker, a decimal place designator was used to document the number of individuals present. A marker inventory number was first assigned to each monument and a decimal point was used to denote each individual associated with it. The first recorded individual was identified as ".1" and continued until each individual celebrated by the marker was recorded. If, for example, three individuals were listed on a single marker (such as Feature 3), they would be identified by 3.1, 3.2, and 3.3. Individual footstones were recorded with the individual and did not receive a distinct number. The number of monuments associated with a particular group of individuals were counted and recorded under the main monument information. This system allowed the field team to accurately record the number of monuments as well as the number of individuals memorialized by these stones.

Once each marker was recorded, it was then photographed. At least one photograph was taken of the front of the marker. Supplementary photographs were taken to document additional inscriptions and decorations on other surfaces. Photographs were also taken to record the size, shape, or condition of the marker. When applicable, images of a grave's landscape and accouterments were made. An inventory of each photograph was made in order to link it with the marker inventory database. The end product created a complete visual and written record of each marker (Appendix A).

GRAVE MARKERS

Variation in grave markers has been a fertile research topic among anthropologists and genealogists because of the wealth of demographic information they contain. Marker style, material, and epitaphs are only a few examples of specific attributes that can be recorded. Because birth and death dates are often provided, it is possible to obtain information regarding overall population health and life expectancy that is otherwise unavailable. Field recording of grave markers required classification according to the types listed below.

Displaced Marker

The designation “displaced” indicates a marker that has been broken, scattered, or otherwise moved from its original location. Often, these displaced items have no identifiable marker type.

Family Monument

Family monuments are typically upright markers that identify the family's primary surname. These markers do not mark individual graves but a group of graves with their own individual markers. Often die-and-base markers, they can also come in the form of a bench or other sculpture or monument form.

Footstone

A footstone is a marker at the foot of the burial. Typically, a footstone is associated with a headstone or tombstone and is a smaller version of the associated marker. A footstone can be in the style of a headstone (standing vertically on the ground surface) or in the style of a tombstone (resting horizontal to the ground surface). Materials usually match those of the associated headstone.

Headstone

Headstones are markers that stand vertically, marking the head of the deceased. Typical headstones come in a variety of shapes and sizes but are less than three feet tall. The front of headstones can be beveled or angled. At Woodlawn cemetery, headstones were typically manufactured from a variety of materials such as granite and marble.

Monument

Monuments are typically greater than four feet in height, although some shorter variations are possible. These markers can mark a single individual or a group of surrounding graves. The name(s) of the decedent(s) and other pertinent information is usually included. Monuments are often constructed out of granite or marble, though concrete forms are not uncommon.

Tombstone

A tombstone is a marker that rests horizontally on the ground surface and is intended to mark the head of the deceased. Tombstones will be less than three feet long.

Unknown Headstone/Footstone

An unknown headstone/footstone is a marker that remains at its original location but is impossible to identify as either a headstone or footstone. Often with historic markers, it is difficult to determine if the marker was intended to mark the head or the foot of the burial. This is particularly true in poorly maintained cemeteries where an original marker may have been displaced or with unfinished markers such as fieldstones.

GROUND PENETRATING RADAR (GPR)

GPR is a remote sensing technique frequently used by archaeologists to investigate a wide range of research questions. In archaeological applications, GPR is used to prospect for potential subsurface features. Because GPR is a remote sensing technique, it is non-invasive, non-destructive, relatively quick and efficient, and highly accurate when used in appropriate situations. In cemeteries, GPR is commonly used to identify anomalies consistent with the expectations for human graves, without ground disturbance (Jones 2008; King et al. 1993).

The use of GPR for identifying potential historic graves is based on the concept of contrast, which may include differences in physical, electrical, or chemical properties between an object or feature and its surrounding matrix (Conyers 2004a). For graves, the body itself is generally not detected; it is typically the coffin or casket, burial shaft, or bottom of the grave that causes the reflection (Jones 2008; King et al. 1993). Not surprisingly, greater contrast generally equates to better detection and resolution. For example, a metal casket in a concrete vault is much easier to see with GPR than a body buried in a wooden coffin only. In certain cases, it is also possible to detect buried markers or other associated grave features that were once present on the surface (Patch 2007).

GPR data are acquired by transmitting pulses of radar energy into the ground from a surface antenna, reflecting the energy off buried objects, features, or bedding contacts, and then detecting the reflected waves back at the ground surface with a receiving antenna (Conyers 2004a). When collecting radar reflection data, surface radar antennas are moved along the ground in transects, typically within a surveyed grid, and a large number of subsurface reflections are collected along each line. As radar energy moves through various materials, the velocity of the waves will change depending on the physical and chemical properties of the material through which they are traveling (Conyers and Lucius 1996). The greater the contrast in electrical and magnetic properties between two materials at an interface, the stronger the reflected signal, and, therefore, the greater the amplitude of reflected waves (Conyers 2004a). When travel times of energy pulses are measured, and their velocity through the ground is known, distance (or depth in the ground) can be accurately measured (Conyers and Lucius 1996). Each time a radar pulse traverses a material with a different composition or water saturation, the

velocity will change and a portion of the radar energy will reflect back to the surface and be recorded. The remaining energy will continue to pass into the ground to be further reflected, until it finally dissipates with depth.

The depths to which radar energy can penetrate, and the amount of resolution that can be expected in the subsurface, are partially controlled by the frequency (and therefore the wavelength) of the radar energy transmitted (Conyers 2004a). Standard GPR antennas propagate radar energy that varies in frequency from about 10 megahertz (MHz) to 1000 MHz. Low frequency antennas (10-120 MHz) generate long wavelength radar energy that can penetrate up to 50 meters in certain conditions but are capable of resolving only very large buried features. In contrast, the maximum depth of penetration of a 900 MHz antenna is about one meter or less in typical materials, but its generated reflections can resolve features with a maximum dimension of a few centimeters. A trade-off therefore exists between depth of penetration and subsurface resolution. In this survey, a 400 MHz antenna was used, which generally produced data of good resolution at depths up to just under two meters (about five ft.).

The success of GPR surveys in archaeology is largely dependent on soil and sediment mineralogy, clay content, ground moisture, depth of buried features, and surface topography and vegetation. Electrically conductive or highly magnetic materials will quickly attenuate radar energy and prevent its transmission to depth. Under ideal conditions, a 400 MHz antenna generally provides radar penetration to between two and four meters. However, the exact depth varies considerably depending on local conditions. Clay can be challenging for GPR because it has a low relative dielectric permittivity (RDP). In practical applications, this generally results in shallower than normal depth penetration because the radar signal is absorbed (attenuated) by the clay regardless of antenna frequency (Conyers 2004a).

The basic configuration for a GPR survey consists of an antenna (with both a transmitter and receiver), a harness or cart, and a wheel for calibrating distance. The operator then pulls or pushes the antenna across the ground surface systematically (a grid) collecting data along a transect. These data are then stored by the receiver and available for later processing.

The “time window” within which data were gathered was 35 nanoseconds (ns). This is the time during which the system is “listening” for returning reflections from within the ground. The greater the time window, the deeper the system can potentially record reflections. To convert time in nanoseconds to depth, it is necessary to determine the elapsed time it takes the radar energy to be transmitted, reflected, and recorded back at the surface by doing a velocity test. Hyperbolas were found on reflection profiles and measured to yield a relative dielectric permittivity (RDP), which is a way to calculate velocity. The shape of hyperbolas generated in programs is a function of the speed at which energy moves in the ground, and can therefore be used to calculate velocity (Conyers and Lucius 1996). The RDP for soils in the survey area was

approximately 8, which, when converted to one-way travel time, (the time it takes the energy to reach a reflection source), is approximately 10 centimeters/nanosecond. All profiles and processed maps were converted from time in nanoseconds (ns) to depth in centimeters using this average velocity.

FIELD METHODS

The survey was conducted with a Geophysical Survey Systems, Inc. (GSSI) SIR 3000 control unit with an attached 400MHz antenna (Figure 13). The first step was to calibrate the antenna to local conditions by walking the survey area and adjusting the instrument's gain settings. This method allows the user to get an average set of readings based on subtle changes in the RDP (Conyers 2004a). Field calibration was repeated as necessary to account for changes in soil and/or moisture conditions (Conyers 2004b). Effective depth penetration was approximately 1.75 meters. Slight signal attenuation (degradation) was noted in the field, which was due to the presence of clay soils. However, signal attenuation was not severe enough to limit detection of graves.

In order to effectively collect and process GPR data, it is necessary to establish a formal grid. For this project, grid layout was accomplished with metric tapes and surveyor's chaining pins. The actual size, orientation, and layout of the grid was determined by surface features and presumed orientation of the targets. Grid orientation was adjusted between the western and eastern sections to maintain consistency with predominant grave orientation in each section.

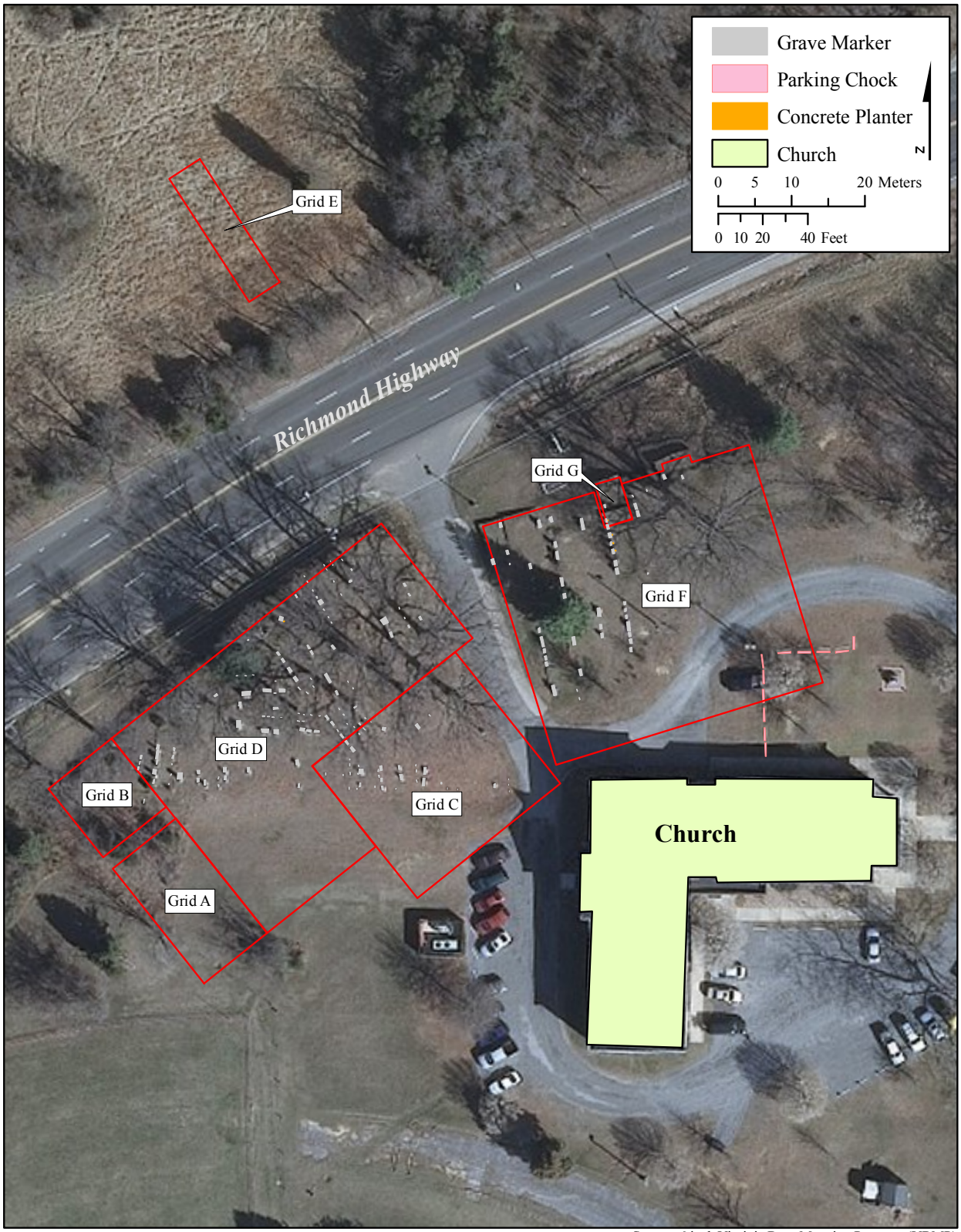
Table 1 lists summary information for each of the survey grids. Survey grid locations are shown in Figure 14. Total coverage was approximately one acre of land. All grid corners were mapped in each of the survey grids using a Nikon DTM-32 total station and TDS Recon data collector. There was significant variation in grave orientation between different sections.

Table 1. GPR Survey Grids

Survey Area	Origin Point	Spacing (m)	Collection Method	Orientation	Dimensions (m)	Acres
GPR A	Southwest	0.5	Parallel	X direction	10.5x15	0.04
GPR B	Northwest	0.5	Parallel	X direction	10.5x10	0.03
GPR C	Northwest	0.5	Zig-Zag	X direction	23x25	0.14
GPR D	Northeast	0.5	Zig-Zag	X direction	47x34	0.4
GPR E	Southwest	0.5	Zig-Zag	Y direction	5x20	0.02
GPR F	Southwest	0.5	Zig-Zag	Y direction	38x34	0.32
GPR G	Northwest	0.5	Parallel	X direction	4x3.5	0.003
Total						0.953

Figure 13.
GPR Survey in Progress

Figure 14.
Map Showing Location of GPR Survey Grids



Source: 6 inch Virginia Base Mapping Program (VBMP)

It is generally standard practice to orient transects perpendicular to the long axis of suspected features. For this reason, data collection orientation was changed as conditions warranted in different sections of the cemetery. Transect spacing was 50 centimeters, an interval that is well suited for identifying the subtle, moderate to large sized grave features (Pomfret 2006). Transects were collected in two ways depending on surface conditions. Alternating transects are faster because the antenna collects data in two directions, but it requires an even grid. Baseline transects require the antenna to be returned to the same starting position for each pass and data collection is slower. However, the advantage of this method is that it doesn't require a square grid, and it is particularly useful for surface obstacles.

DATA PROCESSING

All data were downloaded from the control unit to a laptop computer for post-processing. Radar returns are initially recorded by their strength and the elapsed time between their transmission and receipt by the antenna. Therefore, the first task in the data processing was to set "time zero", which tells the software where in the profile the true ground surface was. This is critical to getting accurate results when elapsed time is converted to target depth. A background filter was applied to the data, which removes the horizontal banding that can result from antenna energy "ringing" and outside frequencies such as cell phones and radio towers. Background noise can make it difficult to visually interpret reflections. The third and final step was to "migrate" the data, which eliminates the tails of the hyperbolic reflections and generates a more realistic view of the size, depth, and orientation of point targets. Hyperbolic reflections are generated from the way the radar energy reflects off point targets. In cemeteries, graves are often visible as hyperbolic reflections.

The next data processing step involved the generation of amplitude slice-maps (Conyers 2004a). Amplitude slice-maps are a three-dimensional tool for viewing differences in reflected amplitudes across a given surface at various depths (see Appendix B). Reflected radar amplitudes are of interest because they measure the degree of physical and chemical differences in the buried materials. Strong, or high amplitude reflections often indicate denser (or different) buried materials. Such reflections can be generated at pockets of air, such as within collapsed graves, or from slumping sediments. Amplitude slice-maps are generated through comparison of reflected amplitudes between the reflections recorded in vertical profiles. In this method, amplitude variations, recorded as digital values, are analyzed at each location in a grid of many profiles where there is a reflection recorded. The amplitudes of all reflection traces are compared to the amplitudes of all nearby traces along each profile. This database can then be "sliced" horizontally and displayed to show the variation in reflection amplitudes at a sequence of depths in the ground. The result is a map that shows amplitudes in plan view, but also with depth.

Slicing of the data was done using the mapping program *Surfer 8*. Slice maps are a series of x,y,z values, with x (east) and y (north) representing the horizontal location on the surface within each grid and z representing the amplitude of the reflected waves. All data were interpolated using the Inverse Distance Weighted method and then image maps were generated from the resulting files.

From the original .dzt files (raw reflection data), a series of image files was created for cross-referencing to the amplitude slice maps that were produced. Two-dimensional reflection profiles were also analyzed to determine the nature of the features identified on the amplitude slice maps (see Appendix C). The reflection profiles show the geometry of the reflections, which can lend insight into whether the radar energy is reflecting from a flat layer (seen as a distinct band on profile) or a single object (seen as a hyperbola in profile). Individual profile analysis was used in conjunction with amplitude slice maps to provide stronger interpretations about possible graves.

The final step in the data processing is to integrate the depth slices with other spatial data. This was done using ArcGIS 9.3, which can display and manipulate all forms of spatial data created for this project, including GPR results, GPS data, and base graphics such as aerial photography and topographic maps. The resulting anomalies were digitized as individual features and referenced to the UTM Zone 18, NAD83 coordinate system.

GPR data were analyzed in both plan and profile views. Amplitude slice maps were generated of all data at regular intervals (Appendix B). These were used to analyze overall patterns. Profile analysis involved review of individual transects (linescans) in 2D mode to identify individual reflections (both hyperbolas and surfaces). Profiles showing selected anomalies are included in Appendix C.

GPR IN CEMETERIES

Several factors influence the overall effectiveness of GPR for detecting human graves (Buck 2003; Conyers 2006; Jones 2008; King et al. 1993). Soil conditions are the most important, with clay being the most difficult to penetrate. Its high conductivity causes the radar signal to attenuate much quicker, which in turn limits its overall depth and strength.

Age of the graves is also critical, with older graves being more difficult to detect because they have had more time to decompose and are less likely to have intact coffins or caskets (if they were present to begin with).

Burial "container", what the physical remains may have been placed in, is also important, and includes simple linen or cloth shrouds, pine boxes or wooden coffins, lead or other metal caskets, and burial vaults (Trinkley and Hacker 2009). In certain cases, hardware such as nails, hinges, and handles may be present, but not necessarily all the time. Although there is a high degree of variation in specific types among different geographical regions, each of these tends to have been used at certain times throughout history and correlates with the presumed age of the grave. For example, burial shrouds were common throughout the seventeenth and early eighteenth centuries before being replaced by wooden coffins. It must also be noted that cultural trends and patterns tended to persist longer in rural and/or economically depressed areas much longer than urban centers. Socio-economic status of particular individuals and groups also affected burial practices.

V. RESULTS AND RECOMMENDATIONS

MARKER INVENTORY RESULTS

The current study documented 133 unique grave markers representing 179 individuals. In addition, three non-mortuary features were recorded (possible fieldstone markers), as well as three graves with floral offerings and no formal markers.

Using data from the current survey, several attributes are discussed below. These examples are not exhaustive but are meant to address broad research questions and provide insight into social and cultural attitudes at particular points in time. These data were compiled from the *Access* database. It is important to note that the counts used for individual attributes vary because certain markers may have lacked that information. It is also important to note that the numeric values provided in each attribute are not necessarily equal. Demographic information on particular markers was highly variable and in several cases, incomplete (e.g., initials only, no specific gender). The number of markers further complicates these data. For example, footstones were recorded as separate features but if associated with a headstone were given the same provenience number. Therefore, a single grave might have two or more markers.

A second issue was the presence of a relatively high frequency of markers that commemorated more than one individual. In certain cases, the death decades were separated by as much as 40 years. In these cases, it was impossible to determine with complete certainty when the marker was actually erected. However, based on previous research and local context, it was unlikely that temporary markers were used. For analytical purposes, the earliest death date recorded on the monument was assumed to reflect the date of marker installation.

MARKER TYPE

Grave markers included several different types manufactured from a variety of raw materials (Tables 2-3). Headstones (n=102) are the most common with approximately 77 percent of the total, followed by tombstones (n=22) at 17 percent, monuments (n=6) at 5 percent, and single examples each of displaced marker, family monument, and unknown headstone or footstone. There is less diversity in marker type than expected based on previous studies (Richey et al. 2007a; Richey et al. 2007b). In addition, three graves were identified that did not have stone markers and three other non-mortuary rocks were recorded.

Table 2. Count of Marker Type by Raw Material

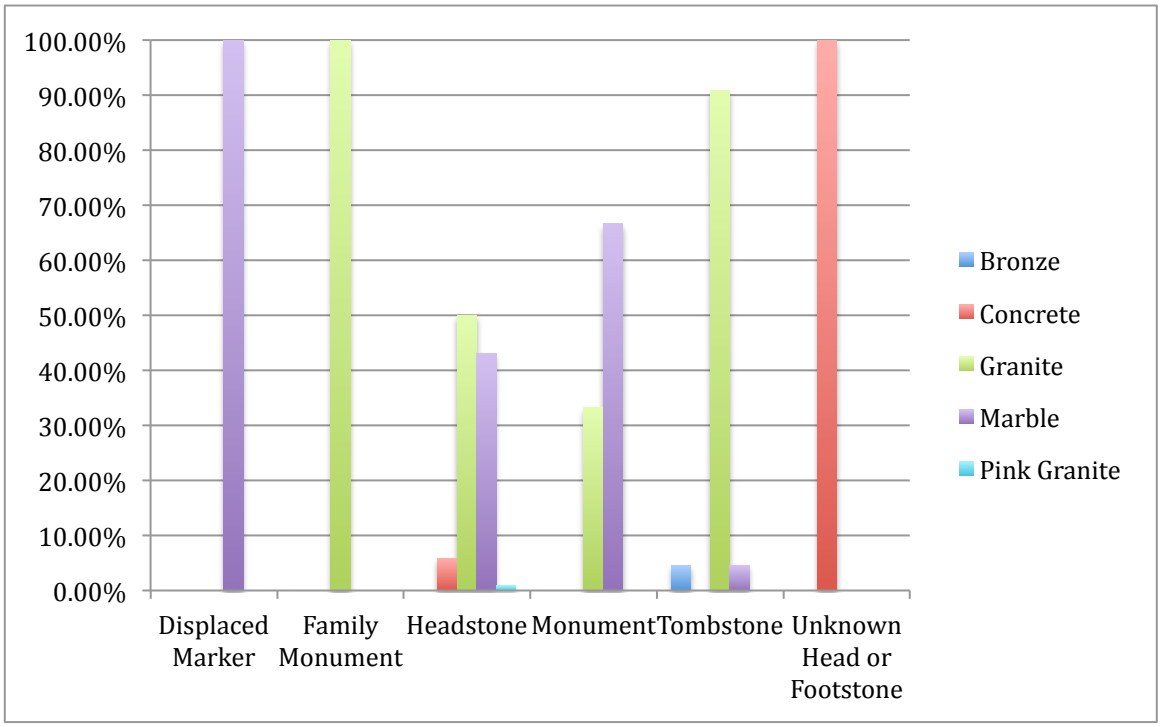
Marker Type	Bronze	Concrete	Granite	Marble	Pink Granite	Total Count	Total Percent
Displaced Marker				1		1	0.75
Family Monument			1			1	0.75
Headstone		6	51	44	1	102	76.69
Monument			2	4		6	4.51
Tombstone	1		20	1		22	16.54
Unknown Head or Footstone		1				1	0.75
Total Count	1	7	74	50	1	133	100.00

Table 3. Relative Frequencies of Marker Type by Raw Material

Marker Type (%)	Bronze	Concrete	Granite	Marble	Pink Granite	Grand Total
Displaced Marker	0.00	0.00	0.00	100.00	0.00	100.00
Family Monument	0.00	0.00	100.00	0.00	0.00	100.00
Headstone	0.00	5.88	50.00	43.14	0.98	100.00
Monument	0.00	0.00	33.33	66.67	0.00	100.00
Tombstone	4.55	0.00	90.91	4.55	0.00	100.00
Unknown Head or Footstone	0.00	100.00	0.00	0.00	0.00	100.00
Grand Total	0.75	5.26	55.64	37.59	0.75	100.00

Marker types considerable variation with respect to different raw materials (Table 3, Figure 15). Granite (n=74) is the most common material for the entire cemetery with approximately 56 percent of the total, followed by marble (n=50) at approximately 38 percent, concrete (n=7) with approximately 5 percent, and pink granite (n=1) and bronze (n=1) with approximately 1 percent each. Frequencies of these materials are consistent with patterns documented at other cemeteries. Variation within each category shows different trends. All family monuments were manufactured from granite. Headstones show the greatest variation, including granite (50%), marble (43%), concrete (6%), and pink granite (1%). Tombstones are dominated by granite (91%), with lower frequencies of marble (4.5%) and bronze (4.5%). Monuments are represented by marble (67%) and granite (33%).

Figure 15. Bar Chart Showing Relative Frequencies of Marker Type and Raw Material



Frequencies of marker type by decade are listed in Tables 4-5 and shown in Figure 16. Headstones were used in every decade from the 1870s through the 1990, with peak years from 1910 to 1949, after which time they began to wane slightly. Monuments were erected only between 1880 and 1909 representing a brief period of popularity. Tombstones appeared in 1910 and were used in all subsequent decades with consistent frequencies. However, as a percentage of all graves markers they were relatively more common than headstones from the 1940s to present.

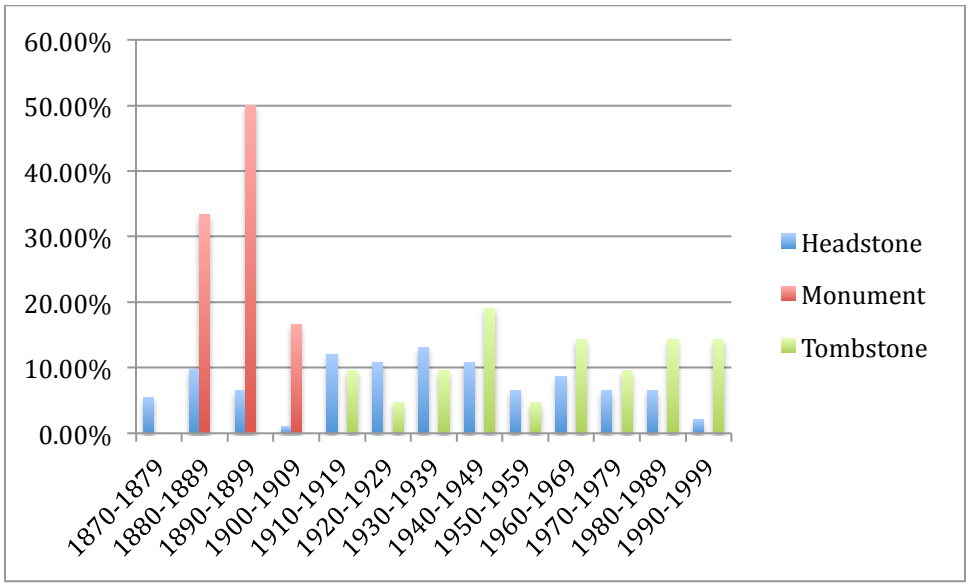
Table 4. Counts of Marker Type by Decade

Marker Type	1870-1879	1880-1889	1890-1899	1900-1909	1910-1919	1920-1929	1930-1939	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	Grand Total
Headstone	5	9	6	1	11	10	12	10	6	8	6	6	2	92
Monument		2	3	1										6
Tombstone					2	1	2	4	1	3	2	3	3	21
Grand Total	5	11	9	2	13	11	14	14	7	11	8	9	5	119

Table 5. Relative Frequencies of Marker Type by Decade

Marker Type (%)	1870-1879	1880-1889	1890-1899	1900-1909	1910-1919	1920-1929	1930-1939	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	Grand Total
Headstone	5.49	8.79	6.59	1.10	12.09	10.99	13.19	10.99	6.59	8.79	6.59	6.59	2.20	100.00
Monument	0.00	33.33	50.00	16.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Tombstone	0.00	0.00	0.00	0.00	9.52	4.76	9.52	19.05	4.76	14.29	9.52	14.29	14.29	100.00
Grand Total	4.20	9.24	7.56	1.68	10.92	9.24	11.76	11.76	5.88	9.24	6.72	7.56	4.20	100.00

Figure 16. Bar Chart Showing Relative Frequencies of Marker Type by Decade



MARKER MATERIAL

Marker material is an attribute that is particularly sensitive to chronological changes (Tables 6-7, Figure 17). Granite (n=73) and marble (n=41) together comprise an overwhelming percentage of the total, with low frequencies of concrete (n=3) and bronze (n=1). Not surprisingly, granite and marble also show the greatest variation through time with a few observations worth noting. First, marble was used in relatively consistent frequencies beginning in the 1870s before gradually declining at the end of the 1940s. Second, granite, although also used as early as the 1870s, did not gain in popularity until approximately 1910 when it increased in a consistent fashion and continued in use to the present. These two materials were used in

approximately equal frequencies in the 1930s, which represents a period of overlap as granite increased and marble decreased in popularity. Concrete saw its highest period of use in the 1940s and may reflect economic hardships during that decade. Overall, these trends fit well with data from comparable data from other cemeteries (Richey et al. 2007a).

Table 6. Counts of Marker Material Type by Decade

Row Labels	1870-1879	1880-1889	1890-1899	1900-1909	1910-1919	1920-1929	1930-1939	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	Grand Total
Bronze											1			1
Concrete								2				1		3
Granite	1	4	3		7	5	10	9	7	8	6	8	5	73
Marble	4	7	6	2	6	6	4	3		3				41
Pink Granite											1			1
Grand Total	5	11	9	2	13	11	14	14	7	11	8	9	5	119

Table 7. Relative Frequencies of Marker Material Type by Decade

Marker Type (%)	1870-1879	1880-1889	1890-1899	1900-1909	1910-1919	1920-1929	1930-1939	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	Grand Total
Bronze	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00
Concrete	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.67	0.00	0.00	0.00	33.33	0.00	100.00
Granite	1.37	5.48	4.11	0.00	9.59	6.85	13.70	12.33	9.59	10.96	8.22	10.96	6.85	100.00
Marble	9.76	17.07	14.63	4.88	14.63	14.63	9.76	7.32	0.00	7.32	0.00	0.00	0.00	100.00
Pink Granite	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00
Grand Total	4.20	9.24	7.56	1.68	10.92	9.24	11.76	11.76	5.88	9.24	6.72	7.56	4.20	100.00

Figure 17. Bar Chart Showing Relative Frequencies of Marker Raw Material by Decade

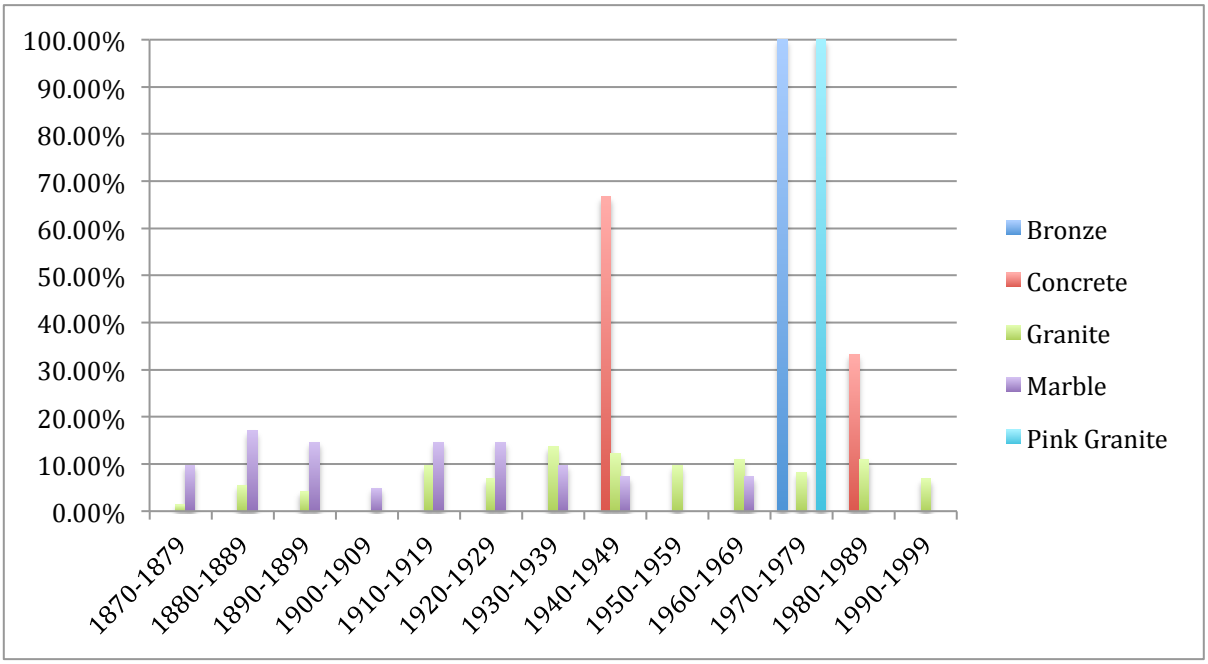
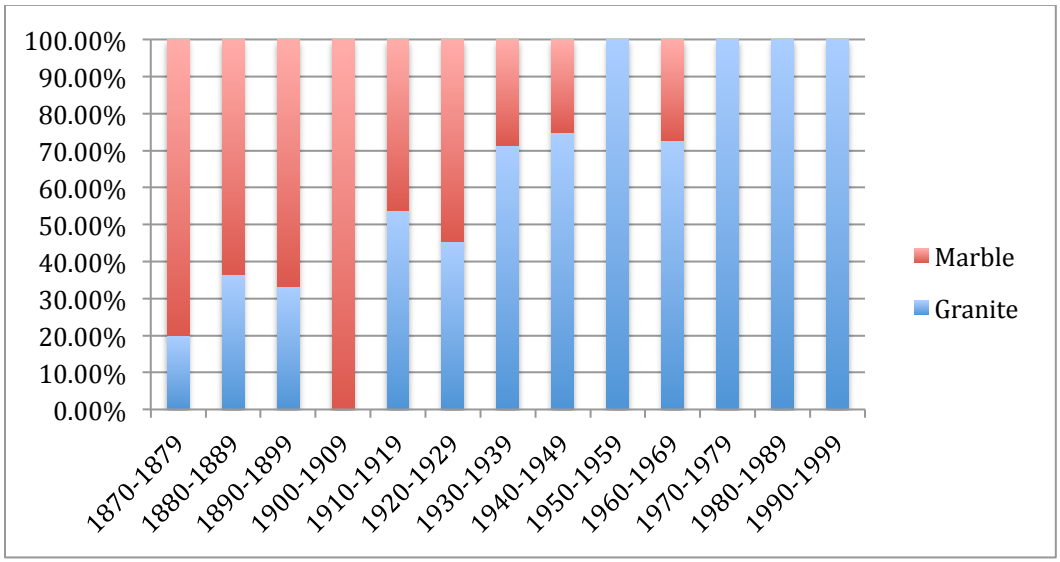


Figure 18 is a bar chart that shows the relative frequencies of only marble and granite to each other through time. Marble was much more common during the early decades and gradually declined. At the same time, granite increased substantially until being used almost exclusively from the 1970s onward. This pattern has been well documented at other cemeteries (Deetz and Dethlefsen 1965, 1978; Richey et al. 2007).

Figure 18. Bar Chart Showing Relative Frequencies of Raw Material Through Time



MARKER PRODUCTION

Of the 133 identified markers, 127 were formally produced and only six were vernacular (Tables 8-9). This fits well with the overall context of a well-maintained church cemetery where high frequencies of vernacular or informal frequencies are not expected. Two of the vernacular markers were made from concrete and erected in the 1940s and a third was of marble erected in the 1920s. Concrete, in particular, indicates an improvised strategy for grave markers and may reflect material shortages or economic hardships associated with the World War II years, while the vernacular marble marker form the 1920s may reflect economic hardships associated with the Great Depression. The overwhelming use of professional markers reflects a community that conformed to existing rules in a formal cemetery. It also indicates access to commercial marker sources.

Table 8. Marker Frequencies by Production Method

Production Method	Count	Percent
Professional	127	95.49
Vernacular	6	4.51
Grand Total	133	100.00

Table 9. Counts of Marker Production Method and Raw Material by Decade

Production Method	Material	1870-1879	1880-1889	1890-1899	1900-1909	1910-1919	1920-1929	1930-1939	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	Grand Total
Professional		5	11	9	2	13	10	14	12	7	11	8	9	5	116
	Bronze											1			1
	Concrete												1		1
	Granite	1	4	3		7	5	10	9	7	8	6	8	5	73
	Marble	4	7	6	2	6	5	4	3		3				40
	Pink Granite											1			1
Vernacular							1		2						3
	Concrete								2						2
	Marble						1								1
Grand Total		5	11	9	2	13	11	14	14	7	11	8	9	5	119

MARKER SHAPE

The Woodlawn cemetery dataset reflects a wide range of marker shapes and forms (Tables 10-11, Figure 19). Identified forms include columns (n=5), die-on-base (n=42), gothic tablet (n=1), obelisk (n=1), pillar (n=1), podium (n=1), rectangular block (n=3), rectangular slab (n=1), rectangular tablet (n=9), round top tablet (n=23), serpentine top tablet (n=2), shouldered tablet (n=1), slant front block (n=5), and slant top block (n=23). With the exceptions of die-on-base, round top tablet, and slant top block, most of these forms occur in relatively low frequencies.

Table 10. Counts of Marker Shape by Decade

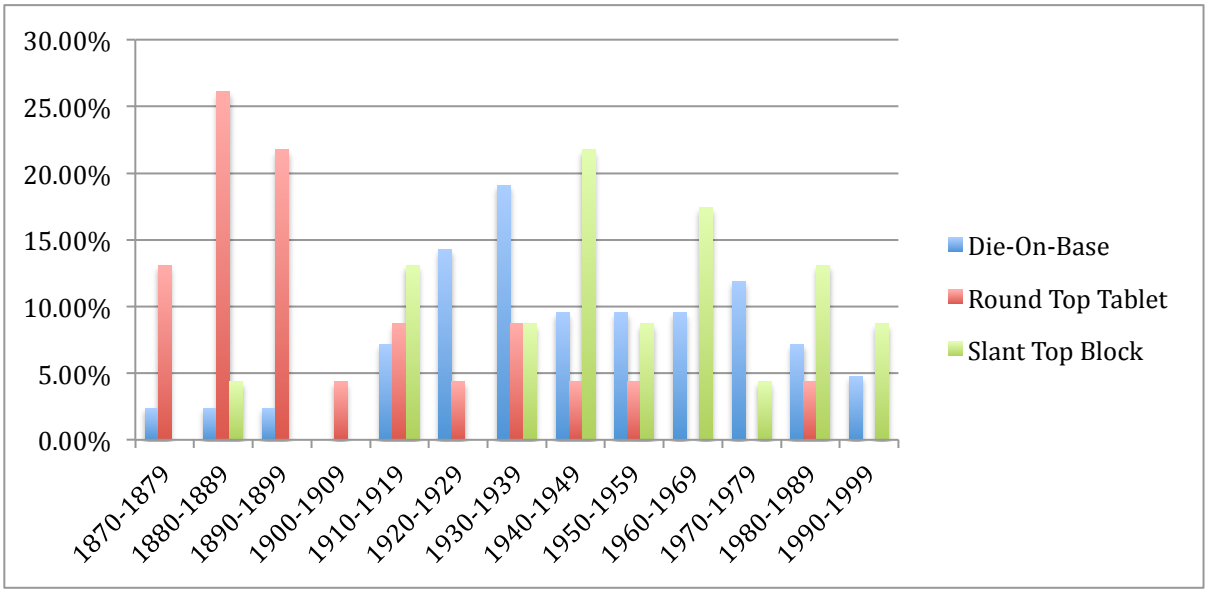
Marker Shape	1870-1879	1880-1889	1890-1899	1900-1909	1910-1919	1920-1929	1930-1939	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	Grand Total
Column	1	2	1	1										5
Die-On-Base	1	1	1		3	6	8	4	4	4	5	3	2	42
Gothic Tablet					1									1
Obelisk			1											1
Pillar		1												1
Podium						1								1
Rectangular Block						1		1					1	3
Rectangular Slab											1			1
Rectangular Tablet					2	2	1			3		1		9
Round Top Tablet	3	6	5	1	2	1	2	1	1			1		23
Serpentine Top Tablet							1				1			2
Shouldered Tablet								1						1
Slant Front Block					2			2				1		5
Slant Top Block		1			3		2	5	2	4	1	3	2	23
Grand Total	5	11	8	2	13	11	14	14	7	11	8	9	5	118

Table 11. Relative Frequencies of Marker Shape by Decade

Marker Shape (%)	1870-1879	1880-1889	1890-1899	1900-1909	1910-1919	1920-1929	1930-1939	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	Grand Total
Column	20.00	40.00	20.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Die-On-Base	2.38	2.38	2.38	0.00	7.14	14.29	19.05	9.52	9.52	9.52	11.90	7.14	4.76	100.00
Gothic Tablet	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Obelisk	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Pillar	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Podium	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Rectangular Block	0.00	0.00	0.00	0.00	0.00	33.33	0.00	33.33	0.00	0.00	0.00	0.00	33.33	100.00
Rectangular Slab	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00
Rectangular Tablet	0.00	0.00	0.00	0.00	22.22	22.22	11.11	0.00	0.00	33.33	0.00	11.11	0.00	100.00
Roundtop Tablet	13.04	26.09	21.74	4.35	8.70	4.35	8.70	4.35	4.35	0.00	0.00	4.35	0.00	100.00
Serpentine Top Tablet	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	50.00	0.00	0.00	100.00
Shouldered Tablet	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100	0.00	0.00	0.00	0.00	0.00	100.00
Slant Front Block	0.00	0.00	0.00	0.00	40.00	0.00	0.00	40.00	0.00	0.00	0.00	20.00	0.00	100.00
Slant Top Block	0.00	4.35	0.00	0.00	13.04	0.00	8.70	21.74	8.70	17.39	4.35	13.04	8.70	100.00
Grand Total	4.20	9.24	7.56	1.68	10.92	9.24	11.76	11.76	5.88	9.24	6.72	7.56	4.20	100.00

Figure 19 is a bar chart showing the relative frequencies of the three most common marker forms: die-on-base, round top tablet, and slant top block. Although all three were used from the 1870s onward, there is a significant degree of variation in their patterning by decade. For example, round top tablets were most common prior to 1900 (more than 60) before falling off considerably. Die-on-base forms were in use from the 1870s but did not increase in popularity until 1910. At that time, its popularity rose consistently each decade until reaching a peak in the 1930s. From that point on it remained relatively constant until falling after the 1970s in a steady decline. Slant top blocks show the greatest chronological fluctuations. Although they were used in 1880s, it was in very low numbers and it was not until 1910 that they gained in popularity. Between 1910 and the present, the frequencies of this form rose and fell in alternating decades before showing a relatively consistent decline in the 1980s. This form peaked in the 1940s.

Figure 19. Bar Chart Showing Relative Frequencies of Selected Marker Forms by Decade



MARKER MEASUREMENTS

Measurements were recorded for each marker, including width, depth, and height to the nearest tenth of a foot (Table 12). Mean values and volume in cubic feet were then calculated. For several types the samples are very small. However, the data indicate clear size differences among the major classes, particularly with respect to volume. Monuments have the largest volume (25.8), followed by family monuments (12.9), headstones (5.9), and tombstones (0.7). From an anthropological perspective, the size (i.e., volume) of a marker is assumed to reflect its cost and the importance of the individual. In general, the assumption is that because larger markers cost more at least a certain level of social rank is represented in death. Chronological changes in marker volume by decade are also apparent (Table 13, Figure 20).

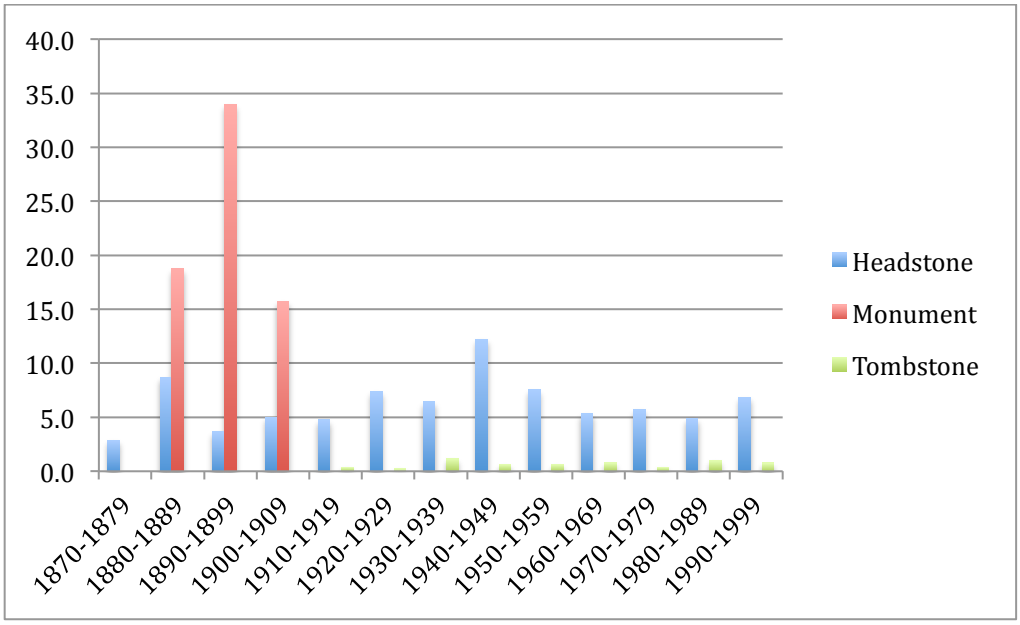
Table 12. Mean Values for Width, Depth, and Height of Marker Forms

Marker Type	Count	Mean Height	Mean Width	Mean Depth	Mean Volume (cubic feet)
Displaced Marker	1	1.5	0.5	0.2	0.1
Family Monument	1	2.6	4.2	1.2	12.9
Headstone	103	2.2	2.0	0.9	5.9
Monument	6	5.0	2.4	2.1	25.8
Tombstone	21	0.5	1.7	0.9	0.7
Unknown Head or Footstone	1	0.0	1.0	0.4	0.0
Grand Total	133	2.0	1.9	0.9	6.0

Table 13. Mean Volumes for Major Marker Types by Decade

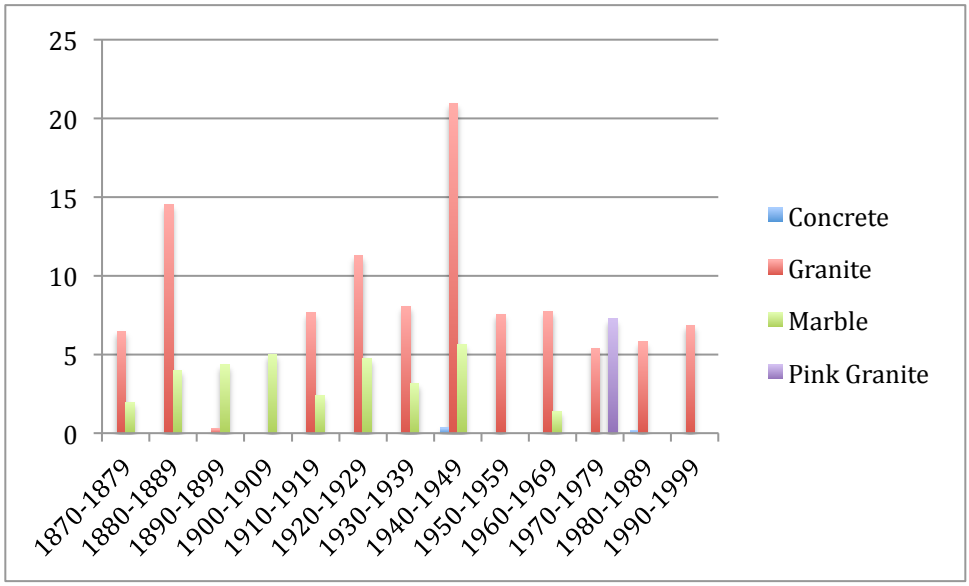
Marker Type	1870-1879	1880-1889	1890-1899	1900-1909	1910-1919	1920-1929	1930-1939	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	Grand Total
Headstone	2.9	8.7	3.7	5.0	4.8	7.3	6.4	12.2	7.6	5.3	5.7	4.9	6.8	6.6
Monument		18.8	34.0	15.7										25.8
Tombstone					0.4	0.2	1.2	0.7	0.7	0.8	0.4	1.0	0.8	0.7
Grand Total	2.9	10.5	13.8	10.4	4.1	6.7	5.7	8.9	6.6	4.1	4.4	3.6	3.2	6.6

Figure 20. Bar Chart Showing Mean Volume for Major Marker Types



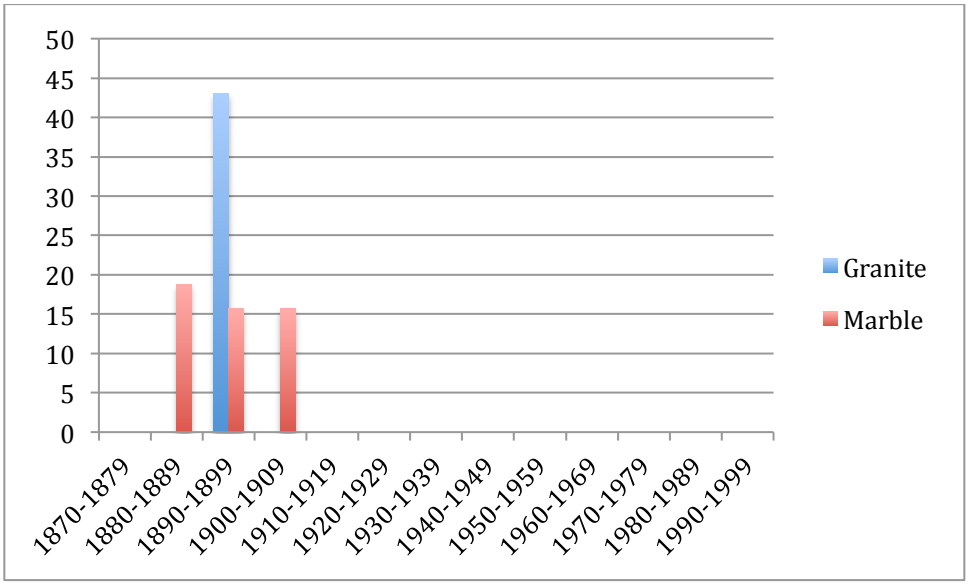
Headstones were used in all decades and show a moderate degree of variation in volume (Figure 21). They range from a low of 2.9 cubic feet in the 1870s to a high of 12.2 cubic feet in the 1940s. Multiple materials are also represented in the headstone data, including concrete, granite, marble, and pink granite. Granite headstones were the largest in every decade except the 1890s and 1970s, with typical volumes well over five cubic feet. Marble headstones were smaller overall and rarely ranged above five cubic feet. Size differences between granite and marble are difficult to explain. However, economic factors may have played the biggest role. Quarry locations and commercial providers are currently unknown, which makes it impossible to calculate the cost of obtaining a marker from a particular material. The smaller size of marble suggests that it was more costly to obtain and/or that the sizes available from a particular quarry were restricted. Conversely, if granite were less expensive and/or available in larger sizes, it would have been possible to create larger markers.

Figure 21. Bar Chart Showing Mean Volume of Headstones by Raw Material Through Time



Monuments (n=6), particularly obelisks, are larger in size because they tend to be commemorative (Figure 22). Both marble (n=4) and granite (n=2) were used but not in equal frequencies. Marble monuments show much more consistency in size, with a mean volume of 17 cubic feet. Granite monuments are significantly larger, with a mean volume of 43 cubic feet. The larger size of granite monuments suggests significant cost investment that was intended to reflect one's social and economic status.

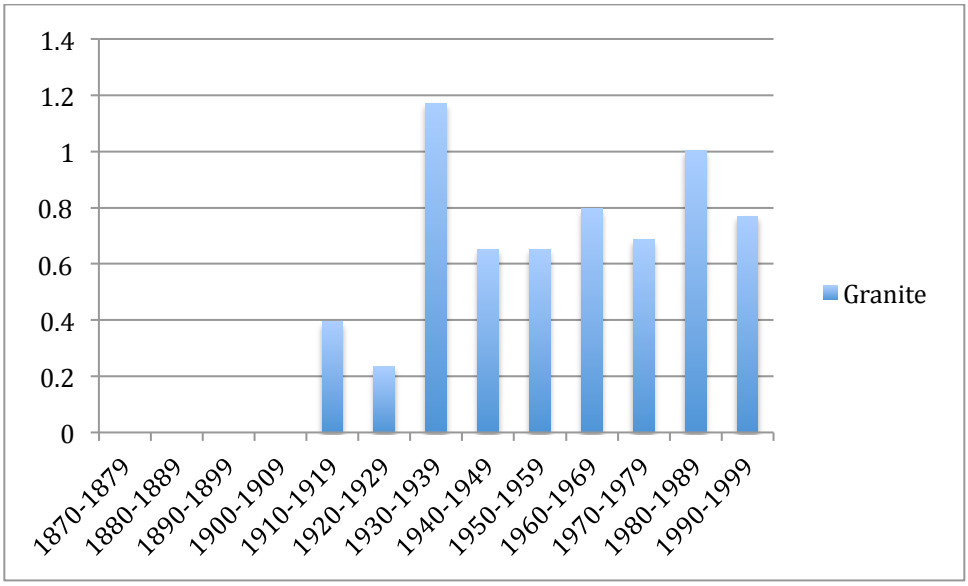
Figure 22. Bar Chart Showing Mean Volume of Monuments by Raw Material Through Time



The chronological distribution of monuments from the 1880s to the 1900s fits securely in the late Victorian period. During this time, there was a strong emphasis on Social Darwinism and the "cult of me" (Hijiya 1983). Large monuments indicated the social value of one's place/rank relative to the rest of society. In other words, one's perceived importance in life was commemorated in death.

Tombstones did not appear until the 1910s. Relative to other types they appear to have uniform volumes. However, all tombstones were manufactured from granite (Figure 23). There is a very clear trend toward increasing volume through time, with the exception of the 1930s. Increasing size may be a reflection of the reduced costs of granite as it gained in popularity or more prosperity for commemoration of the deceased.

Figure 23. Bar Chart Showing Mean Volume Of Tombstones by Raw Material Through Time



MARKER INSCRIPTIONS

The presence or absence of marker inscriptions generally reflects attitudes of broader community. Inscriptions were noted on 127 of the markers, accounting for more than 91 percent of the total (Table 14). Placement of inscriptions on individual markers shows considerable variation, although there was a clear emphasis on the eastern side (Table 15). Inscriptions tend to be fairly simple and reflect familial relationships, including "Mother", "Father", "At Rest", "His Wife", and "In Memory Of". There are very few examples of longer, more complicated inscriptions.

Table 14. Presence or Absence of Marker Inscription

Inscription	Count	Percent
No	12	8.63
Yes	127	91.37
Grand Total	139	100.00

Table 15. Inscription Placement on Markers

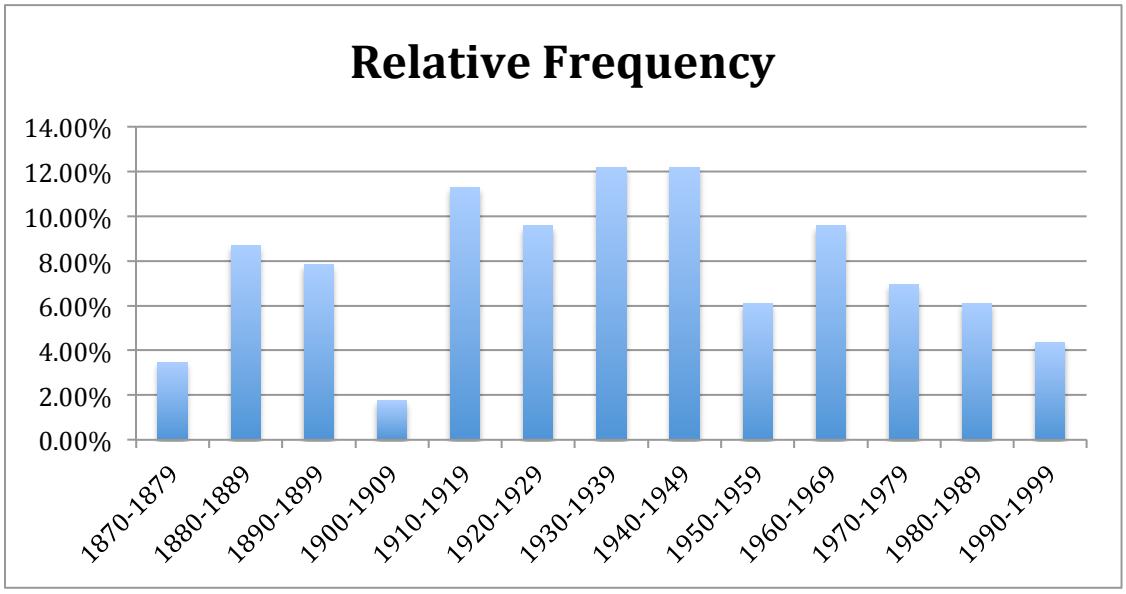
Inscription Placement	Count	Percent
East	106	81.54
North	1	0.77
Northeast	12	9.23
Other	1	0.77
Top	7	5.38
West	3	2.31
Grand Total	130	100.00

The presence of inscriptions through time shows slight variation (Table 16, Figure 24). Overall, there is a gradual, yet consistent increase beginning in the 1870s, with a noticeable peak between 1910 and 1949, and then a gradual decline from that point forward. Two exceptions to this trend are the decades beginning in 1900 and 1950.

Table 16. Presence of Marker Inscription by Decade.

Inscriptions	1870-1879	1880-1889	1890-1899	1900-1909	1910-1919	1920-1929	1930-1939	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	Grand Total
Total Count	4	10	9	2	13	11	14	14	7	11	8	7	5	115
Total Percent	3.48	8.70	7.83	1.74	11.30	9.57	12.17	12.17	6.09	9.57	6.96	6.09	4.35	100.00

Figure 24. Bar Chart Showing Relative Frequencies of Marker Inscriptions by Decade.



MARKER ADORNMENTS

Artistic embellishments and adornments are often times found on grave markers. Of the 139 identified markers, 57 (41%) had adornments and 82 (59%) did not (Table 17). Specific types included carvings (n=53, 93%), reliefs (n=2, 3.5%), and carvings with reliefs (n=2, 3.5%)(Table 18). Chronologically, adornments were used in every decade (Table 19, Figure 25). Figure 25 shows clearly a unimodal distribution with a clear peak in the 1930s. This trend appears to be independent of the overall number of internments during that decade and reflects a stylistic embellishment that was particularly popular at that time.

Table 17. Presence of Absence of Marker Adornments

Adornment	Count	Percent
No	82	58.99
Yes	57	41.01
Grand Total	139	100.00

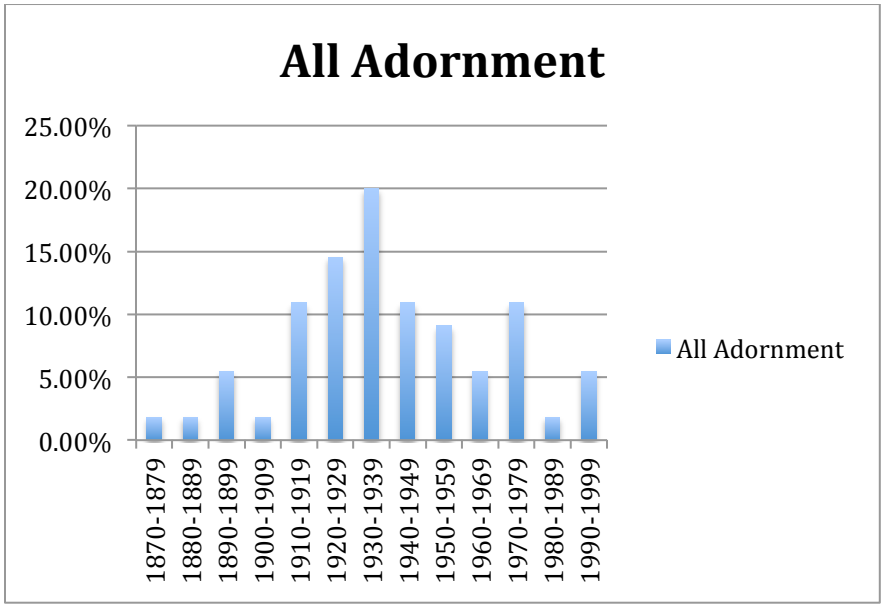
Table 18. Marker Adornment Type

Adornment Type	Count	Percent
Carving	53	92.98
Carving/Relief	2	3.51
Relief	2	3.51
Grand Total	57	100.00

Table 19. Frequencies of Marker Adornment Type by Decade

Adornment Type	1870-1879	1880-1889	1890-1899	1900-1909	1910-1919	1920-1929	1930-1939	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	Grand Total
Carving	1	1	2	1	5	8	10	6	5	3	5	1	3	51
Carving/Relief			1		1									2
Relief							1				1			2
Grand Total	1	1	3	1	6	8	11	6	5	3	6	1	3	55
Grand Total (%)	1.82	1.82	5.45	1.82	10.91	14.55	20.00	10.91	9.09	5.45	10.91	1.82	5.45	100.00

Figure 25. Bar Chart Showing Relative Frequencies of Marker Adornment Type by Decade



DEMOGRAPHICS

Grave markers contain a wealth of information about individuals, including birth and death dates, gender, and age at death. However, the level of detail on particular markers is highly variable. These data provide insight into demographic trends are different points in time and can be useful for addressing a range of research questions.

NUMBER OF GRAVES PER MARKER

Table 20 lists the number of individuals who are represented by a particular grave marker. Approximately 74 percent have single individuals (n=99), 20 percent have two individuals (n=27), 3 percent have three individuals (n=4), 2 percent have four individuals (n=2), and 1 percent has five individuals (n=1). These data are clearly skewed toward one marker for one individual. However, upon closer examination a few patterns emerge in the data (Tables 21-22, Figure 26).

Table 20. Frequencies of Individuals per Marker

Number of Individuals	Count	Percent
1	99	74.44
2	27	20.30
3	4	3.01
4	2	1.50
5	1	0.75
Grand Total	133	100.00

Not surprisingly, single graves are present in every decade except 1900-1909, with a peak in the 1940s. Double graves follow a similar trend with slightly more consistency yet have peaks in the 1880s (22%) and 1930s (15%). Temporal distributions of the remaining types are much more restricted. For example, markers with three individuals were only present in the 1890s, 1910s, 1920s, and 1930s. Markers with four individuals were only used in the 1870s and 1880s. The single example of marker with five individuals occurred in the 1920s. Overall, these data indicate relatively consistent occurrences of markers with one or two individuals through time. Markers with more than two individuals are out of the ordinary and much more restricted temporally. They may represent special events by family members.

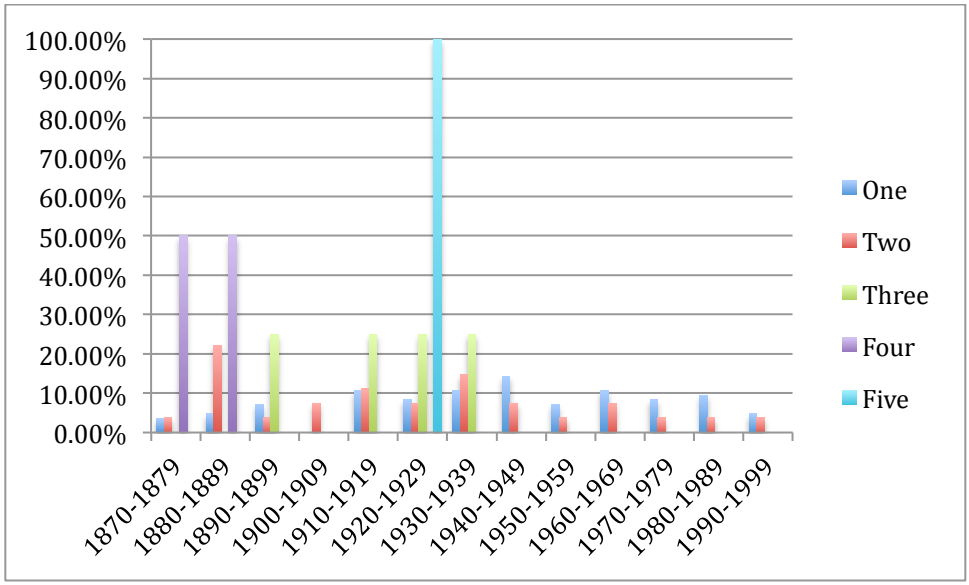
Table 21. Counts of Individuals per Marker by Decade

Number of Individuals	1870-1879	1880-1889	1890-1899	1900-1909	1910-1919	1920-1929	1930-1939	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	Grand Total
1	3	4	6		9	7	9	12	6	9	7	8	4	84
2	1	6	1	2	3	2	4	2	1	2	1	1	1	27
3			1		1	1	1							4
4	1	1												2
5						1								1
Grand Total	5	11	8	2	13	11	14	14	7	11	8	9	5	118

Table 22. Relative Frequencies of Individuals per Marker by Decade

Number of Individuals (%)	1870-1879	1880-1889	1890-1899	1900-1909	1910-1919	1920-1929	1930-1939	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	Grand Total
1	3.57	4.76	7.14	0.00	10.71	8.33	10.71	14.29	7.14	10.71	8.33	9.52	4.76	100.00
2	3.70	22.22	3.70	7.41	11.11	7.41	14.81	7.41	3.70	7.41	3.70	3.70	3.70	100.00
3	0.00	0.00	25.00	0.00	25.00	25.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
4	50.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
5	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Grand Total	4.24	9.32	6.78	1.69	11.02	9.32	11.86	11.86	5.93	9.32	6.78	7.63	4.24	100.00

Figure 26. Bar Chart Showing Relative Frequencies of Number of Individuals per Marker by Decade



Each grave was classified primarily based on the number of individuals present (Table 23). Family plots (n=65, 47) are the most common, followed by single graves (n=36, 36), couples (n=30, 22%), and paired (n=4, 3%). Three non-mortuary features and one single unmarked grave were also noted. There is less patterning through time for any particular type, with most occurring in every decade (Table 24, Figure 27). However, paired graves (non-husband and wife) show discontinuous distributions through time, with examples in the 1870s, 1920s, and the1980s.

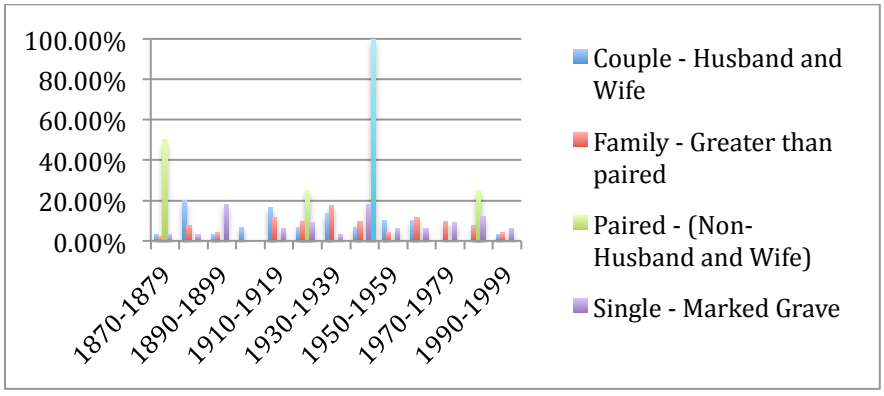
Table 23. Counts of Grave Plot Type

Plot Type	Count	Percent
Couple - Husband and Wife	30	21.58
Family - Greater than paired	65	46.76
Non-Mortuary Feature - Rock	3	2.16
Paired - (Non- Husband and Wife)	4	2.88
Single - Marked Grave	36	25.90
Single - Unmarked Depression	1	0.72
Grand Total	139	100.00

Table 24. Counts of Grave Plot Type by Decade

Plot Type	1870-1879	1880-1889	1890-1899	1900-1909	1910-1919	1920-1929	1930-1939	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	Grand Total
Couple - Husband and Wife	1	6	1	2	5	2	4	2	3	3			1	30
Family - Greater than Paired Clear Family Association	1	4	2		6	5	9	5	2	6	5	4	2	51
Paired - (Non-Husband and Wife)	2					1						1		4
Single - Marked Grave	1	1	6		2	3	1	6	2	2	3	4	2	33
Single - Unmarked Depression								1						1
Grand Total	5	11	9	2	13	11	14	14	7	11	8	9	5	119

Figure 27. Bar Chart Showing Relative Frequencies of Grave Plot Type by Decade



Very few plots have formal boundaries such as copings or walls. In the western section of the cemetery there are four plots with boundaries. These are constructed of small concrete pillars with galvanized steel pipe set in them horizontally to form an outline. The pipes are elevated and not at ground level. The eastern section has seven plots that are bounded by brick and/or concrete walls. Several of the brick walls are located along the northern boundary and were clearly designed to retain soil and create additional burial space on steeply sloping terrain. A few individual graves are outlined with informal materials such as bricks.

GENDER

Not surprisingly, gender of the deceased is evenly split between males and females (Tables 25-26, Figure 28).

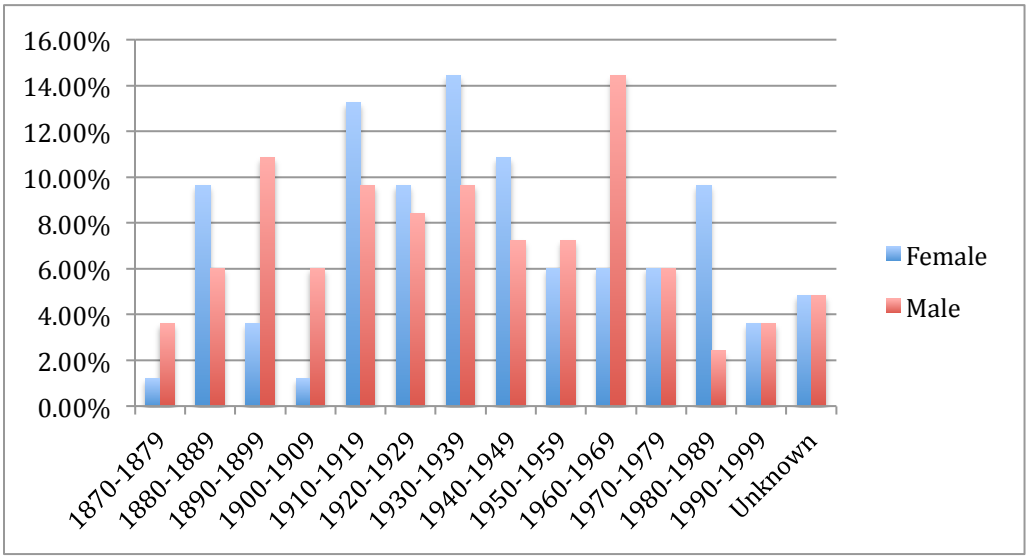
Table 25. Counts of Burials by Gender and Decade

Gender	1870-1879	1880-1889	1890-1899	1900-1909	1910-1919	1920-1929	1930-1939	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	Unknown	Grand Total
Female	1	8	3	1	11	8	12	9	5	5	5	8	3	4	83
Male	3	5	9	5	8	7	8	6	6	12	5	2	3	4	83
Unknown	1	2				1								9	13
Grand Total	5	15	12	6	19	16	20	15	11	17	10	10	6	17	179

Table 26. Relative Frequencies of Burials by Gender and Decade.

Gender (%)	1870-1879	1880-1889	1890-1899	1900-1909	1910-1919	1920-1929	1930-1939	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	Unknown	Grand Total
Female	1.20	9.64	3.61	1.20	13.25	9.64	14.46	10.84	6.02	6.02	6.02	9.64	3.61	4.82	100.00
Male	3.61	6.02	10.84	6.02	9.64	8.43	9.64	7.23	7.23	14.46	6.02	2.41	3.61	4.82	100.00
Unknown	7.69	15.38	0.00	0.00	0.00	7.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	69.23	100.00
Grand Total	2.79	8.38	6.70	3.35	10.61	8.94	11.17	8.38	6.15	9.50	5.59	5.59	3.35	9.50	100.00

Figure 28. Bar Chart Showing Relative Frequencies of Burials by Gender and Decade.



LAST NAME

Table 27 lists the counts of family name by decade. These data are useful for examining familial relationships and activity through time as well as overall burial activity. The list is too long to permit detailed analysis of every name. However, a few specific examples can help demonstrate overall trends. For example, the name Dove is the most common (n=15) and has the greatest time depth, with burials spanning 10 separate decades from the 1870s-1990s. Peak burials for this name occurred from 1910-1939. Clearly, this family is well established and shows a deep connection to and continuity with the church. Other names with relatively high frequencies include Petit (n=9), Jacobs (n=8), Hunter (n=8), Duvall (n=6), and Horton (n=6). These names, too, tend to span multiple decades. Family names that occur in low frequencies indicate a high degree of variation in burial decade with no consistent patterns. In some cases there might be two names in the same decade and in others they might be separated by several decades. These examples appear to be spouses.

Table 27. Count of Last Name by Decade

Last Name	1870-1879	1880-1889	1890-1899	1900-1909	1910-1919	1920-1929	1930-1939	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	Unknown	Grand Total
Augustine		2			1										3
Ayres			2			1	1							1	5
Baumbach						1		1		2					4
Beavers								1	1						2

Table 27. Count of Last Name by Decade

Last Name	1870-1879	1880-1889	1890-1899	1900-1909	1910-1919	1920-1929	1930-1939	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	Unknown	Grand Total
Behanna												1			1
Blakely								1							1
Blakey							2		1	1					4
Blunt			1	1	1										3
Bowers								1			1	3			5
Clair												1			1
Collins									1	1					2
Collyer								1							1
Dodson		1	1												2
Dove	1	1	1		3	2	3	1	1	1				1	15
Duvall							2			1	2	1			6
Fitzgerald												1		1	2
Garrison			1												1
Herson													1		1
Hinegardener						1		1		1					3
Horton						1	2		1	1	1				6
Hudson							1			1					2
Hullings		2													2
Hunter		3	1			2	2								8
J														1	1
J.														3	3
Jacobs			1	2			1		2	2					8
Johnson					1										1
Kerby		1		1											2
Lacey			2												2
M														2	2
Mason	2	2			2	1									7
McCalley					1										1
Mero		1	1		1										3
Miller											1	1			2
No name														1	1
Parker								1			1				2
Perry					1					1					2
Petitt				1	3	2	1		2						9

Table 27. Count of Last Name by Decade

Last Name	1870-1879	1880-1889	1890-1899	1900-1909	1910-1919	1920-1929	1930-1939	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	Unknown	Grand Total
Pulley											1				1
Quesenbury							1							1	2
Rappolee										1					1
Rogers						2					1	1			4
Russell								1							1
Ryan													1		1
Schurtz				1		1		1							3
Scott								1		1					2
Sheldon					2										2
Shepherd						1									1
Sherwin	2														2
Simms								1							1
Skillman					1										1
Smith								1		1					2
Talbot									1		1				2
Talbott							2						2		4
Troth						1	1				1				3
Truax		2			2			1							5
Tussing							1		1	1					3
Unknown														6	6
Veirs			1												1
Vest												1			1
Walker								1		1					2
Winstead													2		2
Grand Total	5	15	12	6	19	16	20	15	11	17	10	10	6	17	179

SPATIAL PATTERNING

Data from markers and individuals can be combined to examine broader patterns of overall cemetery development (Figure 29). The cemetery is bisected by the church driveway, which creates a clear division. As a general observation, the western side is older and shows greater variation among grave orientations, markers types, and frequency of burials through time. By contrast, the eastern section appears to be more uniform and is the focus of more recent activity.

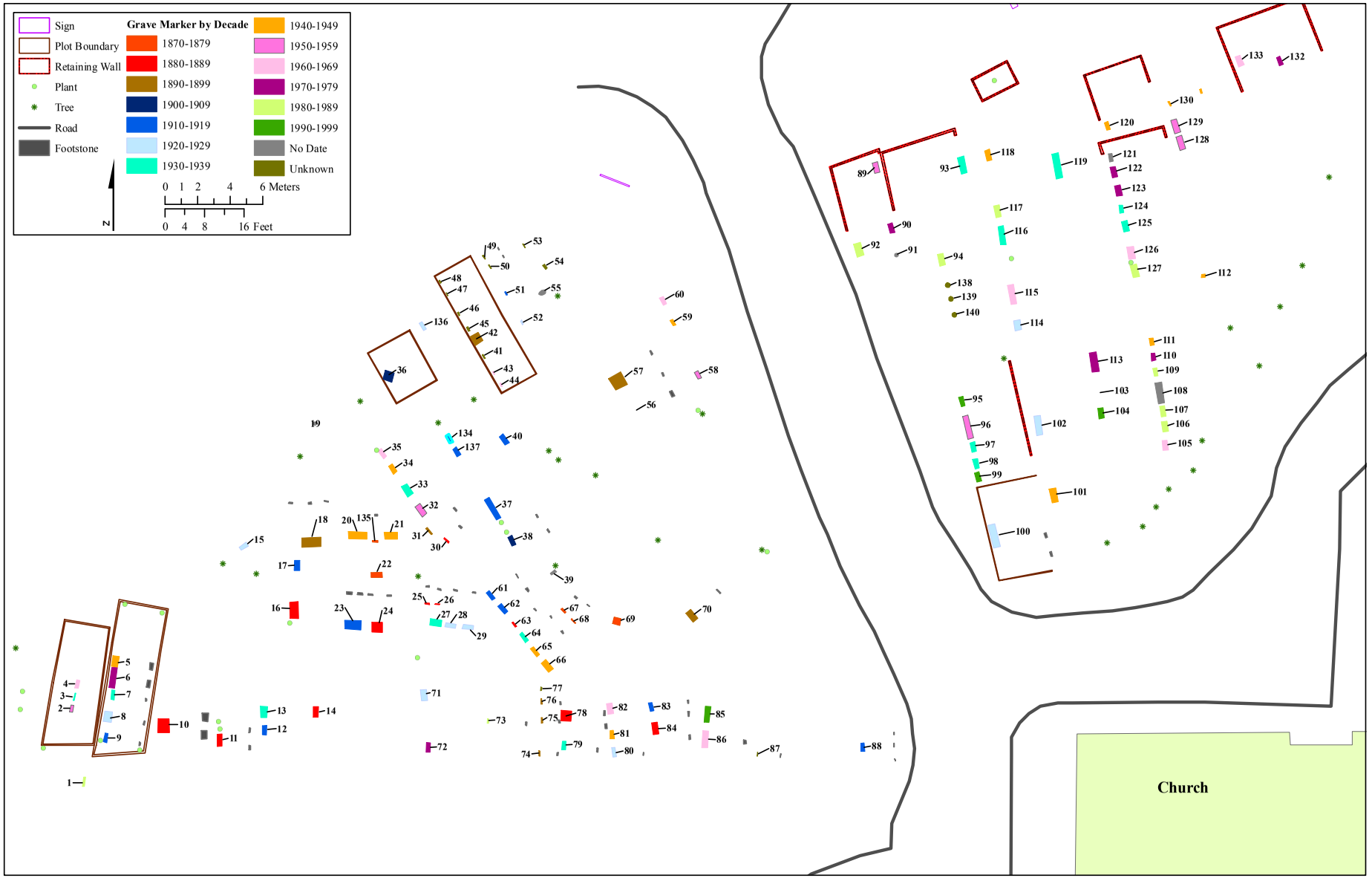


Figure 29.
Map Showing Distribution of Markers by Decade of Death

CEMETERY SECTION

Burials in the cemetery are loosely arranged in clusters that are represented by variation in grave marker orientation (Tables 28-29, Figure 30). Closer examination of each cluster indicates subtle differences in the number of burials through time. The most obvious differences relate to the eastern section, which is physically separated from the rest of the cemetery. The three clusters identified in the western section are somewhat recognizable by the placement and orientation of graves. The origin of these clusters is not clear, although likely causes include restrictions on plots sales by the governing body to certain segments and strong familial relationships. Clusters of burials with distinct characteristics offer clues about the growth and development of the cemetery as a whole because they have both spatial and temporal aspects.

Table 28. Counts of Burials for Each Cemetery Section by Decade

Cemetery Area	1870-1879	1880-1889	1890-1899	1900-1909	1910-1919	1920-1929	1930-1939	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	Grand Total
Eastern Section						3	7	6	4	4	6	7	4	41
Western Cluster 1	3	2	5	2	7	2	2	4	2	4				33
Western Cluster 2		5	3		4	3	4	2	1	3	2	2	1	30
Western Cluster 3	2	4	1		2	3	1	2						15
Grand Total	5	11	9	2	13	11	14	14	7	11	8	9	5	119

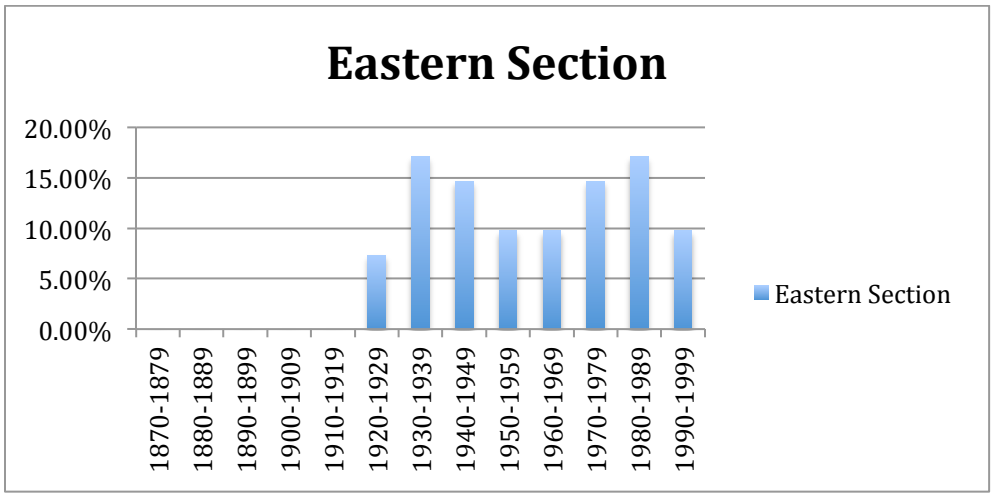
Table 29. Relative Frequencies of Burials for Each Cemetery Section by Decade

Cemetery Area (%)	1870-1879	1880-1889	1890-1899	1900-1909	1910-1919	1920-1929	1930-1939	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	Grand Total
Eastern Section	0.00	0.00	0.00	0.00	0.00	7.32	17.07	14.63	9.76	9.76	14.63	17.07	9.76	100.00
Western Cluster 1	9.09	6.06	15.15	6.06	21.21	6.06	6.06	12.12	6.06	12.12	0.00	0.00	0.00	100.00
Western Cluster 2	0.00	16.67	10.00	0.00	13.33	10.00	13.33	6.67	3.33	10.00	6.67	6.67	3.33	100.00
Western Cluster 3	13.33	26.67	6.67	0.00	13.33	20.00	6.67	13.33	0.00	0.00	0.00	0.00	0.00	100.00
Grand Total	4.20	9.24	7.56	1.68	10.92	9.24	11.76	11.76	5.88	9.24	6.72	7.56	4.20	100.00

Figure 30.
Map Showing Location of Grave Clusters

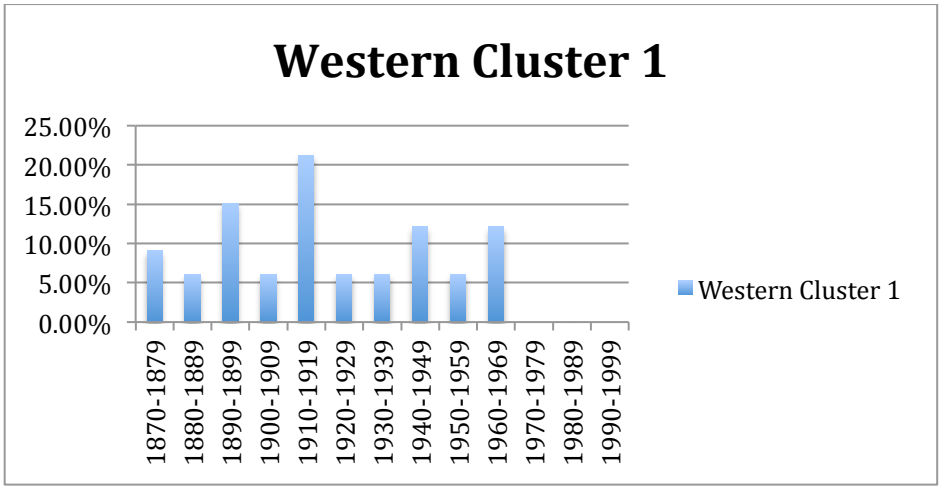
Burials in the eastern section (n=47) began in the 1920s at a relatively slow pace and then increased quickly (Figure 31). Burials show a bimodal distribution, with peaks in the 1930s and 1980s. It is actively used today, presumably because it has more open space than other sections. Grave orientations in this cluster are uniformly east-west, which may reflect greater planning and compliance with existing cemetery customs.

Figure 31. Bar Chart Showing Relative Frequencies of Burials by Decade in the Eastern Cluster



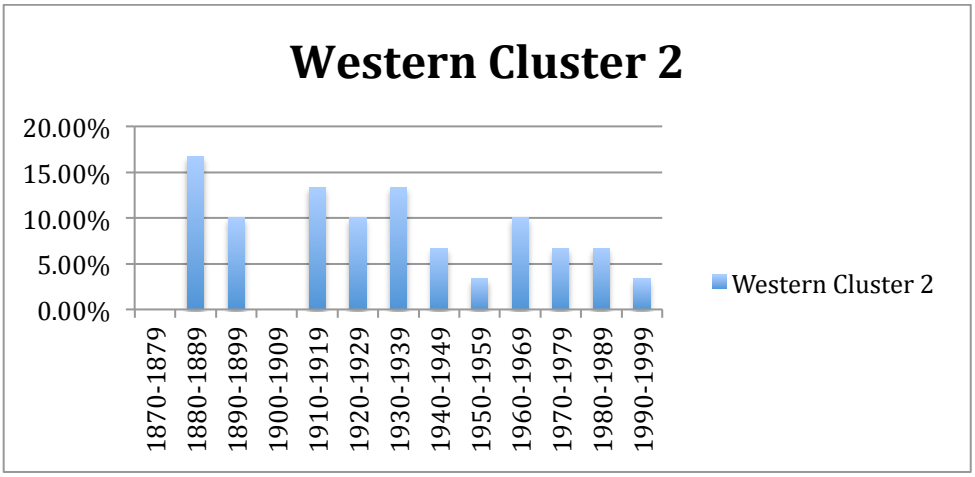
Western cluster 1 (n=44) is fairly large and occupies the north-central portion of the cemetery. Grave markers are generally oriented northeast-southwest, with slight variations. Burials in western cluster 1 are present from the 1870s through 1960s (Figure 32). Peak burial activity occurred in the 1910s, with slightly more than 20 percent of the total. Overall burial activity was slightly irregular, with alternating decades of relatively high and low numbers.

Figure 32. Bar Chart Showing Relative Frequencies of Burials in Western Cluster 1



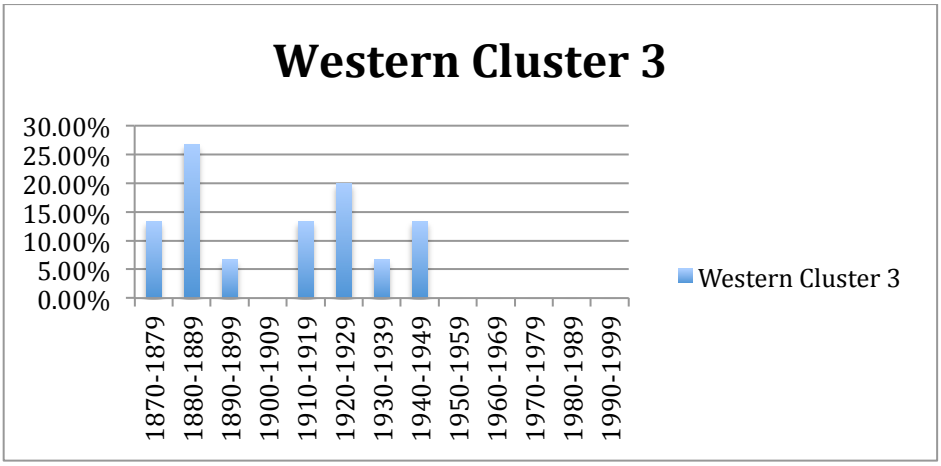
Western cluster 2 (n=32) occupies a long strip along the cemetery's southern boundary. Grave marker orientations are uniformly east-west. Burials in western cluster 2 occurred from the 1880s to the 1990s (Figure 33). Peak activity occurred in the 1880s (16%). With minor exceptions there is a very clear trend toward decreasing burial activity through time.

Figure 33. Bar Chart Showing Relative Frequencies of Burials in Western Cluster 2



Western cluster 3 (n=16) occupies a relatively small space in the west-central portion of the cemetery. Grave marker orientations are almost exclusively north-south, which provides a stark contrast with other sections. Burials in western cluster 3 occurred from the 1870s-1940s (Figure 34). Frequency distributions by decade are slightly irregular, with alternating periods of high and low numbers. There were no burials in the early 1900s. The lack of burials after the 1960s was likely in response to increased use of other sections.

Figure 34. Bar Chart Showing Relative Frequencies of Burials in Western Cluster 3



GRAVE ORIENTATION

Orientation of graves tends to follow traditional patterns known from formal cemeteries, with a primary emphasis on east-west (n=91), followed by northeast-southwest (n=11), and north-south (n=7) (Table 30). Northeast-southwest can be viewed as a variation of east-west. However, north-south orientations appear to have been chosen deliberately, and may be related to family plots or groupings.

Table 30. Counts of Grave Orientation Direction by Decade

Orientation	1870-1879	1880-1889	1890-1899	1900-1909	1910-1919	1920-1929	1930-1939	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	Grand Total
East/West	2	8	5	1	12	6	12	9	7	10	7	8	4	91
NE/SW	2	3	1		1	2	1	1						11
North/South			2	1			1	1		1	1			7
Grand Total	4	11	8	2	13	8	14	11	7	11	8	8	4	109

VEGETATION AND ORNAMENTAL PLANTINGS

The cemetery's overall appearance is natural, with limited evidence of formal plantings. Existing vegetation consists of a mix of mature hardwood trees, juvenile trees, and shrubs. Grass cover varies in thickness and is largely dependent on competition for nutrients with trees. Ornamental plantings likely reflect modern attitudes of beautification rather than spiritual or religious aspects.

VEGETATION

Vegetation was recorded and identified as either plants or trees (Tables 31-32). Plants tend to be ornamental in nature and are typically, but not always, associated with graves. In certain cases they are used to define burial spaces and create a buffer between non-mortuary features such as parking areas. Plant species include boxwood (n=9, 47%), yucca (n=5, 26%), unidentified (n=2, 11%), and single examples each of azalea, holly, and roses.

Table 31. Frequencies of Identified Plants

Common Name	Scientific Name	Count	Percent
Azalea (white)	*Rhododendron Pentanthera*	1	5.26
Boxwood	*Buxus sp.*	9	47.37
Holly	*Ilex* sp.	1	5.26

Table 31. Frequencies of Identified Plants

Common Name	Scientific Name	Count	Percent
Rose	*Rosaceae Rosa* "New Dawn"	1	5.26
Unidentified		2	10.53
Yucca	*Asparagaceae Agavoideae* sp.	5	26.32
Grand Total		19	100.00

Tree varieties include white oak (n=12, 44%), dogwood (n=8, 30%), American holly (n=2, 7%), and single examples of birch, black oak, Bradford pear, chestnut oak, and live oak (Table 32, Figure 35). Many of the hardwood trees are mature and have been allowed to grow because they enhance the overall appearance; they do not appear to have been planted intentionally. However, tree roots may also impact graves and markers and undermine their long-term stability.

Table 32. Frequencies of Identified Trees

Common Name	Scientific Name	Count	Percent
American Holly	*Ilex opaca*	2	7.41
Birch	*Betula sp.*	1	3.70
Black Oak	*Quercus velutina*	1	3.70
Bradford Pear	*Pyrus calleriana*	1	3.70
Chestnut Oak	*Quercus prinus*	1	3.70
Dogwood	*Cornus florida*	8	29.63
Live Oak	*Quercus virginiana*	1	3.70
White Oak	*Quercus alba*	12	44.44
Grand Total		27	100.00

GRAVE PLANTINGS

Graves may often be decorated with ornamental plantings. Only eight of the 139 graves (6%) showed evidence of plantings (Table 33). Specific types included boxwood, azaleas, and flowering yucca. Reasons for the low frequency are unclear, although it could be the result of cemetery restrictions, lack of descendants, or unsuitable conditions.

Table 33. Presence or Absence of Ornamental Plantings.

Ornamental Plantings	Count	Percent
No	131	94.24
Yes	8	5.76
Grand Total	139	100.00

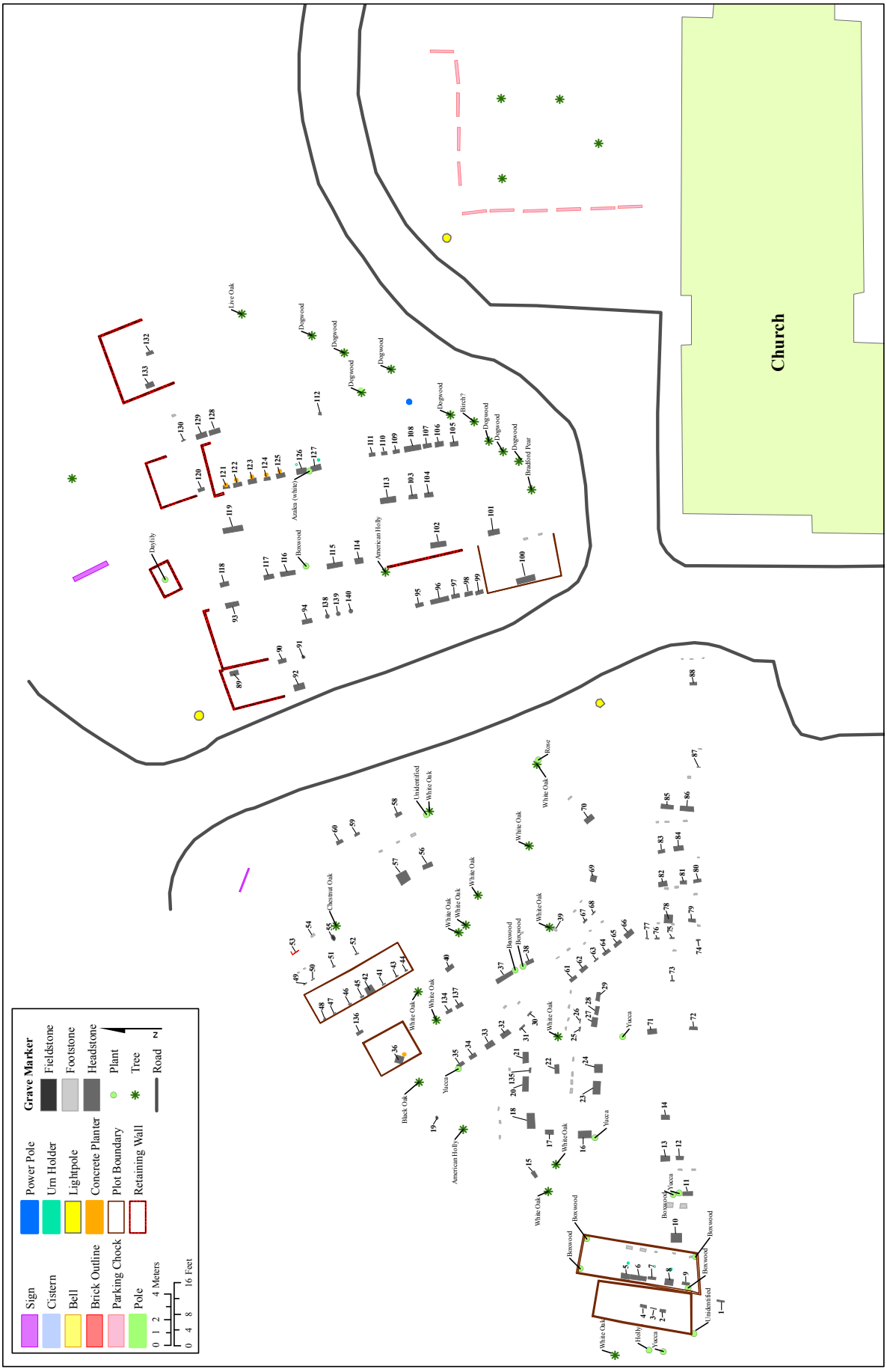


Figure 35.
Map Showing Spatial Distribution of Tree Species

CURRENT CONDITIONS

The overall appearance of Woodlawn cemetery is attractive and well maintained. However, the passage of time and years of exposure to natural forces have affected certain aspects of the cemetery, including landscaping and built elements such as markers, borders, copings, and individual graves. All cemeteries confront these challenges and administrators must recognize the need for an ongoing maintenance plan. The following section summarizes the current conditions of both markers and graves.

MARKER CONDITION

A conditions assessment was made for each grave marker (Table 34). Weathering has impacted a small number of markers and is a constant challenge in all cemeteries. An overwhelming majority (n=115, 85%) of markers are maintained, followed by weathered markers (n=13, 10%), broken (n=2, 1.5%), repaired (n=2, 1.5%), and single examples each of missing, slumped, and weathered/repaired. These data conform to expectations for a formal church cemetery that is actively maintained. However, markers require at least a minimal level of maintenance over time to ensure their long-term stability.

Table 34. Counts of Marker Condition

Condition	Count	Percent
Broken	2	1.48
Maintained	115	85.19
Missing	1	0.74
Repaired	2	1.48
Slumped	1	0.74
Weathered	13	9.63
Weathered / Repaired	1	0.74
Grand Total	135	100.00

GRAVE CONDITION

Grave condition was also noted as maintained, disturbed, or slumped (Table 35). The majority of graves are well maintained (n=126, 94%). Disturbed graves (n=7, 5%) have generally been affected by burrowing from gophers. In certain cases the marker positions have been compromised and are slowly subsiding or falling over. Gopher burrows may potentially displace human remains and the Church's efforts to eradicate the gophers from the cemetery should be maintained.

Table 35. Counts of Grave Condition

Condition	Count	Percent
Disturbed	7	5.22
Maintained	126	94.03
Slumped	1	0.75
Grand Total	134	100.00

GPR RESULTS

Depending on site specific conditions, GPR data can be used for a range of purposes, including to identify unmarked graves, correlate existing markers with graves, assess the likelihood that a marker may have been moved, variations in burial depth that may have temporal significance, and assess the potential for multiple or overlapping graves. New South Associates takes a conservative approach to the identification of possible historic graves based on GPR data. As noted in the Methods section, several factors influence the overall effectiveness of GPR for detecting anomalies consistent with graves including soil type and acidity, moisture and precipitation, age of probable graves, likely burial depth, burial container (e.g., shroud, wood coffin, metal casket, concrete vault), and social/cultural/economic practices of a particular group.

The GPR results indicate 176 unique anomalies that are possible burials ranging in depth from 20 to 165 centimeters (Figure 36, Table 36). It is impossible to know with complete certainty whether or not all of these anomalies are graves. In fact, at least a small percentage of these may be false positives such as tree roots, concentrations of moisture, or rodent burrows. At the same time, not all graves can be detected with GPR for the reasons outlined above. In general, however, these results provide a very good estimate for the total number of probable graves.

Table 36. Burials Identified by GPR

ID	Interpretation	Depth (cm)	Marker	UTM Easting	UTM Northing
1	Possible Burial	20-40		313934.043	4287210.470
2	Possible Burial	50-70	Y	313934.842	4287207.672
3	Possible Burial	90-110	Y	313936.693	4287204.157
4	Possible Burial	50-70	Y	313937.391	4287207.847
5	Possible Burial	50-70	Y	313937.375	4287209.071
6	Possible Burial	35-55		313937.374	4287210.064
7	Possible Burial	35-55		313940.650	4287209.494
8	Possible Burial	125-140		313940.754	4287206.735

Table 36. Burials Identified by GPR

ID	Interpretation	Depth (cm)	Marker	UTM Easting	UTM Northing
9	Possible Burial	70-90	Y	313939.753	4287205.985
10	Possible Burial	90-110	Y	313940.794	4287204.575
11	Possible Burial	20-50		313941.697	4287201.615
12	Possible Burial	125-140		313944.312	4287206.195
13	Possible Burial	70-90	Y	313943.719	4287204.451
14	Possible Burial	125-140	Y	313944.422	4287203.815
15	Possible Burial	30-50	Y	313946.564	4287206.020
16	Possible Burial	140-160	Y	313946.484	4287204.858
17	Possible Burial	90-110		313945.758	4287202.780
18	Possible Burial	130-150		313949.213	4287210.736
18	Possible Burial	90-110		313946.177	4287201.912
19	Possible Burial	70-90		313949.811	4287209.912
20	Possible Burial	140-160	Y	313949.777	4287206.638
21	Possible Burial	70-90		313952.288	4287207.117
22	Possible Burial	15-40		313956.441	4287209.623
23	Possible Burial	70-90	Y	313956.585	4287207.269
24	Possible Burial	50-70	Y	313956.965	4287203.953
25	Possible Burial	50-70		313958.559	4287206.646
26	Possible Burial	90-110	Y	313959.866	4287206.141
27	Possible Burial	90-110	Y	313960.270	4287205.427
28	Possible Burial	35-50	Y	313961.618	4287203.451
29	Possible Burial	70-100	Y	313963.060	4287207.596
30	Possible Burial	125-140	Y	313963.119	4287207.057
31	Possible Burial	70-100	Y	313963.215	4287206.547
32	Possible Burial	90-110	Y	313962.916	4287205.549
33	Possible Burial	140-160	Y	313965.185	4287204.882
34	Possible Burial	50-70		313965.596	4287200.854
35	Possible Burial	50-70		313966.337	4287199.807
36	Possible Burial	100-125	Y	313966.343	4287203.440
37	Possible Burial	50-70	Y	313967.864	4287206.069
38	Possible Burial	70-90	Y	313967.424	4287205.375
39	Possible Burial	110-125	Y	313968.009	4287204.444
40	Possible Burial	100-130	Y	313967.530	4287203.551
41	Possible Burial	140-160	Y	313970.633	4287206.287
42	Possible Burial	100-125	Y	313970.590	4287205.400
43	Possible Burial	70-90	Y	313970.284	4287203.790

Table 36. Burials Identified by GPR

ID	Interpretation	Depth (cm)	Marker	UTM Easting	UTM Northing
44	Possible Burial	50-75	Y	313973.906	4287206.099
45	Possible Burial	50-75	Y	313974.191	4287204.799
46	Possible Burial	140-160	Y	313975.711	4287204.124
47	Possible Burial	125-140	Y	313976.419	4287203.298
48	Possible Burial	70-90		313979.485	4287205.778
49	Possible Burial	50-70		313982.362	4287202.553
50	Possible Burial	110-125	Y	313944.028	4287217.535
51	Possible Burial	140-160		313944.597	4287219.491
52	Possible Burial	50-70	Y	313947.165	4287219.233
53	Possible Burial	35-50	Y	313948.379	4287217.468
54	Possible Burial	50-70	Y	313949.241	4287219.430
55	Possible Burial	30-50		313950.618	4287218.852
56	Possible Burial	70-90	Y	313952.199	4287217.322
57	Possible Burial	90-110	Y	313951.638	4287214.964
58	Possible Burial	50-70	Y	313953.360	4287217.980
59	Possible Burial	90-110	Y	313953.492	4287215.461
60	Possible Burial	90-110	Y	313954.920	4287213.451
61	Possible Burial	90-110	Y	313955.828	4287213.272
62	Possible Burial	90-110	Y	313956.515	4287213.062
63	Possible Burial	140-160	Y	313957.373	4287212.432
64	Possible Burial	125-140	Y	313958.430	4287211.822
65	Possible Burial	90-110	Y	313959.073	4287213.791
66	Possible Burial	30-50	Y	313953.765	4287222.479
67	Possible Burial	90-110	Y	313954.261	4287221.485
68	Possible Burial	70-90	Y	313955.292	4287220.030
69	Possible Burial	100-125	Y	313956.529	4287219.086
70	Possible Burial	140-160	Y	313957.073	4287218.123
71	Possible Burial	50-70	Y	313957.765	4287216.056
72	Possible Burial	125-140	Y	313960.832	4287213.576
73	Possible Burial	50-70	Y	313961.560	4287212.000
74	Possible Burial	70-90		313960.996	4287209.007
75	Possible Burial	70-100	Y	313962.779	4287210.432
76	Possible Burial	70-100	Y	313963.445	4287209.643
77	Possible Burial	50-70	Y	313963.889	4287211.456
78	Possible Burial	40-70	Y	313964.910	4287211.998
79	Possible Burial	70-90	Y	313964.290	4287213.129

Table 36. Burials Identified by GPR

ID	Interpretation	Depth (cm)	Marker	UTM Easting	UTM Northing
80	Possible Burial	120-140	Y	313961.820	4287217.078
81	Possible Burial	70-90	Y	313960.586	4287218.620
82	Possible Burial	90-110	Y	313962.784	4287218.928
83	Possible Burial	90-110	Y	313958.754	4287223.138
84	Possible Burial	10-20		313955.467	4287225.393
85	Possible Burial	140-160		313961.459	4287222.313
86	Possible Burial	100-125	Y	313961.104	4287223.621
87	Possible Burial	90-110	Y	313960.847	4287226.974
88	Possible Burial	90-110	Y	313960.475	4287228.630
89	Possible Burial	110-130	Y	313959.711	4287229.611
90	Possible Burial	90-110	Y	313959.105	4287230.273
91	Possible Burial	110-130	Y	313958.660	4287231.106
92	Possible Burial	90-110	Y	313958.263	4287231.941
93	Possible Burial	30-50		313959.849	4287232.527
94	Possible Burial	50-70	Y	313960.897	4287231.557
95	Possible Burial	90-110	Y	313962.320	4287231.054
96	Possible Burial	50-70		313963.423	4287232.594
97	Possible Burial	50-70	Y	313963.715	4287234.206
98	Possible Burial	50-70	Y	313961.946	4287235.445
99	Possible Burial	50-70		313967.779	4287233.023
100	Possible Burial	50-70	Y	313969.493	4287230.643
101	Possible Burial	50-70	Y	313970.138	4287229.622
102	Possible Burial	125-140	Y	313968.624	4287227.536
103	Possible Burial	125-140	Y	313969.012	4287226.097
104	Possible Burial	110-130	Y	313969.188	4287224.806
105	Possible Burial	30-50	Y	313972.663	4287227.259
106	Possible Burial	70-90	Y	313982.003	4287239.211
107	Possible Burial	110-130		313982.570	4287237.265
108	Possible Burial	50-70	Y	313983.201	4287235.561
109	Possible Burial	30-50	Y	313983.193	4287234.740
110	Possible Burial	90-110	Y	313983.271	4287233.883
111	Possible Burial	35-50		313986.546	4287240.204
112	Possible Burial	50-70	Y	313987.223	4287238.969
113	Possible Burial	50-70		313986.823	4287236.975
114	Possible Burial	50-70	Y	313987.843	4287234.592
115	Possible Burial	50-70		313988.090	4287230.722

Table 36. Burials Identified by GPR

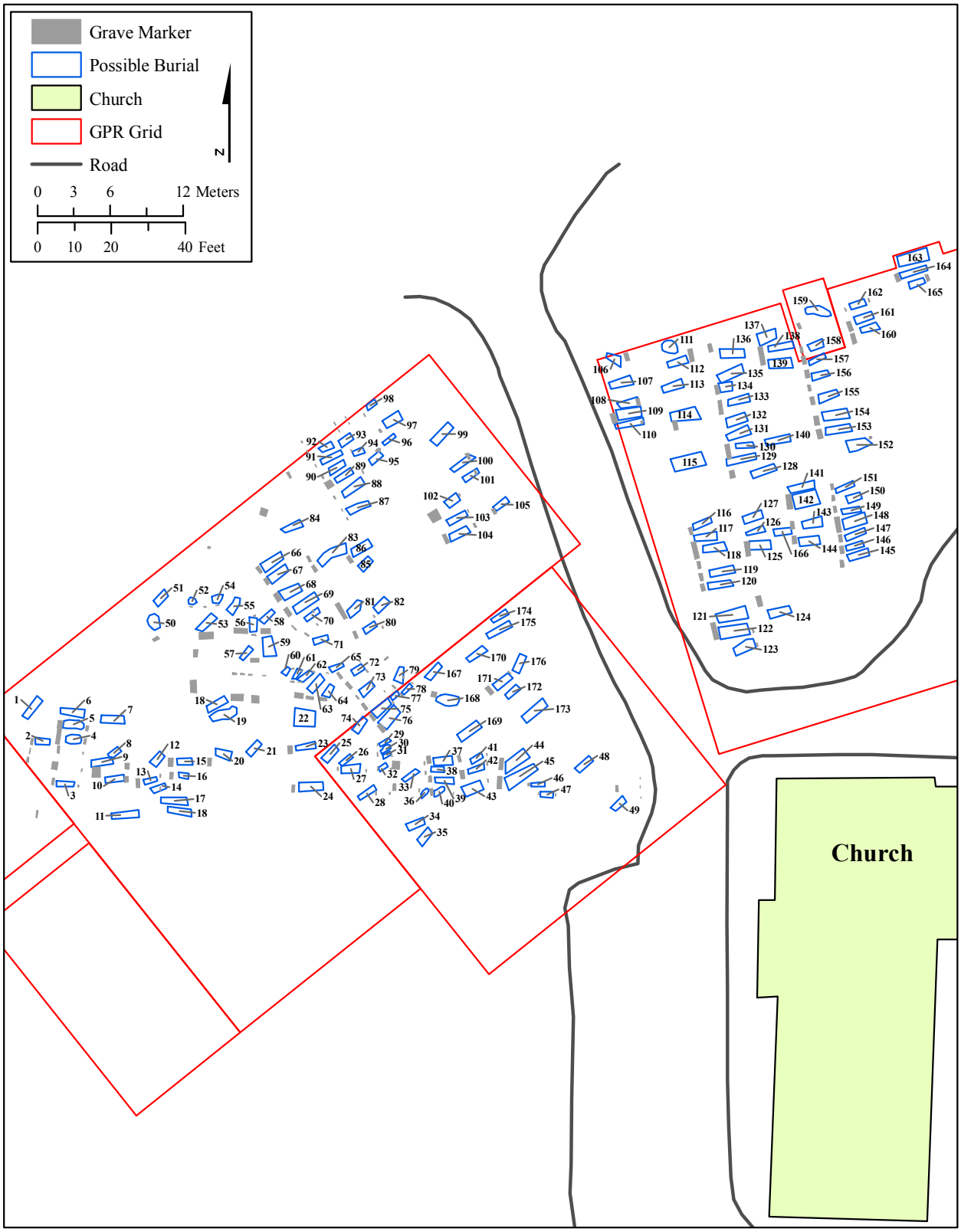
ID	Interpretation	Depth (cm)	Marker	UTM Easting	UTM Northing
116	Possible Burial	30-50	Y	313989.222	4287225.664
117	Possible Burial	50-70	Y	313989.559	4287224.538
118	Possible Burial	20-50	Y	313990.251	4287223.653
119	Possible Burial	70-90	Y	313990.870	4287221.705
120	Possible Burial	20-50	Y	313990.689	4287220.595
121	Possible Burial	120-140	Y	313991.748	4287218.100
122	Possible Burial	120-140	Y	313991.847	4287216.778
123	Possible Burial	90-110	Y	313992.738	4287215.477
124	Possible Burial	30-50	Y	313995.586	4287218.350
125	Possible Burial	140-160	Y	313993.995	4287223.859
126	Possible Burial	50-70		313993.698	4287225.028
127	Possible Burial	50-70		313993.413	4287226.182
128	Possible Burial	90-110		313994.277	4287229.968
129	Possible Burial	110-130	Y	313992.452	4287230.937
130	Possible Burial	70-90	Y	313992.768	4287232.090
131	Possible Burial	50-70		313992.264	4287233.079
132	Possible Burial	110-130		313992.057	4287234.198
133	Possible Burial	70-90	Y	313992.272	4287235.831
134	Possible Burial	110-130	Y	313991.185	4287236.928
135	Possible Burial	50-70		313991.587	4287238.003
136	Possible Burial	50-70	Y	313991.712	4287239.673
137	Possible Burial	50-70	Y	313994.554	4287241.046
138	Possible Burial	50-70	Y	313995.738	4287240.227
139	Possible Burial	90-110	Y	313995.684	4287238.850
140	Possible Burial	90-110		313995.490	4287232.533
141	Possible Burial	70-90	Y	313997.456	4287228.650
142	Possible Burial	50-70	Y	313997.782	4287227.631
143	Possible Burial	30-50	Y	313998.361	4287225.690
144	Possible Burial	30-50	Y	313998.062	4287224.201
145	Possible Burial	50-70	Y	314002.138	4287223.077
146	Possible Burial	90-110	Y	314001.821	4287223.809
147	Possible Burial	30-50	Y	314001.847	4287224.760
148	Possible Burial	50-70	Y	314001.812	4287225.840
149	Possible Burial	90-110	Y	314001.492	4287226.722
150	Possible Burial	30-50	Y	314001.728	4287227.764
151	Possible Burial	30-50	Y	314001.021	4287228.647

Table 36. Burials Identified by GPR

ID	Interpretation	Depth (cm)	Marker	UTM Easting	UTM Northing
152	Possible Burial	140-160	Y	314002.018	4287232.156
153	Possible Burial	50-70	Y	314000.461	4287233.408
154	Possible Burial	50-70	Y	314000.252	4287234.601
155	Possible Burial	20-50	Y	313999.592	4287236.156
156	Possible Burial	120-140	Y	313998.931	4287237.871
157	Possible Burial	50-70	Y	313998.689	4287239.189
158	Possible Burial	90-110	Y	313998.606	4287240.346
159	Possible Burial	35-50	Y	313998.760	4287243.156
160	Possible Burial	120-140	Y	314003.061	4287241.775
161	Possible Burial	50-70	Y	314002.553	4287242.620
162	Possible Burial	90-110	Y	314002.063	4287243.731
163	Possible Burial	50-70		314006.638	4287247.581
164	Possible Burial	50-70	Y	314006.643	4287246.402
165	Possible Burial	140-160	Y	314006.905	4287245.464
166	Possible Burial	120-140		313995.834	4287224.974
167	Possible Burial	90-110		313967.095	4287213.429
168	Possible Burial	100-125	Y	313968.260	4287211.087
169	Possible Burial	70-90		313970.037	4287208.533
170	Possible Burial	90-110		313970.652	4287214.894
171	Possible Burial	70-90	Y	313972.769	4287212.609
172	Possible Burial	50-70		313973.599	4287211.772
173	Possible Burial	70-90		313975.420	4287210.196
174	Possible Burial	90-110		313972.541	4287218.010
175	Possible Burial	90-110		313972.521	4287216.885
176	Possible Burial	70-90	Y	313974.167	4287214.112

Of the 176 GPR anomalies, 45 cannot be immediately associated with an existing marker. However, the correlation of specific GPR anomalies with markers relies on subjective classification that is largely based on distance. In certain cases there may be more than one anomaly and/or marker and it is impossible to determine which belong together. Certain GPR anomalies are obviously unmarked graves and others may be false positives. In other cases there are existing markers that do not have an associated GPR anomaly. This may be due in part to the age of the grave (i.e., an older grave has had more time to decompose), lack of contrast, or lack of an actual burial (least likely). Cenotaphs and family markers, in particular, are not expected to have burials associated with them because they are largely commemorative. Overall, the distribution of GPR features is highly consistent with existing markers. In short, there are no areas with possible graves outside the primary clusters.

Figure 36.
Map Showing Distribution of GPR Anomalies

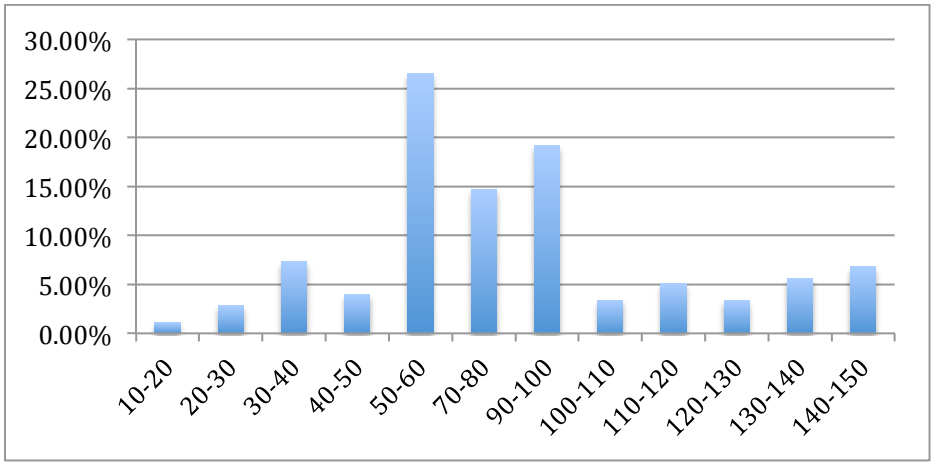


Vertical distributions of GPR anomalies are listed in Table 37 and shown in Figure 37. These should be evaluated as relative distributions because many of the anomalies are visible at multiple depths. For purposes of this discussion, the depth at which an anomaly was first visible was chosen for counting. More than 60 percent of the GPR anomalies are located between 50 and 90 centimeters, with the highest frequency at 50 centimeters (26.55%). The vertical distributions indicate a wide range of depths that may be due in part to soil conditions and/or cultural practices through time.

Table 37. Vertical Distribution of GPR Features

Depth Below Surface	Count	Percent
10-20	2	1.13
20-30	5	2.82
30-40	13	7.34
40-50	7	3.95
50-60	47	26.55
70-80	26	14.69
90-100	34	19.21
100-110	6	3.39
110-120	9	5.08
120-130	6	3.39
130-140	10	5.65
140-150	12	6.78
Grand Total	177	100.00

Figure 37. Bar Chart Showing Relative Frequencies of GPR Features by Depth Below Surface



GPR SURVEY NORTH OF U.S. 1

An additional area north of U.S. 1/Richmond Highway was selected for GPR survey based on the presence of a "Cem" label on the USGS map. It is physically separated from Woodlawn cemetery and there is no evidence from archival sources for a cemetery in this area. Surface conditions in this area were generally good, with grass and a few briars and a relatively flat landform (Figure 38). GPR data indicate a landform that was either artificial or had been cleared and graded at some point in the past (Appendix D). There was no evidence for graves in this area.

NATIONAL REGISTER OF HISTORIC PLACES ELIGIBILITY

The Woodlawn Cemetery reflects the presence of the Baptist Church community at Woodlawn from the origins of the church through the presence. While the cemetery itself is not distinguished by significant mortuary architecture, it is a historic element of the cultural landscape. The modern church and historic cemetery were considered eligible for the National Register of Historic Places (NRHP) as contributing elements of the districts and New South Associates concurs with the recommendation that the cemetery be considered NRHP eligible as a contributing component of the Woodlawn Historic District.

CONCLUSIONS AND RECOMMENDATIONS

The Woodlawn Cemetery is in over-all good condition, however, although the cemetery is well-maintained, there are a few markers and graves in need of repair. The most critical threat is from animal burrowing, which is currently undermining several graves. Results of this activity include the slumping of graves, settling of markers, and possible displacement of grave features (i.e., bones, artifacts). Marker repair should be considered to prevent further damage or deterioration.

New South Associates recommends that all 176 anomalies identified as possible burials be treated as suchAlthough a small number of the GPR anomalies are likely false positives, there is no way to verify identifications without additional work. The results presented above show the physical locations of each possible burial with associated UTM coordinates and depth for plotting on the ground. It might be helpful to have these anomalies marked, indicating a probable unknown deceased.

During the grave marker assessment part of this survey, 133 unique grave markers representing 179 individuals were documented. The total number of graves, as indicated from marker data and GPR, is between 176-179.

Figure 38.
GPR Survey and Field Conditions North of U.S. 1/Richmond Highway

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APPENDIX A: CEMETERY MARKER INVENTORY

Appendix A
Woodlawn Cemetery Marker Inventory

Name	Birth Date	Death Date	Gender	Epitaph 1	Epitaph 2	Epitaph 3
				A. J.		
				E. E. J.		
				Mother		
				Father		
				G.W.J.		
Augastien, F. A.	1858	1916	Male			
Augustin., F. A.	June 9, 1822	Dec 14 1885	Male	Father & Mother	His wife	
Augustine, B. B.	April 15, 1827	May 3 1889	Female	father & mother	His wife	
Ayres, Thomas Peyton	Feb. 15, 1846	Dec. 13 1926	Male	He has fought a good fight		
Ayres, Va.						
Ayres, Vilinda Ellen	May 3, 1855	January 9 1930	Female	We'll never Say goodbye in heaven		
Ayres, Myrtle	April 3, 1891	April 8 1891	Female	our baby	Daughter of T.P. & E.V. Ayres	
Ayres, Columbus	Oct. 23, 1892	Oct. 29 1892 .	Male	Son of TP. & Ella Ayres		
Baumbach, Mabel E.	May 7, 1887	June 1 1968	Female			
Baumbach, Roy A.	Nov.5, 1882	Sept. 21 1962	Male			
Baumbach, D. Leslie	Feb. 2, 1915	Dee. 8 1921	Male	Son of R. A. & Mabel Baumbach		
Baumbach, Doris M.	Sept. 11, 1928	March 27 1943	Female			
Beavers, John H.	May 12, 1869	Mar. 30 1943	Male			
Beavers, Ruben	Jan. 3, 1913	Dec. 4 1957	Male			
Behanna, Ursula A.	Feb. 2, 1905	Sept. 5 1985	Female			
Blakely, Evelyn	1873	1947	Female			
Blakey, Michael Allen		April 14 1961	Male	Son of Leroy and Joan Blakely	Budded on earth to blossom in heaven.	
Blakey, lois ann		Apr. 21 1931	Female	Our Babies		
Blakey, Alice May		Aug. 13 1936	Female	Our babies		
Blakey, Barbara Arleen	Aug. 16, 1958	Aug. 19 1958	Female			
Blunt, George B.	1880	1894	Male	Their Son		
Blunt, Laura E.	1841	1913	Female	wife of Taylor W. Blunt		
Blunt, Taylor W.	1838	1906	Male			
Bowers, Norma Jean	1923	1983	Female			
Bowers, Logan Louis	1920	1989	Male			
Bowers, Thelma G.	February 23, 1902	July 31 1987	Female			
Bowers, Carrie E.	April 17, 1895	March 16 1945	Female	Mother		
Bowers, Carson A.	August 11, 1895	June 24 1970	Male	Father		
Clair, William		March 1 1983	Male	Asleep till Jesus calls to wake		
Collins, Augustine E.	March 11, 1920	Sept 15 1965	Male			
Collins, Ramona L.	March 21, 1894	Feb. 19 1959	Female			
Collyer, Annie	Feb-4, 1875	May 1 1940	Female	A Loving Wife and Mother		
Dodson, Lemuel	Sept. 21, 1818	July 19 1891	Male	In memory of	Dearest husband Thou hast left usl they loss most deeply felt But is God who hath bereft me He can all my sorrows heal	
Dodson, Maggie		Nov.16 1887		Daughter of E. & Emma Dodson	Aged 11 months	Asleep in Jesus
Dove, George H.	Dec. 5, 1886	…11 1918	Male	Asleep in Jesus		
Dove, Elizabeth	July 11, 1840	Dec. 30 1917	Female	In Memory of	Asleep in Jesus	
Dove, Norman E.	Oct.24, 1866	Dec.17 1930	Male	At rest		
Dove, James M.		Aug. 23 1883	Male	At rest		

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Woodlawn Cemetery Marker Inventory

Name	Birth Date	Death Date	Gender	Epitaph 1	Epitaph 2	Epitaph 3
Dove, Mary E.	July 22, 1875	July 4 1891	Female	In Memory of	God's will and mine are game this day And cow more shall in and Thais e Calm in life's tossed way And the waves Sleep quietly	
Dove, Sadie E.	Aug2, 1881	Oct 13 1920	Female			
Dove, Alice I	1866	1941	Female	Wife of Norman E. Dove	At Rest	
Dove, Elizabeth	Oct 15, 1862	May 27 1928	Female	Mother	Sometime we'll understand	
Dove, Everett	1888	1950	Male	Husband of Nettie E. Petitt	thon wilt keep him in Perfect Peace	
Dove, Calvin Edward	Nov. 6, 1925	Sept. 20 1967	Male			
Dove, Lydia A.	Mar.7, 1856	n.d.	Female			
Dove, Andrew K.	June 3, 1861	June 7 1937	Female	Father	Sometime we'll understand	
Dove, John R.	Aug. 10, 1851	May 17 1919	Male			
Dove, Immanuel S.	Aug. 9, 1877	Oct 28 1875	Male			
Dove, Nettie E.	1886	1939	Female	Wife of Everett Dove	She hath done what She could.	
Duvall, Juanita Grace	July 8, 1923	Dec. 16 1975	Female	Mother	Duvall	
Duvall, Jesse Sylvester	Sept. 8, 1908	Aug. 21 1975	Male	Father	Duvall	
Duvall, Mable Elise	March 25, 1908	Nov. 8 1935	Female	Wife of Jessie S. Duvall	Duvall	
Duvall, James Garfield	Dec. 21, 1893	April 18 1962	Male	A Soldier of the Cross	Duvall	
Duvall, Sadie	April 24, 1898	Sept. 25 1989	Female	Life. Love. Laughter	Duvall	
Duvall, James Wesley	Oct. 29, 1935	Feb. 9 1936	Male	Duvall		
Fitzgerald, Blanche Irene	Sept. 18, 1914	June 23 1981	Female			
Fitzgerald, Thomas Daniel	n.d.	n.d.	Male			
Garrison, George E.		June 30 1894		He has gone from his loved ones this wife and Child, Whom he willingly toiled for and loved as his liFe, Oh God how Miserable is thy ways, To take from us this loved one in,t he best of his days.		
Herson, Grace L.	October 12, 1916	December 25 1997	Female	In Loving Memory		
Hinegardener, Perry Robert	Aug. 6, 1881	July 19 1968	Male	Father		
Hinegardener, Zada Florence	Oct. 13, 1884	May 10 1948	Female	Mother		
Hinegardener, Audrey V.	Sept. 16, 1923	Feb. 7 1928	Female			
Horton, Arthur L.	Aug. 24, 1931	Oct. 12 1931				
Horton, Julian S.	July 30, 1927	Nov.25 1928	Female			
Horton, Samuel D.	July 24, 1865	Sept. 10 1930	Male	Husband		
Horton, Annie L.	Aug. 11, 1895	Sept. 10 1965	Female	Wife		
Horton, Adeline M.	Nov. 10, 1867	Aug. 30 1956	Female	Wife		
Horton, William H.H.	Apnl14, 1893	oct.16 1978	Male	Husband		
Hudson, Edward Taylor	April 12, 1894	February 3 1968	Male			
Hudson, Mary Elizabeth	February 13, 1903	July 14 1934	Female			
Hullings, George W.	1836	1883	Male	His wife		
Hullinqs, Hannah L.	1844	1888	Female	His wife		
Hunter, Martha M.	Nov. 6, 1819	March 23 1888	Female			
Hunter, Mattie E.		July 27 1881	Female			
Hunter, Annie R.	March 25, 1879	March 29 1939	Female			
Hunter, William	April 16, 1847	July 19 1923	Male	In memory of		
Hunter, Elizabeth T.	March 27, 1856	Dec.24 1933	Female			
Hunter, James	April 12, 1813	oct.19 1894	Male			

Appendix A
Woodlawn Cemetery Marker Inventory

Name	Birth Date	Death Date	Gender	Epitaph 1	Epitaph 2	Epitaph 3
Hunter, Mary W.	October 30, 1851	February 20 1928	Female	In Memory of		
Hunter, Linnie A.		July 7 1884				
J.	N.d.	n.d.				
Jacobs, Irving	Mar.4, 1909	July 14 1966	Male			
Jacobs, Rachel	Feb. 1, 1872	Sept. 18 1937	Female	His wife		
Jacobs, John W.	March 7, 1865	Nov. 25 1955	Male			
Jacobs, Malcolm R.	June 7, 1954	Aug.2 1954	Male			
Jacobs, George W.	Jan. 17, 1904	July 10 1904	Male	Children of John W. & Rachel R. Jacobs		
Jacobs, Herman	Dec. 27, 1905	July 24 1961	Male			
Jacobs, Armstead	Nov. 28, 1893	Nor. 29 1893	Male	Children of John W. & Rachel R. Jacobs		
Jacobs, Elsie E.	May 7, 1901	Jan. 20 1908	Female	Children of John W. & Rachel R. Jacobs		
Johnson, Edward	April 30, 1844	Dec.28 1912	Male			
Kerby, James owen	Sep. 7, 1836	July 14 1905	Male	In memory of		
Kerby, Rachael	may 22, 1840	march 5 1885	Female	In memory of		
Lacey, Elizabeth	May 1, 1827	Apnl 1 1899	Female	Also his wife		
Lacey, Richard P.	Oct. 14, 1826	Oct. 14 1895	Male			
M						
M						
Mason, Rachel	Feb. 28, 1810	April 28 1889	Female			
Mason, Elizabeth	Nov. 14, 1825	March 24 1913	Female	She hath done what she could		
Mason, Wm. H.	1841	1875	Male	Father & Mother		
Mason, Anna T.	1844	1927	Female	Father & Mother		
Mason, William H.		Sept. 20 1875				
Mason, John	July 6, 1799	Sept. 21 1888	Male			
Mason, Ebenezer Erskine	Aug. 25, 1829	June 18 1910	Male	Blessed are the dead that die in the Lord		
McCalley, Robert W.	Aug. 7, 1913	Aug. 9 1913	Male	Son of Chas. & Lena		
Mero, Amanda M.	Feb. 7, 1835	Dec. 25 1912	Female	At Rest		
Mero, John A.		Jan 10 1894	Male			
Mero, Mary		April 1 1888	Female			
Miller, Bessie Ann	April 7, 1892	March 10 1981	Female	At Rest is God's hands		
Miller, George William	April 11, 189,	Dec. 17 1970	Male	At rest in God's hands		
No name						
Parker, Mary Edna	Feb. 29, 1896	Jan. 13 1970	Female	Good night down here Good morning up there		
Parker, Lafayette	Feb. 10, 1888	March 14 1945		Some day we'll Understand		
Perry, Marion 0.	May 1, 1886	March 22 1960	Male	At Rest		
Perry, Annie L.	Dec.28, 1889	Oct.25 1918	Female	At rest		
Petitt, Albert	Jan_22, 1923	Apr. 30 1923	Male			
Petitt, Elizabeth C.	1850	1911	Female	Father & Mother	He that believed in me though he werdead yet shall be live	
Petitt, India Alice	April 18, 1876	Feb. 24 1912	Female	His wife		
Petitt, Andrew J.	1844	1907	Male	Father & Mother	He that believed in me though he werdead yet shall be live	
Petitt, Elmer	Feb. 6, 1921	Apr. 5 1923	Male			
Petitt, Elizabeth	June 5, 1876	Sept. 4 1953	Female	Petitt	Wife of Christopher C. Petitt, Sr.	While you rest in peaceful sleep your memory I shall always keep

Appendix A
Woodlawn Cemetery Marker Inventory

Name	Birth Date	Death Date	Gender	Epitaph 1	Epitaph 2	Epitaph 3
Petitt, Christopher C.	Feb. 24, 1881	Feb. 5 1955	Male	PETITT	Husband of Elizabeth Schurtz	PETITT
Petitt, George Milton	Aug. 17, 1874	July 4 1938	Male			
Petitt, Lily	Feb. 6, 1915	May 31 1919	Female			
Pulley, Miriam L.	1918	1978	Female	Y2 U.S. Navy World War II		
Quesenbury, Joseph L.	1852	1934	Male	his wife		
Qulsenbury, Belle			Female	his wife		
Rappolee, Alice L.	September14, 1878	March 8 1962	Female	Inloving memory of	God is Love	
Rogers, Ruby Ellett	June 11, 1902	Feb.28 1984	Female			
Rogers, Georgiana	1845	1929	Female	Mother of Rachel Jacobs		
Rogers, Samuel	Dec. 18, 1910	Feb. 14 1979	Male	Loving Father		
Rogers, T. F.	Sept. 20, 1881	Sept. 6 1927	Unknown	A Smile hath passed which filled our home with light A soul Whose beauty mark that smile so bright		
Russell, John	1903	1943				
Ryan, Lenora E.	May 30, 1958	Feb. 18 1999	Female	Beloved wife	Living Mother	
Schurtz, Blanche M	1883	1940	Female			
Schurtz, Robert E.	Dec. 15, 1845	March 4 1904	Male	Father	Husband of Mary E. Schurtz	Asleep in Jesus
Schurtz, Mary E.	Nov.17, 1851	March 21 1924	Female	Mother	Wife of Robt. E. Schurtz	Gone but not forgotten
Scott, George W.	March 20, 1878	April 13 1967	Male			
Scott, Alice	Feb. 22, 1883	Dec.5 1948	Female			
Sheldon, Sara Anna	April 24, 1909	Jan. 21 1910	Female			
Sheldon, James W.	May 4, 1879	Jan. 7 1911	Male			
Shepherd, Raymond Winfield	n.d., 1884	Feb. 4 1920	Male			
Sherwin, Illegible R.	March 11, 1877	Oct.31 1877				
Sherwin, Marel R.	May 13, 1873	Jan 17 1879	Female	5 years & 8 mo.		
Simms, Maurice Edward	July 29, 1940	July 31 1940	Male			
Skillman, Sarah E.	May, 10, 1828	Jan. 5 1916	Female	At rest.		
Smith, Evelyn G.	1914	1969	Female			
Smith, Ethel May	Feb. 22, 1894	April 10 1947	Female	Wife of Richard L. Smith	At Rest in Peace	
Talbot, Frank	15 April, 1880	19 Oct. 1954	Male			
Talbot, Janie R.	4 May, 1889	11 July 1976	Female			
Talbott, Frances P.	17 Nov., 1913	28 Jan. 1992	Male			
Talbott, Richard S.	17 March, 1931	25 April 1931	Male			
Talbott, Irvin S.	16 June, 1917	11 April 1990	Male			
Talbott, Mary C.	2 April, 1909	26 Aug. 1931	Female			
Traux, Annie Rachel	1845	1911	Female	His wife		
Traux, Mary Jane	1823	1888	Female	His wife		
Troth, Martha W.	Feb. 22, 1860	Jan. 14 1939	Female	His wife	their three infants asleep in Jesus	
Troth, Frank W.	Feb.22, 1856	Jan. 22 1928	Male	his wife	their three infants asleep in Jesus	
Troth, Gertrude	Jan. 17, 1894	Aug. 18 1979	Female			
Truax, John B.	1842	1917	Male			
Truax, J. Harry	Feb-4, 1874	Nor. 17 1946	Male			
Truax, Henry	1817	1889	Male			
Tussing, Lula Virginia	June 30, 1889	Dec.13 1955	Female			
Tussing, James Vernon	Jan.17, 1923	Nov. 16 1967	Male			
Tussing, Woodrow	Sept. 17, 1917	Oct.22 1938	Male			
Unknown						
Unknown						

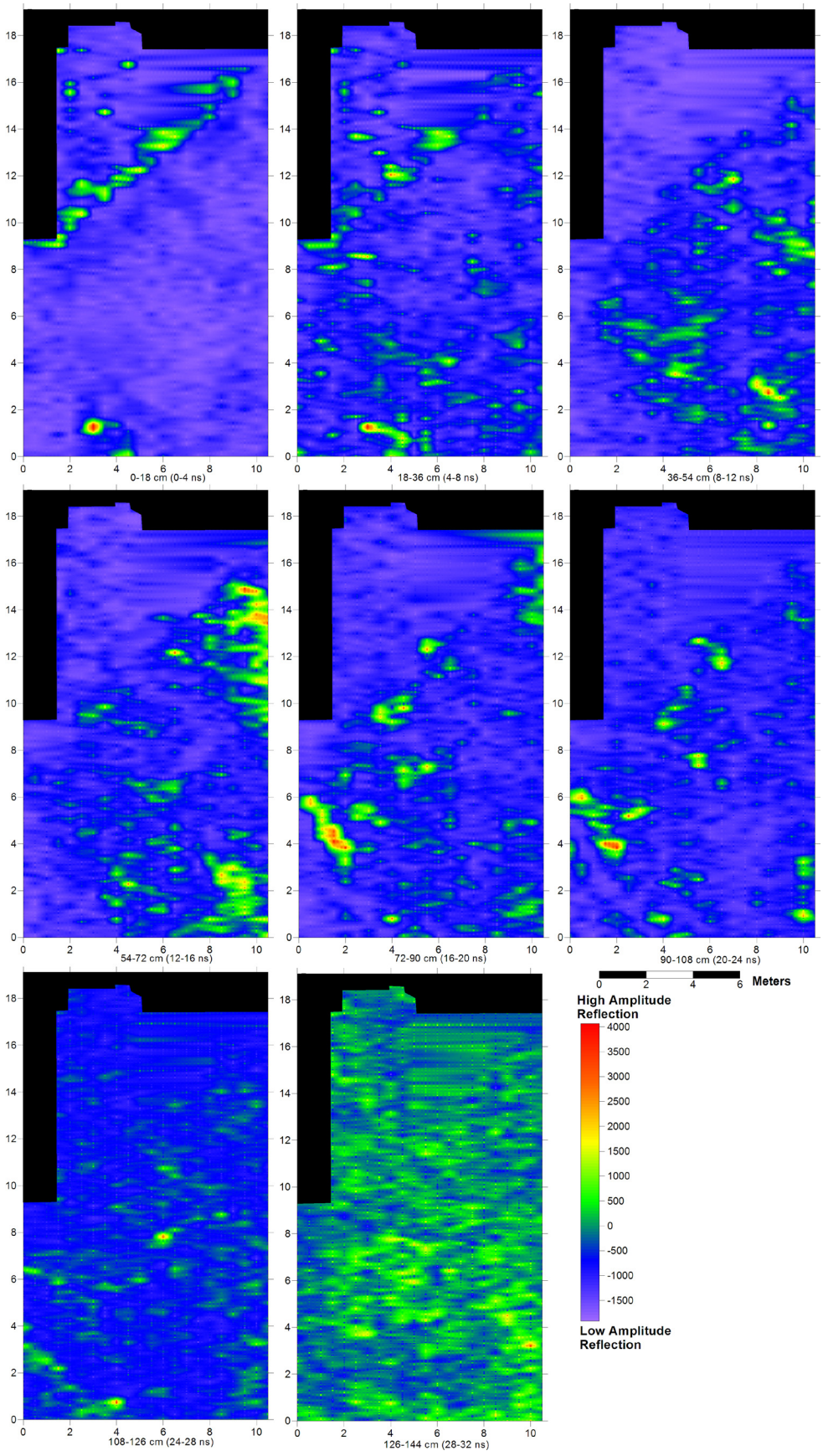
Appendix A
Woodlawn Cemetery Marker Inventory

Name	Birth Date	Death Date	Gender	Epitaph 1	Epitaph 2	Epitaph 3
Unknown						
Unknown						
Veirs, Royal K.	May 9, 1894	Sept. 14 1894	Male	Our Babe	Son of S. B. & S. J. Veirs	
Vest, Eleanor M.	july, 22, 1920	november, 4 1988	Female			
Walker, Herbert W.	1877	1941	Male			
Walker, Frances	1877	1963	Female			
Winstead, Robert Andrew	1911	1996				
Winstead, Elta	1907	1998	Female			

APPENDIX B: GPR AMPLITUDE SLICE MAPS

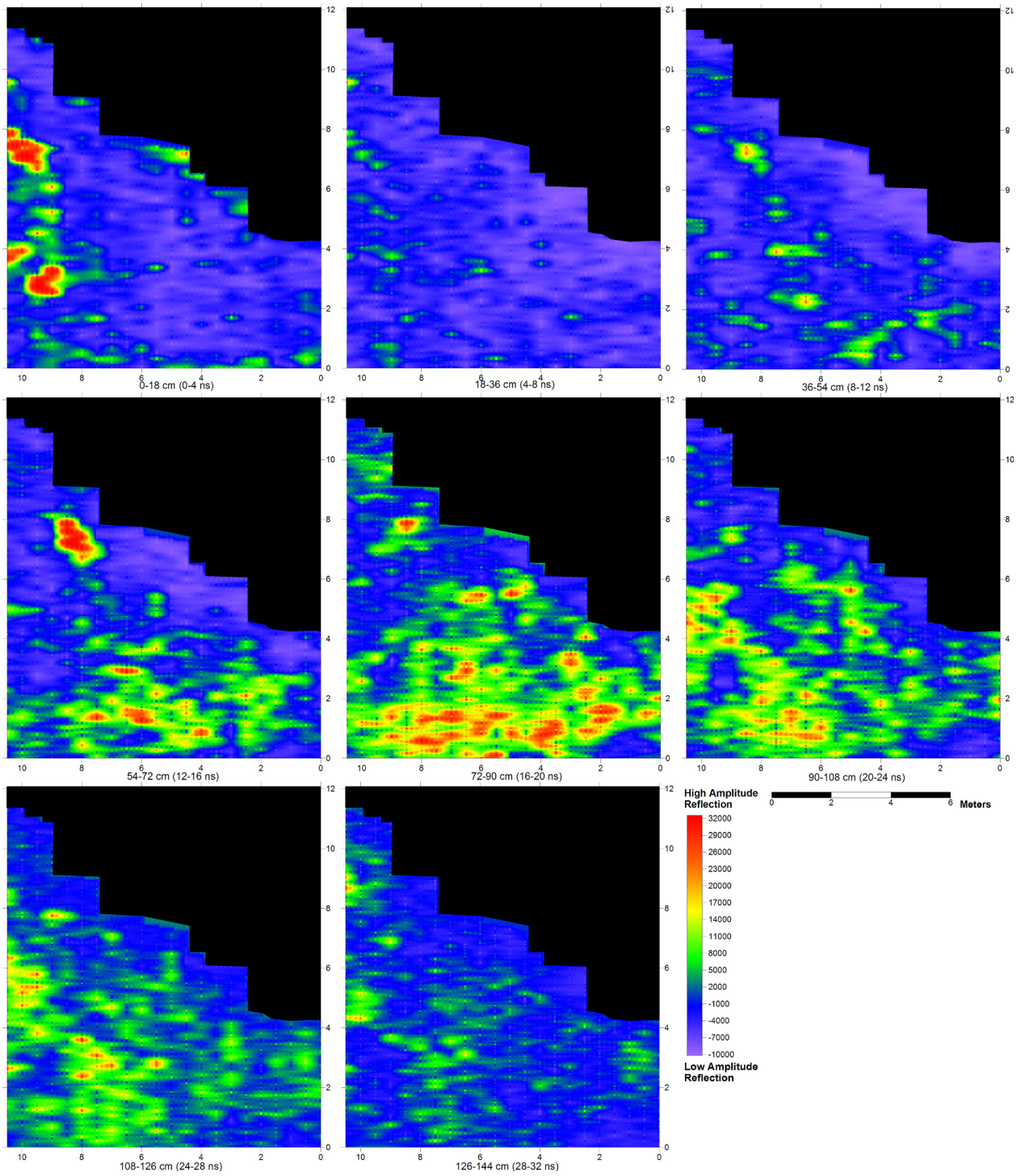
Appendix B

Grid Slice A



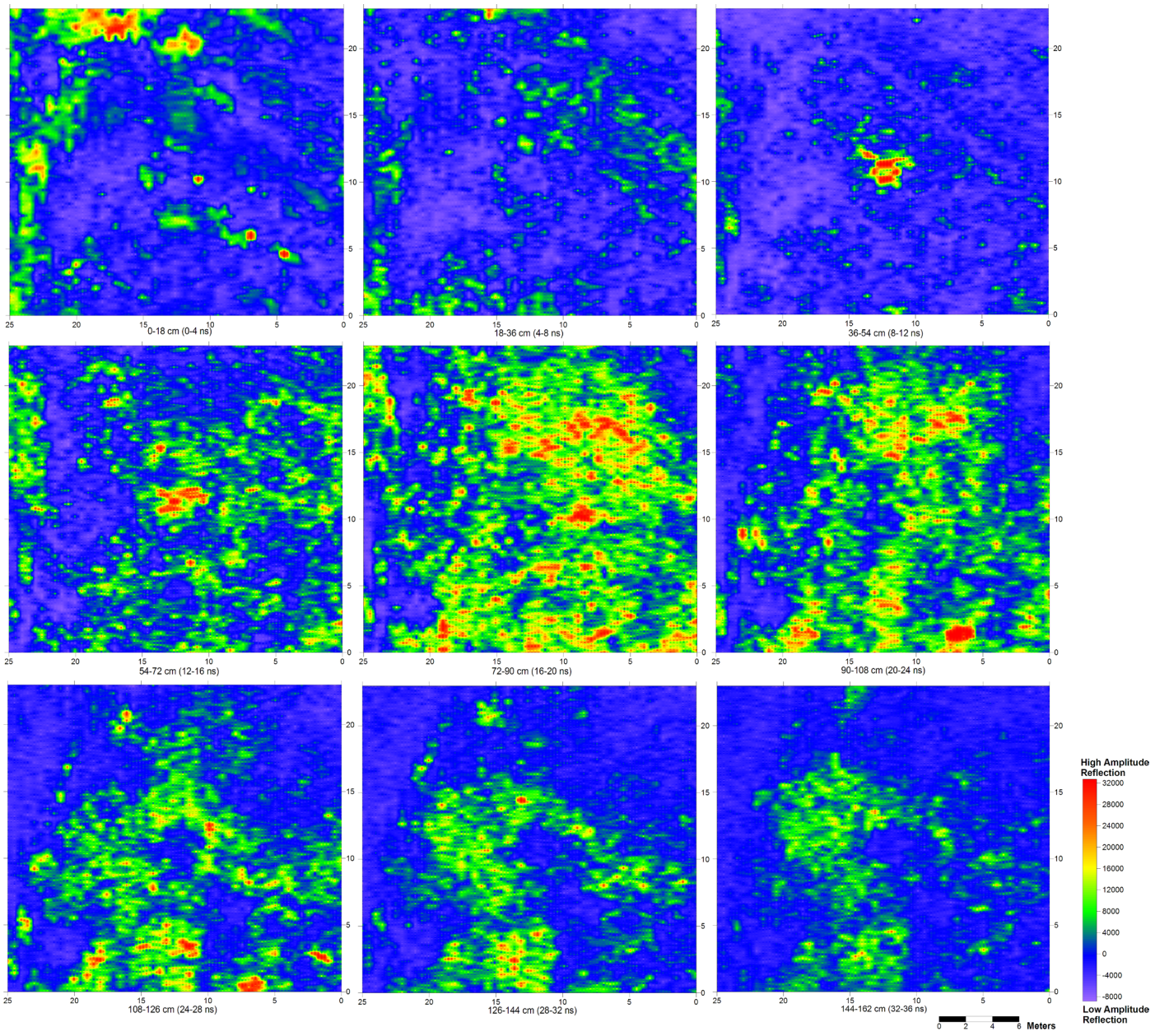
Appendix B

Grid Slice B



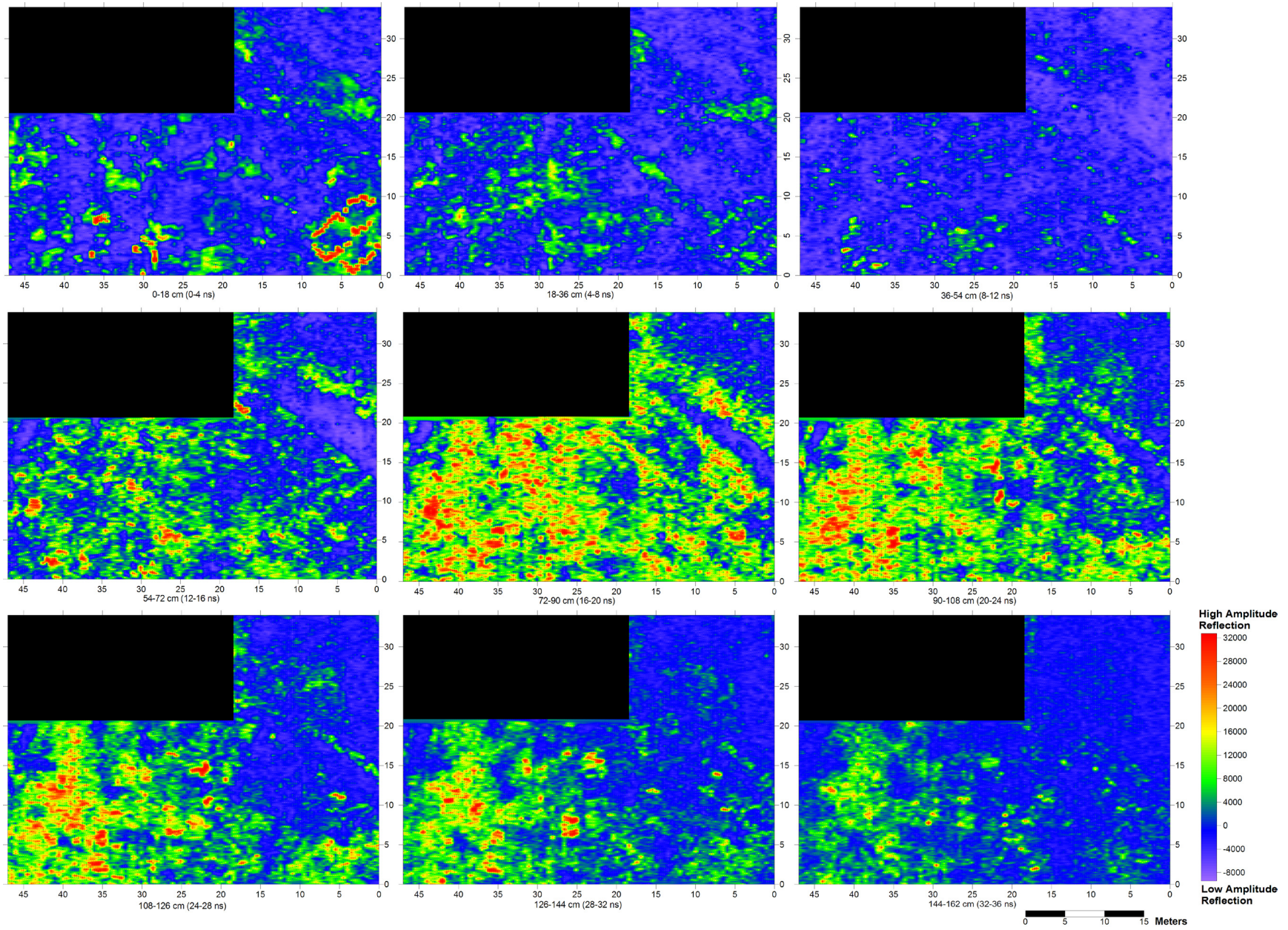
Appendix B

Slice C

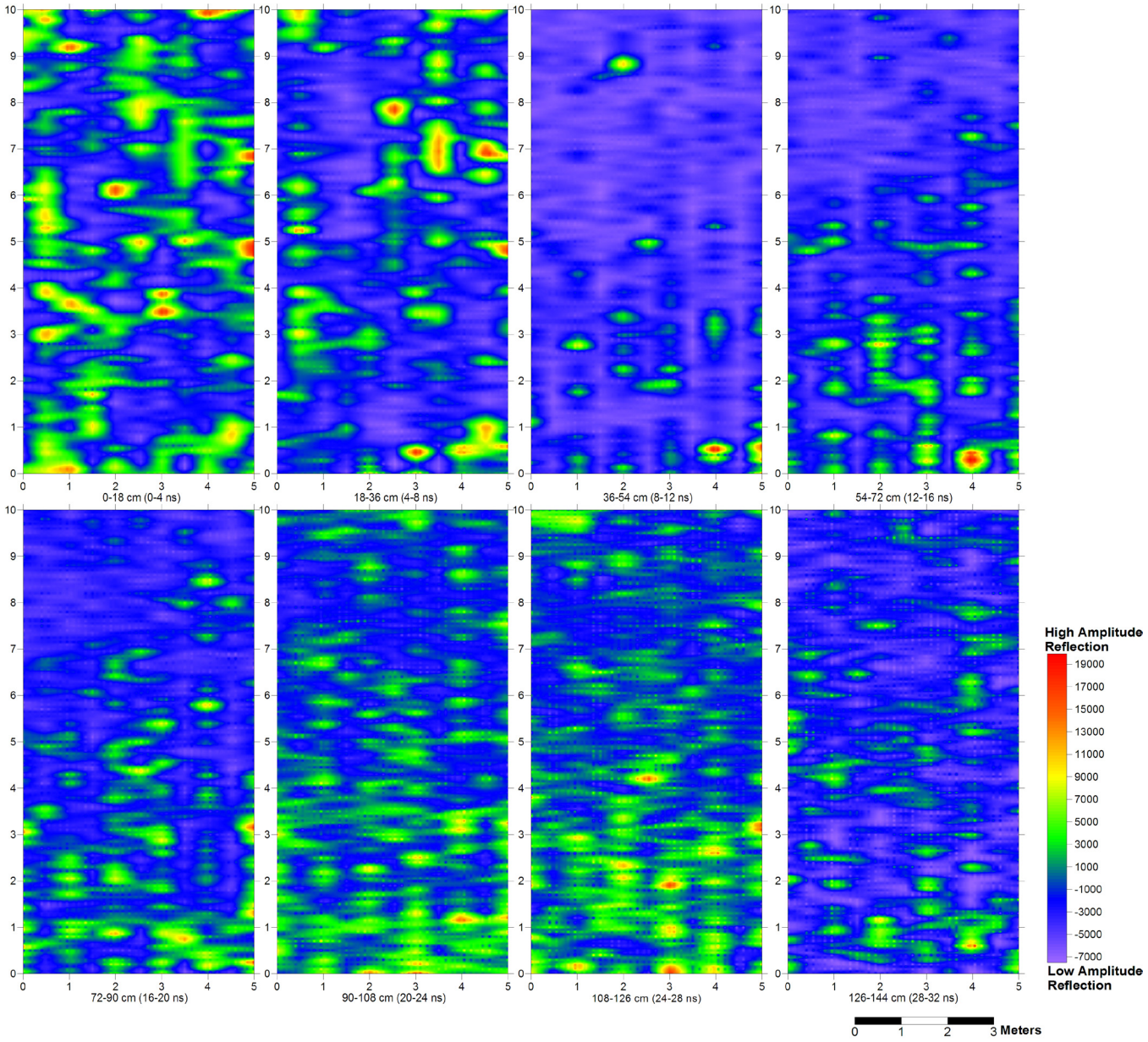


Appendix B

Slice D

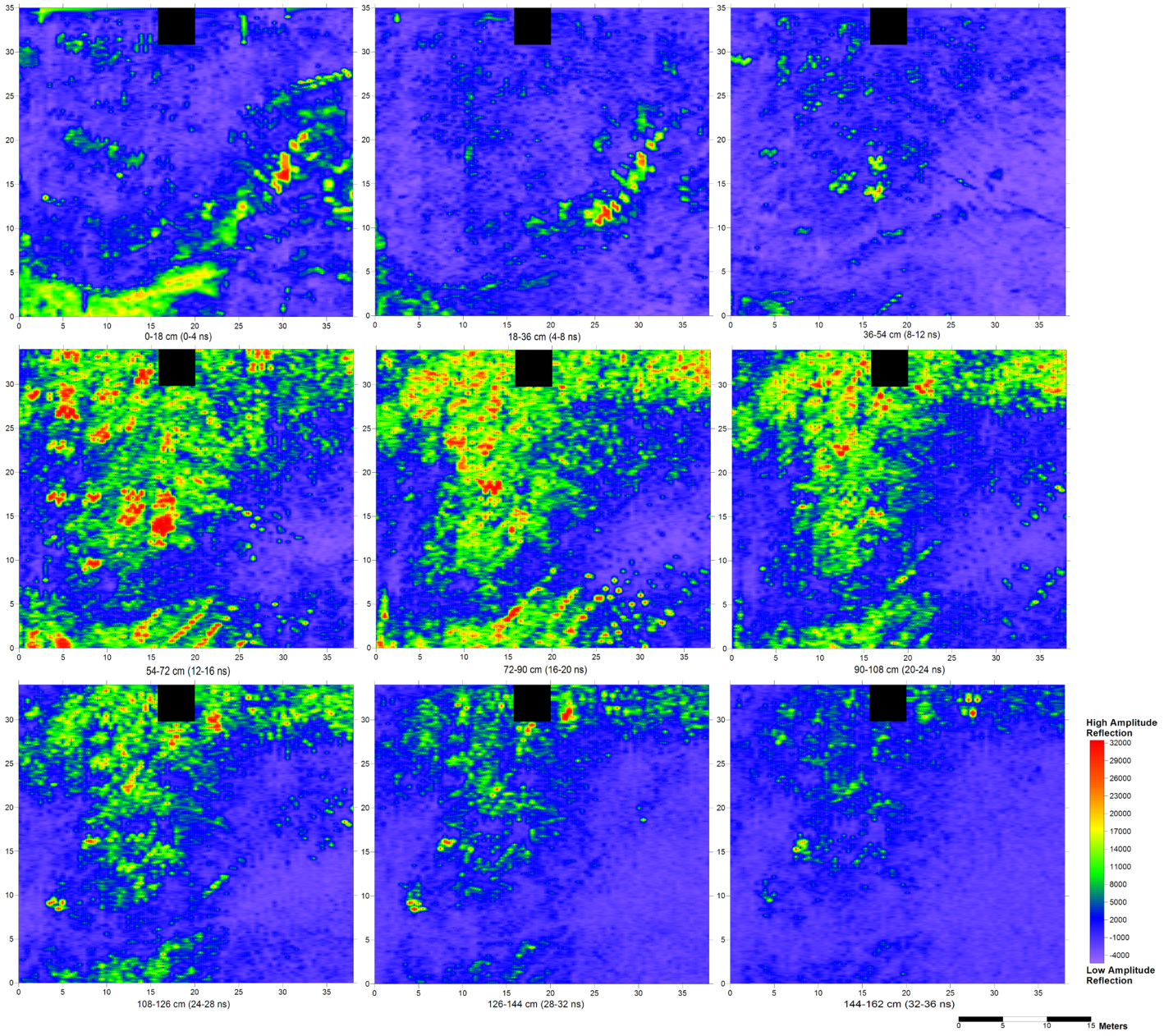


Appendix B
Grid Slice E



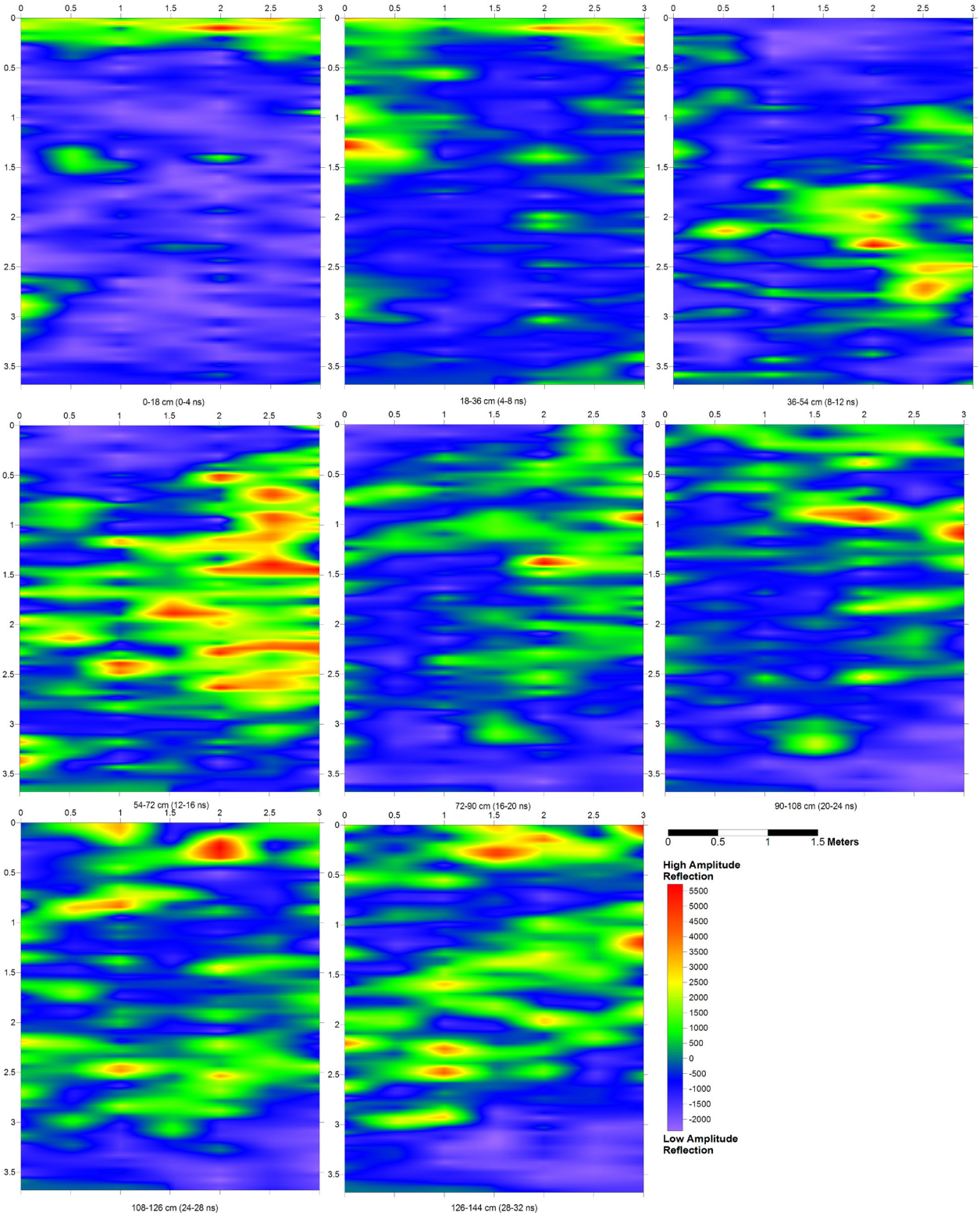
Appendix B

Slice F



Appendix B

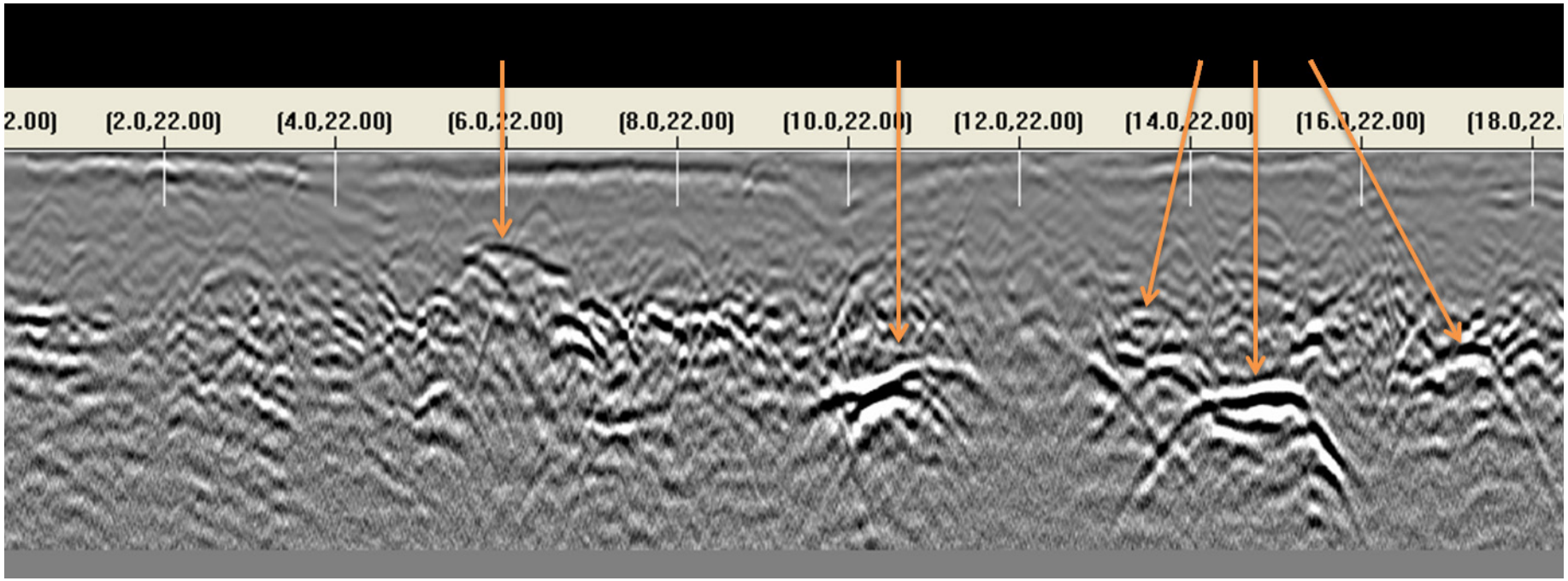
Grid Slice G



APPENDIX C: SELECTED GPR PROFILES

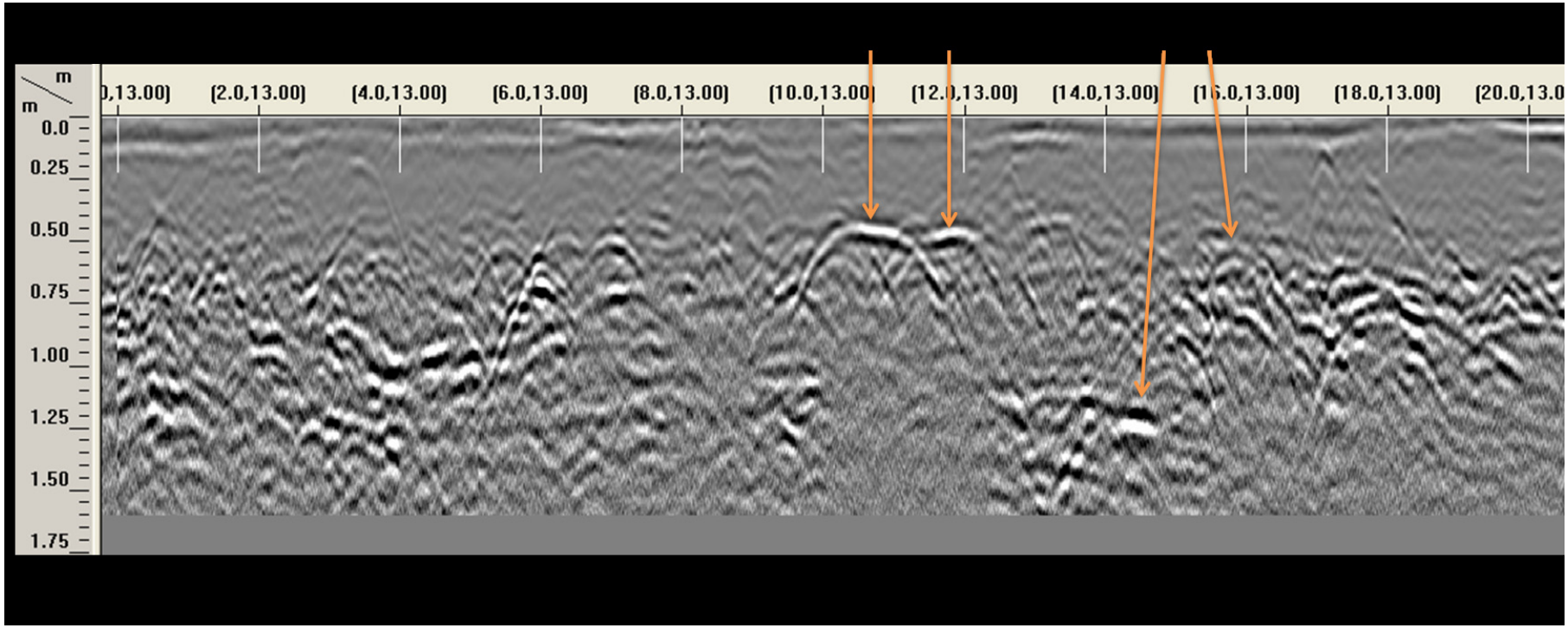
Appendix C

Amplitude Slice Map 2



Appendix C

Amplitude Slice Map 2



Appendix C

Amplitude Slice Map 3