

PRESERVATION ASSESSMENT OF THE CLAY CEMETERY, ATLANTA, GEORGIA



Chicora Research Contribution 536

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CHICORA RESEARCH CONTRIBUTION 536



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MANAGEMENT SUMMARY

This study was funded by a grant from the Georgia Department of Natural Resources, Historic Preservation Division and the Georgia Department of Economic Development to the Kirkwood Neighbors Organization (KNO). The work was conducted by Chicora Foundation on December 13 and 14, 2010 and involved one-day on-site and a meeting with members of the KNO involved in the preservation of Clay Cemetery.

The study examines a small (0.48 acre) family cemetery situated in the Kirkwood area of eastern Atlanta. It was begun by the Jesse Clay family in the second half of the nineteenth century and continued to be used into the early twentieth century. Today there are both marked and unmarked graves and the property is encompassed by the Kirkwood Historic District.

Recently efforts to preserve the cemetery have been undertaken by the Kirkwood Neighbors Organization. Volunteers have removed dense undergrowth, had a tree assessment conducted, and have collected historical research. The grant for this assessment was the next step in developing long-term preservation plans for the cemetery.

This assessment examined a broad range of issues that affect burial grounds, including access, security and safety, the landscape, maintenance practices, the condition of the stones, among other topics. As a result of the assessment this study proposes a range of preservation activities and provides budget estimates.

This report classifies all of the identified needs into three broad categories:

- Those issues that are so critical – typically reflecting broad administrative issues,

health and safety concerns, and issues that if delayed will result in significantly greater costs – that require **immediate** attention. These actions should be accomplished in 2011.

- Those issues that, while significant and reflecting on-going deterioration and concerns, can be spread over the next several years (i.e., 2012-2013). This allows some budgeting flexibility, but this flexibility should not be misconstrued as a reason to ignore the seriousness of the issues.
- Finally, those issues that represent on-going maintenance and preservation issues. These costs can be spread over the following two years (i.e., 2014-2015). Like the Second Priority issues, this budgetary flexibility should not be interpreted as allowing these issues to slide since further delay will only increase the cost of necessary actions.

Priority 1 activities are estimated to cost about \$6,200. Most of this funding will go toward the removal of four dead trees that degrade the cemetery landscape, and pose a hazard to both people and the stones. It is also critical that the entrance to the cemetery be ramped in order to provide safe and secure footing. Other high priority activities include various administrative tasks such as a formal recognition that all activities at the Clay Cemetery should follow the recommendations of the Secretary of Interior Standards for Preservation and that all work on the stones be conducted by trained conservators. We recommend that the front fence be repaired (a task that can be accomplished by volunteers) and that regulatory signage be erected.

Priority 2 actions account for nearly \$42,000. Of this, nearly half (\$18,600) is allocated to the removal of additional trees. An additional \$11,000 is budgeted for the repair of monuments in the cemetery. A final large sum of \$10,500 is budgeted for the installation of chain link fence along the north and south boundaries of the cemetery. It is critical that efforts continue to control the ivy and periwinkle in the cemetery so that it doesn't take over the newly cleared ground.

Priority 3 tasks are estimated to cost about \$9,580. This includes funding for necessary tree pruning. Funding is also recommended for professional historical research sufficient to allow the cemetery to be nominated to the National Register of Historic Places.

We envision that once critical actions are accomplished to stabilize the cemetery, the property will require an on-going yearly budget of \$2,500 to \$6,000 for maintenance (the amount dependent on what can be accomplished by volunteers).

We also encourage caution in efforts to turn the cemetery over to a governmental entity since we have found that historically counties and municipalities are not sensitive caregivers and that often the condition of cemeteries decline under their control.

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INTRODUCTION

The Project

In October 2009 Mr. Earl Williamson with the Kirkwood Neighbors Organization (KNO) contacted Chicora Foundation to request information on the assessment of the Clay Cemetery in Atlanta's historic Kirkwood neighborhood. We provided a proposal for an assessment that was subsequently approved in December 2010. The study was partially funded by a grant from the Georgia Department of Natural Resources, Historic Preservation Division and the Georgia Department of Economic Development. An agreement for the assessment was signed in December 2010.

The assessment was conducted on December 14, 2010 by the authors, Michael Trinkley and Debi Hacker. The work involved one day in Atlanta at the Clay Cemetery, as well as an evening meeting with individuals in the Kirkwood Neighbors Organization that are working in the cemetery.

Atlanta is the capital and most populous city in the state of Georgia with nearly 550,000 residents. It is the county seat of Fulton County and the location of the seat of government of the state of Georgia. A small portion of the city of Atlanta corporate limits extends eastwards into DeKalb County. The Atlanta metropolitan area, with more than 5.5 million people, is the third largest in the Southeastern United States and the ninth largest in the country. Metro Atlanta consists of 28 counties and includes a large

number of incorporated and unincorporated suburbs (both inside and outside Atlanta), exurbs, and surrounding cities (Figure 1). It encompasses 8,480 square miles. The Atlanta Combined Statistical Area (CSA), a larger trade area, has a population approaching six million and is the largest in the Southeast.

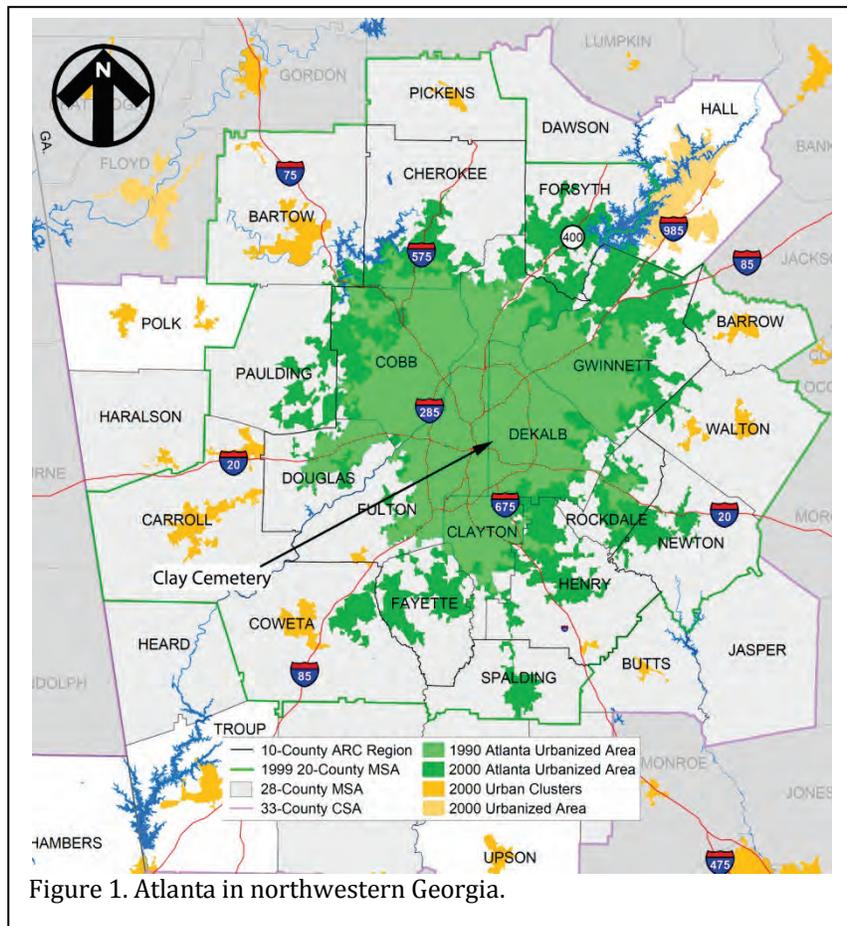
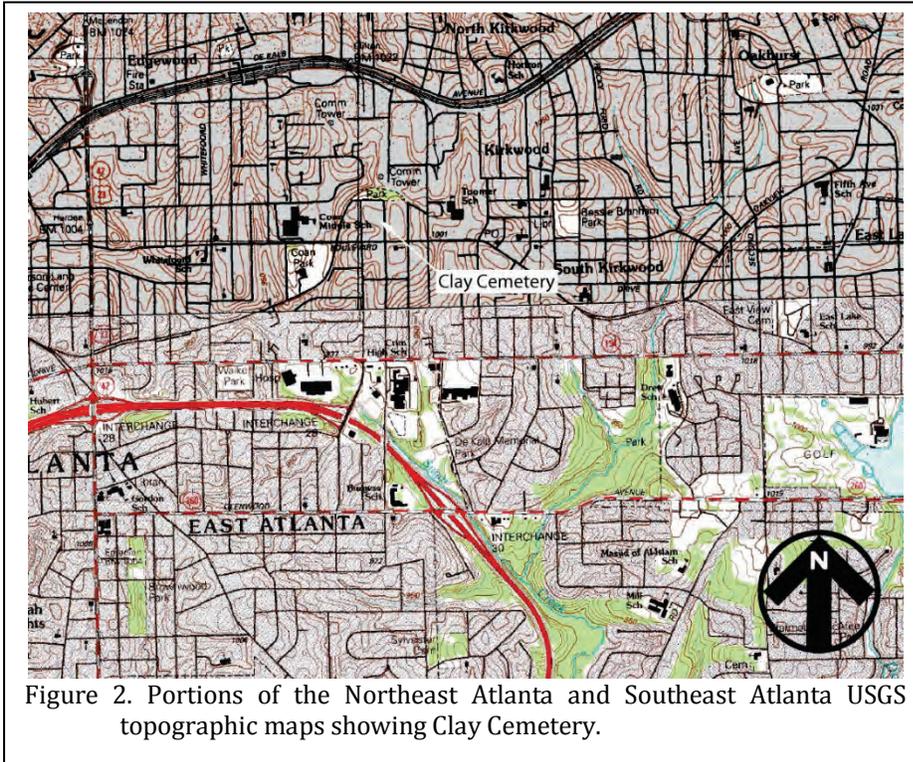


Figure 1. Atlanta in northwestern Georgia.

Atlanta's history is intimately tied to the development of the area's railroads. The name was originally "Atlantica-Pacific" after the Western and Atlantic Railroad, but morphed to Atlanta; the town was incorporated in December 1847.



Preservation Fundamentals

Preservation is not an especially difficult concept to grasp, although the key principles are not always clearly articulated. The fundamental concepts are well presented in the Secretary of the Interior’s Standards for Preservation (see Table 1).

This document reminds us – at least at a general level – of what caregivers need to be thinking about as they begin a cemetery preservation plan. Those responsible for the care of Clay Cemetery should

The Clay Cemetery is situated at the eastern edge of Atlanta’s corporate limits, south of DeKalb Avenue and north of I-20 (Figure 2). It is within what was historically known as Kirkwood, a neighborhood in eastern Atlanta designed in the late 1890s by architect Will Saunders. Situated in DeKalb County, it is located adjacent to Lake Claire, East Lake, Parkview, Edgewood, and Oakhurst. The community is bounded on the north by DeKalb Avenue and on the south by Memorial Drive.

The cemetery is just less than 0.5 acre on the west side of Clifton Street NE. Originally heavily overgrown, volunteers with the Kirkwood Neighbors Organization have succeeded in removing a large amount of brush and other debris from the cemetery.

be intimately familiar with the eight critical issues it outlines.

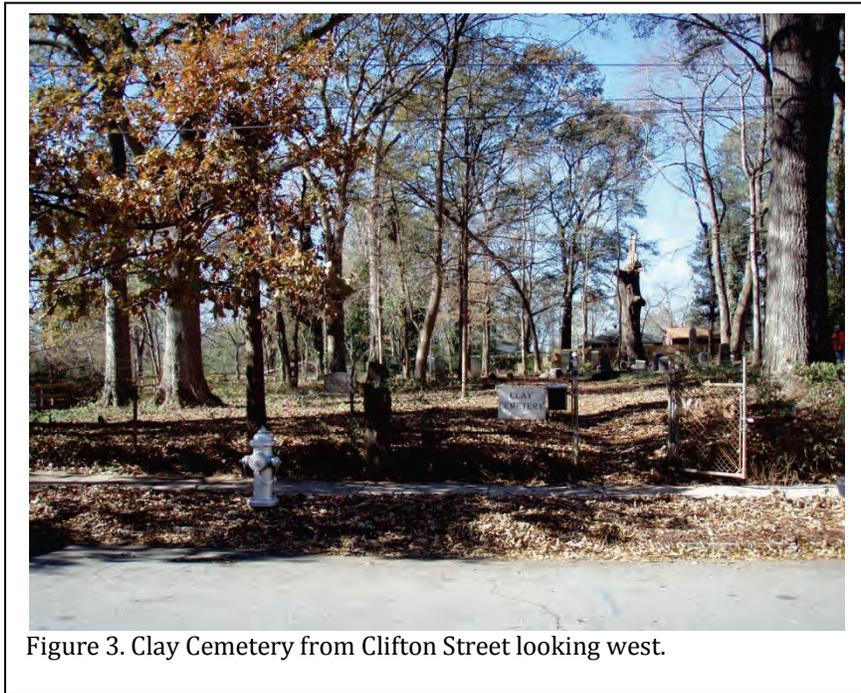


Figure 3. Clay Cemetery from Clifton Street looking west.

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For example, all other factors being equal, a cemetery should be used as a cemetery – not to walk dogs, not as a playground, not to store equipment, and not as a park. And until the caregivers are able to do what needs to be done, it is their responsibility to make certain that the site is preserved – it must not be allowed to suffer damage under their watch.

Caregivers must work diligently to understand – and retain – the historic character of the cemetery. In other words, they must look at the cemetery with a new vision and ask themselves, “what gives this cemetery its unique, historical character?” Perhaps it is the landscape, the old and stately trees, the large boxwoods, or the magnificent arborvitae. Perhaps it is the very large proportion of complex monuments, or the exceptional hand-made markers. It may simply be that it is a unique representation of a cemetery type rarely seen in a rapidly developing urban setting. Whatever it is, those undertaking its care and preservation become the guardians responsible for making certain those elements are protected and enhanced (whether they are particularly appealing to the caregivers or not).

Whatever conservation efforts are necessary must be done to the highest professional standards; these conservation efforts must be physically and visually compatible with the original materials; these conservation efforts must not seek to mislead the public into thinking that repairs are original work; and the conservation efforts must be documented for future generations. If the caregivers aren’t conservators, it is their responsibility as the stewards of the property to retain a conservator

<p>Table 1. Secretary of the Interior’s Standards for Preservation</p> <ol style="list-style-type: none"> 1. A property will be used as it was historically, or be given a new use that maximizes the retention of distinctive materials, features, spaces, and spatial relationships. Where a treatment and use have not been identified, a property will be protected and, if necessary, stabilized until additional work may be undertaken. 2. The historic character of a property will be retained and preserved. The replacement of intact or repairable historic materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided. 3. Each property will be recognized as a physical record of its time, place, and use. Work needed to stabilize, consolidate, and conserve existing historic materials and features will be physically and visually compatible, identifiable upon close inspection, and properly documented for future research. 4. Changes to a property that have acquired historic significance in their own right will be retained and preserved. 5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved. 6. The existing condition of historic features will be evaluated to determine the appropriate level of intervention needed. Where the severity of deterioration requires repair or limited replacement of a distinctive feature, the new material will match the old in composition, design, color, and texture. 7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used. 8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
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appropriately trained and subscribing to the Code of Ethics and Standards of Practice of the American Institute for Conservation (AIC).

The Secretary of the Interior reminds those responsible for the resources that each and every cemetery has evolved and represents different styles and forms. It is the responsibility of care-givers to care for all of these modifications and not seek to create a “Disney-land” version of the cemetery, tearing out features that don’t fit into their concept of what the cemetery “ought” to look like.

Likewise, caregivers are reminded that there will be designs, monuments, and other features that characterize the cemetery – and the caregivers are responsible for identifying these items and ensuring their preservation. Caregivers must be circumspect in any modifications, ensuring that they are not destroying what they seek to protect.

Before acting, those responsible for preservation are required as good and careful stewards to explore and evaluate the property, determining exactly what level of intervention – what level of conservation – what level of tree pruning – is actually necessary. And where it is necessary to introduce new materials – perhaps a pathway – into the cemetery, they must do their best to make certain these new elements are not only absolutely necessary, but also match the old elements in composition, design, color, and texture. In other words, if the cemetery has brick pathways, they would be failing as good stewards if they allowed concrete pathways – especially if the only justification was because concrete was less expensive.

Where conservation treatments are necessary, the Secretary of the Interior tells stewards that they must be the gentlest possible. However phrased – less is more – think smart, not strong – caregivers have an obligation to make certain that no harm comes to the resource while under their care. And again, one of the easiest ways to comply is to make certain that caregivers retain a conservator subscribing to the ethics and standards of the American Institute for Conservation.

Finally, the caregivers must also recognize that the cemetery is not just a collection of monuments and the associated landscape – the cemetery is also an archaeological resource. They must be constantly thinking about how their efforts – whether to repair a monument, put in a parking lot, or resurface a path – will affect the archaeological resources – archaeological resources that are the remains of people buried at the cemetery by their loved ones.

These are especially critical issues for Clay Cemetery. This

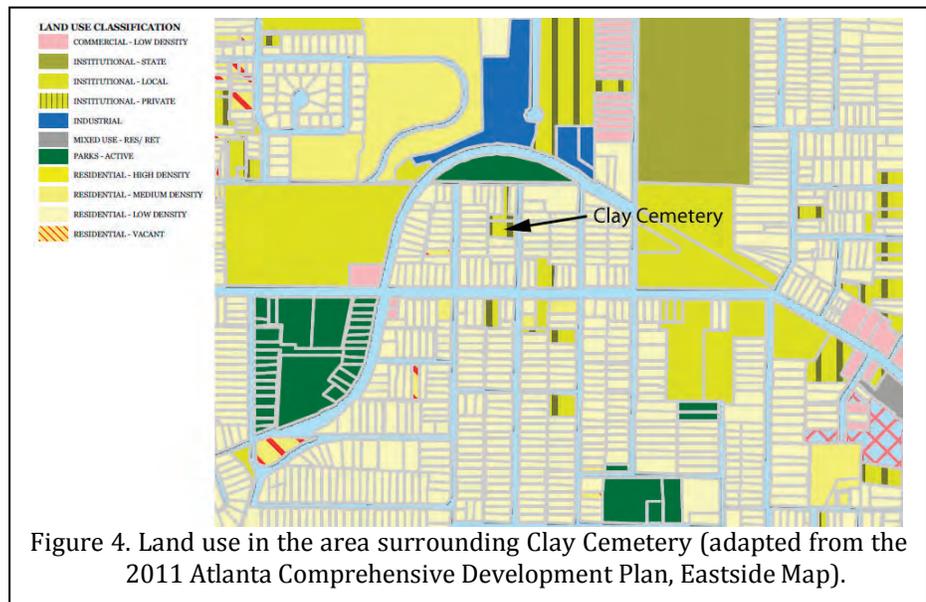
burial ground has been fighting gradual deterioration since at least the early 1960s. Largely forgotten by descendants and even others in the neighborhood, the property had become overgrown and it was used for the dumping of trash. Like many cemeteries in the midst of development tracts, it was passed over by the developer, leaving the burial ground for the eventual neighborhood association or property owner’s association.

Our first recommendation, therefore, is that those assuming care for the cemetery become thoroughly familiar with the Secretary of the Interior’s Standards for Preservation and reaffirm their responsibility as stewards of this historical resource to ensure that future preservation efforts are consistent with sound preservation principles and practices. These standards must become “talking-points” for all future discussions and decisions made concerning the cemetery.

The Cemetery, Its Setting, and Context

The Clay Cemetery is located in Block Group 1019 of Census Tract 206 of DeKalb County, Georgia. It is identified as parcel 15-207-01-050 and is given the property address of 0 Clifton Street, NE.

The 0.48 acre cemetery is roughly a

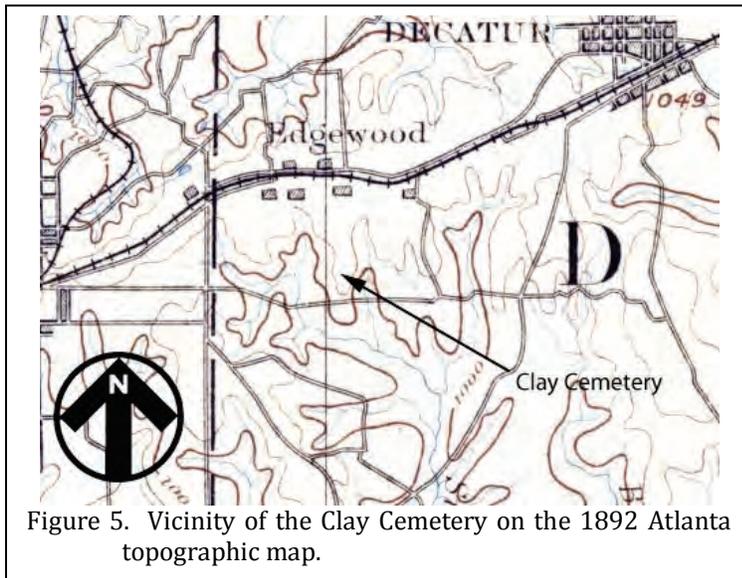


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rectangle measuring about 112 by 182 feet. The eastern boundary is Clifton Street NE; on the remaining three sides the cemetery abuts other lots. The cemetery lies within land lot 207 in the 15th District DeKalb County.

Looking at current land use, the area around the cemetery is primarily residential, with the immediate area identified as “Low Density Residential” and zoned “Single Family Residential.” A band of parks and forest is found on three sides to the north, east, and west, although two pockets of “industrial” use are found to the north and Memorial Drive to the southeast is identified as an area of dense commercial development (Figure 4). Within 0.5 mile are three parks, two schools, a public health center, an evolving medium density residential area, and two residual industrially zone parcels.

Figure 2 reveals that the cemetery is situated on the west edge of a relatively well defined ridge that slopes to the west and south. Elevations rise slightly to the east (where historically the main Clay settlement was located). Figure 5 reveals that prior to the extensive development of this area; the Clay Cemetery and associated farm were on a broad north-south



ridge line situated between two drainages. At a micro-scale, topography slopes up from Clifton Street, with a slight rise to the north edge of the tract.

Elevations in the cemetery are estimated to be about 1020 feet above mean sea level (AMSL).

The cemetery consists of Cecil-Urban land complex soils with slopes of 2-10%. The Cecil series consists of very deep, well drained moderately permeable soils on ridges and side slopes of the Piedmont uplands. A typical soil profile reveals an A or Ap horizon about 0.7 foot in depth consisting of dark yellowish brown (10YR 4/4) sandy loam overlying up to 1.5 foot of a red (10R 4/8) clay Bt1 horizon. The Bt2 zone extends to 3.5 feet and consists of a similar red clay with prominent yellowish red (5YR 5/8) mottles. A B/C transition occurs from 3.5 to 4.2 feet and consists of a red (2.5YR 4/8) clay loam. Soils are consistently acidic to strongly acidic.

The cemetery is situated in a relatively poor area of Atlanta. The median household income in the 2000 census was \$20,549, compared to the Atlanta-Decatur CCD average of \$45,580. In the Atlanta-Decatur area about 9.6% of the families are below the poverty level, while in the cemetery area 38.1% of the families live in poverty. While the unemployment rate for the Atlanta region is 10.2%, the rate for DeKalb County is 10.4% (December 2010, not seasonally adjusted).

City-wide the home ownership rate is about 59%. In the study area it is 27.2%. The median value of these residences is \$84,600, considerably lower than the Atlanta-Decatur CCD average of \$119,000. Nearly 51% of the housing units are renter-occupied and over half of the residents had lived in the Census Tract less than 5 years at the time of the census. This is generally the same city-wide, perhaps reflecting the metropolitan situation of Atlanta. Nevertheless, while about 16% of those in the Atlanta area have lived in the same residence for at least 30 years, only 12% in the cemetery area have similar longevity.

The median age for the area is 23, while city-wide it is slightly older, 32 years.

Nevertheless, 67.2% of the population 65 years or older reports a disability, compared to a city-wide average of only 45.5%.

The community around the cemetery is predominately African American (96.2%), although the Atlanta-Decatur CCD is 67% African American. Over 52% of those in the census tract have not graduated from high school and only 6%

Overall crime occurrences are down for all crimes in the Kirkwood area between 2009 and 2010 except for homicide, which saw a 70% increase. Nevertheless, the national median property crime rate is 34.3 crimes per 1,000, while the Atlanta rate is 85.5 per 1,000. The cemetery – and Kirkwood – is situated in Atlanta Police Zone 6, covering 15 square miles. Figure 6 shows the incidence of property-related crimes in the vicinity of the cemetery. These are crimes that are of special concern to cemeteries since they indicate the potential for cemetery-related thefts and vandalism.

The cemetery is today a green and peaceful enclave surrounded by residential development. It is not, however, well marked and use is sporadic and undirected. Some of the use of cemetery, such as by dog walkers, is clearly inappropriate. Funding for the cemetery is limited and largely related to various small grants.

Factors Affecting the Landscape Character

DeKalb County is in the Southern Piedmont land resource area. All but the northern tip of the county is contained within the Winder Slope province. This area has a gently rolling surface dissected by the headwaters of major streams flowing southwestward to the Atlantic. Stream valleys are generally deep and narrow, usually 100 to 200 feet below the surrounding upland divides where elevations are typically from 700 to 1000 feet AMSL. The northern fifth of the county lies in the Gainesville Ridges, an area of northeast-trending, low, parallel ridges separated by narrow valleys.

The pre-contact vegetation of the Georgia Piedmont has been extensively altered, so that it is now difficult to determine what natural communities were originally dominant. In the vicinity of Clay Cemetery they were likely oak, hickory, pine forests with the natural vegetation being oak/pine. The contemporary forest consists of successional or silvicultural stands of loblolly pine (*Pinus taeda*) and shortleaf pine (*Pinus echinata*) along with secondary pine-hardwood

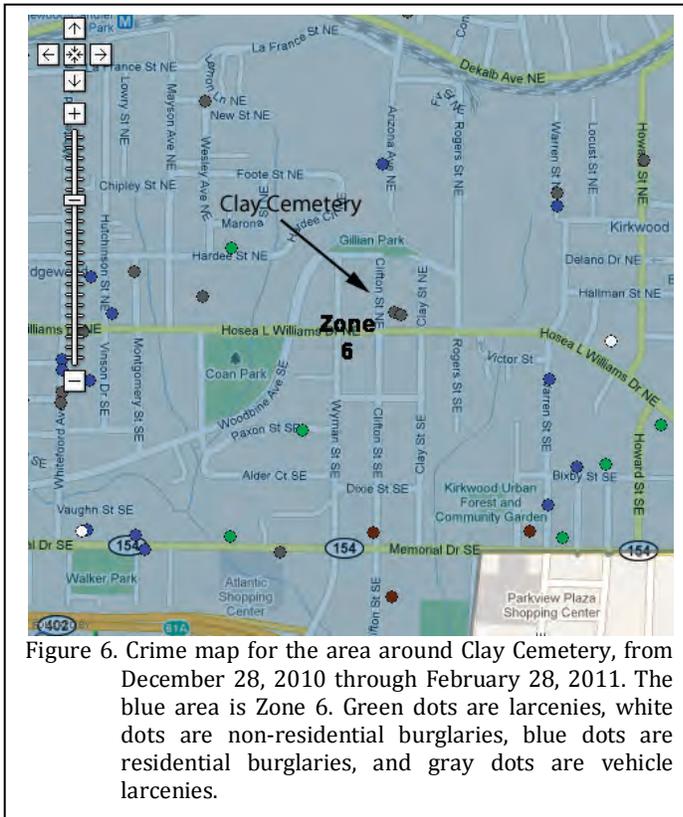


Figure 6. Crime map for the area around Clay Cemetery, from December 28, 2010 through February 28, 2011. The blue area is Zone 6. Green dots are larcenies, white dots are non-residential burglaries, blue dots are residential burglaries, and gray dots are vehicle larcenies.

have graduated from college. In comparison only 16% of the Atlanta-Decatur CCD residents have not graduated from high school and nearly a third have a college degree.

Some of this data may be dated since the neighborhood has seen significant rehabilitation over the past decade. As early as 2002 it was noted that housing prices were rising in the Kirkwood area, with “rock-bottom pricing on fixer-uppers . . . in the low \$100,000s” (Kirkwood Atlanta Community is Providing Niceties and Showing Evidence of Resurgence, *Atlanta Journal-Constitution*, August 4, 2002).

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forests that developed after repeated cutting or agricultural abandonment.

The cemetery today includes a range of native trees, including water oak (*Quercus nigra*), Southern red oak (*Quercus falcata*), post oak (*Quercus stellata*), sweet gum (*Liquidambar*

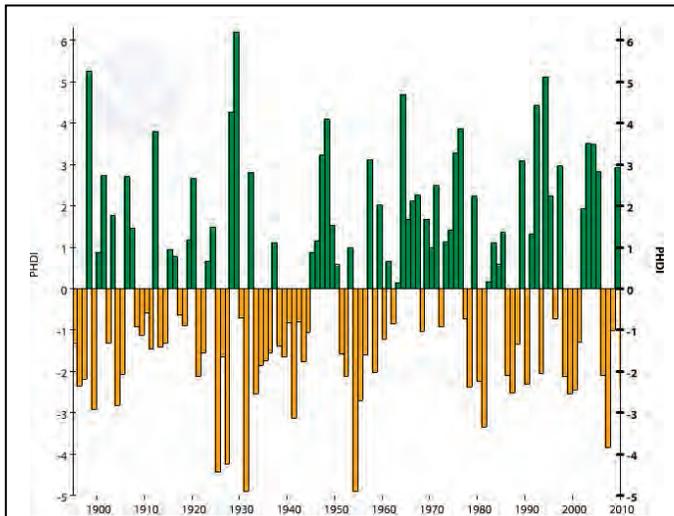


Figure 7. Palmer Drought Index for Georgia from 1898 through 2011.

styraciflua), tulip poplar (*Liriodendron tulipifera*), black cherry (*Prunus serotina*), and Eastern red cedar (*Juniperus virginiana*). Small examples of magnolia (*Magnolia* sp.) are also found but appear to be recently introduced, probably by birds.

Shrubs that were likely intentionally planted include liriopie (*Liriope* sp.), spiraea (*Spiraea* sp.), nandina (*Nandina domestica*), and privet (*Ligustrum ovalifolium*).

Three ground covers are also present and two are common in cemeteries – English ivy (*Hedera helix*) and periwinkle (*Vinca minor*). Both are considered invasive and the English ivy in particular can be a significant threat when it climbs trees and blooms. The third vine, found primarily on the front fence, is honeysuckle (*Lonicera* sp.).

A weedy vine also found in the cemetery is the cat greenbrier (*Smilax glauca*).

Atlanta’s climate is classified as humid subtropical. Prevailing winds flow from the

southwest to the northeast; this results in large amounts of humid air being pulled into the region from the Gulf. The area also has its own “tornado alley” tracking from Columbus to Marietta.

The average annual temperature is 61°F; in winter the average is 44°F, with an average minimum of 35°F. In summer, the average temperature is 77°F and the average daily maximum temperature is 87°F. The urban areas, however, serve to store heat so they can have temperatures 5 to 10°F higher than rural areas.

The total annual precipitation is typically in excess of 48 inches. Of this, 23 inches, or about 48%, usually falls in April through September, the growing season for most crops. The region has an average of 50 rainstorms per year. Figure 7 reveals that while 2007-2009 were years of drought, 2010 was a year of recovery. Nevertheless, droughts are not uncommon.

The average growing season for the Atlanta area is 208 days. Figure 8 shows that the Atlanta area is split between Zones 7a and 7b, with the Clay Cemetery in Zone 7b (with minimum temperatures of 5 to 10°F).

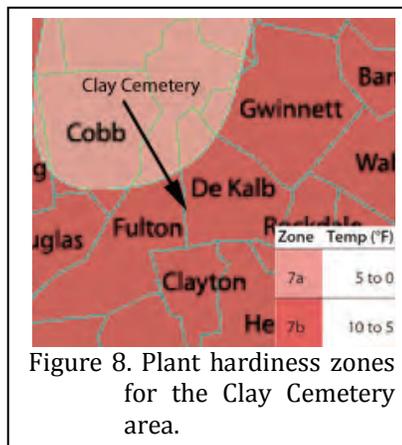


Figure 8. Plant hardiness zones for the Clay Cemetery area.

Atlanta is generally dominated by warm season grasses such as Bermuda, centipede, and zoysia. Further north, however, a transition zone is found where cool season grasses such as Kentucky bluegrass and fescue can thrive.

A factor not only affecting the landscape but also stone preservation, is the level of pollutants. Based on monitoring in the Atlanta area, the annual mean of NO₂ is 0.013 ppm and the annual mean of SO₂ is 0.003 ppm. These levels result in

significant levels of acid rain and deterioration of marble and many sandstones.

Since this is a relatively urban setting the EPA lists a rather large number of pollution and hazardous material sources in relatively close proximity to the Clay Cemetery. There are 12 sources of land pollution in the area, largely clustered to the north along DeKalb Avenue. There are two sources of air pollution - one in Edgewood immediately west of Kirkwood and another on DeKalb Avenue. There are 11 hazardous waste generators in the vicinity; most of these are also just north of the cemetery along DeKalb Avenue.

Recommendations

All decisions regarding modifications, alterations, additions, or other actions affecting Clay Cemetery should be carefully evaluated against the Secretary of the Interior's Standards for Preservation.

Special care should be taken to protect all remaining historic fabric and the context.

HISTORIC SYNOPSIS

This assessment was not tasked with conducting historic research on the Clay Cemetery and this synopsis relies on information provided by the Kirkwood Neighbors Organization (KNO) and the documentation in the National Register nomination of the Kirkwood Historic District. This district encompasses the area north of Memorial Drive, east of Montgomery Street, south of the MARTA rail transit line and CSX rail line, and west of the Decatur City Limits, an area of about 875 acres. The Clay Cemetery lies on the western edge of the district.

In spite of these efforts much of the Clay family's history remains undocumented, although we understand that a title search was conducted. Many of the citations used to document the cemetery and the surrounding Clay property are secondary. We recommend that far more comprehensive and detailed historical research be conducted, especially if there is a desire to nominate the Clay Cemetery to the National Register (it is currently a contributing property to the Kirkwood Historic District).

It is reported that the patriarch of the Clay family in Kirkwood, Jesse Clay (1786-1872), moved from Monticello in Jasper County, Georgia to the Atlanta area in 1826 (Anonymous 2009:4; Messick and Laub 2009:23). He acquired over 850 acres in Land Lots 206 and 207 – today the southwest corner of Kirkwood. The Clay farmstead was located near present-day Clay Street and one plat (Figure 9) shows Jesse Clay's dwelling and the "Burial Ground."

The plat illustrates features in only vague positions. For example the cemetery, shown abutting Wyman Street, is actually located further east, toward the dividing line between lots 9 and 10 where Clifton Street would be constructed. Nevertheless, comparison of this plat with Figures 2 and 5 reveals that the Clay homestead was built on a pronounced ridge, with the burial grounds just off to the west.

The plat does reveal that with Jesse Clay's death in 1872 the family began subdividing the

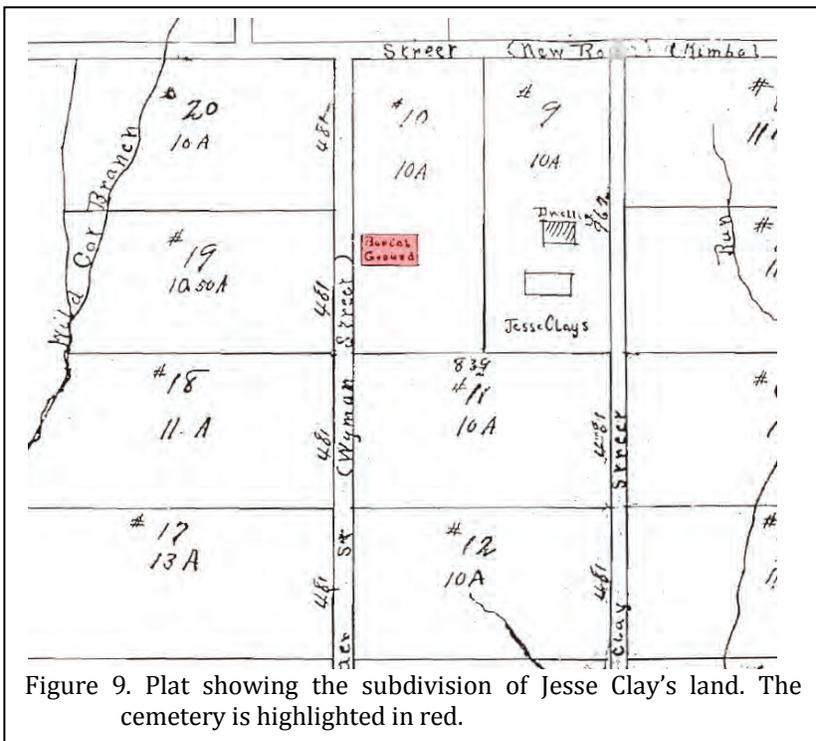


Figure 9. Plat showing the subdivision of Jesse Clay's land. The cemetery is highlighted in red.

plantation and attempting to sell lots. Whether this was successful is unknown, but by 1891 the property was owned by The Atlanta Suburban Land Company, which had divided the land into 1 acre or smaller lots and was selling them (Figure 10). The smaller lot sizes reflect the shift from the late nineteenth century when the area was described containing "beautiful suburban villas" to

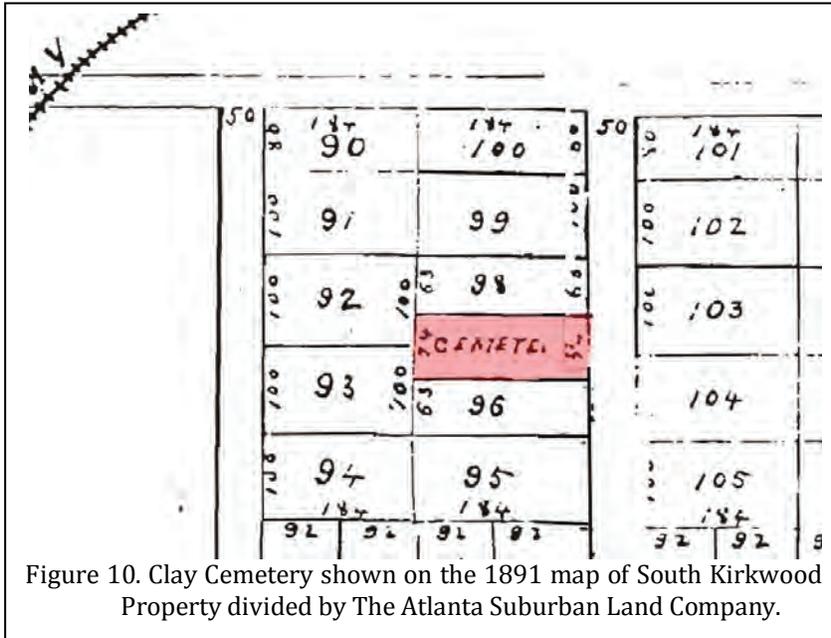


Figure 10. Clay Cemetery shown on the 1891 map of South Kirkwood Property divided by The Atlanta Suburban Land Company.

to become a white upper middle class neighborhood cemetery” (Anonymous 2009:4). This may be the case and we suppose that the evidence offered are the names on the tombstones in the cemetery. What is not clearly documented – and is beyond the scope of this study – is a careful genealogical study of those buried in the cemetery. What was their relationship, if any, to the Clay family? Did those individuals with names other than Clay own any property in the immediate neighborhood?

While there are certainly examples of family burial grounds gradually morphing into more general community burial locations, we do not have clear

the early twentieth century when the arrival of streetcars created Kirkwood.

Curiously, when The Atlanta Suburban Land Company revised their plat in 1893 the cemetery designation had been removed and the lot was simply labeled “97.” Whether this suggests that the company was attempting to sell the parcel is unknown, but it is worth further research to determine if the Clay family placed a reservation on their family cemetery.

An early twentieth century map (Figure 11) shows the effort to emulate the Olmstead suburban movement:

In Kirkwood, this less costly version of the Olmstead neighborhood had narrow lots, straight streets, parks and open spaces within the neighborhood (Messick and Laub 2009:29).

The cemetery lot is shown and labeled, although the boundaries are not clearly depicted.

It is reported that during this period the cemetery “evolved from a family burial ground . . .

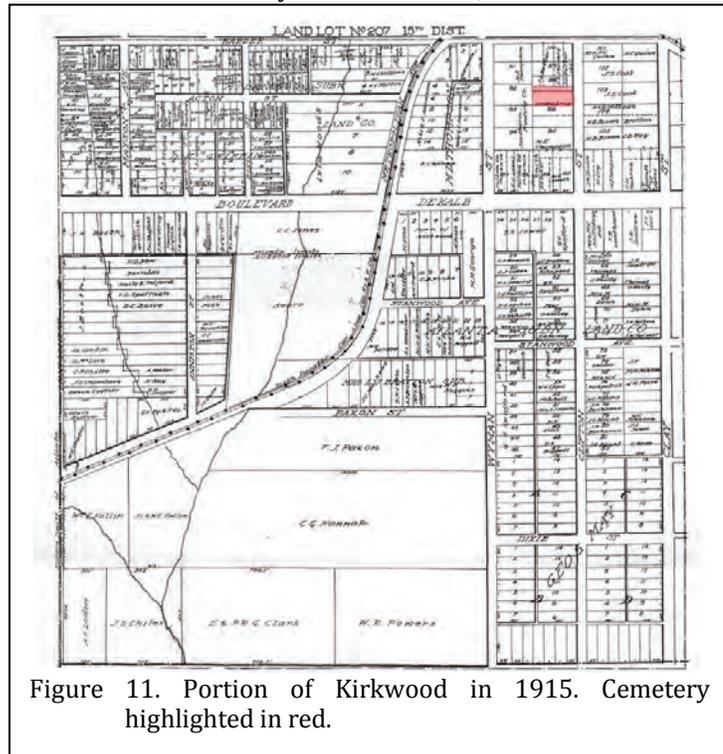


Figure 11. Portion of Kirkwood in 1915. Cemetery highlighted in red.

evidence of this in the case of the Clay Cemetery and additional research should be conducted.

The cemetery is again indicated on the 1928 Atlanta topographic maps. A number of

other structures are shown in the neighborhood, as well as a very long structure immediately adjacent to the north of the cemetery (Figure 12).

Messick and Laub suggest that racial and

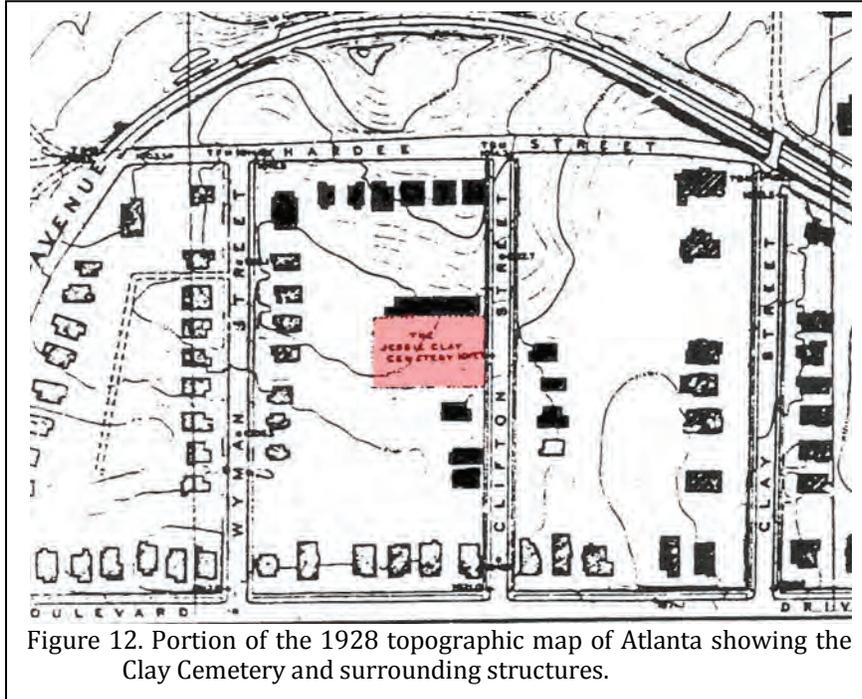


Figure 12. Portion of the 1928 topographic map of Atlanta showing the Clay Cemetery and surrounding structures.

economic changes began in the Kirkwood area as early as the end of the WWII, when newer development outside of Atlanta began to offer “spacious lots, carports and other attractive amenities, which urban neighborhoods like Kirkwood did not incorporate” (Messick and Laub 2009:32). A far more radical shift occurred, however, with school desegregation – resulting in “white flight” from places like Kirkwood. Messick and Laub indicate that this flight was actively encouraged by real estate agents who convinced,

long-time white residents that their neighbors were leaving in rapid numbers to be replaced by blacks, convincing them to sell at a rock-bottom price and then turning around and reselling the houses to incoming African-Americans at a record-high price (Messick and Laub 2009:33).

By 1967, the census reveals that Kirkwood was 95% African American – whites had effectively deserted the neighborhood. It has been suggested that about this time African Americans began using the cemetery. This is based on “oral history from the Clay family [that] reports African American burials in the cemetery beginning in the 1950’s” (Anonymous 2009:5).

Given the reports by Messick and Laub regarding neighborhood efforts to prevent African Americans from moving into Kirkwood, it is difficult to imagine that blacks would have been freely allowed access to a white burial ground. Nevertheless, this is an intriguing report and deserves to be further explored.

There is one marker, inscribed for Willie M. Smith, typically associated with African American funeral homes at the Clay Cemetery.

We have identified a death certificate for this individual (Fulton County, 025230) that should list where he was buried. Obtaining this certificate would assist in resolving at least this one question.

It is worth cautioning that reports of African American burial traditions, such as the use of milk bottles on graves, are very similar to Euro-American traditions and the two can be confused. In addition, these graves have had their goods stripped off and the original context has therefore been lost.

Table 2 lists those burials identified from the cemetery based on stones reported by Messick and Laub (2009:7-8), the Clay Family website (<http://www.clayfamilysociety.com/Cemeteries/ClayCemeteries-Georgia.htm>), the survey plat, and field observations during this assessment. Some burials are thought to be present (based, for example, on death certificates) but no stone is present. Other stones are identified on the survey

PRESERVATION ASSESSMENT OF THE CLAY CEMETERY, ATLANTA, GEORGIA

Table 2.
Individuals Reported Buried in Clay Cemetery

Name	Birth	Death
Burke, James C.*	[]	1/4/1914
Clay, Alex	10/9/1884	7/23/1886
Clay, Anna*	[]/[]/1857	2/10/191[]
Clay, Arthur	[]	10/9/1883
Clay, Cleveland	1/9/1836	4/28/1909
Clay, Clifford E.	2/5/1877	5/29/1878
Clay, Floyd B.	8/22/1888	7/15/1890
Clay, Florina	11/24/1878	3/16/1879
Clay, G.F. Infant*	[]	3/19/1912
Clay, Hal Amicus	[]	[]
Clay, Ida*	[]/[]/1882	2/17/1917
Clay, Jennie Hammond	1/10/1862	4/20/1920
Clay, John Allen	5/7/1881	7/5/1937
Clay, John W.	5/4/1861	9/20/1928
Clay, Maggie West	[]/[]/1889	4/1/1920
Clay, Margaret E.*	10/17/1848	2/13/1914
Clay, Nancy	4/8/1842	5/7/1903
Clay, Powell Wesley	7/11/1891	6/26/1892
Clay, Robert C.	9/27/1862	6/16/1863
Clay, Susannah M.*	[]	6/1/1923
Clay, Talmadge	[]	7/4/1899
Clay, W.D.*	[]/[]/1905	4/3/1922
Clay, Will D.*	[]/[]/1882	4/20/1914
Cox, Ruth	4/21/1905	4/26/1923
Dunn, Dan	[]	[]
Dunn, Gertie	6/8/1878	1/3/1899
Dunn, Jesse L.	[]/[]/1851	12/20/1901
Dunn, John Wesley	8/8/1883	2/11/1912
Dunn, Margaret Hammond	2/27/1854	8/8/1921
Dunn, Ruth	[]	[]
Felton, Maggie Belle	9/5/1887	1/24/1915
Hammon, Annie	6/18/1831	5/18/1908
Hammond, Ester	[]	[]
Hammond, John F.	3/28/1854	2/21/1919
Hammond, Matilda	[]	[]
Hammond, Ruth	5/15/1901	8/16/1916
Hammond, Sadie	7/6/1897	12/25/1900
Hammond, Sallie T.	9/26/1873	2/8/1925
Hammond, Tom	[]/[]/1873	[]/[]/1894
Howard, Nannie Lou Clay	1/19/1896	9/23/1921
Marston, Lila Lee	9/24/1904	5/29/1905
Marston, Ruthie Frank	10/12/1904	7/27/1907
Orr, Agnes May	2/21/1912	3/13/1912
Orr, Carl Thomas	2/24/1906	4/11/1928
Orr, Earnest Howard	9/9/1917	12/15/1917
Orr, J.T.	4/22/1874	1/4/1936
Parker, Florarinda	5/2/1849	10/9/1909
Parker, Thomas	4/30/1845	3/27/1921
Powell, Susan	[]	9/25/18[]0
Smith, Willie M.	2/1/1910	7/10/1983
Wood, Claudia Elise	8/8/1891	1/[]/1915
Wood, Earnest Howard	1/1/1915	1/1/1915

* Individual reported buried in Clay Cemetery, but no stone is present

plat, but are not found recorded or documented elsewhere. We noticed a variety of typographic or transcription errors in Messick and Laub. These have been corrected where obvious, but the list is not comprehensive.

We understand that a complete listing is available for all stones in the cemetery, complete with transcription and photographs. We recommend that this information be included in a

cemetery website, allowing greater – and more accurate – information concerning burials at Clay Cemetery.

Recommendations

There is no comprehensive historical study of the cemetery and we recommend that one be prepared, especially if there is a desire to list the cemetery individually on the National Register of Historic Places.

There remain significant questions concerning the relationship of individuals buried in the cemetery. We recommend that genealogical research be conducted to ascertain what relationships exist as well as where individuals who used the cemetery were living.

There are also questions regarding the potential use of the cemetery by African Americans. We recommend that oral history be documented and further explored. African American funeral homes should also be contacted in an effort to identify those that might have been using the cemetery. It would also be useful to examine death certificates that might list the Clay Cemetery.

ROADS AND PEDESTRIAN ISSUES

Access and Circulation

The plat of Jesse Clay's lands does not provide sufficient detail to allow us to determine if there was a road or pathway that permitted access or if the cemetery was in some fashion connected to the main settlement as part of a planned landscape. Figure 9 only suggests that the cemetery was originally an east-west oriented rectangle.

Nor is it clear if the original boundaries of the cemetery were such to conveniently support its division as a lot. It is possible that the cemetery was either enlarged or reduced in size to conveniently fit a subdivision lot.

What is clear is that once the Kirkwood neighborhood was laid out the cemetery was accessed by the road running north-south between DeKalb Boulevard (today Hosea Williams Drive) and what was then known as Hardee Street (today Wade Avenue). Clifton Street was constructed at least by 1891 and to establish a convenient grade the street was sunk about 3 feet below the existing grade (see Figures 3 and 13).

Figure 14 shows Clifton Street today. Road rights of way were laid out to be 50 feet in width. They are about 26 feet from curb to curb, the grassed strips are about 7.5 feet in width, and the sidewalks are about 5 feet.

The asphalt road is in good condition, although some cracks are beginning to be apparent. Curbs and gutters are in fair to good condition, although much was obscured by leaves and debris at the time of this assessment. It is likely that these debris affect drainage since they will readily clog street drains. The grassed strips are nondescript and poorly maintained except where individual homeowners have added them to their maintenance regime. These strips are used for above ground power and telephone poles,

as well as fire hydrants. The sidewalks in the immediate area of Clay Cemetery are in good condition with no obvious defects.

Residents appear to routinely park on the sides of the road, often reducing the street to one

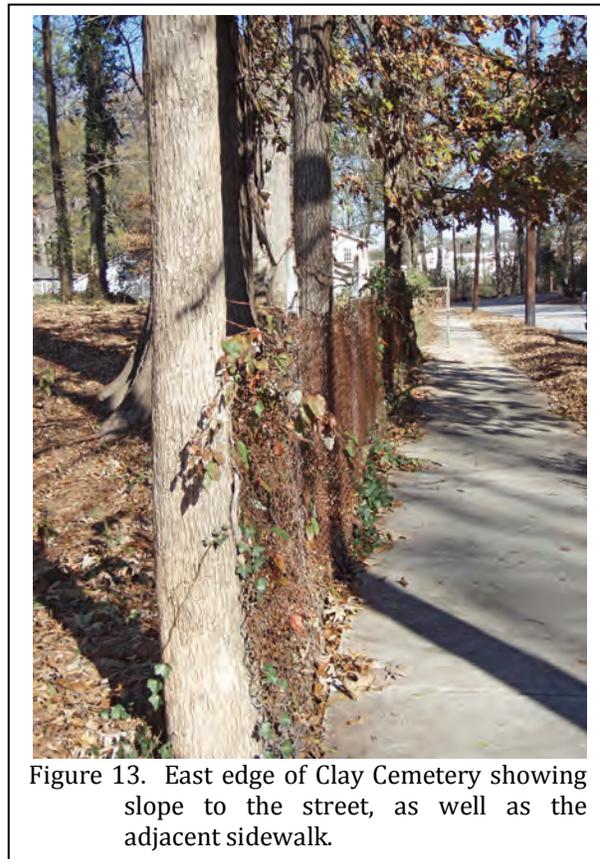


Figure 13. East edge of Clay Cemetery showing slope to the street, as well as the adjacent sidewalk.

traffic lane (see Figure 14). Parking is not designated and even the curb in front of hydrants is not marked as no-parking.

It is likely that the road system will be the preferred route to access the cemetery, at least by non-residents with a historical or genealogical interest in the cemetery.



Figure 14. Clifton Street immediately in front of the Clay Cemetery, looking northeast.

Once at the cemetery there is no obvious circulation system. Plots are identifiable as a vaguely gridded pattern, but even these are not consistently organized.

Pedestrian Access, Sidewalks and Pathways

While sidewalks are present and the cemetery is situated in a residential neighborhood, we observed no pedestrians during the brief period of our weekday assessment. We doubt that many historical or genealogical visitors to the cemetery would routinely use the sidewalks.

Atlanta's bikeway plan (http://web.atlantaga.gov/connectatlanta/images/Map_grid_images/Map%202023.pdf) identifies Hosea Williams Drive as an existing secondary bike connection. Rogers Street, to the east of Clay Cemetery, is identified as a proposed secondary bike connection. Many of the neighborhood streets, however, appear to have little traffic and are likely suitable for bike transportation. Nevertheless, this is

not likely a significant transportation mode for historical and genealogical visitors.

There are also public bus routes running along Hosea Williams Drive, as well as Wyman Street south of Hosea Williams. However, we again doubt that many visitors to the cemetery are likely to use this system.

Once in the cemetery there are no obvious pathways except for a small area of concrete sidewalk running north-south in the northeastern quadrant of the cemetery. Its function is uncertain and it provides no real benefit.

An issue of considerable concern is the slope immediately within the gate of the cemetery. For about 20 feet the slope, leaves and vegetation, and clay soils make pedestrian access treacherous (Figure 15). This area requires immediate



Figure 15. Entrance to the cemetery. The slope, leaves, and slick soil make this a dangerous entrance for many pedestrians.

improvement. These improvements may require the area be examined for the presence of graves.

Although steps could be constructed, they would not be accessible and, depending on construction, could lead to additional maintenance issues. A more sensitive approach may be to grade the slope and install an in-ground walkway. There are several suitable alternatives. Exposed aggregate concrete with small-sized stones provides an even surface and is an appropriate hard paving where texture is desired to provide warning or traction. Interlocking concrete pavers set on sand can provide a relatively smooth and regular walkway. Matching interlocking blocks could also be used on the sides to help control erosion.

Finally, while soft paving materials would have minimal visual intrusion, even those capable of being compacted (such as decomposed granite) would require on-going maintenance to prevent erosion. Soft paving materials also require stabilization with a hard edges, such as wood header or metal edging and these not only require maintenance, but may pose a trip hazard.

Universal Access

The ADA or the Rehabilitation Act of 1973 is generally not interpreted to apply to cemeteries by the Department of Justice. Nevertheless, we are an aging population. Many who visit cemeteries are elderly and therefore impairments associated with older age should particularly be taken into consideration.

There are few naturally limiting factors for ADA compliance or universal access at the cemetery. The topography is such that ramps are unnecessary, except at the entrance (discussed above). The major limiting factors are the soil and vegetation that would make wheelchair access problematical.

While extensive modifications would be out of character, at the present level of use we are not convinced that there is a demand adequate to justify either the expense or the damage to the historic fabric.

If at some future date pathways become necessary because of visitation, we generally discourage the use of hard pathway materials. Gravel is difficult for the elderly to walk on and

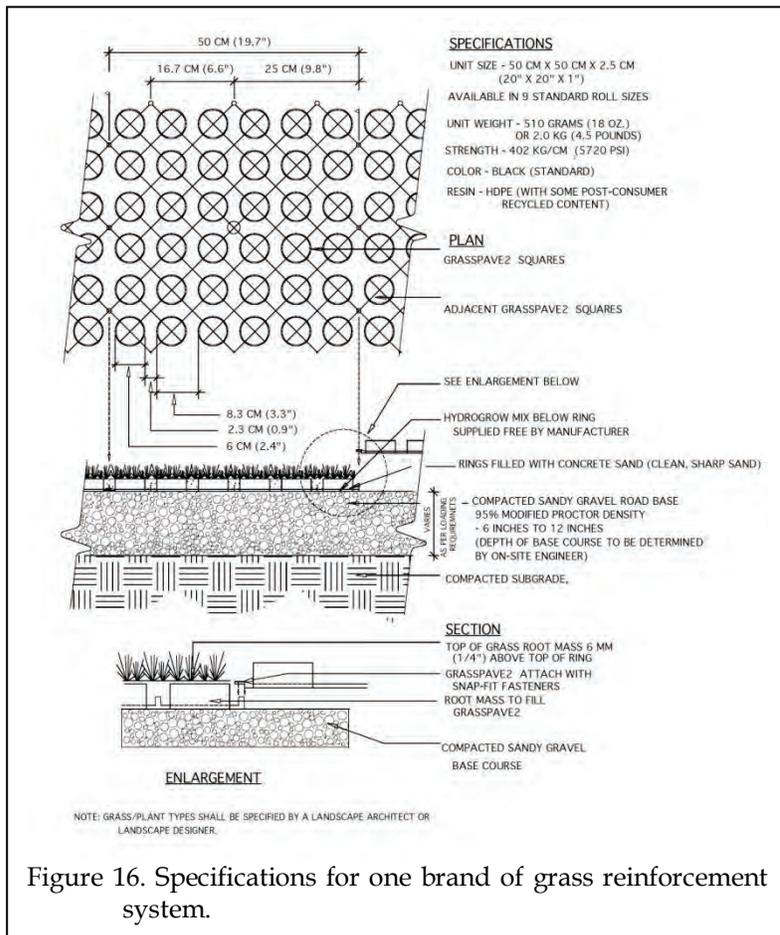


Figure 16. Specifications for one brand of grass reinforcement system.

requires a great deal of maintenance. In addition, it represents a harsh introduction into a burial ground where pathways were never found historically. It is equally important to avoid simply repeating street pavement details that would clash with the cemetery setting.

Should pathways eventually be required a far better choice is to use grass tracks underlain by a reinforcing system to provide a firm, but free draining layer on which vegetation can grow. One

grass reinforcement system is the Grasspave² porous pavement by Invisible Structures, Inc. (<http://www.invisiblestructures.com/grasspave2.html>). This system has the added benefit of having been approved for ADA use (Figure 16).

Paths should be at least 5'7" in width to accommodate wheelchair users and people with visual impairments assisted by a sighted person or guide dog. A path of this width will also allow an adult and child to walk together. The minimal suitable width is 3'11" and if paths this narrow are required, it is helpful to install at least occasional passing areas that are at least 5'7" in width.

There are, of course, additional issues in achieving universal access, such as the use of appropriate signage and even the selection of routes in the cemetery. While ADA compliance may not be required, the goal should be to create additions to the cemetery that are as accessible as possible. In addition, existing obstacles to access should be removed wherever possible.

Recommendations

The entrance to the cemetery should be improved using an exposed aggregate concrete ramp or interlocking pavers. This is necessary to reduce the slip and trip hazard at the entrance.

Visitation at the cemetery does not reveal a need for pathways at present. However, should they be called for in the future they should not clash with the historic fabric of the cemetery or present a visual intrusion. The use of grass reinforcement materials can be used to create permeable pathways that will also be universally accessible.

All decisions regarding the introduction of new elements or the removal of existing materials should be evaluated against universal accessibility needs, with improved accessibility an identified goal.

LIGHTING AND SECURITY ISSUES

Vandalism

At the time of our assessment, caregivers reported no known vandalism. There are toppled stones, but it is uncertain if these were the result of previous vandalism or damage from falling trees and limbs. The latter is likely given the lengthy absence of routine maintenance. In addition, the cemetery lacks many of the common signs of vandalism, such as broken stones and spray paint graffiti.

Nevertheless, we know from the previous discussion that the cemetery is situated in an area where property crimes are relatively high. Moreover, there is no formalized mechanism for reporting vandalism.

There are accounts of vagrants as well as occasional finds of bedding and camping supplies in the cemetery. These, however, have been

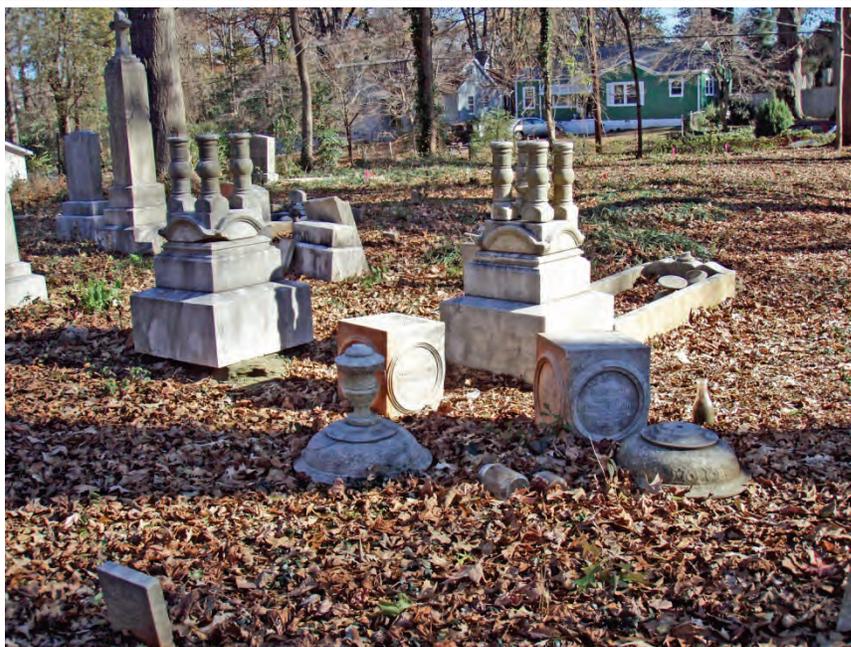


Figure 17. Toppled stones do not necessarily indicate vandalism.

reduced by the cleaning and maintenance of the cemetery.

Fencing at the cemetery is found only in selected areas, forming a permeable boundary. At the front of the cemetery is an old chain link fence and gate (which is typically locked). Along the north side of the cemetery there are remnants of a wire fence. At the western edge is the board fence of the rear neighbors. Along the south side is a low rail fence infilled with metal wire. This fence does not extend to the road, leaving a sizeable open area.

Options to Minimize Vandalism

Fencing

The existing fence should be repaired. Along the front of the cemetery, leaves and soil piled against the fence should be removed, re-establishing the original ground profile (which may require stabilization to prevent additional erosion). With the fence cleared, it should be straightened and repaired where necessary. Caregivers should evaluate whether the barbed wire is necessary along the street frontage. It gives the cemetery a foreboding appearance. While we recommend the retention (or replacement) of barbed wire on side fences, consideration should be given to removing it from the front of the cemetery.

The fence should be repainted with Rust-



Figure 18. Existing fences along the edge of the property. Top photo shows the north fence; bottom photo shows the south fence.

Oleum Chain Link Fence Paint or with a product such as ZRC Cold Galvanizing Compound.

We are told that KNO is considering the use of a low wood fence along the south side to blend in with the existing wood fence. Such a fence would only serve to mark the boundary and do nothing to secure the premises.

A better choice would be to extend the same chain link fence found in the front along both the north and south sides. We recommend a 5-6 foot fence. The fence fabric should be PVC color coated per ASTM F668 Class 1 minimum.

The coating will significantly reduce maintenance and improve the life span of the fencing. Mesh should be 1" and 11 gauge. Most chain link is 2"; the reduced size makes it much more difficult to climb. Twisted selvage should be specified for the top and bottom selvage if permitted by local code; this will enhance security. The fencing should eliminate the use of a top rail, installing instead a 7-gauge coil spring wire. This will make the fence more difficult to climb. Finally, we recommend the use of a bottom rail that is secured in the center of the two line posts using a 3/8" eye hook anchored into a concrete footing. This will eliminate the possibility of forcing the mesh up to crawl under the fence.

Lighting

Lighting is sometimes seen as reducing vandalism. There is no consensus on whether well-lit areas or "dark" locations are superior in terms of crime prevention. Cemeteries were not lighted historically. Thus, the introduction of lighting detracts from the historical integrity of the properties, changing the historic fabric. Another issue to be considered is that lighting is only useful if there is someone guarding the property, using the lighting to identify problems. This is not the case in most cemeteries, including Clay Cemetery.

There are a number of standard single arm steel brackets with cobra head luminaires mounted on every second utility pole along Clifton Street. We do not recommend that any additional lighting be installed.

Continue Maintenance

Clean, well-maintained cemeteries free of debris or garbage, free of evidence of past vandalism, and with attractively landscaped grounds are less at risk for vandalism. Consistent maintenance may serve as an "occupation proxy," giving the appearance that the cemetery is under steady surveillance by those concerned about keeping it safe. Conversely, cemeteries with much

trash, evidence of damage, or poorly maintained grounds give the appearance of abandonment; if no one in society cares for the property, why should the prospective vandal? Simply put, the appearance of abandonment breeds additional damage and vandalism. Thus, it is critical that the level of maintenance at Clay Cemetery be continued.

Police Patrols

Increasing the frequency with which police patrol the cemetery periphery increases the likelihood that potential vandals will be seen. Routine police patrols of the neighborhood should pay particular attention to the cemetery. At night patrols should shine their spotlight into the cemetery.

If KNO has not met with Zone 6 Atlanta Police Department Commander, Major John Dalton (404-371-5002), we recommend they do so.

Improve Opportunities for Natural Surveillance

The likelihood that adjacent neighbors and pedestrians going about their daily activities will spot an intruder depends on the visibility of the cemetery grounds from nearby houses, sidewalks, and streets. Clear sight lines in key locations maximize the ability of residents and passersby to observe activity in vulnerable areas. It is critical that security be taken into consideration when plantings are chosen and located. Security is an equal concern when existing plants are pruned or receive similar maintenance.

Create a "Cemetery Watch" Program

Similar to "Neighborhood Watch" efforts, community residents can conduct citizen patrols of cemetery property during evenings and weekends. Membership and regular participation in voluntary patrols increase when some form of prestige is offered to volunteers. Effective practices include:

- patrolling regularly, but at unpredictable times;
- engaging in passive surveillance only, and not interacting with potential vandals or intruders in any way; and
- publicizing activities and outcomes through newsletters and local media outlets.

As an adjunct to this, residents in adjacent homes should be especially encouraged to be attentive to problems in the cemetery. Unusual noise, lights, or activities should be sufficient to have neighbors call the police to report their concerns. KNO should seek to encourage the active participation of residents in nearby houses.

In response to a specific problem or rash of incidents, watch programs can produce short-term reductions in vandalism. However, these programs are difficult to sustain, so KNO will likely need to periodically "rejuvenate" the program by holding new meetings and bringing in new participants.

KNO should also consider developing similar programs in nearby schools, enlisting students to assist in collecting trash, cleaning stones, painting fences, or other activities. Boy and Girl Scout troops should also be contacted. Involving students in the care of cemeteries, and engaging them in ongoing, active projects will help create caring adults of the future.

Hardening Targets

Thefts in cemeteries nationwide have dramatically increased. The reasons for this are two-fold. First, there is an increasing market for gates, urns, ironwork, and statuary – created by an increase in upscale garden design and individuals willing to pay large sums for original artwork. Second, there is less attention being paid to cemetery fixtures, largely the result of decreased maintenance budgets and fewer police patrols.

Items that are targeted for theft are not common in many family burial grounds. Nevertheless, having a comprehensive inventory of objects in the cemetery and their condition, will provide valuable assistance in evaluating theft and

damage potential. We are delighted to see that this has already been accomplished.

Fragmentary stones will be discussed in greater detail in a following section, but it is important that damage be repaired to prevent loose items from being readily available to thieves or souvenir seekers.

Dealing with the Homeless

The 2009 Point in Time Survey, which provides a snapshot of people experiencing homelessness on a particular night of the year, reveals that the Atlanta area has over 5,300 homeless individuals. Most are adult males. Other data exploring race, mental illness, chronic substance abuse, and chronic homelessness were not examined.

Clearly homelessness is an extremely complex social problem that impacts the quality of life in every community. There are no easy solutions. There is a fine line between homelessness as a social issue and a criminal issue. Many homeless are on the street because of substance abuse, mental illness, or both. Often the disorder issues associated with homelessness are criminal in nature but difficult to enforce.

While being homeless is not a crime, many kinds of public conduct are illegal and should be reported to the Atlanta Police Department. These include being intoxicated, loitering, prowling, fighting, trespassing, aggressive panhandling, soliciting, urinating and defecating, consuming alcoholic beverages in public, camping or sleeping in public areas, littering, disturbing the peace by loud and unreasonable noises, using offensive words, behaving in a threatening manner, etc.

KNO and the Atlanta Police Department should take steps to eliminate the use of Clay Cemetery by the homeless. The property should have regulatory signage identifying the hours the property is open and informing visitors that anyone on the property after these posted hours will be arrested for trespass. This signage should also establish rules of conduct for use of the cemetery, including the prohibition of loitering,

drinking alcoholic beverages, use of drugs, etc. The signage should state that persons engaged in prohibited acts will be asked to leave the cemetery and that failure to cease the conduct or leave will result in arrest.

Any shopping carts, bedding, or other personal belongings should be removed from the cemetery promptly. The landscape must be maintained to prevent hiding places and to ensure clear lines of sight. The cemetery must be kept free of litter and debris.

Recommendations

We recommend that a multifaceted approach against vandalism be taken:

- **Fencing along Clifton Street should be repaired and painted. Security chain link fencing should be installed along the north and south sides of the cemetery to improve the impermeability of the boundary.**
- **Lighting is adequate and we do not recommend any additions.**
- **Maintenance has been dramatically improved and this level of effort should be maintained or expanded.**
- **Police patrols are crucial and KNO should meet with the Zone 6 Commander to explain the importance of the cemetery and the nature of the threats it faces.**
- **Maintenance activities should keep security in mind and ensure that there are clear and unobstructed sight lines through the cemetery.**
- **A "Cemetery Watch" program should be started to encourage periodic voluntary inspections of the cemetery, especially at night, on weekends, and during holidays. Adjacent home owners should be contacted and encouraged to take an interest in activities in the cemetery. Where**

possible cemetery activities should involve local youth.

The cemetery should be clearly posted to discourage its use by the homeless and all bedding, carts, and similar materials should be immediately removed.

CEMETERY FIXTURES AND FURNISHINGS

Like most small family or community cemeteries, the Clay Cemetery lacks the fixtures and furnishings often found in larger municipal, church, or commercial burial grounds. There are no associated structures, none of the plots are surrounded by ironwork, and the boundary fence has been adequately discussed in the previous section on security.

The portion of sidewalk in the eastern section of the cemetery should be minimally maintained.

Lot Amenities

Relatively few lot amenities, such as urns or coping, are present in the cemetery. Where present they are generally in deteriorated condition. In some cases this may be the result of vandalism; in other cases it is the result of natural factors. Their repair is a relatively low priority, but will be discussed in greater detail in the section dealing with conservation issues.

Coping is in generally good condition. An effort should be made to maintain the coping as it represents an integral component of the burial ground, representing family demarcations.

There is a small area of concrete sidewalk running north-south in the eastern half of the cemetery. It has no clear association with any plot and its function is unknown. The maintenance of this feature is a relatively low priority. It is currently in good condition and will likely remain in satisfactory condition for many years. We do not, however, recommend any particular measures for its long-term preservation since it appears to have no recognizable function and its loss would not dramatically alter the appearance of the cemetery.

Recommendations

Family copings are an important aspect of the cemetery and an effort should be made to ensure their preservation.

LANDSCAPE MAINTENANCE

Maintenance Operations & Staffing

A Clay family member has brought the sanitation fees on the cemetery up to date (while cemeteries are not generally taxed, the “fees” allow trash and debris to be picked up at roadside), but physical control – including maintenance – is in the hands of the Kirkwood Neighbors Organization. Funding is currently only \$1,000 to \$3,000 a year, depending on secured grants, and most of the work is done by volunteers. The available funds are used for activities that volunteers are not able to accomplish, such as tree removal.

One of the issues facing the cemetery is long-term funding. In the current economy it is unlikely that grants will provide a stable funding platform. Thus, it is increasingly critical that funding be provided either directly from the Clay descendants or through KNO as part of their routine amenity maintenance program.

A second issue of considerable concern is the reliance on volunteers. Volunteers are an exceptional resource and the dedication of those who have done and who are currently performing the maintenance is exceptional. Nevertheless, this places the cemetery in a precarious long-term position. Volunteers age or find new interests. The financial costs are high and in the current economy not everyone can take the time to perform such work or can afford the wear and tear on equipment. Volunteers, by their nature, are an uncertain resource. It is likely that in the future KNO will need to be in the financial position to contract out maintenance.

The level of maintenance effort during the growing season is entirely dependent on what is viewed as an acceptable level of care by those associated with the cemetery. The acceptable level is also affected by the nature of the landscaping. Our vision and recommendations are based on a minimal level of maintenance – sufficient to

ensure the care and security of the grounds and monuments, but which will reduce overall costs and effort to a reasonable and sustainable level. To achieve this we also envision the landscape remaining natural with the grounds mulched to control ground cover.

Cemetery Trees

Cemeteries, in general, have historically been dominated by large deciduous trees, although evergreens such as cedar are also very common. They provide a distinctly inviting image for visitors and passersby. These trees also provide some visual separation from adjacent buildings. Ideally the trees selected should be historically appropriate and should not compound maintenance issues.

Small family or rural cemeteries do not often have a planned landscape. In many cases these burial grounds have little vegetation during the period of their use, with trees and herbaceous plants becoming common only as part of the natural succession of plants as the burial ground lapses into disuse. In such circumstances the trees that are eventually present are those that are found naturally in the area. This seems to be the case with the Clay Cemetery.

Trees are also an especially important resource since they dominant the landscape and many are very large and old varieties.

An ISA Certified Arborist has conducted a tree survey of the cemetery (Dechant 2008) and this report has been gradually implemented. The report identified 18 trees; eight were in good condition, three were in fair condition, five were in poor condition, and two were dead. Each of these trees was assigned a number (871-888) and tagged for future reference. There are, however, additional trees in the cemetery that were not included in the assessment, probably because they were smaller.

PRESERVATION ASSESSMENT OF THE CLAY CEMETERY, ATLANTA, GEORGIA

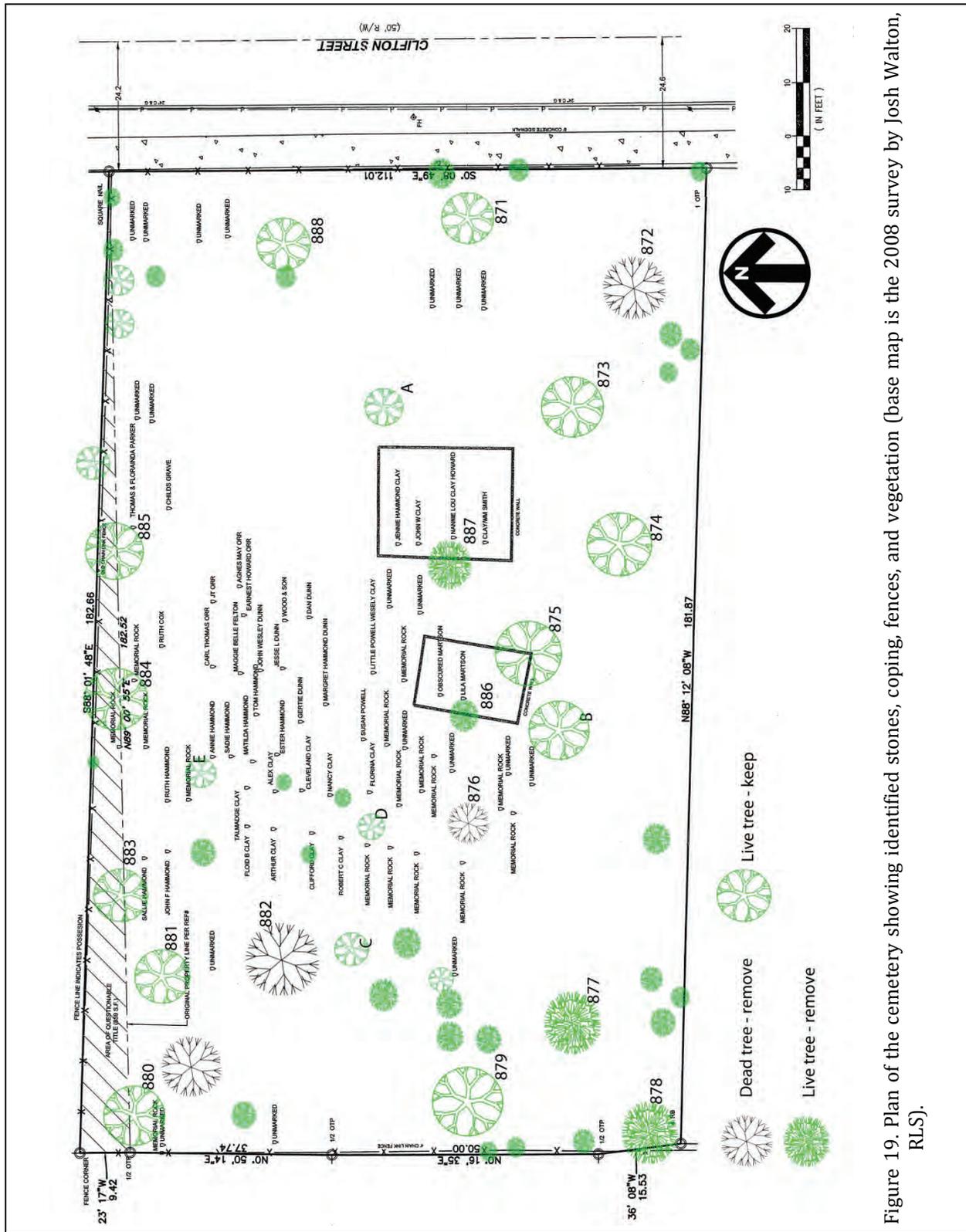
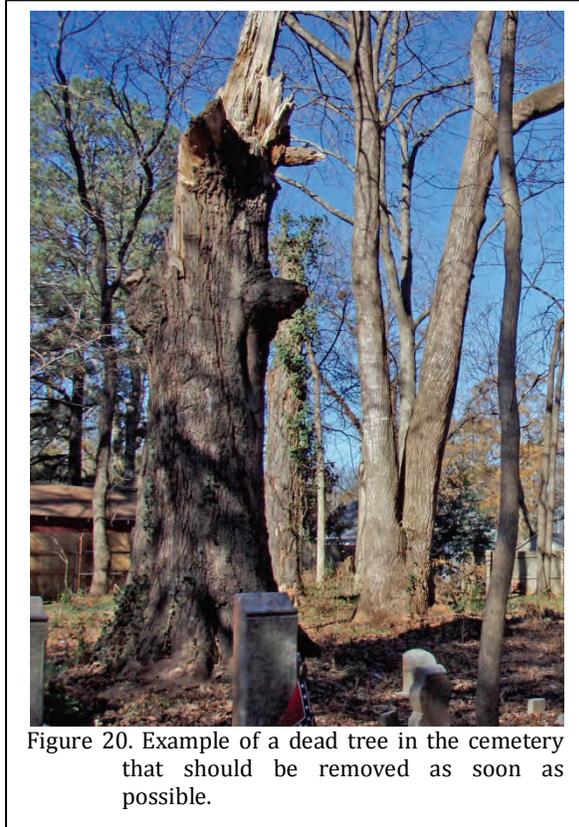


Figure 19. Plan of the cemetery showing identified stones, copings, fences, and vegetation (base map is the 2008 survey by Josh Walton, RLS).

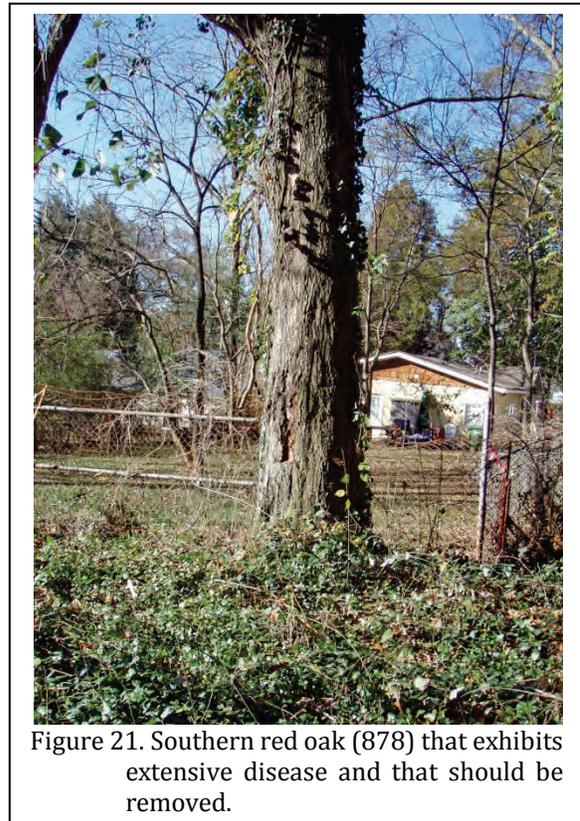
Figure 19 is a map of the cemetery that includes the identified trees (each with its assigned number), as well as the smaller trees that were not included in the assessment.



All of the dead trees in the cemetery should be removed as soon as practical. These include three numbered trees: 872 (in poor condition in 2008), 876, and 882. We understand that several were topped and limbed, but were allowed to remain as a cost saving move. Contrary to the opinion of the arborist, these trees do not provide “interest value.” They degrade the cemetery landscape and pose a threat to the monuments. In addition, the cost of their removal will only increase as they age and they become more hazardous.

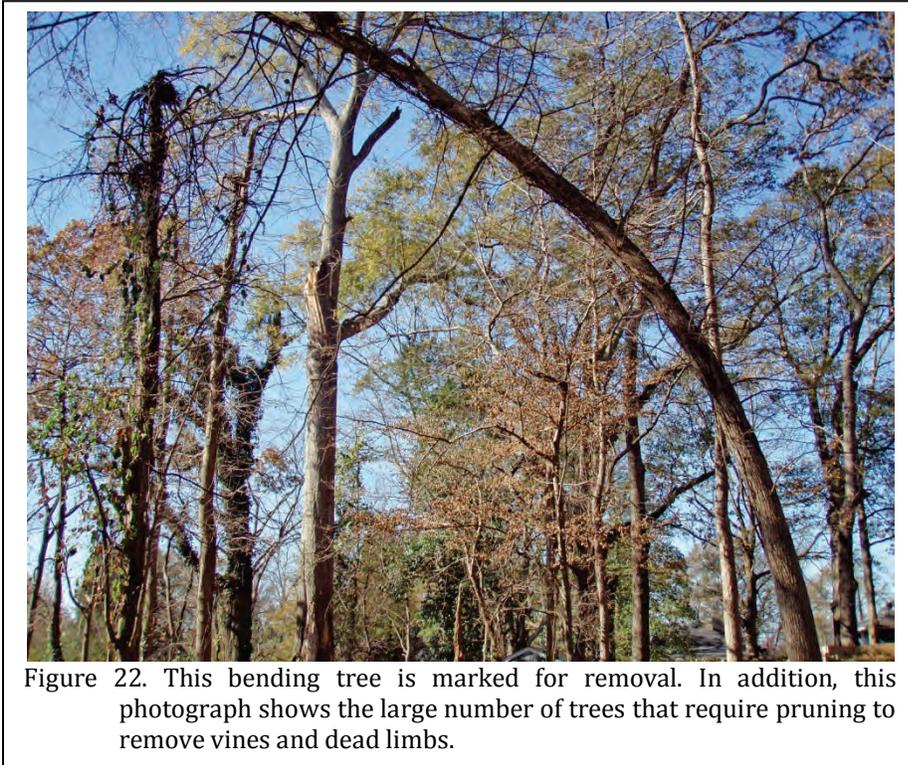
In addition, two years after the assessment we identified four numbered trees that should also be removed. These include two sweet gums (886 and 887), a water oak (877), and a Southern red oak (878).

The two sweet gums are damaging coping and pose a threat to monuments. Sweet gums also produce a great deal of trash and better trees can be selected for a cemetery landscape. The water oak and Southern red oak were both identified as being in poor condition in 2008 and have deteriorated since that time. They should be removed before they cause damage to the cemetery or its monuments.



Finally, we found a great many small trees that are damaged or stunted and which should be removed to allow other trees additional room for growth. In all we recommend 27 unnumbered trees be removed.

The removal of these trees will improve the cemetery landscape, creating a more open setting dominated by healthier trees. It will also allow limited planting of new trees to help prepare the landscape for the eventual loss of additional trees listed in fair to poor condition (such as trees 875 and 881).



is to brace it. This would provide additional support and prolong the life of the tree.

Replacement Trees

Although the need for replacement trees is not immediate, replacements should be planted in time to allow them to begin to mature and fill in anticipated vacant spots. This will help prevent the cemetery from appearing denuded.

While there are many possible replacements, one that is appropriate for small piedmont burial grounds, while at the same time exhibiting few negative

Trees recommended for removal should be cut as close as possible to the ground surface, but stumps should *not* be ground. Instead they should be left to decay naturally since this will do far less damage to graves and monuments. It will, of course, require periodic stump infilling, but this is a relatively minor maintenance activity.

Research is suggesting that trees, especially older mature trees, improve in health when vegetation is removed under the branch spread and mulch is applied at a depth not exceeding 3 to 4-inches. This is a practice that could be productively employed at the cemetery complex. Thus, we recommend that all trees to be removed be ground into mulch and the mulch spread in the cemetery.

It is also possible to extend the life of some trees through careful intervention. For example, while tree 881 is correctly noted as having a weak stem union with included bark, this tree is otherwise in good condition and healthy. It is also the only tulip poplar onsite. An appropriate and relatively inexpensive treatment for this tree



features, is the Eastern red cedar (*Juniperus virginiana*). Red cedar is an evergreen growing 40 to 50 feet tall in an oval, columnar, or pyramidal form and spreading 8 to 15 feet when given a sunny location. It has no significant litter problem, requires little pruning, and surface roots are not generally a problem. The tree may have breakage issues so should be located where it is not likely to damage stones.

The sugar maple (*Acer saccharum*) has a variety of good qualities including its resistance to breakage and absence of surface roots. It provides excellent colors through all seasons and is frequently used for ornamental plantings. It is moderately drought resistant and can tolerate partial shade. The tree grows 50 to 80 feet in height and has a spread of 35 to 80 feet.

All replacement trees should be of at least 1-inch caliper and meet the minimum requirements of the American Nursery and Landscape Association's American Standard for Nursery Stock (ANSI Z60.1-2004).

It is unlikely that the caregivers for the cemetery will be able to routinely water newly planted trees. While relying on rainfall after initial planting is typically acceptable, the recent summer droughts make it imperative that water is provided over the first year. A good choice is the use of water rings or bladders for the newly planted trees. These typically store about 20 gallons of water, gradually releasing it over 48 hours or longer. These bladders are relatively inexpensive and should be provided to all new trees.

Maintenance Issues

It is also crucial in a cemetery context that trees be periodically inspected and pruned. We do not believe that either has occurred at Clay Cemetery.

Trees should be inspected for potential threats to monuments, as well as general health. Ideally these inspections should be made yearly and after any storm where the winds exceed 55 mph. They should be pruned to remove potentially hazardous dead wood on a yearly

basis, but safe pruning every 5 years by a certified arborist is acceptable. Rigging must be used to minimize the potential for damage to stones or the landscape. Under no circumstances are tree climbers (hooks, spikes, gaffs) to be worn while ascending, descending, or working in trees to be pruned (they may *only* be used in trees that are being removed).

There are a number of trees that require pruning for either thinning or cleaning. Thinning is a technique of pruning that removes selected branches to increase light and air movement through the crown. This also decreases weight on heavy branches. The natural shape of the tree is retained and its overall health is improved. In cleaning, the pruning removes branches that are dead, dying, diseased, crowded, broken, or otherwise defective. This includes narrow crotches.

In pruning, branches should always be cut just beyond the branch collar (an extension of the main stem) and not flush with the trunk. Large branches should be removed with three cuts to prevent tearing of the bark, which can weaken the branch and lead to disease. All pruning within the cemetery should be performed by an ISA Certified Arborist.

Trees should be pruned to preserve the natural character of the plant and in accordance with ANSI A300 (Part 1) - 2001 standards.

Shrubbery and Ground Cover

While it is possible that the cemetery originally contained a variety of heirloom plants, relatively few were observed during this assessment. Those that are present include spiraea, nandina, and privet. Bulbs may also be present.

The spiraea and privet were likely planted by animals and the current efforts to control these species by pulling them out are appropriate.

There is only one small nandina and it will not require pruning for several years.

There is no turf at the cemetery, although there are a variety of ground covers. The two dominant species are English ivy (*Hedera helix*) and periwinkle (*Vinca minor*). Both are considered invasive and efforts should continue to remove them from the cemetery.

Also present in smaller quantities are honeysuckle (*Lonicera* sp.), cat greenbrier (*Smilax glauca*), and poison ivy (*Toxicodendron radicans*). The honeysuckle and greenbrier are found primarily along fence lines. The poison ivy is more generally spread throughout the cemetery.

English ivy is found growing on a number of trees. The plant flowers most readily when it becomes aerial. Left unchecked the ivy will kill the trees it is on and we recommend immediate steps to eradicate it. This can be done by cutting out 6-12 inches of the stem close to the ground and painting the freshly cut stem with a pesticide such as Roundup Promax® used without dilution. This 47.8% glyphosate herbicide will prevent the ivy from returning (<http://www.utextension.utk.edu/publications/wfiles/W231.pdf>).

Periwinkle is even more difficult to eradicate and many herbicides have little effect (<http://imapinvasives.org/GIST/ESA/esapages/documents/vincmaj.pdf>). Manual removal over a substantial period of time is likely the best (and most environmentally sensitive) approach.

The poison ivy is not only invasive, but it can be hazardous to a large proportion of the population. It was observed growing aurally on several trees and should be removed in a fashion similar to English ivy – the stems should be cut and then painted with undiluted Roundup Promax®.

In the past Dow's Garlon® 4 (61.6% triclopyr) has been used in the cemetery. While this herbicide is effective against poison ivy and even English ivy, it is not listed for periwinkle ([http://www.fs.fed.us/r5/eldorado/documents/freds/WEB%20Only/garlon 4 label rev 100708.pdf](http://www.fs.fed.us/r5/eldorado/documents/freds/WEB%20Only/garlon%204%20label%20rev%20100708.pdf)). In addition it is very toxic to a wide range of woody plants, including oaks.

In addition, both Roundup Promax® and Garlon® 4 contain salts that can cause extensive damage to stone. These herbicides need not be sprayed directly onto the stone since the salts can migrate to the stone by moisture wicking up from the ground.

Thus, the use of herbicides should be carefully considered and special care should be taken to prevent drift or spraying in close proximity to monuments.

Mulch

We have previously recommended that trees be ground on-site and used to mulch the cemetery. This mulch will also help eliminate the inappropriate ground covers, especially in combination with either mechanical removal or periodic application of an herbicide.

Mulch does need periodic replenishment; we have found that a number of Atlanta arborists offer to deliver mulch for free since it eliminates their need to pay a landfill charge. Sources include:

- <http://www.arbor-nomicstree.com/free-chips.php>,
- <http://www.randrtreeservice.com/mulch.php>,
- <http://www.1800treeexpert.com/services-offered/free-wood-chips-program>.

In addition, DeKalb County provides free mulch and compost to residents at four different locations. The use of this source does, however, require that KNO pick up the mulch.

Soil Testing

KNO reports that it does not routinely conduct soil tests. We recommend such tests be conducted every three to five years. The University of Georgia Agricultural and Environmental Services Laboratories provides a standard soil testing for \$15 (<http://aesl.ces.uga.edu/>). This is certainly affordable since only one test every five years is necessary.

A single test was collected as part of this assessment. The results are shown in Figure 24. Soil pH is slightly less than optimal (5.5-6.0) for most trees. Because of nitrate's transient nature, it is not generally part of the soil test. Phosphorus and potassium are very low to low. Calcium levels are high and magnesium levels are adequate. The micronutrients examined, zinc and manganese, are both sufficient.

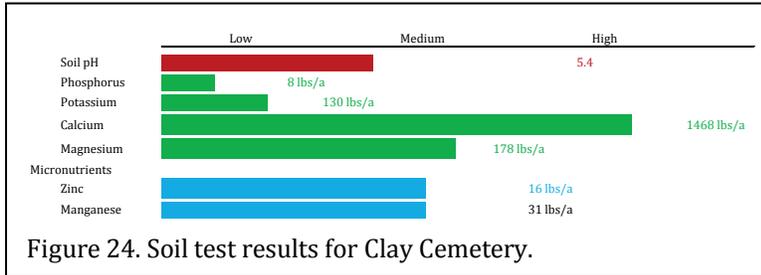


Figure 24. Soil test results for Clay Cemetery.

Using conventional 10-10-10 fertilizer the report recommends broadcasting 1 pound per 100 square feet of canopy spread between late fall (when the leaves have fallen), through early spring (before new growth begins). Also recommended are 50 pounds of lime per 1,000 square feet.

In order to minimize salt uptake by the stones, slow release organic fertilizers are preferable to commercial inorganic fertilizers. An excellent source explaining the differences between organic and inorganic fertilizers is <http://www.cmg.colostate.edu/gardennotes/234.pdf>. The publication at http://pubsadmin.caes.uga.edu/files/pdf/C%20853_2.PDF provides information on converting traditional inorganic fertilizer recommendations to safer organic recipes.

For example, 0.5 lb. of blood meal per 100 square feet of canopy spread will provide the recommended nitrogen levels. Nitrogen is more effective and poses less risk to the environment when applied to dry soil and watered in the same day. Since there is no water available at Clay Cemetery, the blood meal should be applied immediately prior to a soaking rain.

The phosphorus (P₂O₅) levels can be met by using 1 lb of steamed bone meal per 100 square feet of canopy spread. Sulfate of Potash

Magnesia will meet the K₂O demand at a rate of 0.5 lb. per 100 square feet of canopy spread.

Other Landscape Issues

The cemetery contained a large number of leaves during our visit. These obscure some stones and only very slowly degrade. We do not recommend efforts to rake and remove leaves, but we do suggest using a push mower with micro-mulch mower blades and simply mulching the leaves. For example, some blades have jagged teeth instead of a traditional-looking cutting edge. Others have multiple cutting edges. Many mulching mowers employ kickers or tails that force blades upward for repeated chopping. Examples of commercial mulching mowers include the Toro 21" Heavy Duty models, Snapper Pro with their Ninja blade, and the Honda HRC Commercial mowers. All get very high ratings from professional users.

This approach not only eliminates the work of gathering and removing leaves, but it also adds nutrients back into the soil.

There are numerous sunken graves and these pose trip hazards to the public. All of these depressions should be identified and entered onto the cemetery map. Once they are recorded we recommend using clean sand (mason's sand, for example) to fill and compact graves. The sand will provide a clear visual indicator of fill should archaeological investigations at some time be necessary. In addition, it will significantly increase the safety of pedestrians in the cemetery and will help minimize maintenance issue.

Recommendations

All dead trees should be removed from the cemetery as soon as practical. They pose a significant hazard to pedestrians and the stones. They also degrade the cemetery landscape.

A number of trees in poor health, as well as smaller trees should be removed from the

cemetery to allow for healthy growth of those remaining.

Removed trees should be chipped on-site and the mulch used in the cemetery. Additional mulch, if needed, can be obtained for free. Stumps should be cut as close as possible to the ground, but should not be ground.

Appropriate trees for replanting include Eastern red cedar and sugar maple. All replacement trees should be of at least 1-inch caliper and meet the minimum requirements of the American Nursery and Landscape Association's American Standard for Nursery Stock (ANSI Z60.1-2004). Nursery stock should be carefully inspected and specimens with wounds, crooked or double leaders, broken branches, or girdling roots should be rejected.

All trees should be inspected yearly and after any storm with winds in excess of 55 mph. These inspections should be conducted by an ISA certified arborist

The cemetery evidences trees that require pruning for thinning or cleaning. These issues should be dealt with immediately by an ISA certified arborist.

English ivy, poison ivy, and periwinkle in the cemetery should be eradicated. English and poison ivy should be cut from trees and their stems painted with an herbicide. Periwinkle should be manually removed wherever possible.

Shrubbery is not common and does not require any immediate attention.

Soil analysis should be conducted every five years to determine if adjustments are necessary for cemetery vegetation (primarily the shade trees). Where fertilization is needed, only organic, slow release fertilizers should be used in order to minimize salt damage to the stones.

Mowers with mulching blades should be used to allow leaves to be mulched on-site.

OTHER MAINTENANCE ISSUES

Signage

The cemetery lacks effective signage. During our assessment the only signage were metal letters attached to the fence reading "Clay Cemetery" and an additional sign with the same information. There is a holder for literature, but it is not maintained since it allows the handouts to get wet.

From a cemetery preservation perspective, signage is of four basic types: identification, regulatory, informational, and interpretative. They are generally recommended in this same priority.

Identification signage might include the name of the cemetery and might also include the cemetery's date of founding and historic significance (i.e., listed on the National Register). Regulatory signage specifies laws, regulations, or expected standards of behavior.

These two types of signage are immediate necessities at the cemetery and should be placed as soon as possible. KNO should develop signage dealing with, minimally, these issues (perhaps with some modifications of language as might be needed):

- Clay Cemetery. Established in the early 19th century as a family cemetery. By the late 19th century it was being used by the community. Today it is within the Kirkwood National Register District.
- The cemetery is open from 8am to 5pm Sunday – Saturday except for holidays. Any individual in the cemetery at other times is subject to arrest for trespass.
- Many of the stones in this cemetery are very old and may be easily damaged.

Consequently, absolutely no gravestone rubbings will be allowed.

- Please refrain from leaning, sitting, or climbing on any monument. All children must be escorted by an adult.
- Absolutely no alcoholic beverages, fireworks, or fire arms are allowed in the cemetery. Proper conduct is expected at all times. This cemetery is under the jurisdiction of the Atlanta Police Department.
- No pets are allowed in the cemetery.
- No plantings are allowed within the cemetery and KNO will enforce its right to remove any plantings deemed inappropriate, diseased, or damaging the cemetery.
- For additional information concerning maintenance issues, please contact the Kirkwood Neighbors Organization at _____. In case of emergency contact _____.

If it is not possible to have volunteers open and close the cemetery at regular hours throughout the week then the sign should reflect that the cemetery is open by appointment only and there should be a number to call to make this sort of arrangement. The wording that individuals in the cemetery at other times are subject to arrest should remain.

The last two types of signage are informational (for example, directional signs) and interpretative (information on historic people buried in the cemetery). At the current low rate of usage these types of signs are not needed at present.

An interpretative brochure can be used in lieu of additional signage. This is a relatively inexpensive device that could serve to promote the resource, as well as provide information to those visiting the site.

Such brochures, however, should avoid focusing only on local history – creating what has been called the “old dead white man” trap. Instead, the brochure should focus on a wide variety of interests, such as a history of the cemetery, eighteenth and nineteenth century mortuary customs, as well as some narrative on Atlanta’s undertakers and monumental carvers. It should also place the cemetery in a broader regional context. The brochure is also a useful place to include cemetery regulations as a reminder to visitors of appropriate – and inappropriate – actions.

Recommendations

Regulatory signage is critical for the cemetery. It should minimally deal with proper care of the monuments, prohibiting rubbings and warning visitors of their fragile condition; it should clearly state the hours the cemetery is open; it should prohibit certain behaviors and actions, such as use of alcoholic beverages; it should prohibit pets; it should establish simple guidelines for plantings; and it should include contact and emergency information.

There is no current need for interpretative signage although a brochure would be useful. Development of a brochure is relatively cost effective and should represent an immediate action. The brochure should include more information on the cemetery landscape, stone carvers, funerary customs, and reasons that a visitor should be interested in the individuals buried in the cemetery, as well as providing the cemetery regulations.

CONSERVATION ISSUES

What is Conservation?

Conservation is *not* restoration. Restoration means, very simply, making something “like new.” Restoration implies dramatic changes of the historic fabric, including the elimination of fabric that does not “fit” the current “restoration plan.” Restoration is inherently destructive of patina and what makes a property historic in the first place. The “restorer” of a property will know nothing of the Secretary of the Interior’s Standards for Preservation and care even less.

One of the most important early writings was that of nineteenth century art critic and observer John Ruskin. In *The Seven Lamps of Architecture* published in 1849 and in particular, “The Lamp of Memory,” Ruskin introduces us to the issue of trusteeship where he explains,

it is again no question of expediency or feeling whether we shall preserve the buildings of past times or not. We have no right whatever to touch them. They are not ours. They belong partly to those who built them, and partly to all the generations of mankind who are to follow us.

Ruskin also crisply stated the difference between restoration and repair, noting that “restoration” means,

the most total destruction which a building can suffer: a destruction out of which no remnants can be gathered: a destruction accompanied with false description of the thing destroyed.

In contrast, conservation can be defined as preservation from loss, depletion, waste, or harm. Conservation seeks to limit natural deterioration.

Conservation will respect the historic fabric, examine the variety of options available, and select those that pose the least potential threat to the property. Conservation will ensure complete documentation, whether it is of cleaning, painting, or repair. Conservation will ensure that the work done today does not affect our ability to treat the object tomorrow.

Standard for Conservation Work

KNO is the steward of this cemetery, holding what belonged to past generations in trust for future generations. As such the organization bears a great responsibility for ensuring that no harm comes to the property during its watch.

One way to ensure the long-term preservation of this property is to ensure that all work meets or exceeds the Secretary of the Interior’s Standards for Preservation, discussed on pages 2-4 of this study.

Another critical requirement is that the organization ensure that any work performed in the cemetery – whether it involves the cleaning of a stone, or the reconstruction of a heavily damaged monument – be conducted by a trained conservator who subscribes to the Standards of Practice and Code of Ethics of the American Institute for Conservation of Historic and Artistic Works (AIC).

These Standards cover such issues as:

- Do no harm.
- Respect the original fabric and retain as much as possible – don’t replace it needlessly.

- Choose the gentlest and least invasive methods possible.
- Is the treatment reversible? Is retreatment possible?
- Don't use a chemical without understanding its affect on the object and future treatments.
- Don't falsify the object by using designs or materials that imply the artifact is older than it is.
- Replication and repairs should be identified as modern so that future researchers are not misled.
- Use methods and materials that do not impede future investigation.
- Document all conservation activities – and ensure that documentation is available.
- Use preventative methods whenever possible – be proactive, not reactive.

The AIC Code of Conduct also requires a professional conservator provide clients with a written, detailed treatment proposal prior to undertaking any repairs; once repairs or treatments are completed, the conservator must provide the client with a written, detailed treatment report that specifies precisely what was done and the materials used. The conservator must ensure the suitability of materials and methods – judging and evaluating the multitude of possible treatment options to arrive at the best recommendation for a particular object.

General Types of Stone Damage

Although a stone-by-stone assessment of damaged monuments was not included in this assessment, KNO volunteers have recorded much information. The document provided us for this assessment, identified as “Clay Cemetery Grave Notes” typically includes some brief description along with a photograph. For the field stones this is sufficient; for the commercial markers we recommend more detailed information be collected using a standardized form. One example is shown as Figure 25. Such a form makes recordation of standard information convenient and

consistent.

A photograph should be included on the back of the form.

In particular we recommend more photographs be taken, especially of complex markers. At least one photograph should show the entire marker; additional photos can be taken as close-ups of the inscription or other features.

Each monument should also be assessed for conservation needs. A few of the more obvious problems are discussed below.

Broken Stones

The stones present in the cemetery are generally in good condition, but a few are broken.

The form is titled "CEMETERY FIELD SURVEY SHEET INDIVIDUAL MARKER/MONUMENT" and is provided by Chicora Foundation, Inc. It contains the following sections and fields:

- Header:** Chicora Foundation, Inc., PO Box 8664, Columbia, SC 29202, 803-787-6910.
- Identification:** Cemetery, Grave #, Section #, Lot #, Photo No.
- Name(s) on marker:** [Text field]
- Type of Marker/Monument:**
 - Tablet headstone, government issue, raised top, bedstead/cradle, ledger, die in socket, lawn-type, pulpit, table tomb, obelisk, die on base, plaque, die, base, cap, box tomb, other.
- Inscription:** [Text field]
- Inscription Technique:** carved, painted, other.
- Material:** marble, limestone, cast iron, other material, granite, fieldstone, zinc, sandstone, other stone, wood, slate, concrete.
- Gravestone Size (ft/in):** Height, Width, Thickness.
- Gravestone Design Features:** Bible, willow and urn, lamb, Masonic, finger pointing, clasping hands, cross, dove, other fraternal order, other design, flowers, cross & crown, inverted torch.
- Condition of Marker:** weathered, unattached, biologicals, other, cracked, loose, stained, broken, leaning, portions missing, vandalized, repaired.
- Stonecutter's Name:** [Text field]
- City:** [Text field]
- Location of Mark:** [Text field]
- Footstone:** Material, Design/initials, Condition.
- Coping:** Material, Design, Condition.
- Fencing:** Material, Design, Condition.
- Grave Orientation:** Marker inscription faces what direction.
- Grave Goods:** [Text field]
- Surveyor:** [Text field]
- Date:** [Text field]

Figure 25. Example of a monument record that could be modified to suit the specific needs of Clay Cemetery.



Figure 26. Example of a broken stone at the Clay Cemetery.

Figure 26 illustrates one broken tab in socket stone.

Appropriate conservation treatment for broken stones will usually involve drilling and pinning, carefully aligning the two fragments. Fiberglass (or occasionally threaded 316 stainless steel rod) and epoxy adhesives formulated for the specific stone are used in this type of repair. Diameters and lengths of pins vary with the individual application, depending on the nature of the break, the thickness of the stone, its condition, and its expected post-repair treatment.

Sometimes pins are not used in a misguided or misinformed effort to save time and money. Instead the pieces are simply joined using a continuous bead of epoxy or some other adhesive. Experience indicates that for a long-lasting repair, particularly in structural applications, use of pins is necessary. Moreover, most adhesives are far stronger than the stone itself, meaning that failure of the repair is likely to cause additional damage to the stone.

Unstable Stones

The most common stone problem at the Clay Cemetery are monuments that are not stable. Many of these are relatively tall and if tipped over could harm visitors. In general these stones appear to have been originally set without the use of pins that would stabilize the different sections. Some of these stones are also tilting as a result of

the grave settling under the monument. At least one die has fallen and is leaning up against its base.

For these stones the general conservation recommendation is to take the monument apart and drill the individual bases and die for insertion of either fiberglass or stainless steel pins. The individual sections are then reset using a high lime mortar as a setting compound.

If the monument is also tilting it is reset on a bed of pea gravel. This serves as a stable foundation that also helps drain water away from the monument while providing the monument some ability to shift if it is impacted by landscaping activities.

Collapsed Monuments

There are two monuments in the Clay Cemetery that have collapsed over the years, likely after being struck by tree limbs. The two monuments were large and their collapse represents a significant loss to the cemetery



Figure 27. Example of a large, top heavy monument that is unstable.



Figure 28. Collapsed monuments require resetting, often with associated repairs and pinning. In the background is a toppled monument that also requires pinning and resetting.

nevertheless, unacceptable for historic monuments since it creates an artificially white marble and, over time, will cause erosion and yellowing of the stone.

Table 3 discusses problems with a variety of “common” stone cleaning processes widely used by commercial firms and the public. Providing this sort of information to families who have loved ones buried at the cemetery may help deter abusive cleaning.

Cleaning is largely an aesthetic issue, and we observed very few situations in the cemetery complex

landscape. It is critical that these monuments be repaired as soon as possible.

where cleaning would be considered a high

Since some parts of the monuments are broken, the conservation effort will require that parts be first repaired using blind pinning. If there are missing structural parts they will require refabrication to ensure the stability of the monument.

Cleaning of Monuments

A significant amount of damage may result from inappropriate cleaning techniques. The most common cleaning technique is the use of a bleach product – probably because bleach (either sodium hypochlorite or calcium hypochlorite) is widely available and inexpensive. It is,

Table 3.
Comparison of Different Cleaning Techniques

<u>Cleaning Technique</u>	<u>Potential Harm to Stone</u>	<u>Health/Safety Issues</u>
Sand Blasting	Erodes stone; highly abrasive; will destroy detail and lettering over time.	Exposure to marble dust is a source of the fatal lung disease silicosis.
Pressure Washers	High pressure abrades stone. This can be exacerbated by inexperienced users. Pressures should not exceed 90 psi.	None, unless chemicals are added or high temperature water is used.
Acid Cleaning	Creates an unnatural surface on the stone; deposits iron compounds that will stain the stone; deposits soluble salts that damage the stone.	Acids are highly corrosive, requiring personal protective equipment under mandatory OSHA laws; may kill grass and surrounding vegetation.
Sodium Hypochlorite & Calcium Hypochlorite (household and swimming pool bleach)	Will form soluble salts, which will reappear as whitish efflorescence; can cause yellowing; some salts are acidic.	Respiratory irritant; can cause eye injury; strong oxidizer; can decompose to hazardous gasses.
Hydrogen Peroxide	Often causes distinctive reddish discolorations; will etch polished marble and limestone.	Severe skin and eye irritant.
Ammonium Hydroxide	Repeated use may lead to discoloration through precipitation of hydroxides.	Respiratory, skin, and eye irritant.
D/2 Biological Solution	No known adverse effects, has been in use for nearly 10 years.	No special precautions required for use, handling, or storage.

priority. Where cleaning is necessary, a product such as D/2 Biological Solution distributed by Cathedral Stone is appropriate in conjunction with low pressure water.

Recommendations

Stone by stone recordation and assessment has begun by KNO volunteers. We recommend the use of a standard form and that monument photographs include the entire monument with additional photos as necessary to illustrate other details.

All repair work in the cemetery should be conducted by trained conservators who subscribe to the Code of Ethics and Standards of Practice of the American Institute for Conservation of Historic and Artistic Works (AIC). This should be the minimum level of competency required by the city on all projects.

Critical treatments include resetting fallen monuments and pinning unstable monuments that pose a threat to the public. These treatments should be conducted as soon as possible.

Cleaning is not generally a high priority, but if undertaken only safe cleaning material, such as D/2 Biological Solution, should be used. Monuments should never be cleaned with bleach, pressure washed, or sandblasted.

PRIORITIES AND FUNDING LEVELS

Recommended Priorities

Table 4 lists the recommendations offered throughout this assessment, classifying them as a *first, second, or third priority*.

First priorities are those we recommend undertaking immediately, either during what remains of 2011 or during the early part of 2012. Some are issues that have the potential to affect the safety of site visitors and consequently require immediate attention. Most, however, are planning issues that require immediate attention to “set the stage” for future actions. We strongly believe that most cemetery projects fail through inadequate or inappropriate planning – thus, we recommend in the strongest possible terms that KNO engage in the necessary planning to help ensure success.

Second priorities are those that should be budgeted for over the following 2 years (2012-2013). They represent urgent issues that, if ignored, will result in both significant and noticeable deterioration of Clay Cemetery as a significant historic resource.

Third priorities are those that may be postponed for 2014-2015. They are issues that can wait for appropriations to build up to allow action. Some actions are also less significant undertakings that require other stages to be in place in order to make them feasible or likely to be successful. Although they are given this lower priority they should not be dismissed as trivial or unimportant.

The Role of Volunteers

Volunteers from KNO have played a significant role in the recovery and maintenance of Clay Cemetery. Volunteer efforts, however, can go only so far. There are many activities that volunteers simply do not have the training or the resources to accomplish. More to the point, the

owner of the Clay Cemetery (whether that is KNO or Clay descendants) cannot make the care of this cemetery a volunteer obligation.

It is critical that the actions of volunteers receive the financial support of both the Clay family descendants and KNO.

Budget Estimates

Table 5 provides some budget projections for the recommendations, using 2011 dollars. There are significant differences by location, especially in services such as tree inspections, pruning, and removal. Nevertheless, the figures should provide guidance in terms of establishing a budget for the work needed at Clay Cemetery.

The total estimate for Priority 1 through 3 activities is \$56,860. While this is a sizable sum, the priorities allow the activities to be spread over five years, significantly reducing the annual outlay.

Priority 1 activities are estimated to cost about \$6,200, with the bulk of this budgeted for the removal of the four dead trees in the cemetery. A very modest amount of \$100 is budgeted for the cleaning, repair, and painting of the Clifton Street fence since this is an activity that can be accomplished by volunteers.

Priority 2 actions account for nearly \$42,000. Of this, \$18,600 is allocated to the removal of additional trees and an inspection of the trees by a certified arborist. An additional \$11,000 is budgeted for the repair of monuments in the cemetery. This work would include the repining of many monuments that are loose and tilted, as well as the repair of the two large monuments that have toppled. A final large sum of \$10,500 is budgeted for the installation of chain link fence along the north and south boundaries of the cemetery.

Table 4.
Prioritization of Recommendations

Priority	Recommendation
First - 2011-2012	<p>1.1 All decisions regarding modifications, alterations, additions, or other actions affecting Clay Cemetery should be carefully evaluated against the Secretary of the Interior's Standards for Preservation. (http://www.nps.gov/history/hps/tps/standguide/preserve/preserve_standards.htm).</p> <p>1.2 Special care should be taken to protect all remaining historic fabric and the context.</p> <p>1.3 The entrance to the cemetery should be improved using an exposed aggregate concrete ramp or interlocking pavers. This is necessary to reduce the slip and trip hazard at the entrance.</p> <p>1.4 Visitation at the cemetery does not reveal a need for pathways at present. However, should they be called for in the future they should not clash with the historic fabric of the cemetery or present a visual intrusion. Grass reinforcement materials should be used to create permeable pathways that will also be universally accessible.</p> <p>1.5 All decisions regarding the introduction of new elements or the removal of existing materials should be evaluated against universal accessibility needs, with improved accessibility an identified goal.</p> <p>1.6 We recommend that a multifaceted approach against vandalism be taken. Specifically, the fencing along Clifton should be repaired and painted; no additional lighting is appropriate; the maintenance level should be maintained; KNO should seek additional police patrols on Clifton; and maintenance activities should keep security in mind and ensure that there are clear and unobstructed sight lines through the cemetery.</p> <p>1.7 Family copings are an important aspect of the cemetery and an effort should be made to ensure their preservation.</p> <p>1.8 All dead trees should be removed from the cemetery as soon as practical. They pose a significant hazard to pedestrians and the stones. They also degrade the cemetery landscape.</p> <p>1.9 Removed trees should be chipped on-site and the mulch used in the cemetery. Additional mulch, if needed, can be obtained for free. Stumps should be cut as close as possible to the ground, but should not be ground.</p> <p>1.10 Regulatory signage is critical for the cemetery. It should minimally deal with proper care of the monuments, prohibiting rubbings and warning visitors of their fragile condition; it should clearly state the hours the cemetery is open; it should prohibit certain behaviors and actions, such as use of alcoholic beverages; it should prohibit pets; it should establish simple guidelines for plantings; and it should include contact and emergency information.</p> <p>1.11 Stone by stone recordation and assessment has begun by KNO volunteers. We recommend the use of a standard form and that monument photographs include the entire monument with additional photos as necessary to illustrate other details.</p> <p>1.12 All repair work in the cemetery should be conducted by trained conservators who subscribe to the Code of Ethics and Standards of Practice of the American Institute for Conservation of Historic and Artistic Works (AIC). This should be the minimum level of competency required by KNO on all projects.</p>

PRIORITIES AND FUNDING LEVELS

Table 4, cont.
Prioritization of Recommendations

Priority	Recommendation
Second - 2012-2013	<p>2.1 Critical treatments include resetting fallen monuments and pinning unstable monuments that pose a threat to the public. These treatments should be conducted as soon as possible.</p> <p>2.2 We recommend that a multifaceted approach against vandalism be taken. Specifically, security chain link fencing should be erected along the north and south property lines and a "cemetery watch" program should be initiated.</p> <p>2.3 The portion of sidewalk in the eastern section of the cemetery should be minimally maintained.</p> <p>2.4 A number of trees in poor health, as well as smaller trees, should be removed from the cemetery to allow for healthy growth of those remaining.</p> <p>2.5 Appropriate trees for replanting include Eastern red cedar and sugar maple. All replacement trees should be of at least 1-inch caliper and meet the minimum requirements of the American Nursery and Landscape Association's American Standard for Nursery Stock (ANSI Z60.1-2004). Nursery stock should be carefully inspected and specimens with wounds, crooked or double leaders, broken branches, or girdling roots should be rejected.</p> <p>2.6 All trees should be inspected yearly and after any storm with winds in excess of 55 mph. These inspections should be conducted by an ISA certified arborist</p> <p>2.7 English ivy, poison ivy, and periwinkle in the cemetery should be eradicated. English and poison ivy should be cut from trees and their stems painted with an herbicide. Periwinkle should be manually removed wherever possible.</p> <p>2.8 Soil analysis should be conducted every five years to determine if adjustments are necessary for cemetery vegetation (primarily the shade trees). Where fertilization is needed, only organic, slow release fertilizers should be used in order to minimize salt damage to the stones.</p>

Table 4, cont.
 Prioritization of Recommendations

Priority	Recommendation
Third - 2014-2015	<p>3.1 The cemetery evidences trees that require pruning for thinning or cleaning. These issues should be dealt with immediately by an ISA Certified Arborist.</p> <p>3.2 Shrubbery is not common and does not require any immediate attention.</p> <p>3.3 Mowers with mulching blades should be used to allow leaves to be mulched on-site.</p> <p>3.4 There is no current need for interpretative signage although a brochure would be useful. Development of a brochure is relatively cost effective and should represent an immediate action. The brochure should include more information on the cemetery landscape, stone carvers, funerary customs, and reasons that a visitor should be interested in the individuals buried in the cemetery, as well as providing the cemetery regulations.</p> <p>3.5 There is no comprehensive historical study of the cemetery and we recommend that one be prepared, especially if there is a desire to list the cemetery individually on the National Register of Historic Places.</p> <p>3.6 There remain significant questions concerning the relationship of individuals buried in the cemetery. We recommend that genealogical research be conducted to ascertain what relationships exist as well as where individuals who used the cemetery were living.</p> <p>3.7 There are also questions regarding the potential use of the cemetery by African Americans. We recommend that oral history be documented and further explored. African American funeral homes should also be contacted in an effort to identify those that might have been using the cemetery. It would also be useful to examine death certificates that might list the Clay Cemetery.</p> <p>3.8 Cleaning is not generally a high priority, but if undertaken only safe cleaning material, such as D/2 Biological Solution, should be used. Monuments should never be cleaned with bleach, pressure washed, or sandblasted.</p>

PRIORITIES AND FUNDING LEVELS

**Table 5.
Projected Budget for the Clay Cemetery, 2011-2015**

Activity	Estimated Cost	Notes
Priority 1		
Improving entrance	900.00	
Clean, repair, paint Clifton Street fence	100.00	supplies only
Remove 4 dead trees	4,800.00	
Signage	400.00	
	\$6,200.00	
Priority 2		
Conservation treatments	11,000.00	
Approx. 364 linear feet of chain link fencing	10,500.00	
Remove 4 medium size trees and 27 smaller trees	17,700.00	
ISA certified arborist inspection	900.00	yearly
Garlon 4 herbicide	380.00	
Trees for replanting	600.00	every 2-4 years
	\$41,080.00	
Priority 3		
Pruning approx. 10 trees	5,000.00	
Mulching mower (rental)	80.00	yearly
Historical research, approx. 60 hr.	4,500.00	
	\$9,580.00	
Estimated Total Budget	\$56,860.00	

cemeteries. In addition, since governmental budgets are not consistent, there is a tendency for the care delivered to be reduced whenever there is a budget shortfall.

As a result, it has been our experience that the level of care is often inadequate. In addition, the nature of the care is often inappropriate. The combination is disastrous to historic properties.

Any agreement with a governmental entity should be predicated on a memorandum of agreement (MOA) binding the governmental agency in perpetuity that specifies the level of maintenance that will be undertaken, as well as the training and skill of the individuals

Priority 3 work accounts for an estimated \$9,580. Of this, \$5,000 is allocated for tree pruning. An additional \$4,500 is budgeted for professional historical research to resolve issues identified concerning the use of the cemetery.

performing the work. The MOA should also specify that the governmental entity recognizes that the property is eligible for inclusion on the National Register of Historic Places and that all maintenance must conform to the Secretary of Interior's Standards for Preservation. There should be some organization that monitors the MOA and has the legal authority to enforce the agreement.

Some of these costs are recurring, such as tree inspections and rental of a mulching mower. There will be additional yearly costs, such as tree replacements, maintenance of the fence, and occasional repairs to monuments. We recommend an annual budget of \$2,500 once the primary work recommended by this assessment is completed – and this assumes continued volunteer efforts to keep the property clear of limbs and herbaceous vegetation. If this must be contracted out, the annual budget for the cemetery would increase to \$5,000 to \$6,000.

We also recommend that this assessment be made part of the MOA, binding any governmental entity to fulfill any recommendations not yet completed, as well as to continue long-term maintenance efforts, such as yearly assessments by an ISA certified arborist.

Efforts to Turn Ownership Over to DeKalb County

We understand that there is an effort to explore DeKalb County assuming control of the cemetery. We caution that, in general, governmental entities are not especially sensitive caregivers to historic burial grounds. The task is usually turned over to a parks and recreation or public works department. Neither agency has the experience or expertise to appropriately care for

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Cemetery Preservation Plans

Historical Research

**Identification of Grave Locations
and Mapping**

Condition Assessments

Treatment of Stone and Ironwork



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