

OTHER MAINTENANCE ISSUES

Signage

The city's 2006 10-year master plan does not recommend additional signage for the Mount Calvary, Mount Olive, Fisher's, and potter's field cemeteries. This is an error.

The cemetery lacks effective signage. During our assessment the only signage we observed was the vandalized sign on the entrance gate. There are no directional signs to the cemetery; once at the cemetery there is no signage of any nature concerning rules, historic significance, or other details. Thus, the city is failing to take advantage of a unique heritage tourism opportunity.

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., eligible for listing on the National Register).

While the iron entrance gate provides a name and the brick column provides two plaques with confusing information (one reads "Mount Calvary Cemetery 1941" with no explanation of the date and the other reads "Mount Olive Cemetery at Fisher's Hill" with no explanation of how the different cemeteries relate to one another). In addition, this sign is useful only once one is already at the cemetery. The city should consider additional signage directing visitors to the cemetery.

Regulatory signage specifies laws, regulations, or expected standards of behavior. We recommend that the city develop signage

dealing with, minimally, these issues (perhaps with some modifications of language as might be needed):

- The cemetery is open from 8am to 5pm. 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.
- The stones and monuments in this cemetery are fragile. Please refrain from leaning, sitting, or climbing on any monument or mausoleum. 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.
- No pets are allowed in the cemetery.
- Flowers will be removed by the staff 10 days after holidays or when the arrangements become wilted and unsightly.
- No plantings are allowed within the cemetery and the City will enforce its right to remove any plantings deemed inappropriate, diseased, or damaging the cemetery.
- For additional information concerning maintenance issues, please contact the City of Portsmouth Parks, Recreation and Leisure Services Department at _____. In case of emergency contact _____.

The last two types of signage are informational (for example, directional signs) and interpretative (information on historic people buried in the cemetery).

There is currently no informational or interpretative signage at the site. At this time the only such signage we recommend is a Virginia Historical Highway Marker for the cemetery complex. Additional information on this program is available online at http://www.dhr.virginia.gov/hiway_markers/hw_marker_info.htm. This is a project that should be funded by the City with input from this report and other caregivers. The sign should seek to briefly explain the different cemeteries and the importance of the property to the community.

Other Public Outreach

We have found no meaningful interpretative information for the cemetery. It is not mentioned in the "Portsmouth - Virginia's quaint, historic seaport" brochure. Nor have we found any mention of the cemetery anywhere in the city's web site. There is no mention under the Parks, Recreation and Leisure Services web page; no mention under museums; and no mention under tourism (although the white cemetery, Cedar Grove, is briefly mentioned).

This might lead to the impression that the cemetery is little more than an afterthought to the department, rather than an important historical resource. The City should correct this by prominently identifying the site in the web site, including historical information, and including cemetery specific regulations. The web site should also be a focus point for preservation efforts, including documents such as this assessment, as well as eventual conservation information.

We found a similar lack of farsightedness in the city's *Destination 2025* plan. Although the vision statement speaks to "a sense of place" with a rich history, the plan does not discuss that history. Even the observation that the, "city's rich history can contribute to the local economy through heritage tourism" seems to inspire little enthusiasm. There is no mention of cemeteries in

the entire document and the role of African Americans is entirely overlooked.

We found no mention of the cemetery in the African American Heritage website sponsored by the Virginia Foundation for the Humanities. Nor is there any mention on the state's tourism website, including the page specifically designed to search for African American heritage sites (<http://www.virginia.org/site/content.asp?MGrp=1&MCat=2&MItm=39>).

The integration of the cemetery into web sites requires only imagination and a few hours of staff time. In addition, it would be appropriate to develop a brochure for the cemetery that would address the history of the different tracts, provide a map showing the cemetery, identify the rules and regulations for visitors, and explain why the resource is significant in Portsmouth's history.

Trash

We have previously pointed out that the current maintenance contract, while calling for the collection of trash in the cemetery, is not being effectively monitored. Trash is present in the cemetery complex and a greater effort should be made to ensure that it is collected at least monthly.

Similarly, we have emphasized the need to broadly define trash as not only refuse or garbage, but also downed limbs. These, too, must be picked up and removed to permit proper mowing and maintenance activities.

Modifications to the Terrain

The long use of the burial ground, often without use of vaults, coupled with the wet soils, have created a topography that collects water, presents significant hazards to the public, and has resulted in excessive displacement of stones. The uneven topography also makes maintenance more difficult and is certainly driving up the cost of mowing and other turf issues.

Correction of this problem is not, however, as simple as it might at first appear.

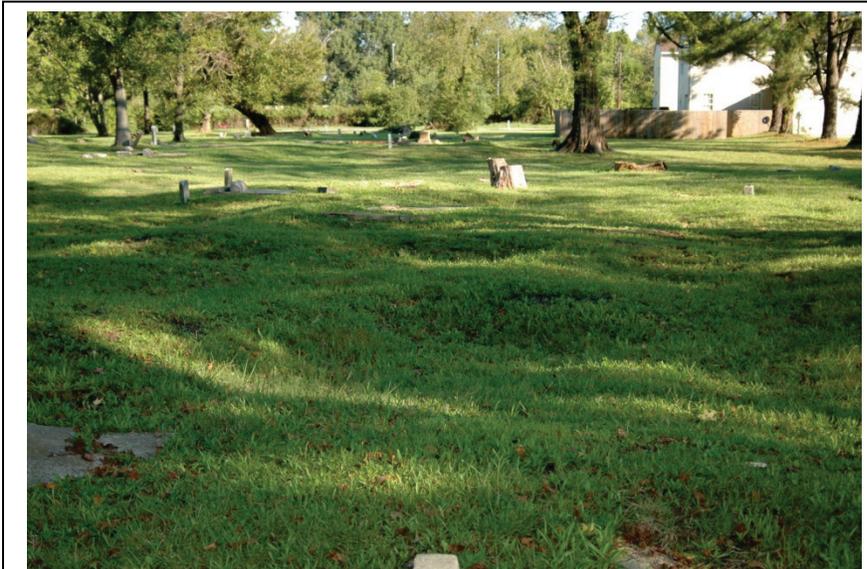


Figure 38. Undulating topography is a clear indication of sunken graves. All of these require mapping prior to being infilled with clean sand.

The grave depressions found throughout the cemetery should not be filled in until their location is recorded on a site plan. The depressions provide clear evidence of graves that cannot be otherwise documented. Filling in these graves without mapping would result in the loss of this critical information.

Thus, the first step must be to create a detailed map of the approximately 11 acre complex. This map would include roads, plots, trees and other vegetation, stones and monuments, and grave depressions. This might be done most easily using a total station; GPS would be less reliable since much of the cemetery is under dense tree cover. We estimate that the work would require a survey team about 6 weeks.

Once a map is completed, it would be possible to begin leveling different sections of the cemetery. This work would involve bringing in sand and backfilling grave

depressions. The ideal places to begin are those with few or no stones, such as potter's field, the west end of Mount Olive, and Fisher's.

The process of backfilling graves must be conducted by hand in order to avoid additional damage to the landscape. Truck loads of clean sand could be deposited in grave depressions using compact tracked loaders perhaps combined with mini track loaders or muck trucks (powered wheelbarrows).

It is during this work that large open areas of the cemetery could be easily prepared for reseeding or resodding.

Relatively quickly, however, open areas would be eliminated, leaving the far more complex site areas requiring work. In these locations the work would necessarily progress from plot to plot. In each plot an assessment would be required regarding the need to reset coping, reset ledgers



Figure 39. Sunken graves can be infilled with sand once they have been mapped.

and monuments, and possibly infill broken or open vaults.

Making topographic corrections by plot would allow the process to be phased and would also avoid the problem of topographic corrections in one area not necessarily being equal to those required in a different section.

This process, however, would allow for the filling of low spots and might improve the overall drainage of the cemetery, especially if it is coordinated with the cleaning and grading of ditches as previously recommended.

Recommendations

Parks, Recreation and Leisure Services should develop better road signage to identify the location of the cemetery. If possible this signage should conform to a consistent tourist or historical site format for the entire city.

Regulatory signage is critical at the entrance to 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 establish simple guidelines for plantings, as well as the placement and removal of floral and grave decorations; and it should include contact and emergency information.

There is no interpretative signage or widely available brochure. Both could be used at the cemetery to encourage more effective use of the facility and help ensure its preservation. Development of a brochure is relatively cost effective and should represent an immediate action, followed by on-site signage as funding allows. 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.

The city should fund a Virginia Historical Highway Marker for the cemetery.

The city's Parks and Recreation website provides no information concerning the cemetery, its history, landscape, care, or regulations. The city is missing an exceptional opportunity to engage an increasingly web savvy public in the cemetery's care and preservation. The addition of genealogical information could also be of immense interest to historians and family researchers. The city could also better promote the cemetery as a tourism resource.

Trash is a problem in the cemetery and greater attention should be devoted to that issue by the contracted maintenance firm. Trash should be expanded to include all downed limbs that would hinder complete and professional lawn maintenance.

A phased approach should be instituted to restore the topography and terrain of the cemetery. The first phase involves the mapping of the cemetery, including grave depressions, plots, monuments, roads, and vegetation. Once mapping is complete broad areas of sunken graves should be infilled. This would be the perfect opportunity to reseed or resod that particular area of the cemetery. Subsequently, individual plots should be restored, with graves filled or recapped, coping and extant monuments should be appropriately reset.

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.¹

Standard for Conservation Work

The Town of Portsmouth is the steward of this cemetery, holding what belonged to past generations in trust for future generations. As such the city 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 3-4 of this study.

Another critical requirement is that the city ensure that any work performed in the cemetery – whether it involves the repair of iron work, the cleaning of a stone, or the reconstruction of a heavily damaged monument,

¹ Readers may question previous recommendations to, for example, “restore” the topography. In some cases restoration is necessary for the long-term – and cost-effective – survival of the historic property. Even this landscape “restoration,” however, is coupled with careful recordation of the existing conditions to ensure that grave locations are not lost. We also advocate every possible effort to replace monuments as they were originally – again to ensure the preservation of the historic fabric.

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 – one is recommended – this section will provide some general observations

concerning the types of problems faced by the cemetery complex.

Broken Stones

There are numerous examples of broken stones. Many of these stones should receive a high priority for conservation treatments since the stones are on the ground and subject to additional damage, increasing the eventual cost of appropriate repair. Stones on the ground are walked on, may have mowers run over them, and if they are marble are subject to greater acid rain damage. It is always critical to erect fallen stones.

Conducting a stone-by-stone assessment will result in proposed treatment recommendations, complete with a project cost and a repair priority for each broken stone. This will allow the city and/or caregivers to develop a reasonable budget for this conservation work. In most cases gravestones are fragile and their repair is delicate work. There are many commercial products on the market used by many commercial stone companies, which are inappropriate for (and often damaging to) historic stone.

Appropriate conservation treatment 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.



Figure 40. Types of stone damage at the cemetery complex. Upper left is a cast Portland cement stone that has broken and is cracked. This stone may be treated using a simple epoxy repair. Upper right is a thin marble headstone that has broken. This is an example of a stone that will require a blind pin repair using fiberglass rods. Middle left is a Portland cement ledger that has shattered. Careful inspection reveals one was laid over a pre-existing ledger (which has also shattered). This will be a very complex repair, requiring that each fragment be pieced back together. Middle right is a broken marble stone, also a candidate for a blind pin repair. Lower left is a stone with two ferrous pins. These pins must be removed and replaced with stainless steel; the stone can then be reset. Lower right shows two stones with ferrous pins. They require the replacement of the ferrous pins, as well as the removal of the thick cement coating that was used.



Figure 41. Damaged stones in the cemetery complex. Upper left, fallen stone that has become partially buried. This stone requires resetting. Upper right, collapsing ledger. This ledger requires releveling with the slant top marker at the head being reset. Middle left, probable vandalized stone. Resetting may require replacement of ferrous pins. Middle right shows a toppled pedestal tomb that should be reset. Stainless steel pins should be inserted to prevent future vandalism. Lower left, displaced military stone. Although the grave location has been lost, the stone should be reset as a memorial with notes made that it may no longer identify the grave location. Lower right, example of a severely leaning obelisk that requires immediate resetting because of the hazard to the public.

Ferrous Pins

Several stones were observed with ferrous pins and these should be given a high treatment priority since, left untreated, the corrosion will cause significant spalling, cracking, and breakage of the stones. In these cases it will be necessary to use diamond core drills to remove the ferrous pins. They will then need to be replaced with fiberglass or stainless steel pins.

After any such repairs it will be necessary to fill the voids with a natural cementitious composite stone material resembling the original stone as closely as possible in texture, color, porosity, and strength. This type of repair may be used to fill gaps or losses in marble and is often used to help slow the spalling of other stones.

Under no circumstances should latex or acrylic modified materials be used in composite stone repair. These additives may help the workability of the product, but they have the potential to cause long-term problems. Such products are not appropriately matched in terms of strength or vapor permeability.

More suitable materials include Jahn (distributed by Cathedral Stone) or the lime-based mortars of U.S. Heritage. These closely resemble the natural strength of the original stone, contain no synthetic polymers, exhibit good adhesion, and can be color matched if necessary.

All infill work should be conducted by a trained conservator. The Jahn products, in fact, require certification in their use through Cathedral Stone.

Tilting and Simple Resets

Throughout the cemetery we observed seriously leaning stones. Some are headstones; others are set on various bases. When this occurs to headstones, the tilt may be sufficient to precipitate a ground break, dramatically increasing the cost of repair. For other monuments the tilt may be sufficient to cause the monument to fail and, in the process, there may be additional damage, or it may fall on a cemetery visitor.

Monuments should never be reset using concrete, but rather should be set in pea gravel. This approach allows the stone some movement should it be accidentally impacted by lawn maintenance activities. The pea gravel will also promote drainage away from the stone, helping the stone resist the uptake of soluble salts.

Resetting of a low stone on a base requires that the base first be leveled, again using pea gravel. Afterwards the stone can be reset using a high lime mortar, typically a 1:2.5 mix of NHL 3.5 and sand. This mix should be relatively dry to prevent staining the base and all excess mortar should be cleaned off immediately.

There are many ledgers that are tilted. These should also be reset (where it is possible to do so without major plot resculpting). Often sand, decomposed granite, or pea gravel is sufficient to level such stones.

While resetting can be done by a conservator, it is a task that volunteers can readily perform, at least for smaller stones. The exception are larger stones that require drilling and pinning for stability.

Collapsed Vaults

There are many examples of collapsed or partially exposed vaults in the cemetery complex. They are typically filled with stagnant water. These require immediate attention. Several options will be provided below for different types of situations.

In any case where water has penetrated into the vault (typically because the cover itself is compromised), the first step should be to pump dry the interior of the vault. This will require a trash centrifugal pump. These are generally at least 2-inch with a flow of at least 200 gpm. Given the small size of the vaults (most will contain around 150 gallons of water at most), a smaller pump would work fine. It is important that the suction hose have a fine strainer in order to prevent the loss of remains that may be found in the bottom of the vault.

In many cases what appears to be a ledger is actually a vault cover. The cover is tilted in the soil and this may indicate that the vault itself has sunk. Releveling the vault would require that the body itself be removed. A better approach is to remove the ledger, add and level wood forms to

Displaced Stones

Throughout the cemetery we observed displaced or orphan stones. These are stones – or fragments of stones – that are no longer clearly associated with a specific grave. They are often



Figure 42. Examples of damaged (or lost) vault tops that should be replaced with new cast concrete slabs.

the sides of the vault, allowing additional fiber-reinforced Portland cement to be poured, leveling the vault to grade. The ledger can then be reset.

Some vaults tops have sustained so much damage that repair is not feasible. These may be replaced with new, pre-fabricated concrete slabs. These slabs can be constructed on-site using pre-mixed concrete poured in forms. We recommend using a minimum of a 4000 psi mix with the addition of glass fibers in the mix. We also recommend 5 to 7% air entrainment to assist in preventing freeze-thaw damage and a slump no greater than 4-inches. The ledger tops should be a minimum of 4-inches thick with the addition of 4x4-inch welded wire mesh reinforcement carefully set in the middle. These new tops can be cast on-site, using wood forms laid over poly sheeting. They may even be cast on top of existing vaults in some situations. Remnants of existing vault tops can be placed within the vault, then covered with the new vault top.

found leaning against other stones or trees, or sometimes flat on the ground (typical of a fallen stone). At present there appears to be no procedure to ensure that damaged stones are identified and cared for. In most cases it appears that broken stones have been left lying where they fell – this is irresponsible management that endangers the stones and shows disrespect for both the monument and the individual buried in the cemetery.

Every cemetery must develop some mechanism to care for these stones, protecting them from additional loss or damage. Repairing damaged stones is the surest way to protect them, but in many cases fragments can be provided temporary storage until funding is available for repair. Temporary storage should be in a dry, secured facility. Individual items must be marked with information concerning where they were found. One solution would be to mark the location on a map and include that map with the stored stones (Ben Meadows “Rite-in-the-Rain” Copier Paper # 145110). Another approach is to use

Table 4.
Comparison of Different Cleaning Techniques

Cleaning Technique	Potential Harm to Stone	Health/Safety Issues
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 Architectural Antimicrobial	No known adverse effects, has been in use for nearly 10 years.	No special precautions required for use, handling, or storage.

a bleach product – probably because bleach (either sodium hypochlorite or calcium hypochlorite) is widely available and inexpensive. It is, nevertheless, unacceptable for historic monuments since it creates an artificially white marble and, over time, will cause erosion and yellowing of the stone.

Table 4 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

aluminum tags (Ben Meadows Aluma-Boss 9” Aluminum Wire Tags # 152428) secured to the stone fragments using nylon string.

Whatever technique is used, it should ensure the preservation of the stones, as well as ensuring that the stones can be correctly replaced in the cemetery once repaired.

It is important for us to emphasize that collection and storage of stones is not an alternative to appropriate repair. If broken stones are only removed and “stored,” eventually the cemetery will become denuded and its historic context and integrity will be lost forever.

Cleaning of Monuments

A significant amount of damage may result from inappropriate cleaning techniques. The most common cleaning technique is the use of

situations in the cemetery complex where cleaning would be considered a high priority.

Cast Stone Monuments

All African American cemeteries exhibit a broad range of cast stone monuments, typically created using a low-aggregate or sandy mix of Portland cement. These monuments were offered by funeral homes, vault companies, and were created by individual families. The fluid nature of Portland cement offered considerable options in the creation of vernacular monuments. Many of the monuments were whitewashed, giving them the final appearance of more expensive marble.

Some of these monuments had industrial letters pressed into the wet mix. Others were hand labeled. In some cases other items were added as decoration, such as colored glass or tiles. The



Figure 43. Examples of cast stone (Portland cement) monuments. These examples show a variety of designs, cast inscriptions, inclusions, and use of whitewash.

Mingo Plot in Mount Olive shows the use of porcelain insulators and door knobs.

These are especially important monuments since they exhibit the intent and variability of individual families and artisans. While their repair does at times require additional effort and cost, special care should be taken to prevent these monuments from being discarded.

Ironwork Conservation

We found little ironwork remaining in the cemeteries. One plot revealed remnant fragments of a decorative iron fence and another plot showed the use of gas pipe set in concrete. There were likely other examples that have been stolen over the years.

Given the relatively low incidence of iron, we will only briefly outline some of the more critical preservation issues.

Every effort should be made to retain all existing ironwork, regardless of condition. Replacement with new materials is not only aesthetically inappropriate, but often causes galvanic reactions between dissimilar metals. When some of the existing ironwork is incomplete, a reasonable preservation solution is to repair and maintain the remaining work rather than add historically inappropriate and incorrect substitutes. If replacement is desired, salvage of matching elements is preferred over recasting. Replication is typically not an appropriate choice since it is by far the most expensive course of action, and is often done poorly.

The single best protection of ironwork is maintenance — and this revolves around painting. A generally useful approach involves minimal cleaning, followed by a coat of rust converter and two top coats of a flat or semi-gloss alkyd paint. Where a coating is still present it is usually



Figure 44. Examples of ironwork in the cemetery complex. Upper photo shows a remnant portion of a “hairpin” section. Middle photo shows a remnant corner post. Lower photo shows a gas pipe fence set in low concrete posts.

necessary to remove this paint to near white metal in order to prime and paint successfully.

While welding may be appropriate in some cases, once welded, pieces are no longer able to move with expansion/contraction cycles, and this may cause internal stresses that leading to yet additional structural problems.

In addition, while wrought iron is easy to weld because of its low carbon content, cast iron contains up to 4% carbon and is difficult to weld. Welding on cast iron should be done only by firms specializing in this work and capable of preheating the elements.

When used, welds should be continuous and ground smooth, in order to eliminate any gaps or crevices. When finished, it should be difficult to distinguish the weld — the original metal should blend or flow directly into the reattached part.

Stone-by-Stone Assessment

We strongly recommend that the cemetery receive a stone-by-stone assessment. This would involve the examination of every stone for conservation treatment needs by trained conservators. Routine during such an assessment is the photography of all stones requiring treatment.

Each assessment would complete a form specific for the stone requiring treatment that identifies the treatment necessary, provides a cost estimate of the needed work, and prioritizes the work.

This would result in the caregivers having a complete list of all stones needing some sort of conservation treatment, as well as a budget that could be used for fund raising efforts. This represents a critical second step (this assessment is the first) in establishing clear preservation priorities for Portsmouth’s African American burial

PRESERVATION ASSESSMENT OF MOUNT CALVARY, MOUNT OLIVE, FISHER'S AND POTTER'S FIELD CEMETERIES

Monument Treatment Proposal	Section:	Plot:
Name: _____	Material: <input type="checkbox"/> marble <input type="checkbox"/> granite <input type="checkbox"/> brick <input type="checkbox"/> other:	
Type: <input type="checkbox"/> headstone <input type="checkbox"/> footstone <input type="checkbox"/> die on base <input type="checkbox"/> tab in socket <input type="checkbox"/> box <input type="checkbox"/> other:		
Position: <input type="checkbox"/> fallen <input type="checkbox"/> tilted <input type="checkbox"/> unstable <input type="checkbox"/> unattached/loose <input type="checkbox"/> missing		
Existing Condition	Deterioration: <input type="checkbox"/> broken <input type="checkbox"/> cracked <input type="checkbox"/> losses <input type="checkbox"/> flaking/sugaring <input type="checkbox"/> ferrous pins <input type="checkbox"/> brass pins <input type="checkbox"/> delamination/detachment <input type="checkbox"/> spalling <input type="checkbox"/> missing fragments <input type="checkbox"/> other:	
	Extent: <input type="checkbox"/> extensive >50% <input type="checkbox"/> partial 25-50% <input type="checkbox"/> minimal <25% <input type="checkbox"/> not applicable	
Failed/Old Treatments: <input type="checkbox"/> metal <input type="checkbox"/> adhesives/coatings <input type="checkbox"/> mortar <input type="checkbox"/> other:		
Soiling: <input type="checkbox"/> biological <input type="checkbox"/> staining <input type="checkbox"/> efflorescence <input type="checkbox"/> other:		
Treatment Strategy	Position: <input type="checkbox"/> reset/level in ground <input type="checkbox"/> reset/level to existing base <input type="checkbox"/> construct new base <input type="checkbox"/> resquare <input type="checkbox"/> possible new base required <input type="checkbox"/> stabilize foundation <input type="checkbox"/> reset with 0:1:3 mix <input type="checkbox"/> reset with compound	
	Failed Treatments: <input type="checkbox"/> drill/grind <input type="checkbox"/> hand tools <input type="checkbox"/> solvents <input type="checkbox"/> other:	
	Treatment: <input type="checkbox"/> core drill <input type="checkbox"/> drill and pin <input type="checkbox"/> simple adhesive repair <input type="checkbox"/> injection grout <input type="checkbox"/> replace bricks <input type="checkbox"/> mortar <input type="checkbox"/> repoint <input type="checkbox"/> other:	
Cleaning: <input type="checkbox"/> low pressure water <input type="checkbox"/> D/2 and flush <input type="checkbox"/> poultice <input type="checkbox"/> other:		
Priority: _____	<small>1) hazardous, immediate action; 2) unstable, requires treatment ASAP; 3) ongoing deterioration, treatment required 2-3 years; 4) re-inspect in 5-10 years; 5) irreparable</small>	
	Cost: _____	
[Insert Before Treatment Photo]		

Figure 45. Example of an assessment form used in a stone-by-stone assessment.

grounds.

The stone-by-stone assessment would also create a rather large photographic database of the cemetery. Although all notes would not be recorded, a very large proportion would be.

Recommendations

All 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.

There are some treatments, such as resetting, that can be undertaken by volunteers or city staff with training and oversight. The town, however, should not attempt repairs beyond the skill level of the individuals available.

The city should strictly limit replacement of historic fabric and require that all such modifications receive approval.

Cleaning is necessary of those monuments exhibiting heavy lichen growth obscuring the inscription. This cleaning may be done by town staff as long as it is conducted in a manner that does not endanger the stone or eliminate the stone's patina. We recommend the use of D/2 Biological Solution and soft scrub brushes. Pressure washers must NOT be used.

A stone-by-stone assessment of the cemetery complex should be

undertaken as soon as possible since this will identify stones requiring conservation treatment and document current conditions.

PRIORITIES AND FUNDING LEVELS

Recommended Priorities

Table 5 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 2010 or during 2011. Some are issues that have the potential to affect the public health and safety 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 the city – and the caregivers that are focusing attention on the cemetery complex and spurring much of the city’s actions – engage in the necessary planning to help ensure success.

Second priorities are those which 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 Mount Calvary, Mount Olive, Fisher’s, and the potter’s field as significant historic resources.

The most costly of these actions will involve the conservation treatments. These costs are the result of critical maintenance actions being deferred. As a result, many of the stones are today at a crossroad. If appropriate conservation treatments are not undertaken, it is likely that many of the stones in the cemetery complex will be forever lost.

Third priorities are those that may be postponed for several years and thus are scheduled for 2014-2015. They are issues that can wait for appropriations to build up to allow action. However, since Portsmouth’s perpetual care fund

for the cemeteries is reported to contain over \$100,000, there is no legitimate reason for the city to postpone these actions for long. 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.

Budget estimates are offered only for the single direct conservation issue of a stone-by-stone assessment of the 11 acre cemetery. This work will require three conservators 2 weeks to accomplish. The total cost (in 2010\$) will be \$28,600. No budgets are offered for other tasks since this is beyond the scope of this assessment.

The Role of the City

The city is taking steps to acquire all of the different parcels that comprise the African American cemetery complex. While the city has been slow to move, it is nevertheless a good and appropriate first step.

We have on several occasions pointed out that the City of Portsmouth was slow to recognize its responsibility to its African American citizens. Portsmouth’s blacks did not chose to create their own cemeteries – they were excluded from the city’s segregated burial grounds and thus had no choice but to create their own.

Denied the opportunity to be buried in cemeteries with perpetual care programs, it is now appropriate that those funds be extended to all burial grounds in the city – including Mount Calvary, Mount Olive, Fisher’s, and potter’s field.

It is incumbent on the city council to take the steps necessary to ensure that this is made possible. Then, it is up to the city to fulfill its role to maintain and preserve the African American burial grounds.

This role will involve extensive efforts to bring the cemetery complex up to a reasonable standard – cleaning ditches to promote drainage, leveling the topography, resetting coping and stones, and replacing broken vault covers. These activities are necessary because of the delayed assumption of appropriate care.

While we are aware that with current budgetary limitations actions will take time, it also seems appropriate that the needs of the African American cemeteries – ignored for decades by the City of Portsmouth – be placed at the top of the city's list of responsibilities. Had the city not embraced segregation and ignored these cemeteries, they would not today need the level of intervention they do. Immediate action is required by the city.

Just as parks or water service or police protection have yearly costs, so too do historic resources. Preservation costs must be continuous. The city cannot, every few years, suddenly remember the cemetery and devote attention. The cemetery must receive constant and on-going care and preservation efforts. The central problem is that Portsmouth has, for years, deferred these costs primarily by claiming no responsibility for African American burial grounds, creating cumulative problems that now must be addressed or else the resource will be so degraded that its continued significance to the community will be doubtful.

The Role of Volunteers

Volunteers seem to have played a significant role in the maintenance of the African American cemeteries since at least the 1960s. Newspaper accounts report the activities of the Summer Youth Corps, Mason's Lebanon Lodge No. 34, and Minority Police Officers Association. In each case the volunteer group eventually collapsed or the activities came to an end. And in each case the work that was done was quickly undone by nature and the continued gradual decay of a property that requires constant attention.

Today Christina Carlton has developed a program that involves considerable assistance from her Navy colleagues.

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 City of Portsmouth cannot make the care of city property a volunteer obligation. It is the city's responsibility to care for city property. Citizens pay taxes to ensure that this is the case.

We are concerned that the actions of volunteers receive the support of the city. In other words, if volunteers clear a ditch of volunteers, the city must be prepared to maintain that ditch. If volunteers open an area that was previously wooded, the city must be prepared to expand their mowing contract into that area to ensure it remains open.

The Role of a Friend's Group

We encourage the development of a friend's group composed of descendants, those interested in cemetery preservation, people interested in African American history, and others. Such a group should seek formal organization, developing by-laws and becoming a registered non-profit organization.

The role of such a group should be two-fold. Most importantly, a friends group should be a constituency demanding the preservation of the Mount Calvary, Mount Olive, Fisher's, and potter's field cemetery complex. This group should be putting pressure on the City of Portsmouth to appropriately care for these properties, overseeing that care, and reporting when that care falls short.

We have encouraged such a friend's group to make periodic patrols of the cemetery to ensure that there is no vandalism. The group should provide periodic reports to City Council documenting what has – or has not – been accomplished in the care of these properties. But most importantly, the group should be vocal in demanding that these resources receive the funds necessary to ensure their long-term preservation.

PRIORITIES AND FUNDING LEVELS

A secondary role of such a group should be to raise funds for specific projects outside the legitimate maintenance role of the city. Such projects may include the development of walking tours, more detailed historic research, erection of interpretative signage, and other such activities.

In terms of funding, nonprofit groups must accomplish two tasks. First, develop a "Mission Statement" (also known as a "Vision Statement") that details the specific goals & objectives of a recognized nonprofit (501(c)(3) or variation) and second, create a "Case for Support." This "Case Statement" provides urgent, compelling, and interesting reasons why an individual, corporate, or foundation donor would take ownership with the group in addressing a specific project or broader sustainable effort, such as cemetery conservation and preservation.

Moreover, the nonprofit group would need to recruit and develop a Board capable of "giving" and "getting" money. The oft-repeated expression, "Won't you join me in giving \$x to this project" is the most powerful opening sentence in fundraising. A Board that is simply "advisory" traditionally has a difficult time achieving stated goals and objectives. One can buy "advice;" getting donors is an entirely different matter. Stated differently, people give money to people, not to ideas.

Table 5.
Prioritization of Recommendations

Priority	Recommendation
First – 2010-2011	<p>1.1 The City of Portsmouth should amend the City Code to reflect their ownership of Mount Calvary, Mount Olive, Fisher's Cemetery, and the City Potter's Field, bringing these properties under the protective umbrella of the city code and ensuring that these African American cemeteries achieve the same right to perpetual care funds as other city cemeteries.</p> <p>1.2 The City of Portsmouth should immediately seek a determination of eligibility for the Mount Calvary, Mount Olive, and Fisher's cemeteries from the Virginia Department of Historic Resources.</p> <p>1.3 All decisions regarding modifications, alterations, additions, or other actions affecting Mount Calvary, Mount Olive, Fisher's Cemetery, and the City Potter's Field 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>1.4 Special care should be taken to protect all remaining historic fabric and the context.</p> <p>1.5 The City of Portsmouth should expeditiously pursue the acquisition of Mount Calvary, Mount Olive, Fisher's Cemetery, and all portions of the City Potter's Field (including those portions on the Bazemore and PRHA tracts).</p> <p>1.6 The City of Portsmouth should rezone parcels south of the cemetery to minimize the impact of light industrial zoning. A far more appropriate zoning designation is urban residential or general residential.</p> <p>1.7 In the near term the City of Portsmouth should ensure that spoil and construction debris on the parcels south of the cemetery complex are removed and the viewscape restored.</p> <p>1.8 As owner of the cemetery complex the city should fulfill its own 2006 recommendation and immediately conduct a detailed assessment of drainage issues at the cemetery complex. The existing drainage issues promote mosquito development and pose significant hazards to the visiting public. The drainage problems at the cemetery are also disturbing to descendants who see the graves of loved ones consistently flooded.</p> <p>1.9 The city should immediately begin routine tri-annual cleaning, reshaping, and grade improvement of the existing ditches in the cemetery complex.</p> <p>1.10 We recommend that the northern access road, running to the western end of the cemetery be closed to public travel. This road is not historic and poses significant security issues to the cemetery and visitors.</p> <p>1.11 Mount Calvary is reported as having had a caretaker's house. This may have left archaeological remains. Maintenance activities in the cemetery should take care to avoid damaging these remains.</p> <p>1.12 Parks, Recreation and Leisure Services should place the Mount Calvary fence on a yearly maintenance schedule, inspecting it for damage and touching up paint as necessary.</p> <p>1.13 Parks, Recreation and Leisure Services should immediately repair the Mount Calvary name on the entrance gate where it has been vandalized.</p> <p>1.14 We recommend that a multifaceted approach against vandalism be taken. Specific steps include: conduct a stone-by-stone assessment to document all damaged stones; educate staff to recognize and report vandalism; create a friends group to assist in patrolling the cemetery; contact residents adjacent to the cemetery and ask them to report suspicious activities in the cemetery; develop a form specifically for cemetery-related vandalism; immediately report all vandalism to the police and insist on investigation; establish a procedure to repair all vandalism quickly; ensure that the cemetery has daily police patrols.</p>

PRIORITIES AND FUNDING LEVELS

Table 5, cont.
 Prioritization of Recommendations

Priority	Recommendation
First – 2010-2011	<p>1.15 The city must develop appropriate specifications for the maintenance of the cemetery. Examples of best maintenance practices are available on the Chicora website.</p> <p>1.16 The cemetery evidences trees that require pruning for thinning or cleaning. These issues should be dealt with immediately. If the city does not have adequate staff to permit the level of care necessary, then a contract should be awarded to an ISA Certified Arborist for the work.</p> <p>1.17 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>1.18 The use of large deck mowers in the cemetery is causing damage to monuments and the practice must be stopped. Only 21-inch walk-behind mowers should be used on the cemetery grounds. All mowers should be fitted with closed cell foam bumpers to reduce accidental damage to the stones. These bumpers should be inspected on a weekly basis and replaced as needed.</p> <p>1.19 The nylon trimmer line being used in the cemetery must not have over 0.065-inch line. There is damage to monuments suggesting that a heavier line is being use or has been used in the past.</p> <p>1.20 Parks, Recreation and Leisure Services should develop better road signage to identify the location of the cemetery. If possible this signage should conform to a consistent tourist or historical site format for the entire city.</p> <p>1.21 Regulatory signage is critical at the entrance to 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 established simple guidelines for plantings, as well as the placement and removal of floral and grave decorations; and it should include contact and emergency information.</p> <p>1.22 The city should fund a Virginia Historical Highway Marker for the cemetery.</p> <p>1.23 The city’s Parks, Recreation and Leisure Services website provides no information concerning the cemetery, its history, landscape, care, or regulations. The city is missing an exceptional opportunity to engage an increasingly web savvy public in the cemetery’s care and preservation. The addition of genealogical information could also be of immense interest to historians and family researchers. The city could also better promote the cemetery as a tourism resource.</p> <p>1.24 All 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.</p> <p>1.25 There are some treatments, such as resetting, that can be undertaken by volunteers or city staff with training and oversight. The town, however, should not attempt repairs beyond the skill level of the individuals available.</p> <p>1.26 The city should strictly limit replacement of historic fabric and require that all such modifications receive approval.</p>

Table 5, cont.
 Prioritization of Recommendations

Priority	Recommendation
Second – 2012-2013	<p>2.1 The city should ensure that the Prentis Park Drainage Improvement Plan takes into consideration the drainage issues already existing in the cemetery. No additional water should be funneled into this catchment area.</p> <p>2.2 The city should immediately begin a larval mosquito control program in the cemetery complex using biological controls.</p> <p>2.3 The city Public Works Department should construct all-weather gravel roads in Mount Calvary along Maple, Elm, and Willow. The resulting road should be identified as one-way; it would provide convenient movement through the cemetery.</p> <p>2.4 We recommend that Maple/Vinyard westward from the ditchline separating Mount Calvary and Mount Olive also be improved, but that this section of road be closed to routine traffic.</p> <p>2.5 The city should establish a protocol for assisting disabled clients and visitors. This should include appropriate training of staff and a means to provide access to remote graves.</p> <p>2.6 Parks, Recreation and Leisure Services should prohibit any future erection of monuments or lot amenities in the cemetery.</p> <p>2.7 The city must also exercise greater control over their landscape contractor, visiting the cemetery, before, during, and after operations to ensure that appropriate work is being done.</p> <p>2.8 All mimosa and cherry laurel trees in the cemetery should be removed as soon as possible. So, too, should all diseased or dead trees. We also recommend that all trees in Mount Olive under 9-inch dbh be removed.</p> <p>2.9 Trees should be chipped on-site and the mulch stored for use in the cemetery. Stumps should be cut as close as possible to the ground, but should not be ground.</p> <p>2.10 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>2.11 Shrubbery is not common, but much of what remains is in poor condition. Much of the shrubbery requires renewal pruning. We recommend that if the city cannot devote trained staff to care for these issues that they let a contract specific for the renewal and rehabilitation of the shrubbery.</p> <p>2.12 Mowers with mulching blades should be used to allow leaves to be mulched on-site.</p> <p>2.13 There is no interpretative signage or widely available brochure. Both could be used at the cemetery to encourage more effective use of the facility and help ensure its preservation. Development of a brochure is relatively cost effective and should represent an immediate action, followed by on-site signage as funding allows. 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>2.14 Trash is a problem in the cemetery and greater attention should be devoted to that issue by the contracted maintenance firm. Trash should be expanded to include all downed limbs that would hinder complete and professional lawn maintenance.</p> <p>2.15 A stone-by-stone assessment of the cemetery complex should be undertaken as soon as possible since this will identify stones requiring conservation treatment and document current conditions.</p>

PRIORITIES AND FUNDING LEVELS

Table 5, cont.
Prioritization of Recommendations

Priority	Recommendation
Second - 2012-2013	2.16 A phased approach should be instituted to restore the topography and terrain of the cemetery. The first phase involves the mapping of the cemetery, including grave depressions, plots, monuments, roads, and vegetation. Once mapping is complete broad areas of sunken graves should be infilled. This would be the perfect opportunity to reseed or resod that particular area of the cemetery. Subsequently, individual plots should be restored, with graves filled or recapped, coping and extant monuments appropriately reset.

Table 5, cont.
 Prioritization of Recommendations

Priority	Recommendation
Third - 2014-2015	<p>3.1 Once the cemetery is consolidated, it should be enclosed with a high-security chain link fence. We estimate that approximately 3,200 linear feet will be required, tying into the extant fence at the front of Mount Calvary.</p> <p>3.2 Appropriate trees for replanting include Eastern red cedar and white cedar. 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>3.3 We recommend a gradual program of turf renovation until sustainable stands of a single turf are achieved. The city may wish to explore the use of alternative turfs such as buffalo grass or seashore paspalum.</p> <p>3.4 With the establishment of a good turf, soil analysis should be conducted every five years to determine if adjustments are necessary for the turfgrass. Where fertilization is needed, only organic, slow release fertilizers should be used in order to minimize salt damage to the stones.</p> <p>3.5 Limited pre-emergent and post-emergent weed control should be instituted at the cemetery, taking care to avoid stones. The herbicides will affect the stones and this work will need to be very carefully done to ensure that the stones are not damaged. However, a better stand of turf will reduce the overall maintenance cost of mowing.</p>

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1983 *Improving Municipal Cemetery Management.* Management Information Service Report 15(1), January.

2007 *City Cemeteries Perpetual Care Fund 10-Year Master Plan.* City of Portsmouth, Department of Parks, Recreation and Leisure Services, Portsmouth, Virginia.

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1989 *The Boston Experience: A Manual for Historic Burying Grounds Preservation.* Second Edition. City of Boston, Boston Parks & Recreation Department, Boston.

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Hammer, Greg

2007 *Soil Survey of the City of Chesapeake, Virginia.* U.S.D.A., Soil Conservation Service, Washington, D.C.

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2007 *History of Portsmouth, Virginia.* Portsmouth Historical Press, Portsmouth.

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Llewellyn, John F.

1998 *A Cemetery Should Be Forever: The Challenge to Managers and Directors.* Tropico Press, Glendale, California.

Trinkley, Michael and Debi Hacker

2007 *A Small Sample of Burials at Randolph Cemetery: What Their Stories Tell Us About the Cemetery and African American Life in Columbia.* Research Contribution 461. Chicora Foundation, Inc., Columbia.

APPENDIX 1.

MICHAEL TRINKLEY

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Education/Training

- | | |
|------|---|
| 1974 | B.A., Anthropology, University of South Carolina, Columbia |
| 1976 | M.A., Anthropology, University of North Carolina, Chapel Hill |
| 1980 | Ph.D., Anthropology, University of North Carolina, Chapel Hill |
| 1997 | Non-Destructive Investigative Techniques for Cultural Resource Management, NPS Workshop, Fort Scott National Historic Site, Fort Scott, Kansas (geophysical techniques) |
| 1999 | Jahn Installer Workshop, Cathedral Stone Products, Inc., Jessup, Maryland (3 days) (certified installer 9906811-SC) |
| 2001 | Preservation & Care of Brownstone Buildings, Technology & Conservation Conference, Boston, Massachusetts |
| 2003 | Lime Mortar Workshop, U.S. Heritage, Chicago, Illinois |
| 2004 | Preservation Masonry Workshop, School for the Building Arts, Charleston, SC (2 days) |
| 2005 | International Lime Conference, Orlando, Florida |
| 2005 | Edison Coatings Workshop, Richmond, Virginia (1 day) |
| 2005 | Historic Masonry Preservation Workshop, John Lambert, Campbell Center for Historic Preservation Studies, Mt. Carroll, Illinois (1 week) |
| 2005 | Preservation Masonry Workshop, College for the Building Arts, Charleston, SC (2 days) |
| 2005 | Masonry Analysis & Testing Workshop, Berkowitz and Jablonski, Campbell Center for Historic Preservation Studies, Mt. Carroll, Illinois (1 week) |
| 2005 | Jahn 4-Hour Workshop, Cathedral Stone Products, Columbia, SC |

PRESERVATION ASSESSMENT OF MOUNT CALVARY, MOUNT OLIVE, FISHER'S AND POTTER'S FIELD CEMETERIES

- 2006 Stone Carving and Restoration Workshop, Traditional Building Skills Institute, Snow College, Ephraim, Utah (3 days)
- 2007 Integrally Colored Concrete Workshop, Ron Blank & Associates, AIA Continuing Education, Columbia, SC
- 2008 IACET Aerial Work Platforms Training; Supported Scaffold Safety Training; Cranes, Chains, Slings and Hoist Safety Training, Columbia, SC
- 2008 Georgia Urban Agriculture Council & UGA Cooperative Extension Outdoor Water Use Registration Program Certificate #P86X9G4467

Memberships

American Institute for Conservation of Historic and Artistic Works
US/ICOMOS – Brick, Masonry & Ceramics Committee
Association of Preservation Technology
Preservation Trades Network
National Trust for Historic Preservation
Association of Gravestone Studies

Abstract of Cemetery Conservation/Preservation Experience (not inclusive of legal/archaeological experience):

- 1992 Reviewer of National Trust for Historic Preservation publication on historic cemeteries publication by Lynette Strangstad.
- 1998-99 Principal Investigator, Survey and Documentation of African-American cemeteries in Petersburg, Virginia. Including mapping, grave location, and development of historic context. (with Preservation Consultants, Charleston, SC).
- 1998-99 Conservation activities, Maple Grove Cemetery, Maple Grove United Methodist Church, Waynesville, North Carolina.
- 1999 Instructor, Cemetery Preservation: Making Good Choices Workshop, Virginia Association of Museums, Petersburg, Virginia.
- 1999 Instructor, Cemetery Preservation: Making Good Choices Workshop, Georgia Local History Conference, Augusta, Georgia.
- 2000 Consultation regarding maintenance and clearing of Ricefield's Woodville Cemetery, Georgetown County, South Carolina.
- 2000 Invited Speaker, Cemetery Conservation Techniques, Historic Cemetery Preservation Workshop, Maryland Historical Trust, Annapolis, Maryland.
- 2000 Preservation assessment, Summerville Cemetery, Augusta, Georgia.
- 2001 Assessment and preservation plan for Glenwood Cemetery, Thomaston, Georgia.
- 2001 Reconnaissance survey of cemeteries in Richland County, South Carolina.

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2001	Preservation guidelines for St. Paul's Cemetery, Augusta, Georgia.
2001	Instructor, Cemetery Preservation: Making Good Choices Workshop, Restoration International Trade Event, New Orleans, La.
2001	Instructor, Cemetery Preservation: Making Good Choices Workshop, National Preservation Institute, Washington, D.C.
2002-2003	Conservation program, Old Waxhaws Presbyterian Cemetery, Lancaster County, South Carolina.
2003	Treatment of markers at the Vardeman Cemetery, Lincoln County, Kentucky.
2003	Consultation concerning cemetery walls and pathways, Maple Grove Cemetery, Waynesville, North Carolina.
2003	Invited Speaker, Preservation of African American Cemeteries Conference, 2003, Helena, Arkansas.
2003	Instructor, Cemetery Preservation: Making Good Choices Workshop, Washington County, Georgia Historical Society, Sandersville, Georgia.
2003	Preservation assessment, Old City Cemetery, Sandersville, Georgia
2003	Instructor, Cemetery Preservation: Making Good Choices Workshop, National Preservation Institute, Washington, D.C.
2003	Treatment of markers at Oakview and Riverside cemeteries; examination of burial vaults in white and African American sections, City of Albany, Georgia (FEMA funded).
2003	Preservation assessment, Historic Cemeteries at Five Cemeteries, Bannack State Park, Bannack, Montana
2003	Instructor, Cemetery Preservation: Making Good Choices Workshop, Bannack State Park, Bannack, Montana
2003	Consultation concerning cemetery brick wall, Midway Church, Midway, Georgia.
2004	Treatment of markers at Richardson Cemetery, Clarendon County, South Carolina.
2004	Instructor, Cemetery Preservation: Making Good Choices Workshop, National Preservation Institute, Washington, D.C.
2004	Treatment of markers at Maple Grove Cemetery, Waynesville, North Carolina.
2004	Consultation regarding State Historical Marker, Roseville Cemetery, Florence County, South Carolina.
2004	Consultation regarding the Mary Musgrove Monument, Musgrove Mill State Park, Laurens County, South Carolina.

PRESERVATION ASSESSMENT OF MOUNT CALVARY, MOUNT OLIVE, FISHER'S AND POTTER'S FIELD CEMETERIES

- 2004 Invited Speaker, Cemetery Preservation Workshop, SC Genealogical Society Annual Meeting, Walterboro, South Carolina.
- 2004 Treatment of markers at Wrightsboro Cemetery, Thomson, Georgia.
- 2005 Treatment of markers at Pon Pon Cemetery, Colleton County, South Carolina.
- 2005 Treatment of markers at Walnut Grove Plantation, Spartanburg County, South Carolina.
- 2005 Consultant on cemetery fence theft, Save Austin's Cemeteries, Austin, Texas.
- 2005 Treatment of markers at Richardson Cemetery (Second Phase), Clarendon County, South Carolina.
- 2005 Instructor, Cemetery Preservation: Making Good Choices Workshop, National Preservation Institute, Washington, D.C.
- 2005 Treatment of marker in Oakview Cemetery, Albany, Georgia.
- 2005 Treatment of markers at Trinity Cathedral, Columbia, SC.
- 2005 Preliminary preservation recommendations, Randolph Cemetery, Columbia, SC.
- 2005 Treatment of markers in Presbyterian Cemetery, Union, SC.
- 2005 Instructor, Cemetery Preservation: Making Good Choices Workshop, Save Oklahoma's Cemeteries, Muskogee, Oklahoma.
- 2005 Instructor, Cemetery Preservation: Making Good Choices Workshop, National Preservation Institute, Las Vegas, New Mexico.
- 2005 Treatment of marker, Reynolds Homestead, Critz, Virginia.
- 2005 Assessment and preservation plan for Lewis Cemetery, King and Queen County, Virginia. King and Queen County Historical Society.
- 2006 Treatment of markers in Presbyterian Cemetery, Union, SC (second phase).
- 2006 Assessment and preservation plan for Pine Lawn Memorial Gardens, Aiken, South Carolina. SC Department of Archives and History, Columbia.
- 2006 Assessment of Unadilla Cemetery, Unadilla, Georgia.
- 2006 Invited Speaker, Planning a Cemetery Preservation Project, People and Places: South Carolina's Seventh Annual Statewide Historic Preservation Conference, SC Department of Archives and History, Columbia, South Carolina.
- 2006 Assessment and Preservation Plan, Memory Hill Cemetery, Milledgeville, Georgia.
- 2006 Assessment and Preservation Plan, Springwood Cemetery, City of Greenville & Friends of Springwood Cemetery, Greenville, South Carolina.

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- 2006 Invited Speaker, Cemetery Rehab, South Carolina Landmark Conference, SC Department of Archives and History, Aiken, South Carolina.
- 2006 Assessment, Town of Dedham, MA cemetery, Vollmer Associates, Boston.
- 2006 Assessment and Preservation Plan, Naval Medical Cemetery Portsmouth Cemetery, Portsmouth, Virginia.
- 2006 Instructor, Cemetery Preservation: Making Good Choices Workshop, National Preservation Institute, Washington, D.C.
- 2006 Invited Speaker, Preservation Needs at Greenville's Springwood Cemetery, Greenville Chapter of SC Genealogical Society, Greenville, South Carolina.
- 2006 Preparation of landscape plan, Randolph Cemetery, Columbia, South Carolina.
- 2006 Treatment of markers in the Cason Plot, Long Creek Baptist Church, Warrenton, Georgia.
- 2006 Treatment of markers in the Watson Plot, Thomson City Cemetery, Thomson, Georgia.
- 2006 Treatment of markers at Trinity Cathedral, Columbia, South Carolina (second phase).
- 2006 Assessment and Preservation Plan, Old Athens Cemetery, University of Georgia, Athens, Georgia.
- 2006 Preparation of Treatment Plan, Terrell Tomb, Sparta, Georgia.
- 2006 Emergency conservation treatment, Settler's Cemetery, City of Charlotte, North Carolina.
- 2006-2007 Preservation Assessment and Recordation, St. Elizabeth's Cemetery, Washington, DC (for General Services Administration).
- 2006-2007 Preservation Assessment, three Raleigh Cemeteries, Raleigh, North Carolina.
- 2007 Historic research, Randolph Cemetery, Columbia, South Carolina.
- 2007 Treatment of Monuments at Laurelwood Cemetery, Rock Hill, South Carolina.
- 2007 Assessment of markers, Machpelah Cemetery, Lincoln County, North Carolina.
- 2007 Assessment of Moss Family Cemetery, Stanly County, North Carolina.
- 2007 Treatment of Monuments at the Old Athens Cemetery, University of Georgia, Athens, Georgia.
- 2007 Treatment of markers at Trinity Cathedral, Columbia, South Carolina (third phase).
- 2007 Invited Speaker, Annual Conference of the South Carolina African American Heritage Commission, Mars Bluff, South Carolina.
- 2007 Instructor, Cemetery Preservation: Making Good Choices Workshop, National Preservation Institute, Greensboro, North Carolina.

PRESERVATION ASSESSMENT OF MOUNT CALVARY, MOUNT OLIVE, FISHER'S AND POTTER'S FIELD CEMETERIES

- 2007 Treatment of markers at Machpelah Cemetery, Lincoln County, North Carolina.
- 2007 Assessment of markers, St. Johns Cemetery, Richmond, Virginia.
- 2007 Preservation Assessment, Village Cemetery, Newberry, South Carolina.
- 2007 Instructor, Cemetery Preservation: Making Good Choices Workshop, Lincolnton Historical Society, Lincolnton, North Carolina.
- 2007 Treatment of markers, Settler's Cemetery, Charlotte, North Carolina.
- 2007 Assessment of markers, Unitarian Church Cemetery, Charleston, South Carolina.
- 2007 Preparation of Conservation Scope of Work (cemetery stones), Chalmette National Cemetery, Louisiana (for Lord, Aeck & Sargent, Ann Arbor, Michigan).
- 2007 Preservation Assessment and Assessment of markers, Mann Family Cemetery, North Attleboro, Massachusetts.
- 2007 Treatment of the Pringle Vault, City Cemetery, Sandersville, Georgia.
- 2007 Assessment of the Plunk Family Cemetery, Lincolnton, North Carolina.
- 2007 Assessment of City Cemetery, South Bend, Indiana.
- 2007 Assessment of Magnolia Cemetery, Mobile, Alabama.
- 2007 Treatment of the Middleton family vault, Middleton Plantation, Dorchester County, South Carolina.
- 2007 Treatment of ledgers in family cemetery, Augusta, Georgia.
- 2007 Consultant, National Trust for Historic Preservation, Southern Field Office, Tornado damage at Oak View Cemetery, Americus, Georgia.
- 2007-2008 Treatment of markers at Richardson Cemetery, Clarendon County, South Carolina (third phase).
- 2008 Assessment of the Coleman-Leigh-Warren Family Cemetery, Augusta, Georgia.
- 2008 Assessment of three city cemeteries, Thomasville, Georgia.
- 2008 Assessment of Cottage Cemetery, Augusta, Georgia.
- 2008 Assessment, South View Cemetery, Atlanta, Georgia.
- 2008 Treatment of Mitchem Family Cemetery stones, Clarendon County, South Carolina.
- 2008 Preparation of Conservation Scope of Work (brick, iron, stucco), Chalmette National Cemetery, Louisiana (for Lord, Aeck & Sargent, Ann Arbor, Michigan).

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2008	Treatment of stones at Unitarian Church Cemetery, Charleston, South Carolina (first phase).
2008	Treatment of vandalized stones at Trinity Cathedral Church Cemetery, Columbia, South Carolina.
2008	Consultant, Dantzler Plantation, regarding brickwork, stucco, and rising damp, Holly Hill, South Carolina.
2008	Assessment, Christ Church Cemetery, Greenville, South Carolina.
2008	Treatment of stones at Magnolia Cemetery, Mobile, Alabama (first phase).
2008	Instructor, Cemetery Preservation: Making Good Choices Workshop, National Preservation Institute, Jacksonville, Florida.
2008	Treatment of Monuments at the Old Athens Cemetery, University of Georgia, Athens, Georgia (second phase).
2008	Treatment of Newman Swamp Methodist Church stones, Florence County, South Carolina.
2008	Treatment of Rehoboth Cemetery stone, Clarendon County, South Carolina.
2008	Penetrometer survey and mapping of Old Brick Church Cemetery, Fairfield County, South Carolina.
2008	Consultant, National Trust for Historic Preservation, Southern Field Office, Tornado damage at Oak View Cemetery, Atlanta, Georgia.
2008-2009	Assessment and preservation plan for three City of Suwanee cemeteries, Suwanee, Georgia (includes GPR and mapping in association with GEL Geophysics, Charleston, South Carolina).
2008-2009	Assessment and preservation plan for city cemetery, Jonesborough, Tennessee.
2008-2009	Conservation assessment of Orleans City Cemetery, Orleans, Massachusetts.
2009	Treatment of monuments at Settler's Cemetery, Charlotte, North Carolina.
2009	Treatment of monuments at Magnolia Cemetery, Mobile, Alabama (second phase).
2009	Treatment of monuments at the Old Athens Cemetery, University of Georgia, Athens, Georgia (third phase).
2009	Assessment and preservation plan for St. Elizabeths Hospital, East Camus Cemetery, Washington, DC.
2010	Treatment of the National Cemetery Monument, Biloxi National Cemetery, Biloxi, Mississippi.
2010	Treatment of the Dade Pyramids and Monument, St. Augustine National Cemetery, St. Augustine, Florida.

PRESERVATION ASSESSMENT OF MOUNT CALVARY, MOUNT OLIVE, FISHER'S AND POTTER'S FIELD CEMETERIES

- 2010 Treatment of the Potter Memorial, Beaufort National Cemetery, Beaufort, South Carolina.
- 2010 Assessment and preservation plan for the Old Shiloh Presbyterian Church Cemetery, Grover, North Carolina.
- 2010 Presenter, Association Gravestone Studies Conference, Granville, Ohio.
- 2010 Treatment and replacement of fence ironwork, Old Athens Cemetery, Athens, Georgia.
- 2010 Cemetery assessment, stone-by-stone assessment, and preservation plan, Elm Street Cemetery, Braintree, Massachusetts.
- 2010 Treatment of stones, Randolph Cemetery, Columbia, South Carolina.
- 2010 Cemetery assessment, conservation consultation, Spring Grove Cemetery and Arboretum, Cincinnati, Ohio.
- 2010 Cemetery assessment, Mount Calvary, Mount Olive, Fisher's, and Potter's Field, Portsmouth, Virginia.
- 2010 Treatment of stones, Violet Bank Cemetery, Colonial Heights, Virginia.
- 2010 Treatment of stones, Old Athens Cemetery, Athens, Georgia.
- 2010 Stone-by-stone assessment, Richland Cemetery, City of Greenville, South Carolina.
- 2010 Cemetery assessment, Eastern Cemetery, Portland, Maine.
- 2010 Invited Speaker, 9th Annual Alabama Cemetery Preservation Alliance, Montgomery, Alabama.

National Register Nominations of Cemeteries

- 1999 Preliminary Multi-Property Nomination, African American Cemeteries of Petersburg, Virginia. Submitted to Virginia Department of Historic Resources, Richmond, Virginia (with Sarah Fick, Preservation Consultants).
- 2000 National Register Nomination, King Cemetery, Charleston County, South Carolina. Submitted to South Carolina State Historic Preservation Office, SC Department of Archives and History, Columbia.
- 2002 National Register Nomination, Scanlonville or Remley Point Cemetery, Charleston County, South Carolina. Submitted to South Carolina State Historic Preservation Office, SC Department of Archives and History, Columbia.
- 2005 Preliminary Information Form – Hopkins Family Cemetery, Richland County, South Carolina. Submitted to South Carolina State Historic Preservation Office, SC Department of Archives and History, Columbia.
- 2007 Preliminary Information Form – Harts Bluff African American Cemetery, Wadmalaw Island, Charleston County, South Carolina. Submitted to South Carolina State Historic Preservation Office, SC Department of Archives and History, Columbia.

APPENDIX 1.

2009 Preliminary Information Form – Lower Cemetery, City of Columbia, Richland County, South Carolina. Submitted to South Carolina State Historic Preservation Office, SC Department of Archives and History, Columbia.

Cemetery Preservation Plans

Historical Research

**Identification of Grave Locations
and Mapping**

Condition Assessments

Treatment of Stone and Ironwork



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