PLACES TO REMEMBER

Guidance for Inventorying and Maintaining Historic Cemeteries

By
Carol Griffith and Michael Sullivan
2012
(Revised January 2013 from 2012 draft)
PLACES TO REMEMBER

GUIDANCE FOR INVENTORYING
AND
MAINTAINING HISTORIC CEMETERIES

By Carol Griffith and Michael Sullivan
2012
(Revised January 2013 from 2012 draft)

Cover Photograph: Guadalupe Cemetery, Tempe, Arizona
Image by authors
Arizona State Parks Board

CHAIR
Walter D. Armer, Jr.
Vail

VICE CHAIR
Maria Baier
State Land Commissioner

Tracey Westerhausen
Phoenix

Larry Landry
Phoenix

Alan Everett
Sedona

William C. Scalzo
Phoenix

Bryan Martyn
Executive Director

Arizona State Parks
1300 W. Washington
Phoenix, AZ 85007
Tel & TTY: (602) 542-4174
Fax: (602) 542-4180
Internet: AZStateParks.com

This document is available on the Arizona State Parks website
This document is available in alternative formats by contacting the ADA Coordinator at (602) 542-7152

This document was printed with Historic Preservation Fund grant money allocated to the Arizona State Historic Preservation Office from the National Park Service, Department of the Interior. Under Title VI of the Civil Rights Act of 1964 and Section 504 of the Rehabilitation Act of 1973, the U.S. Department of the Interior prohibits discrimination on the basis of race, color, national origin, age, or handicap in its federally assisted programs. If you believe you have been discriminated against in any program, activity, or facility as described above, or if you desire information, please write: Office of Equal Opportunity, U.S. Dept. of the Interior, Washington, D.C. 20240
# Table of Contents

Introduction ................................................................. 1

History of Cemeteries and Cemetery Styles ................................. 3
  Vernacular Cemeteries .................................................. 3
    The Church Graveyard .............................................. 3
  Secular Cemeteries ..................................................... 4
  Potter’s Fields ........................................................... 6
  Isolated Graves .......................................................... 6
  Master Planned Cemeteries ............................................ 7
    The Rural Garden Cemetery ....................................... 7
    Lawn Park Cemeteries .............................................. 9
    Memorial Park ......................................................... 10
    Military Cemeteries ................................................ 11

The Cultural and Ethnic Aspect of Cemeteries ........................... 15

Elements of a Cemetery ..................................................... 17
  Buildings and Structures ............................................. 18
  Landscape Features ................................................... 19
  Grave Markers and Monuments ..................................... 21
    Grave Marker Iconography and Symbolism ................. 26

Cemetery Laws and the National Register of Historic Places ........ 35
  State Laws ............................................................... 35
  Federal Laws ............................................................ 37

Before You Begin Cemetery Preservation Activities .................. 39
  Obtain Permission ..................................................... 39
  Photography ............................................................. 39
  Cemetery Etiquette .................................................... 40
  Gravestone Rubbing ................................................... 41

Documenting Historic Cemeteries ........................................... 43
  Research ................................................................. 43
  Inventory of Historic Cemeteries ................................... 43
  Preliminary Cemetery Survey and Mapping ....................... 43
  Marker and Monument Survey and Recordation ................ 45
  Condition Assessment Survey ...................................... 45
  Landscape Survey ..................................................... 46

Planning for Cemetery Preservation Activities ........................ 49
  Create a Master Plan .................................................. 49
  Suggested Components of a Master Plan ......................... 49
Maintenance of Historic Cemeteries ................................................................. 51
Redisaster Planning and Property Protection .................................................. 52

Preservation of Cemetery Elements ............................................................... 55
Secretary of Interior’s Standards for the Treatment of Historic Properties ...... 56
Repair and of Grave Markers and Other Elements ........................................ 57
Stone Markers and Monuments ................................................................. 58
Metal Markers and Elements .................................................................. 61
Masonry Markers and Structures ............................................................. 64
Wood Monuments ................................................................................. 67

Cemetery Preservation Resources and Professionals ...................................... 71

Appendix A ............................................................................................ 73
Appendix B ............................................................................................ 77
Appendix C ............................................................................................ 85
To help commemorate Arizona’s Centennial on February 14, 2012, a project was begun to inventory and promote the protection of historic cemeteries throughout the state. Historic cemeteries were chosen as the focus because they are important irreplaceable resources, many of which are in danger of being lost through neglect, natural erosion, and vandalism.

Arizona’s historic cemeteries provide important information about the state’s people, communities, historical events, and traditions. They may be aesthetic, containing works of art in their grave markers, monuments and landscape design. Even the smallest and most desolate cemeteries have their own sense of beauty and reflect the nature of the historic community that created them. Cemeteries are also tranquil and spiritual. For living family members of the deceased, they are places of memories and reverence. Historic cemeteries are also the final resting places of the individuals who pioneered and built this state.

These cemeteries often fall into disrepair and may even be vandalized once communities are abandoned and families of the deceased are no longer around to care for the graves (Figure 1).

Individuals and groups interested in preserving these cemeteries may lack the guidance on proper preservation and maintenance techniques. Cemetery preservation efforts have ranged from the well-funded, researched, and properly directed to the well-intentioned but ultimately damaging activities (Figure 2).

As the Arizona Centennial approached, it seemed appropriate that an organized statewide effort be undertaken to locate, inventory, and provide guidance for the repair and maintenance of these significant properties. The Inventory of Arizona Historic Cemeteries (IAHC) task force was formed to guide these activities. This group included the State Historic Preservation Office (SHPO), the Pioneers’ Cemetery Association (PCA), other statewide cemetery and genealogical associations, federal and state land managing agencies, a former state legislator, a city councilman, a representative of the Arizona...
Mortuary Association, and a numerous volunteers.

The primary goal of the IAHC was to create an inventory of historic cemeteries in Arizona. Volunteers throughout the state mobilized to identify historic cemeteries and collect basic information for the inventory. For purposes of the inventory, historic cemeteries are defined as an individual or more graves that are at least 50 years old. To facilitate the documentation of these properties, the SHPO created an inventory form (Appendix A). Arizona Revised Statute §41-511.04 designates the SHPO as the official repository for this inventory.

A secondary goal of the IAHC was to develop written guidance to assist individuals, organizations, and property owners in maintaining, documenting, and conserving historical cemeteries. The purpose of this document is to provide that guidance. The document is organized into sections on the following topics: an overview of the history of cemeteries including national trends in the evolution of styles and Arizona’s adaptations of those styles; cemetery laws; recording and documenting cemeteries; planning maintenance, preservation and conservation treatments; and preservation resources and professionals.

In preparing this document, the authors gleaned information from a number of sources that are referenced throughout the document. Anyone who is undertaking work in a historic cemetery is encouraged to review pertinent technical source documents for more detailed information and seek assistance from conservation professionals for more complex interventions.
The Church Graveyard

The prevailing burial practices in the United States have their beginnings in ancient Roman and early Christian European traditions and practices. It was pre-Christian Romans who had practices most common to the modern Western cemetery. The Romans interred their deceased in individual plots with markers. This practice gradually changed with the weakening of the Roman Empire and the rise of Christianity.

In approximately the tenth century throughout Christian Europe the churchyard became the standard place to be buried. The deceased were interred in common pits surrounding a church. Exceptions were made for the highest-ranking community and Church members. These individuals were provided individual burial plots or vaults within the church. At the other end of the spectrum, the nonbelievers, sinners and those not baptized were not permitted space in the consecrated churchyard. Around the thirteenth century, the old Roman practice of individual plots with markers began to appear in churchyards.

From the beginning of colonization on the eastern coast of America, settlers followed the European tradition of burying the dead in church graveyards. Located on the land surrounding the church, these burial grounds provided convenient places for the burial of deceased congregation members. Church graveyards also had a more subliminal purpose. Locating the dead among the living ensured that the congregation would regularly be reminded of their own mortality and the need to prepare for death.

Inscriptions and symbols within graveyards reinforced the need to prepare for death by de-emphasizing temporal life and emphasizing the eternal afterlife. For example, only rarely do the memorials in these cemeteries provide much information.
beyond the deceased name, date of death, and date of birth. Symbols reminiscent of death (for example, skulls, crossed bones, and the winged death’s head) almost invariably appear at or near the center of the viewer’s focus, while icons associated with life appear on the periphery.

Two types of church graveyards appear in Arizona. They differ by culture and period. The earliest of these are the Mission cemeteries, which date to the Spanish and Mexican Colonial periods. As those working in and around the missions died, they were buried within the walls of the mission complex, as at San José de Tumacácori (Figure 3) or at a short distance from the complex, as seen with San Xavier del Bac.

The later church graveyard period started in towns of the American frontier during the late 1800s and early 1900s. Most of these functioned as small community cemeteries interring not only congregation members but other individuals who died in the area. For example, the Palo Verde Baptist Church in Palo Verde and the Clear Creek Church in Camp Verde (Figure 4) have associated graveyards in close proximity to the church. Today in many instances the church building is no longer standing or in use as a church but the cemetery remains.

Secular Cemeteries

While church graveyards remained the primary burial location for generations of congregation members, secular cemeteries provided burial space for all members of a community regardless of religious affiliation or social station. The fluidity of populations in the United States created new communities. Nearly every community established a cemetery at the edge of town. Family plots might be established for founding families of the community. Isolated ranches and farms formed their own unique communities and often had their own cemeteries.

Vernacular cemeteries are found throughout Arizona beginning in the mid-1800s. The ranches and mining towns that sprang up across the territory were difficult and often dangerous locations. Populations were as new as the places they occupied and mostly transient in nature. Many Arizona towns lacked the population density, wealth, and longevity to warrant the installation of a formally designed cemetery.

A community cemetery was often a patch of native countryside dedicated to burials. Landscaping was natural or minimally enhanced (Figure 6). Monuments were usually unimpressive simple wood or stone markers. Families of the deceased were free to decorate plots as they chose.
If the town was abandoned, the cemetery was also abandoned. Even if the community endured, the old pioneer cemetery could fall into disrepair as newer more formal cemeteries appeared. Bradshaw City in the Bradshaw Mountains south of Prescott and Pinal City Cemetery near Superior are examples of vernacular community cemeteries (Figure 7). Not all such vernacular cemeteries belong to lost and forgotten communities. There are still maintained and in use vernacular cemeteries in the state. Some have very distinct religious or ethnic character as seen in the Russian Molokan Cemetery in Glendale or the Guadalupe Cemetery in Tempe (Figures 8 and 9). However, most Arizona cemeteries do not have such pronounced expressions of ethnic identity throughout the entire cemetery.

The isolation of many Arizona ranches and farms necessitated the establishment of cemeteries on these rural properties. While these cemeteries were used primarily for the owner’s family, at times the locations were also used to inter the workers and their families. A good example of a ranch cemetery is Faraway Ranch, which is now part of the Chiricahua National Monument in southeastern Arizona (Figure 5). The Fry Cemetery in Sierra Vista began as a family cemetery but was later used by other members of the community.
Potter’s Fields

Burial grounds for strangers and the poor were often unmarked and usually placed in a less than desirable location of a community. Because most of the graves had small or no markers, the location of these cemeteries are often lost as time passes and the cemetery is no longer actively used for burials. They are sometimes marked with a central monument stating that it is a potter’s field, or a cemetery that served a hospital or victims of an epidemic. The name “potter’s field” comes from a Biblical reference, Matthew 27:7 that says “And they took counsel, and bought with them the potter’s field, to bury strangers in” (King James Bible [Cambridge Edition]).

In Arizona, county cemeteries such as those in Maricopa County at Tempe and at White Tanks are operated so those who die indigent, unknown, or without other means for burial have a place to be interred (Figure 10). Cemeteries at the State Mental Hospital and the State Prison also contain the remains of those having no other location to be buried (Figure 11). These locations are usually devoid of all but the most rudimentary

Isolated Graves

Generally isolated graves are located at the site of a death and marked by a stone or wooden board. Usually few traces of the markers remain, especially in areas that lacked stone. Since most of these burials went unrecorded, the location and number of these sites is extremely difficult to determine (Figure 12).
The Rural Garden Cemetery

The Industrial Revolution in Europe and the United States created an explosion in urban population as people migrated to the cities to take advantage of newly created manufacturing jobs. As in Europe, United States cities, particularly in the Northeast, had higher urban mortality rates because of overcrowding, dangerous labor conditions, and poor health practices. The climbing death rate soon overtaxed the limited resources of existing inner city burial grounds. The population densities of cities also fostered the transmittal of diseases. Urban dwellers became more aware of the potential health dangers associated with overcrowded city cemeteries.

In the 1830s, traditional views of a cemetery as just a place for the dead began to change. Community leaders seeking to develop open natural areas as healthy retreats from the congested, dirty cities began to view cemeteries as potential open park-like spaces with designed landscapes, beautiful monuments and places for meditation and relaxation.

On September 14, 1830, the consecration of Boston's Mount Auburn Cemetery (Figure 13) created a new era in cemetery design known as the Rural Cemetery Movement. Coinciding with the growing popularity of gardens and appreciation of rural settings, Mount Auburn was designed as a variant on 19th century English landscape design and was located in a rural setting outside the urban center.

The Rural Garden Cemetery plan included natural elements such as water features, mature forested areas, gardens and new plantings of both native and exotic stock (Figure 14). The cemetery built environment contained fenced family plots often decorated with elaborate icons, heavy headstones, scattered monuments and sculptures installed by wealthy patrons, and curving driveways and paths. From every viewpoint, Rural Garden Cemeteries looked like elaborate, purposely staged nature preserves. The new Rural Garden Cemetery was designed as a place where the living would be able to derive pleasure, emotional satisfaction, and instruction on how best to live life in harmony.
with art and nature. The owners of these new cemeteries installed aesthetically appealing objects throughout the cemetery. These provided an example for the individual plot memorials that followed.

Judging from the rapid emergence of Rural Garden Cemeteries subsequent to the establishment of Mount Auburn, as well as Mount Auburn’s immediate popularity, this new approach to cemetery design quickly lived up to its advocates’ expectations. Within a matter of months, travelers from near and far began to make “pilgrimages to the Athens of New England, solely to see the realization of their long cherished dream of a resting place for the dead, at once sacred from profanation, dear to the memory, and captivating to the imagination” (Downing 1974:154). Part of the reason for Mount Auburn’s immediate popularity was its novelty. Yet Mount Auburn remained remarkably popular throughout the rest of the century. Rural Garden Cemeteries quickly become the dominant preference in major and secondary urban areas. Only the major population centers could afford the cost of developing these extremely intricate sites. However, lesser versions did begin appearing in the smaller communities throughout the country. "In their mid-century heyday, before the creation of public parks," as the scholar Blanche Linden-Ward has observed, "these green pastoral places also functioned as ‘pleasure grounds’ for the general public" (Linden-Ward 1989:293).

None of the cemeteries designed in Arizona in the early to middle 20th century completely carried out the design elements of the Rural Garden style. The larger more affluent communities adopted some aspects of the Rural Garden Cemetery into new and already existing cemeteries.

Ornate grave markers, plot fencing, and decorative landscaping were incorporated into these early sites (Figure 15). Individual plots had the full range of monuments, from those with highly decorative iconography to simple flush with the ground markers. Obelisks and other monuments, vaults, tombs
and mausoleums, enclosures, and other buildings dotted the cemetery landscape.

Entrance gates were common but lacked elaborate decoration. Many Arizona cemeteries had a central, wider roadway with smaller paths between sections. Most incorporated a simpler, gridded vehicle and pedestrian circulation patterns, in contrast to the curvilinear format popular in Rural Garden Cemeteries. Largely in response to these criticisms, in 1855 the superintendent of Cincinnati’s Spring Grove Cemetery, Adolph Strauch, was told to remove many of the features installed when the place was designed as a Rural Garden Cemetery (Figure 18). In the process, he established a new cemetery form, the Lawn Park Cemetery, which dominates cemetery design to this day.

Rural Garden Cemeteries in Arizona lacked the lush compact vegetation characteristic of these cemeteries in parts of the country with more precipitation. The effect of less vegetation provided views and open sightlines unlike traditional Rural Garden Cemetery design (Figures 16 and 17). The setting included a landscape with native as well as many non-native trees, flowers, and bushes.

These cemeteries were not intended to remind the living of their need to prepare for death like the church graveyards. Nor did they provide mourners and other visitors with a sylvan environment to deal with death homeopathically. Instead, the Lawn Park Cemetery provided visitors with an open vista, unobstructed by fences, memorials, and trees. This open park-like design allowed cemetery to specific patrons, and freedom of expression in erecting and decorating individual or family plots. Instead the primary design characteristics of a Lawn Park Cemetery include open vistas, grave markers that are either low or flush with the ground. This is not to say that Lawn Park Cemeteries are devoid of ornamentation, as they often contain a variety of such features. However, these statues and monuments serve as overall focal points for different sections of the cemetery rather than markers for individual and family plots. This design style is influenced by the desire of the corporate ownership for efficiency, centralized management, and explicit rules and regulations.
superintendents to make the most efficient use of space. Available land was generally laid out in a grid so that no areas failed to come under the general plan. Finally, by eliminating fences, hedges, trees, and other things associated with the Rural Garden Cemetery and by requiring small markers that were level or nearly level with the ground, these cemeteries did not appear to be a cemeteries at all but an expanse of green. Although Lawn Park Cemeteries did not capture people’s imaginations like the Rural Garden Cemetery had in the early nineteenth century, they did rapidly increase in number. Presently, they are considered among the most common kind of cemetery in the United States.

The Lawn Park Cemetery style was adopted in new cemeteries and newer sections of older cemeteries in Arizona. It is not uncommon to see elements of Rural Garden and Lawn Park designs in the same cemetery. One section of Greenwood (see Figure 16) in Phoenix has curving roadways, central monuments, and the open landscape design characteristic of Lawn Park Cemeteries. Grave markers in this section are still personalized, varying in size and elaboration, but plot fencing and individual grave plantings are absent. Rather than the plot fencing used in Rural Garden Cemeteries, a prominent marker is sometimes used to demarcate a family plot with small, flush to the ground markers for individual family members (Figure 19).

Memorial Parks

A modern refinement of the Lawn Park Cemetery concept is the Memorial Park style of the twentieth century. Memorial Park cemeteries are cared for in perpetuity by a business or nonprofit corporation and are generally characterized by open expanses of grass with either flush or other regulated grave markers with central section monuments (Figure 20). Dr. Hubert Eaton initiated the move toward the Memorial Park Cemetery in his 1917 concept and design for Forest Lawn in California. His “The Builders Creed,” which he had carved in stone at the Great Mausoleum at Forest Lawn, states the cemetery would be “a great park, devoid of misshapen monuments and other customary signs of earthly death,” and filled with signs of life with birds, animals, plants, and open green spaces. This type of cemetery did not become popular until after World War II.

Post-World War II Arizona cemeteries abandoned almost all aspects of the Rural Garden style and moved fully into the Lawn Park style and its even cleaner...
lined version the Memorial Park. As with the earlier cemeteries, these new locations did not adopt all the nuances that defined the full Memorial Park style but came much closer. The elements that were most often included were those that helped reduce maintenance costs. Elaborate headstones were replaced by simple markers low or flush to the ground. Individual plot decorations were limited to floral offerings, and these were subject to explicit rules on type and duration. Landscaping emphasized open expanses of grass (Figure 21). The traffic patterns usually conformed to a grid.

Not all Arizona cemeteries fall into this sequence. Some new cemeteries continue to have aspects that reflect the old Rural Garden style. Some hark farther back to the early, unadorned community cemetery. It is not hard to find cemeteries where decoration of the individual plots is not only accepted but is expected. In general, these older forms are found in smaller communities and in areas dominated by certain ethnic groups. Even the older urban cemeteries will have areas that express earlier cemetery styles.

Military Cemeteries

These special population cemeteries were established for war casualties, veterans, and the eligible dependents of veterans. Military cemeteries established by the government include post cemeteries, Confederate and Union plots, national cemeteries, soldiers’ lots, and American cemeteries in foreign countries.

Post cemeteries are the earliest official military cemeteries in the United States. The death of military personnel while stationed at a military installation where injury and disease were prevalent forced the Army in the early 1800s to authorize the establishment of official post cemeteries within military reservations. The responsibility for registering burials and maintaining records and cemeteries fell to the quartermaster officers.

The American Revolution was obviously the first war where there was anything like a national army in the United States. Compared to the massive carnage that took place in the Civil War some 80 years later, mortality rates from Revolutionary War battles seem small. Existing graveyards and burial grounds surrounding the battle sites could accommodate the unfortunate soldiers who paid the ultimate price. In many instances,
the remains were removed back to the individual’s home community. There are no cemeteries entirely dedicated to war dead from the Revolutionary War.

The mortality rates during the Civil War forced a change in the interment of war dead. To say battle deaths increased dramatically is something of an understatement. The hundreds killed in battle during the Revolutionary War were greatly eclipsed by the thousands and tens of thousands who died in the battles of the Civil War. At Antietam 3,650 were killed in 12 hours. By National Park Service estimate, more than 20,000 lost their lives in the second battle of Manassas (Bull Run). In addition to deaths on the battlefield, disease and wounds accounted for many more deaths. The best statistics for the Union armies, though suspect and debated, still give a rough indication of the scale of mortalities. Somewhere around 67,000 soldiers lost their lives on the battlefield, another 43,000 died from wounds and the treatment of wounds, and an astounding 224,000 died of diseases. The even less reliable statistics for the Confederate armies suggest that the situation was the same among those troops.

The volume of dead needing to be interred far exceeded the capacity of the local cemeteries near battlefields and military hospitals. Initially, the military attempted to address the situation by acquiring land near its hospitals. This approach reflected the traditional post cemetery concept. It did not take long before it became apparent that hospital cemeteries were going to be overwhelmed. In 1862, using the precedent of the establishment of a dedicated military cemetery in Mexico City to hold the remains of those Americans who died in the war with Mexico, Congress passed legislation that established a system of national military cemeteries. The first large military cemetery in the United States was established in south central Pennsylvania in 1863, shortly after the Battle of Gettysburg. Twenty-seven such cemeteries had been established by the end of 1864. The present National Cemetery System includes most of these cemeteries (Figures 22 and 23). By 1989 there were 110 military cemeteries in the United States containing more than a 1,000,000 individuals.
Prior to 1867 there were no overarching guidelines for the appearance and maintenance of military cemeteries. That year Congress passed legislation requiring all military cemeteries meet certain standards. Among these standards were ones requiring a headstone for each grave, and the entire cemetery had to be surrounded with an iron or stone fence. With the establishment of an organized system of military cemeteries efforts began to close out isolated post cemeteries, particularly those in the far west, and bring the remains for reburial in the new military cemeteries.

The responsibility for administration of all military cemeteries logically fell to the War Department. Eleven of these cemeteries were located near or on National Park administered battlefields and other historic military sites. The administration of these associated cemeteries was transferred in 1933 to the National Park Service. Three additional military cemeteries have been added to the National Park Service charge so today the agency is responsible for 14 military cemeteries. The National Cemetery System today contains over 100 cemeteries. The Department of Veterans Affairs administers those outside the jurisdiction of the National Park Service.

Beyond the National Cemetery System many states have established their own veteran’s cemeteries. Often the establishment and improvement of these areas was accomplished with federal monies available through the Department of Veterans Affairs State Cemetery Grants Program. As a result these cemeteries generally follow the eligibility requirements for internment established by the Department of Veterans Affairs for the National Cemeteries. However, they may also include residency restrictions. The administration of these state veteran cemeteries lies with the states. The sites are uniform green spaces that hold an orderly arrangement of similar white markers. Flat metal markers set flush with the ground mark newer military burials. Memorial Day and Veterans Day are two holidays acknowledged at military cemeteries.

Most recently, in 2006, Title 38 of the United States Code was amended to recognize the contributions and special circumstance of Native American veterans. The Veterans Benefits, Health Care, and Information Technology Act of 2006 (Public Law No. 109-461) authorized the Department of Veterans Affairs to make grants to Native American tribal organizations to assist them in establishing, expanding, or improving veterans’ cemeteries on tribal trust lands in the same manner and under the same conditions as the Department makes similar grants to the states.

References


Cemeteries and graves often mirror the social complexities of the living. Social status, religious affiliation, and ethnic differences can be expressed through separate cemeteries or separate sections in cemeteries, through the obvious cost of a marker, or in special symbols incorporated onto grave markers. Moreover, groups may employ different temporary grave decorations and visit the grave on special occasions.

One of the defining aspects of the United States is the diversity of its population. This diversity manifests itself in a wide range of ethnic and cultural practices that foster a sense of identity among these various populations. These practices extend to the rituals and architecture associated with providing a final resting place for the deceased. Every aspect from how the overall space is organized, to how the individual graves are designed, marked, and maintained is imbued with meaning reflecting how the living view death, the dead, and each other.

At times a group’s desired funerary customs can be different than that usually seen in mainstream United States cemeteries. Therefore, in many places ethnic groups have established their own cemeteries (Figure 24). These cemeteries are noticeably different from the mainstream cemeteries and can present very specific concerns when it comes to documentation, maintenance, and restoration of the graves and landscape.

Interestingly, the appearance of many of these ethnic cemeteries is not very dissimilar to the traditional American community cemeteries during the seventeenth and eighteenth centuries where personalized grave sites were common. This period reached its zenith in the early 1800s with the rise of the Rural Garden Cemetery design and its excesses in grave decoration.

The following Lawn Park Cemetery movement dramatically reacted against the personalization and began a trend toward standardization in graves and markers. This standardization continues today in the Memorial Park cemeteries. It has come to dominate the American cemetery design. The highly personalized
ethnic cemeteries serve an ever-decreasing segment of the population. Ethnic populations choosing to have an internment done in a Lawn Park Cemetery must make compromises on their traditional practices. These cemeteries require that all headstones conform to visual guidelines. Headstones often continue to include information in the native language and, where allowed, a photograph of the deceased. Grave offerings may be limited to flowers.

Similar to ethnic cemeteries are those associated with fraternal orders such as the Masons, Woodmen of the World and the International Order of Odd Fellows (Figure 25). Internment in any of these cemeteries requires that the deceased have been a member of that particular order. Not surprisingly, each order also has its own rules and expectations in regards to grave architecture and offerings.

Nineteenth and twentieth century Native American cemeteries and graves are located both on and off Indian reservations in Arizona. Tribal cemeteries may include elements of national and local cemetery styles but will also reflect the specific cultural and religious traditions of tribal individuals and communities. Permission needs to be obtained from the individual tribes to access reservation lands. No activities involving Native American cemeteries on or off the reservation should be initiated without permission and the involvement of the appropriate tribe.

Figure 25: International Order of Odd Fellows Cemetery, Prescott, Arizona
Image courtesy Arizona State Historic Preservation Office
The elements of a cemetery include, but are not limited to, grave markers, monuments, fences, entrance gates, buildings, structures, and the roads, paths, and plantings that make up the overall circulation and architectural plan for the cemetery. Like the evolution of cemetery design, the elements of cemeteries have also changed through time based on social and economic influences. These elements contribute to the overall character, design, and feeling of the cemetery. Before the implementation of any maintenance and conservation work at a historic cemetery, it is important to understand the contributions these elements make to the overall design and character of the cemetery. Changing or introducing new elements may negatively impact the historic character of the property.
Mausolea and Columbaria

A mausoleum is a free-standing building constructed to house the body of the deceased or bodies of deceased family members. Burial chambers may be within interment niches in the structure or below the structure in sarcophagi. Christian mausolea may include a chapel. These structures represent a substantial financial investment for treatment of the dead and are usually reserved for distinctive or wealthy individuals or families (Figure 27).

Columbaria are a type of mausoleum used to house cremated remains.

Chapels

Cemeteries not associated with a church (see church graveyards) may have a cemetery chapel that serves as a place for conducting services or receiving family and friends of the deceased. These may have a religious affiliation or may be non-denominational (Figure 28).

Administration Buildings

These buildings house the administrative offices of the cemetery. They are most commonly found at Lawn Park and Memorial Park cemeteries.

Gazebos

These are usually covered, circular, or octagonal structures with multiple open sides used for viewing a vista or vistas.

Caretaker’s or Superintendent’s Home

These are more commonly associated with Rural Garden Cemeteries.

Storage/Maintenance Facilities

These types of structures function as storage sheds, carriage facilities, and garages.
Circulation Features

Circulation features include paths and roads. Community/municipal cemeteries are generally laid out in a geometric pattern with pathways connecting different sections of the cemetery. In many of Arizona’s historic cemeteries, pathways are dirt, and except for the main entrance, not well defined. Rural Garden Cemeteries have a well-defined central entrance and curving pathways connecting different sections of the cemetery (Figure 29). Lawn Park and Memorial Park cemeteries are more park-like with curving roadways that are designed to be wide enough to accommodate motor vehicles. Roadways are also designed to accentuate landscape views, water features, and central statues and monuments. The later two types of cemeteries have an overall scenic landscape design.

Vegetation

The placement and type of vegetation is an important character-defining element of the landscape design of Rural Garden, Lawn Park and Memorial Park cemeteries (Figure 30). Vegetation in historic Vernacular and Rural Garden cemeteries include plantings made by individual families. Historically, certain types of plants were used because they embodied a special meaning and symbolism.
Gates

Large elaborate entry gates are common features of Rural Garden Cemeteries (Figure 31).

Statues and Monuments

In Rural Garden Cemeteries, statues and monuments may be used to mark individual or family graves, or commemorate groups of individuals. In Lawn Park Cemeteries, they usually serve as decorative focal points or markers for different sections of the cemetery (Figure 32).

Walls and Fences

A wall or fence may be used to define the boundaries of, and within, the cemetery (Figure 33). Low walls and fencing is also used to define individual and family plots. This is a common practice in Rural Garden Cemeteries.

Fountains and Water Features

Fountains and water features add to the restful feeling of a cemetery and are often designed focal elements for Lawn Park and Memorial Park cemeteries.

Benches

Benches are common elements of Lawn Park and Memorial cemeteries.

Flagpoles

Flagpoles are traditionally associated with military/veteran cemeteries, but found at most modern cemeteries.
Tablet Headstone and Footstones

Tablet grave markers are very common. They are set vertically at the end of the grave and can be made of a variety of materials including, stone, wood, metal, and concrete (Figure 34). Graves may have smaller footstones as well as headstones. Both the headstone and the footstone may have markings, but markings on the footstone are usually limited to initials and the date of death.

Crosses

Crosses are commonly used as grave markers. They are made of many of different materials including wood, metal, and stone (Figure 35). Cross styles may be indicative of ethnicity, such as the use of Celtic and Eastern Orthodox style crosses. Crosses may be mounted directly in the ground or on a base.

Obelisk

The obelisk portion of the monument is usually a column or shaft terminating in a 4-sided pyramidal point that is mounted on a base (Figure 36). This style of monument is based on Egyptian design and was most popular from 1880 to 1910. Egyptian designs in architecture and cemetery monuments became popular in the United States after the discovery and excavation of ancient tombs in the Valley of the Dead in Egypt.
Military Markers

The federal government issued military markers. Civil War headstones for Union soldiers had a shield (Figure 37); Confederate headstones did not. Later, tombstones omitted the shield and instead displayed a faith symbol at the top center. In recent years, the use of flat, flush-to-the-ground markers made of granite, marble, or bronze have become common (Figure 38). These markers often display religious symbols for the faith of the deceased.

Figure 37: Phoenix Pioneer Cemetery, Phoenix, Arizona
*Image by authors*

Pedestal Tomb

The pedestal tomb consists of a base and an elongated central shaft that is topped with a decorative element, such as an urn (Figure 39).

Figure 39: Phoenix Pioneer Cemetery, Phoenix, Arizona
*Image by authors*

Pulpit Markers

Pulpit markers are shaped like a church pulpit and often have an open or closed book on the top (Figure 40).

Figure 40: Phoenix Pioneer Cemetery, Phoenix, Arizona
*Image by authors*

Ledger Marker

Ledger markers are thin slabs laid on the ground over the grave. Inscriptions are placed on the slab (Figure 41).

Figure 41: Phoenix Pioneer Cemetery, Phoenix, Arizona
*Image by authors*
Two-Piece Die in Socket Monuments

Two-piece monuments consist of an upright stone (the die) set into an underground socket or base (Figures 42 and 43).

Two-Piece Die on Base Monuments

In this type of marker the headstone is mounted on a broad, flat base. Before the 1930s, the headstone was attached to the base with brass or iron pins (Figures 44 and 45). If the iron pins become exposed to water and rust, they will expand, which can cause damage to the stone (known as iron jacking).

Base, Die, and Cap Monuments

Another type of monument is made up of three or more pieces including a base that may be stepped; a die, which is usually rectangular; and a decorative cap (Figure 46).
Flush-to-the-Ground and Raised Top Markers

Flush markers are generally made of stone, rectangular in shape and set in the ground. These first occur in the mid 1930s and have continued to be used. Raised top markers are rectangular and slightly above the ground (Figure 47).

Box Tomb

The box tomb has a flat slab/ledger that sits on a raised base or box (Figure 48). The box is hollow and does not house the burial.

Plaque Markers

Plaque markers consist of a square or rectangular stone cut at an angle on the face (Figure 49). The inscription is placed on the angled face of the stone.

Bedstead Monument or Cradle Grave with Planters

Some monuments are made to look like a bed. They consist of a headstone, a footstone and side rails. A planting area is sometimes added in the central area between the headstone and footstone (Figure 50).
Religious Statues

Statues of the Virgin Mary and other saints are often used as the primary grave marker or as additional ornamentation with another grave marker (Figure 51).

Candles and Flowers

Votive candles and artificial flowers may serve as the only markers on some graves. They are more commonly used as grave offerings (Figure 52).

Natural Stone

A large stone may be used to mark the head of a grave (Figure 54). Graves may also be covered with stones. This was a common practice in Arizona during the historic period, particularly in rural settings outside established cemeteries. In addition to marking the grave, the stones help protect the body from animal scavengers.

Table Tomb

Table tombs consist of a slab/ledger set on four or more legs (Figure 53).

Burial Vault Slab

A burial vault slab monument consists of a burial vault that is topped with a large slab that sits on-grade. Inscriptions are placed on the slab. These are expensive and represent a higher status burial.

Mounded Dirt

Mounding dirt on top of the grave is common in historic Arizona cemeteries. Some mounding is done at the time of burial to compensate for settling of the soil but pronounced mounding of the dirt above the grave seems to be used as a way to mark the grave location.
Symbolism in cemeteries is expressed through the iconography on grave markers and monuments (Figure 55). There are numerous sources of information on cemetery iconography. This document only provides information on some of the most common symbols found in Arizona cemeteries.

In general, iconography on tombstones corresponds with the changes in cemetery styles. Modest tombstones with death-related imagery are common in Colonial period church graveyards. The markers are simple in design; their imagery reminded the living that this life was transient and the need to focus on obtaining happiness in the afterlife.

The more elaborate three-dimensional headstones in Rural Garden Cemeteries from the Victorian period use symbolic imagery to pay tribute to the deceased person's life and the sense of loss for the people left behind.

The size and style of markers and monuments in Lawn Park Cemeteries are governed by guidelines developed by the corporate owners of the cemetery. Markers and monuments may still be three-dimensional and elaborate in design but are generally smaller and closer to the ground so they do not obscure views.

Markers in Memorial Park Cemeteries are flush with the ground for easy maintenance and unobstructed views of the park-like setting. There is little or no elaboration or status differentiation in grave markers in Memorial Park Cemeteries.

Iconography in these cemeteries is more elaborate and romantic. These markers and monuments also reflected the status and wealth of the deceased or their family. Markers may also have symbols indicating the deceased person's membership to service, vocational, and social organizations.

Some of the most common fraternal societies and their associated symbolism are highlighted in the following pages.

Fraternal organizations were very popular in the United States during the 1800s and early 1900s. Two thousand fraternal societies existed in North America in the mid-1800s. Half the male population in the 1920s belonged to at least one such organization. It was common for men to belong to two or three organizations.

Evidence of the popularity of these societies can be seen in the number of gravestones with fraternal symbols. Many stones carry more than one organization's symbol.

Often fraternal organizations bought adjoining cemetery plots forming separate sections where the deceased members of the association could be buried together. Some of the larger organizations such as the Masons and Odd Fellows would also establish their own cemeteries.
Freemasons or Masons

One of the oldest known fraternal organizations in North America, the Masons trace their origins to the stonemasons’ guilds of England and Scotland. By 1730 the masons were already well established in the Eastern states. It is believed that they were also established in Canada by the late 1700s.

The main symbol for the Masons is the letter G placed within the compass and square. The G may refer to God or geometry. The compass and square represent the transition from the material to the intellectual to the spiritual (Figure 56).

Another common Masonic symbol is the “all-seeing eye” with rays of light, an ancient symbol for God. This all-seeing eye, also called the Eye of Providence or Eye of God, has origins dating back to the Eye of Horus in Egyptian mythology. It has been adopted as part of the Great Seal of the United States, which shows the all-seeing eye floating on top of a pyramid. This can be seen on the back of the one-dollar bill. In cemeteries the all-seeing eye symbol may be associated with Freemasonry or the Independent Order of Odd Fellows.

Other symbols used by the Masons and their meanings include the beehive a symbol of industriousness and productivity. An open hand with a heart symbolizes charity, one of the greatest virtues of Masons, along with faith and hope. A woman with a cross is faith. A woman with an anchor is hope. A virgin standing over an open book represents mourning. Two columns represent the entrance to Solomon’s temple, sometimes labeled B for Boaz (strength) and J for Jachin, which means to establish. Mosaic patterns represent the good and evil in life. This is commonly seen as black and white tile pattern on grave ledger top.

Order of the Eastern Star

The Order of the Eastern Star (OES) is a female companion organization to Freemasonry. Men who are Master Masons may also join the OES. Their primary symbol in cemeteries is a five pointed star with a tip pointing down, representing the Star of Bethlehem (Figure 57). Each point represents a heroine and a tenant for the organization. There may be additional symbols and/or the letters F A T A L, which stand for “Fairest Among Thousands, Altogether Lovely.”
Independent Order of Odd Fellows

The Odd Fellows, first organized in the United States in 1819, is a popular fraternal/benefit organization. The emblem of the Odd Fellows is usually shown as three links of a chain (Figure 58). It typically stands alone, but can be seen with other symbols. If there is a number on the stone, it is the local lodge number. Sometimes the chain links will encircle the letters F, L and T these stand for friendship, love, and truth.

Daughters of Rebekah

The Daughters of Rebekah are a female auxiliary of the International Order of Odd Fellows. The typical symbol for this auxiliary is a half-moon symbolizing the value of regularity in work, intertwined with a dove for peace, a lily for purity, and the letters D and R. The circular part of the D will often be depicted as a crescent moon. Less frequently the symbols may include the Odd Fellows three chain links.

Modern Woodman of American

Founded in 1883 this fraternal organization is based in Illinois. It has the same founder as Woodman of the World but is not affiliated. The symbol has a crossed hammer and axe over a shield (Figure 59).

International Organization of Good Templars

This is an international fraternal organization working in the field of temperance. Founded in 1851, it admits men and women and has no distinction based on race. Its symbol features a globe with the letters “I-O-G-T” (Figure 60).

The Fraternal Order of Knights of Pythias

This international fraternity promotes universal peace. It was founded in Washington, D.C. in 1864. It is the first Congressionally chartered brotherhood. The symbols of Knights of Pythias membership include an open book or a shield. These are surrounded by a downward pointing triangle carved with the letters F, B and C representing friendship, benevolence, and charity. A knight’s helmet is set at the top of the triangle. Other symbols include an axe and single or crossed swords.
Woodmen of the World

Woodmen of the World, derived from the Modern Woodmen of America, was founded in 1883. It is an insurance society with fraternal lodge features. It is highly represented in cemeteries because, until the 1920s, one of the benefits of membership was a tombstone.

The Woodmen of the World emblem is a sawed-off tree stump (Figure 61). Some monuments will have branches. This is often combined with a dove and an olive branch for peace, and an ax, beetle, and wedge for workmanship. The motto *Dum, Tacet Clamat* (though silent he speaks) usually appears somewhere on the border. It should be noted that not all tree stump monuments mark graves of Woodsmen of the World members.

Ancient Order of United Workmen

This fraternal insurance society was founded in Meadville, Pennsylvania on October 27, 1868. The group incorporated various traditions of Freemasonry including local lodges (branches), regalia, and initiation ceremonies. The Ancient Order of United Workmen (AOUW) evolved into the Pioneer Mutual Life Insurance Company, which was taken over by American United Life Insurance Company and is now part of One America. The AOUW membership dwindled in the early twentieth century. The organization no longer exists. Grave markers of AOUW members are adorned with a shield, an anchor, or a combination. Across or surrounding these symbols the letters A O U W usually appear. The Degree of Honor was the ladies auxiliary of the AOUW.

The Improved Order of Red Men

This fraternal organization traces its origins to pre-Revolutionary War patriotic societies, such as the Sons of Liberty. The name was changed to the Society of Red Men after the War of 1812, and to the Improved Order of Red Men in 1834. They have incorporated some customs and symbols of Native Americans. Today they are a patriotic fraternal organization that promotes freedom, friendship, and charity. In cemeteries the headstones of members may be marked with an Indian head symbol or an eagle. The letters T O T E may also appear. These stand for “Totem of the Eagle” (Figure 62). The female auxiliary of the Red Men was founded in 1885 and called The Degree of Pocahontas.
Ancient Arabic Order of the Nobles of the Mystic Shrine (Shriners)

The Shriners were founded in 1872 in New York City to create a new fraternity for Masons stressing fun and fellowship. The organization continues to be closely tied to the Freemasons. All Shriners must be Masons. Shriners adopted a Middle Eastern theme for the group. Their primary symbol shows a crescent and star hanging from a scimitar (Figure 63). On grave stones this symbol is often found in conjunction with Mason symbols. The Ladies Oriental Shrine of North America was founded in Wheeling, West Virginia in 1903, and Daughters of the Nile was founded in 1913 in Seattle, Washington.

Botanical Symbols

Acanthus

Acanthus is one of the oldest cemetery motifs. It is a symbol of Heaven.

Bamboo

Bamboo is a symbol of Buddha.

Fleur-de-Lis

This symbol is generally thought to be a French stylized image of a lily. Another interpretation, based on the earliest location and use of the symbol, suggests that it was an iris rather than a lily. It is used on cemetery markers as a symbol of passion and motherhood or the Virgin Mary (Figure 64).

Ivy

Ivy symbolizes regeneration and immortality.

Laurel

Leaves and branches are associated with accomplishment, heroism, and success.

Lily

In Christianity, this flower is associated with the Virgin Mary and symbolizes purity and perfection. The Fleur-de-lis can be a stylized lily. The Calla Lily represents marriage.
Oak Tree

It is thought that the wood of an oak tree was used to build the cross used to crucify Christ. In this context, the oak tree symbolizes strength, endurance, and Christianity. It may also represent the Tree of Life.

Palm

The palm represents victory in death or success in life.

Rose

The rose symbolizes achievement, perfection and regeneration. The progression of the rose bloom may be used to signify the age of the deceased. A rose bud is used to designate a child. A rose in bloom represents an older person in the prime of life.

Tree trunk

This symbolizes the shortness of life but may also be associated with the Woodman of America.

Willow

The willow tree depicted on a grave marker symbolizes eternal grief and mourning. Willow trees were also used as plantings in cemeteries.

Wreath

Represents victory in death (Figure 65).

Animal Symbols

Birds

In the Christian tradition, a dove represents the Holy Spirit of the Trinity and peace. In the Jewish tradition, a dove may symbolize Israel.

Lamb

A lamb or lambs are usually associated with children's graves (Figure 66). It symbolizes purity and innocence.

Architectural Symbols

Column

A broken column symbolizes a life cut short.

Urn

The urn symbolizes mourning. A draped urn symbolizes sorrow and is usually associated with the death of an older person (Figure 67).
Celtic

The Celtic cross is a cross with a central circle (Figure 68). According to legend, St. Patrick introduced the cross to Ireland. The circle in the cross is thought to be a merging of the pagan symbol for a Celtic deity with the Christian symbolism of the cross.

Greek

The Greek cross has four arms that are all equal in length. This symbol was originally an ancient pagan symbol for earth, air, fire and water. It later became a symbol of Christianity.

Eastern or Greek Orthodox

This is similar to the standard Latin cross but with the additional arms representing a headrest and slanted footrest (Figure 69).

Maltese

The Maltese or Amalpi cross has eight points (Figure 70). These points represent the eight lands or origin for the Knights of Malta and the eight characteristics of courage.

Latin

This is the oldest, most common, cross with a vertical line longer than the horizontal line. It symbolizes Christianity and resurrection. A tilted Latin cross, symbolizes the cross being carried.

Cross Patee

A variant of the Maltese cross, this cross has arms narrowing towards the center, but with flat ends (Figure 71). It can be shown with curved inside edges but sometimes encountered with straight edges.
Angel and Cherubs

Angels and cherubs are often used on children’s graves. Angels are protectors and mediators between man and God (Figure 72).

Moon

The moon symbolizes rebirth. A crescent moon and star symbolizes Islam.

Star

The five-pointed star is a symbol of the life of Christ and represents the five wounds of the crucifixion. A six-pointed star is a symbol for Judaism.

Book

A book represents knowledge, scholarship, and learning. A book may also represent the Book of Life. If the book is a Bible, it represents faith and may indicate that the deceased was a cleric or person active in religious life (Figure 73).

Hands

Praying hands signify devotion to God. A hand pointing up signifies life after death, rewards in heaven, and the pathway to heaven. A hand pointing down denoted mortality. Clasped hands represent a union not broken in death or a goodbye (Figure 74). When clasped hands belong to a man and a woman, which is indicated by the style of cuff, it indicates the bond between the couple and a meeting again in heaven. Two hands with thumbs touching and fingers separated between the two central digits symbolize the Jewish Kohane blessing where the hands form the Hebrew letter “shin” (Figure 75).

Shells

The scallop shell is a symbol of Christian pilgrimage and the Crusades. Shells symbolize fertility, resurrection, journey, or pilgrimage. In ancient times it was customary to leave shells, stones, and coins as offering at graves. The custom of leaving stones on Jewish graves is still practiced today. Coins were sometimes left at Hispanic graves in Arizona.
CEMETERY LAWS AND THE NATIONAL REGISTER OF HISTORIC PLACES

There are a number of state and federal laws governing burials, graves, and cemeteries. The primary intent of the majority of these statutes is to protect the public health and safety. Other laws make certain that those individuals and families who have loved ones interred in a cemetery will know that they will be protected and maintained. Finally Arizona law also ensures, that when discovered, forgotten burials are treated with respect.

### STATE LAWS – ARIZONA REVISED STATUTES (ARS)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARS 41-865</td>
<td>Burial Protection Law of 1990</td>
</tr>
<tr>
<td>ARS 41-844</td>
<td>Amendment to Antiquities Act</td>
</tr>
<tr>
<td>ARS 41-861 through 41-864</td>
<td>State Historic Preservation Act</td>
</tr>
</tbody>
</table>

**ARS 41-865**

Burial Protection Law of 1990

This law requires that landowners, lessees, or their agents inform the Director of the Arizona State Museum of any discovery of human remains or associated funerary objects on state or private land. The law establishes an Acquisition and Preservation Fund to help fund the removal of remains. Criminal fines and monetary penalties assessed from violation of this law are deposited in the Fund. The respectful treatment of all remains is required. The law establishes a joint study committee to consider means for preserving archaeological sites and review funding for the preservation of burial sites and archaeological sites.

**ARS 41-844**

Amendment to Antiquities Act

An Amendment to the Arizona Antiquities Act, this law establishes procedures for individuals, state or county agencies, or municipal organizations to follow upon the discovery of archaeological, historic, or paleontological sites on state land. The Director of the Arizona State Museum must notify all interested parties, including groups with cultural affinity, and to consult with these parties on the disposition of human remain and funerary objects. The Director must also consult with these parties on procedures for the reburial, curation, and scientific analysis of the remains and objects. Groups with cultural affinity, such as Native American tribes, have the final decision making authority on the treatment and disposition of the remains. If no cultural affinity can be established, the Director decides the appropriate disposition and treatment of the remains.

**ARS 41-861 through 41-864**

State Historic Preservation Act

The law requires state agencies to establish a program to identify and nominate properties under their jurisdiction that are eligible of listed on the Arizona Register of Historic Places. The law also requires agencies to consult with the State Historic Preservation Office (SHPO) when planning projects. State agencies are directed of avoid or minimize damage or lost of properties listed on or eligible for the Arizona Register of Historic Places. If an eligible or listed property is going to be harmed or destroyed as a result of a state plan, the agency is directed to document the property. And provide copies to the documentation to the SHPO and the Arizona State Library Archives and Public Records.
ARS 41-511.04
Arizona State Parks Law, Amended Sections

D. The State Historic Preservation Officer shall:
1. In cooperation with federal and state agencies, political subdivisions of the state and other persons, conduct and direct a comprehensive statewide survey of historic properties and historic private burial sites and historic private cemeteries and maintain inventories of historic properties and historic private burial sites and historic private cemeteries.
2 and 3 not relevant to cemeteries.
4. Advise, assist and monitor, as appropriate, federal and state agencies and political subdivisions of the state and other persons to insure that historic properties and historic private burial sites and historic private cemeteries are taken into consideration at all levels of planning and development.
5. Develop and make available information concerning professional methods and techniques for the preservation of historic properties and historic private burial sites and historic private cemeteries.
6. Make recommendations on the certification, classification and eligibility of historic properties and historic private burial sites and historic private cemeteries for property tax and investment tax incentives.

E. The State Historic Preservation Officer may:
1. Collect and receive information for historic private burial sites and historic private cemeteries from public and private sources and maintain a record of the existence and location of such burial sites and cemeteries located on private of public lands in this state.
2. Assist and advise the owners of the properties on which the historic private burial or historic private cemeteries regarding the availability of tax exemptions applicable for such property.
3. Make the records available to assist in locating the families of the person buried in the historic private burial sites and historic private cemeteries.

F. For the purpose of this section, “historic private burial sites and historic private cemeteries” means a place where burials or interments of human remains first occurred more than fifty years ago, that are not available for burials or interments by the public and are not regulated under Title 32, Chapter 20, Article 6.

ARS 42-11110 Exemptions for Cemeteries, as Amended

A. Cemeteries are defined in Section 32-2101 that are set apart and used to inter human beings and historic private burial sites and historic private cemeteries as defined in Section 41-511.04 are exempt from taxation.
B. The owner of a cemetery, historic private burial site and historic private cemetery shall initially establish qualifications for exemption under this section by filing an affidavit with the county assessor under Section 42-11152. Thereafter, the owner in not required to file an affidavit under Section 42-11152 unless:
1. Any part of the property is no longer, or will not be, used as a cemetery or has been rezoned, and the assessor shall serve that part of the property from the exempt parcel.
2. Any interest in the title to any part of the property is conveyed to another owner.

ARS 13-1604 Aggravated Criminal Damage

A person commits aggravated criminal damage by intentionally or recklessly, without the permission of the owner, defacing, damaging or tampering with any cemetery or mortuary or other facility used for the purpose of burial or memorializing the dead. Aggravated criminal damage is a class 4 felony if the damage is in the amount of $10,000 or more, a class 5 felony if damage is $1,500 or more but less than $10,000, and a class 6 felony for all other damage.

ARS 32-2194 – 23-2194.32 Organization and Regulation of Cemeteries

The statutes in Article 6 provide the legal framework for the establishment and operation of cemeteries that are not owned by religious institutions, private entities, municipalities or fraternal organizations. The statutes include but are not limited to: the sale of cemeteries, the sale of cemetery plots, funding, donations and endowments, advertisement, penalties and liabilities, cemetery plans, titles, access, rules and regulations, and signage.

ARS 36-831 Burial Responsibilities

The law outlines the order of responsibility for the burial and disposition of a deceased person and provisions if there are conflicting directions or wishes concerning the disposition of the deceased person.
ARS 9-451
Procedure for Vacating Cemeteries

The governing body of a city or town may pass a resolution to vacate an abandoned cemetery within the corporate limits of a city or town if the cemetery is unsuitable for cemetery purposes, becomes obnoxious, or can be used for other public purposes. Upon passage of a resolution to vacate a cemetery a public notice will be posted for at least 4 weeks. Within six months, remains claimed by a relative will be delivered to that relative. At the end of the six months from initial notice unclaimed remains that can be identified, will be removed to another suitable location. Remains that cannot be identified will be removed and reburied, cremated or left in the vacated cemetery and the surface ground leveled. When a municipal corporation cemetery is vacated, it will be used as a public park. A map or plat will be recorded in the office of the city or town clerk, showing the location of the cemetery and the remains of individuals still in the vacated cemetery. A monument shall be erected and, if possible, the names of individuals still in the cemetery will be placed on the monument.

ARS 9-453
Cemetery Maintenance Fund

A governing body of a city or town having and maintaining a cemetery may establish a maintenance fund for the care of the cemetery. All amounts may be invested or reinvested by the governing body.

ARS 36-104
Disposition of Human Bodies

This statute provides a statement of the powers and duties of the Director of Health Services, which includes the disposition of human bodies program.

FEDERAL LAWS

Native American Grave Protection and Repatriation Act (NAGPRA)

The Native American Graves Protection and Repatriation Act, Public Law 101-601, 25 U.S.C. 3001 et seq., 104 Stat. 3048, is a federal law passed on November 16, 1990. NAGPRA requires, and provides a process for, museums using federal funds and federal agencies to return certain Native American cultural items - human remains, funerary objects, sacred objects, and objects of cultural patrimony - to lineal descendants, Indian tribes, and Native Hawaiian organizations. The Act also authorizes the Secretary of the Interior to assess civil penalties on museums that fail to comply.

National Historic Preservation Act, Section 106

The National Historic Preservation Act of 1966, as amended established the National Register of Historic Places, the Advisory Council on Historic Preservation, the Certified Local Government Program, and the duties and responsibilities of State Historic Preservation Offices and federal agencies in the preservation of historic properties. Under Section 106 of the Act federal agencies are required to consider the impacts of their undertakings on properties that are listed in or eligible for the National Register of Historic Places. The federal regulations at 36 CFR Part 800 provide the consultation process federal agencies must follow to assess the effects of their projects on historic properties and mitigate any adverse effects.

National Historic Preservation Act, Section 101
National Register of Historic Places

The National Register of Historic Places is the nation’s list of properties that are significant in the areas of history, architecture (including landscape architecture), archaeology, engineering, and culture. “Decisions about the relative significance of cemeteries and burial places can be made only by knowledge of the events, trends,
and technologies that influenced practices of caring for and commemorating the dead, and with some concept of the quality and quantity of similar resources in the community, region, State or nation. Such background provides the context for evaluating significance” (Potter and Boland, 1992, p. 9).

To be eligible for the National Register, properties must be 50 years or older and have significance under one or more of the following criteria:

A. The property is associated with an event or events that have made a significant contribution to the broad patterns of history.

B. The property is associated with the lives of persons significant in the past. In the case of a burial place for an important person(s), the person(s) must be of outstanding importance.

C. The property embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or that represents a significant and distinguishable entity whose components may lack individual significance. A cemetery may have a landscape design or artwork and architecture that represents high artistic design, the work of a master, or represents the artistic values and trends of a specific period.

D. Properties that have yielded, or may yield, information important in prehistory of history. Cemeteries may provide information about material culture and social history. “The importance of the information to be yielded usually is determined by considering a research design or a set of questions that could be resolved by controlled investigations ... Certain types of properties, including cemeteries and graves, do not qualify for the National Register unless they meet certain special conditions ... However, cemeteries and graves may qualify under Criteria A, B, and C if they are integral parts of larger properties that do meet the criteria, or if the conditions known as Criteria Considerations. Except for the graves of historical figures, burial places nominated under Criterion D are exempt from the Criteria Considerations requirement” (Potter and Boland 1992, p. 14).

The National Register also requires that the property have integrity. Integrity refers to the ability of a property to convey its historic values through retention of original characteristics. The National Register recognizes the following seven qualities of integrity: location, design, setting, materials, workmanship, feeling, and association. When planning for maintenance and conservation work at a historic cemetery, it is important to be sure that activities do not adversely impact the integrity of the cemetery or the elements in the cemetery. Establishing a baseline survey, developing planning documents and following the Secretary of Interior’s Standards will help insure that the integrity of the cemetery is retained.

References

BEFORE YOU BEGIN CEMETERY PRESERVATION ACTIVITIES

**OBTAIN PERMISSION**

Prior to conducting any activities at a historic cemetery, written permission must be obtained from the legal owner of the property. If the cemetery is located on federal, state, municipal or tribal lands, there may be laws and regulations governing what activities may take place. Contact the applicable public or tribal landowner for more information and direction. They may have a review process that must be completed prior to initiating any activities on the property. These reviews may involve consultation with interested parties, including Native American and other cultural groups who have affinity with persons buried in the cemetery.

For access to properties on Arizona State Trust Land, a Right of Entry will need to be obtained from the Arizona State Land Department. A permit may also be required from the Director of the Arizona State Museum for state and municipal lands. Whatever the ownership of the cemetery, the owner should be involved in preservation planning.

If the cemetery or sections of the cemetery have burials from a specific ethnic or religious group, be aware and respectful of burial traditions and practices associated with those groups. Seek advice from the group before implementing any conservation.

**PHOTOGRAPHY**

Permission may be required for photographing a gravestone. This subject is addressed in an article entitled “Photographing the Stone: Privacy and Copyright Issues” in the *Association for Gravestone Studies Quarterly* Fall 2003 issue. Author Bob Klisiewicz acknowledges that both grave plots and grave stones are private property and raises the question of “whether you or I have the right to take a photo of such private property, and make use of that photo in a public forum without authorization of the owner.” (Klisiewicz 2003).

Klisiewicz concludes that cemeteries and the headstone they contain are public places where there can be no expectation of privacy. However, there could be copyright issues with the works of art that are gravestones. Klisiewicz finds that “It appears that the gravestone photographer can feel comfortable in any field of cemetery photography, including the photographic recording of images, epitaphs, and genealogical data regardless of the date or location of the stone, unless they intend to market these photographs for commercial purposes (that, of course, is prohibited unless authorized)” (Klisiewicz 2003).

The conclusion of the article includes some excellent points to consider about cemetery photography. The points can be extended to other documentation activities in cemeteries and are quoted extensively here. “Some cemeteries are posted, and prohibit a number of activities, including gravestone rubbing or photography. Regardless of whether they have the legal right to prohibit these activities, common courtesy would indicate that the responsible photographer should abide by these wishes. There may also be some stones, images, epitaphs, or genealogical data that for some reason or other could be considered too sensitive or in bad taste to photograph and display, even though it may be legal to do so. This is a personal decision that each photographer must make with adequate thought about the effect that the public showing of such a photo may have on the family of the deceased or on public sensibilities in general. Many times it may be quite legal to take and show a particular photograph, although the display of such work could be considered morally irresponsible. In such a situation, the ethical photographer will pass up the opportunity regardless of the legalities involved” (Klisiewicz 2003).
CEMETERY ETIQUETTE

No matter how isolated or abandoned a cemetery might appear the property belongs to someone. Cemeteries are located on both public and private lands. Cemeteries on public lands are usually open for visitation. However, it is a good idea to check with the public agency responsible for the property to make sure there are no special conditions or restrictions to be followed in visiting. Clearly visits to cemeteries on private land require the permission of the landowner.

Above all when visiting any cemetery it is imperative to be respectful and leave the property the way it was found. Many times negative impacts to cemeteries are the result of the actions by those who actually have an interest in visiting and preserving cemeteries. Conditions at the many apparently abandoned cemeteries have clearly deteriorated over the years. Therefore, concerned individuals and groups may informally adopt one of these seemingly abandoned cemeteries or one simply with some graves in disrepair. These concerned people then set about to “fix” the problem by trimming and replacing vegetation, and attempting to repair or replace broken monuments and other fixtures.

At cemeteries where the graves are ill-defined and the markers are missing or badly deteriorated, maintenance activities often involve more than simply cleaning or repair. In an attempt to bring order to such a property, it is not uncommon for well meaning people to add to the site. Monuments are installed in places where it is suspected that headstones may be missing. Suspected locations of individual graves are defined by borders of rocks or other objects. As a result, the original configuration of the cemetery and the location of graves is often obscured or lost.

Do not remove or rearrange any of the cemetery architecture or artifacts. Efforts to help define individual graves by creating an outline of rocks can obscure the true historic pattern of the cemetery and its graves. Objects found on and around graves should be left as found. What may appear to trash or litter could be a significant grave offering. As important as it is not to remove anything found at a cemetery it is equally important not to add anything. Flowers or other grave offering should not be placed without permission as these may not conform to the beliefs of those interred or maintaining the grave.

The landowner or manager should be contacted when a cemetery visitor observes any condition they feel needs to be corrected. It could be that the observed condition may conform to the beliefs of the group overseeing the cemetery or the interred individual. Taking action without the permission of the property owner could be seen as vandalism and result in criminal or civil legal actions.

Documenting cemeteries must be done with the understanding that these properties have personal and religious associations, which must be respected.

When visiting a cemetery or grave make sure you:

1. Obtain the permission of the landowner
2. Are respectful
3. Follow any specific rules established by the property owner
4. Report any damage or vandalism to the landowner or local law enforcement
5. Take photographs (where permitted) or make sketches rather than do rubbings

And make sure you do not:

1. Stand on, remove, move, deface, damage, handle or tamper with any of the grave markers, fences, rock outlines, graves, or cemetery architecture
2. Clean gravestones without following prior evaluations, recommendations, and preservation plans completed by professional conservators
3. Make chalk or charcoal rubbings of gravestones
4. Remove or add objects on or around graves
5. Weed, dig, or plant without permission of the landowner

Safety for the workers is extremely important. The Chicora Foundation, Inc. suggests:

1. Never lean or sit on stones
2. Inspect before treatment
3. Plan ahead
4. Use appropriate equipment
5. Have insect repellent, sunscreen, gloves, etc.
6. Work as a team and use professionals
GRAVESTONE RUBBING

The practice of gravestone rubbing can have serious impacts to the art and information on headstones. For this reasons rubbings are not encouraged. In fact, many cemeteries prohibit the activity. However, if they are going to be done they must be done carefully to damage the markers as little as possible. The process seems relatively easy. It would appear that putting paper over a stone and rubbing it with a crayon or other marker would have little potential to hurt a gravestone. Unfortunately, there are issues with this practice. No matter how carefully an individual cleans the stone there will always be dirt and detritus under the paper that can act like sandpaper and grind against the surface. This may not be noticed on a single rubbing, but repeated rubbings will severely impact the face of the stone. Other issues include breaking deteriorated monuments, leaving tape adhesive used to secure the paper on stones, and cleaning the markers with tools and chemical solutions. These issues are why rubbings are prohibited at many cemeteries.

The following list of things to do and not to do is an adapted excerpt from the Association for Gravestone Studies guide on the Do's and Don'ts of Gravestone Rubbings.

<table>
<thead>
<tr>
<th>When Gravestone Rubbing Please:</th>
<th>When Gravestone Rubbing Please Don't:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Check (with cemetery superintendent, cemetery commissioners, town clerk, historical society, whoever is in charge) to see if rubbing is allowed in the cemetery.</td>
<td>1. Attempt to rub soft, deteriorating, unsound or weakened stone (for example, a stone that sounds hollow when gently tapped or a stone that is flaking, splitting, blistered, cracked, or unstable on its base); if uncertain about the condition of the stone do not attempt to rub</td>
</tr>
<tr>
<td>2. Get permission and/or a permit as required.</td>
<td>2. Use detergents, soaps, vinegar, bleach, or any other cleaning solutions on the stone, no matter how mild!</td>
</tr>
<tr>
<td>3. Rub only solid stones in good condition. Check for any cracks, evidence of previous breaks and adhesive repairs, defoliating stone with air pockets behind the face of the stone that will collapse under pressure of rubbing, etc</td>
<td>3. Use shaving cream, chalk, graphite, dirt, or other concoctions in an attempt to read worn inscriptions; using a large mirror to direct bright sunlight diagonally across the face of a grave marker casts shadows in indentations and makes inscriptions more visible</td>
</tr>
<tr>
<td>4. Become educated; learn how to rub responsibly.</td>
<td>4. Use stiff-bristled or wire brushes, putty knives, nail files, or any metal object to clean or to remove lichen from the stone; soft natural bristled brushes, whisk brooms, or wooden sticks are usually OK if used gently and carefully</td>
</tr>
<tr>
<td>5. Use a soft brush and plain water to do any necessary stone cleaning.</td>
<td>5. Attempt to remove stubborn lichen; soft lichen may be thoroughly soaked with plain water and then loosened with a gum eraser or a wooden Popsicle stick; be gentle; stop if lichen does not come off easily</td>
</tr>
<tr>
<td>6. Make certain that your paper covers the entire face of the stone; secure with masking tape.</td>
<td>6. Use spray adhesives, scotch tape, or duct tape; use masking tape</td>
</tr>
<tr>
<td>7. Use the correct combination of paper and waxes or inks; avoid magic marker-type pens or other permanent color materials.</td>
<td>7. Use any rubbing method that you have not actually practiced under supervision.</td>
</tr>
<tr>
<td>8. Test paper and color before working on stone to be certain that no color bleeds through.</td>
<td>8. Leave masking tape, wastepaper, colors, etc.</td>
</tr>
</tbody>
</table>
DOCUMENTING HISTORIC CEMETERIES

LEVELS OF DOCUMENTATION

There are a number of different levels of documentation for historic cemeteries ranging from basic location inventories to more detailed surveys of specific elements in the cemetery. The level of documentation chosen will depend on a number of factors including the size and complexity of the cemetery, preservation goals, available funding, and expertise of personnel. The information obtained provides the basis for developing planning documents and conservation projects, preparing funding requests, nominating a cemetery to the National Register, and developing public education and stewardship activities. These surveys also provide an archival record of the cemetery and a baseline for monitoring changes.

RESEARCH

Research is the first step in any documentation effort. Research will help establish a period for the cemetery, ownership status, boundaries, numbers of potential burials, significance within its historic context, original design and landscape features. Sources of information about historic cemeteries include local histories, historic maps and photographs, mortuary records, county records, and newspapers. The State Historic Preservation Office’s (SHPO) publication, “Historical Archaeology: A Research Guide (Ayres, Griffith and Majewski, 2010), provides information on major research collections in Arizona. This document is available on-line at the SHPO web pages on the Arizona State Parks web site, www.azstateparks.gov.

INVENTORY OF HISTORIC CEMETERIES

Documentation of a cemetery for listing on Arizona’s Inventory of Historic Cemeteries requires only basic information about the location, character, and ownership of the cemetery. The SHPO maintains the Inventory of Historic Cemeteries and provides the Inventory Form used for recording the cemetery (Appendix A). This inventory is not intended as a genealogical record or intensive survey of the elements within the cemetery. Full documentation for preservation purposes beyond basic listing on the state inventory will require additional effort and may include a number of different focused surveys.

PRELIMINARY CEMETERY SURVEY AND MAPPING

This initial survey provides information on the history of the cemetery; overall layout and design of the property; infrastructure, such as road and walkway locations; and the location of markers and monuments. A primary goal of this initial survey is to develop a map of the cemetery. The information obtained during the survey will provide the basis for subsequent surveys to obtain more detailed information about monuments and markers. This level of survey may also provide sufficient information for obtaining a determination of National Register eligibility.

Creating a new base map of the cemetery will require plotting the cemetery and all of its features (Appendix B). Before starting, determine the scale of the map. If the cemetery is large, it may be useful to grid off the cemetery into sections using a datum (reference point for all measurements). The final map needs to include the name and location of the cemetery, location of the datum, a key indicating the scale, a north arrow, name of the recorder, and a date. All features should be plotted and numbered on the base map. Develop a numbering system to indicate the location of features on
the map and a system of symbols to indicate the type of feature (grave marker, monument, vegetation, etc.). Also indicate any roads and access points to the cemetery.

Historic maps of the cemetery may exist and, if available, will provide valuable information for the creation of a new base map. The sexton, church, municipality, or organization that owns the cemetery may have a copy of the original cemetery map. Local mortuaries may also have copies if the mortuary was in business during the time the cemetery was in use. Original cemetery maps will usually have some type of lettering and numbering system to indicate the location of grave rows, plots, and sections. Original maps may also have the names of the lot owners. If you have an original cemetery map with numbered and lettered rows and lots, you should use this system for the new base map. However, if a new numbering system is used for the new base map, a concordance table should be developed to establish the relationship between the original historic map and the new base map.

Historic photographs and historic and current aerial photographs may be helpful in developing the new base map. Some sources for historic photographs and aerial photographs are listed in the “Historical Archaeology: A Research Guide” (Ayres, Griffith and Majewski, 2010).

If time, personnel, and funding are available, take a photograph of each feature. With digital photographs include the number of the feature corresponding to the base map, date, orientation and name of photographer on an electronic index file. If the film photography is used put this information in pencil on the back of the photo.

If field survey forms are available, it is helpful to complete as much information as possible for each feature on an individual field survey form. The name of the cemetery, feature number, date, and name of the recorder need to be on each form.

If foliage in the cemetery is overgrown so as to obscure cemetery features, it may be necessary to carefully trim some overgrowth prior to survey and mapping to allow for better visibility. This should be carried out carefully to insure that the plants are not damaged and that significant elements of the cemetery such as grave offerings, natural stone markers, and pieces of broken markers, are not inadvertently removed during site cleaning activities. Weed eaters or lawn mowers should never be uses near marker, monuments, or fencing. Weeding near cemetery elements needs to be done with hand clippers. Never uses insecticides, chemical weed killers, or fertilizers near grave markers. Do not burn vegetation cuttings near the cemetery.

If possible, consult a plant specialist to insure that any surviving heirloom plants and plantings associated with an original landscape design are not removed or damaged by inappropriate trimming. Historic photographs of the grounds and aerial photographs may be helpful in identifying the location of original plantings.

Suggested items needed for mapping:
- Graph paper and tape
- Clip board
- Pencils and erasers
- 100 ft. measuring tape
- Compass or GPS unit
- Ruler and yardstick
- String, wooden stakes, and pin flags
- Camera
- Field survey forms
MARKER AND MONUMENT SURVEY

This survey records detailed information about each grave plot, marker, and monument. It should include descriptions of individual markers, monuments, and other cemetery elements. If time, money, and personnel are available, this survey may be completed in conjunction with the initial survey and mapping. If it is completed as a separate step, the original base survey map, photographs, and reference numbers should be used. This survey provides information that will be useful in developing maintenance and conservation plans.

Develop a consistent approach for recording the cemetery using the base map created during the initial survey. It is useful to divide the cemetery into sections and record each section in a systematic way to insure that all markers and monuments are recorded.

Record all grave, plots, markers, and monuments on a Field Survey Form. At a minimum, the form should include:

- Name of the cemetery
- Marker or monument identification number that corresponds with the cemetery map
- Orientation of the grave
- Type/form of marker or monument
- Material (granite, wood, iron, etc.), inscriptions, and other designs and symbols.
- Measurements of the size of the marker (if feasible)
- Description of any grave fencing or surface grave goods
- Name of the surveyor
- Date of the survey

Take photographs of each grave plot, marker, and monument. Label all photographs to correspond with assigned map numbers and inventory forms. It is useful to have some basic descriptions and pictorial references of marker and monument types, forms, fencing, etc., available to assist surveyors. This will also help to insure consistency in the survey records.

When trying to decipher inscriptions, do not apply any substance to markers. Even rubbings are discouraged. Both of these actions may damage the marker or monument. Inscriptions may be more visible in different lighting conditions. Try viewing the inscription early or late in the day. Using a flashlight and cardboard or construction paper may be helpful in directing or blocking light to decipher lettering.

CONDITION ASSESSMENT SURVEY

Building on the descriptive marker and monument survey this survey assesses the condition of individual markers, monuments, fences, and other architectural structures and objects in the cemetery. The initial survey map should be used as a reference for locating cemetery elements being evaluated. A survey form should be used to document the current condition of each grave marker, monument, and other cemetery element. At a minimum, the information on the survey form should include:

- Name of the cemetery and location
- Number of the marker or element (as it corresponds to the cemetery base map)
- Date recorded
- Recorder’s name
- Element type
- Material type
- Description of current condition
- Causes of damage or deterioration
- Description of any prior repairs.

A photograph should be taken of the element. It is also helpful if the recorder provides an assessment of the need for conservation treatment. This survey needs to be performed prior to the implementation of conservation treatments and will help prioritize treatment needs. Completing a condition assessment survey will require more expertise on the part of the surveyor.
The landscape survey documents the existing landscape elements in the cemetery: the roadways, walkways, architectural features, and plant materials. Beyond the primary goal of identifying what remains of the original cemetery landscape, this survey helps to identify cemetery design influences, defines cemetery boundaries, and provides a basis for decisions about landscape restoration and maintenance. Identifying remaining landscape elements will help determine whether the entire cemetery or a section of the cemetery is vernacular or more formally designed. This helps provide an understanding of how the cemetery fits into the temporal and social history of the area.

Before beginning the landscape survey, conduct historical research to identify any original maps or designs for the cemetery. Historical photographs and paintings of the grounds are valuable sources of information about the original vegetation. Vegetation does change through time, especially in an arid climate like Arizona. Original plantings may die from lack of care and water, and new types of vegetation may invade the area.
Historic aerial photographs are particularly useful for identifying original vegetation patterns and changes through time (Figures 76 to 80). These photographs are also useful for identifying the locations of original roads, walkways, and other elements such as ponds, gates, and fountains.

In addition to documentation of circulation, architectural elements, and the overall pattern of the landscaping, this survey needs to identify original plant materials by genus, species, and common name. Like the motifs used on grave markers, certain types of plants were commonly used in cemeteries to convey symbolic meaning. Cemeteries may also contain heritage species. Identification of vegetation may require the assistance of a professional familiar with plant species. Local botanical gardens and university programs may provide assistance.

All landscape elements need to be identified on the base map or a new map using the same scale as the original base map and original numbering system. It is important to take measurements to insure that the spatial relationships of elements in the cemetery are documented. Each element needs an identification number on the map. This number is used as the reference number for associated survey forms and photographs. A survey form and photograph should be completed for each landscape element.

Suggested items needed:
- Original base map
- Copies of any original cemetery maps and aerial photographs
- Graph paper and tape
- Clip board
- Pencils and erasers
- 100 ft. measuring tape
- Compass or GPS unit
- Ruler and yardstick
- String, wooden stakes, and pin flags
- Camera
- Field survey forms
- Plant reference guide

References


*Cemetery Landscapes: A Practical Guide to Care and Maintenance*. Course materials from a National Preservation Institute sponsored workshop held in Phoenix October, 2006; Columbia, SC; www.chicora.org

Goffinet, Pamela. *Mapping and Documenting Cemeteries*. PKGDeal, Elkton, MD (FourDogs@gmail.com) 2007.


*Preserving Historic Cemeteries: Texas Preservation Guidelines*. Texas Historical Commission, www.the.state.tx.us


PLANNING FOR CEMETERY PRESERVATION ACTIVITIES

Create a Master Plan

A master-planning document must be developed to guide all conservation and maintenance activities at a historic cemetery. The master plan will document the existing condition of the cemetery and its elements; establish goals and priorities for conservation and maintenance; establish appropriate treatments and maintenance procedures; identify the expertise and funding needed for conservation treatments, and establish a process for documenting on-going conservation activities. The complexity of the plan will depend on a number of factors including the size and condition of the cemetery, available resources, and ultimate preservation goals.

SUGGESTED COMPONENTS OF A MASTER PLAN

Documentation

The field survey provides baseline documentation of the cemetery. This includes a descriptive inventory of all the features of the cemetery.

Current Conditions

An assessment of the condition of the cemetery and all its elements is needed to set priorities for conservation efforts. This needs to include the current condition of individual markers as well as the condition of the grounds and notations about any issues, such as poor drainage or intrusive vegetation, that may be causing damage.

Landscaping

The vegetation, roadways, walkways, and architectural elements in a cemetery may have been part of an overall landscape design and a characteristic of a particular period. The plan will have to address decisions about the care of existing vegetation and the addition of any new vegetation. Vegetation should not be added if it would alter the original design or cause damage to existing cemetery features. The landscape planning also needs to include treatments for roadways, walkways and other landscape features.

Statement on History and Significance

An overview of the history and significance of the cemetery will assist in placing the cemetery in a larger temporal framework. An understanding of the time period, design and significance of the cemetery will aid in decision making about the appropriateness of conservation efforts.

Goals and Priorities

Documentation and assessment will provide the basis for establishing short-term and long-term goals and priorities. Preservation priorities and funding availability will be important considerations in setting these goals.
Preservation Activities and Treatments

Treatment measures will be based on the information obtained and documented in the Preliminary Cemetery Survey and the Condition Assessment Survey. Preservation activities may include: site clean-up, grave marker and monument cleaning, repair of markers and other elements, landscape restoration, on-going maintenance, and site protection. It is important to set priorities and consult professionals about preservation treatments and landscape restoration.

Maintenance Issues and Practices

On-going maintenance will help preserve the cemetery. The Cemetery Survey provides a baseline for the identification of cemetery elements and their general condition. This document provides the basis for setting guidelines for maintenance activities. If volunteers are being used to maintain the cemetery, they will need training. Written guidelines are helpful. During on-going maintenance, any changes in the condition of the cemetery or markers can be documented.

Opportunities for Public Education and Community Involvement

Public education and involvement may be a way to recruit volunteers and establish a sense of stewardship for the property. Historic cemeteries also provide a number of educational opportunities about historical persons, community development, cultural practices, and historical events. The degree of public outreach will depend on a number of factors including the wishes of the property owner, remoteness of the site, and security issues. Distributing and posting “Cemetery Site Etiquette” may be helpful. A copy of this flyer can be found in Appendix C.

Workforce Expertise and Training

For many of the historic cemeteries in Arizona, there is little or no corporate or municipal funding available for preservation activities. Volunteers often carry out the preservation work at historic cemeteries. It is important to identify which types of activities are appropriate for volunteers and which require professional intervention and expertise. It is equally important to provide training for volunteers.

Security Measures

Establish security measures that are appropriate for the property. This may include notifying local law enforcement when preservation activities will be taking place or setting up or participating in site monitoring programs.

Safety Standards

Basic safety procedures need to be established before anyone participates in preservation activities on the property.

References


MAINTENANCE OF HISTORIC CEMETERIES

Cyclical maintenance is important for the long-term preservation of historic cemeteries (Figure 81). The frequency and extent of maintenance activities will depend on the ownership of the cemetery, availability of staff, and availability of funding. At abandoned cemeteries maintenance may only involve periodic monitoring and clean up by trained volunteers to remove weeds and debris. Municipal and privately owned cemeteries will have more regularly scheduled maintenance programs. It is best to have a written maintenance plan and schedule that specifies practices for maintaining the cemetery elements and landscaping. The plan should be based on the results of initial surveys that established baseline conditions and identified problems that need to be addressed.

In addition to maintaining markers, monuments, and other structural elements, the landscape elements that contribute to the historic character of the cemetery need to be maintained. Existing original plantings, open spaces, and walkways should be maintained. The Research and the Landscape Survey should provide guidance about original landscape design and plantings which should be retained. Original plants that die should be replaced in-kind, unless the plant will cause harm to other elements in the cemetery. Decisions about landscape maintenance are complex and should be made with the assistance of a professional and guidance from a master plan.

Some activities that should be included in a maintenance program:

- Monitor for water at the base of markers and monuments and repair of any drainage issues
- Monitor for any damage to cemetery elements
- Remove weeds and debris at the base of markers using hand clippers; never use string trimmers or lawn mowers near markers and monuments.
- Trim any tree limbs that pose a threat to markers and monuments.
- Consult with professionals to assist with tree and shrub care and trimming.
- Retain existing original plantings and landscape design features such as walkways, open space, and vegetation that defines and area
- Create a maintenance and preservation activity schedule
- Document any issues
- Schedule training for volunteers
- Post cemetery etiquette for the public

Figure 81: Phoenix Pioneer Cemetery, Phoenix, Arizona
Image by authors
Disaster Planning

Continued involvement in the care and maintenance of a cemetery should include planning for what to do if it is damaged by natural or human actions. Disasters such as flooding, winds, or fire can wreak havoc with a cemetery. More common are human caused acts, intentional or unintentional, that can damage or destroy all or parts of the property. In any instance, it is important that those responsible for care of the cemetery are ready to respond, contain the situation, and conduct proper stabilization, repair, and rehabilitation activities.

The most important tool any cemetery official can have is thorough documentation of the property. This includes but is not limited to photographs of every grave marker, wall, gate, sculpture, walkway, road, decorative planting area, and tree. Basically, every element on a property that could possibly need replacement or repair if damaged or destroyed should be photographed. It is also a good idea to provide a written description of these features detailing materials, construction techniques, and anything else that may help. Plans also need to be produced of any water, sewer, and power lines that may cross the land. Finally a list of the various plants used throughout the property should be developed.

Once the documentation is in place it will be important to periodically inspect the various elements to note any change in condition. This will insure that any less than catastrophic damage or vandalism is noticed, documented, and dealt with promptly. In addition to updating the property documentation, taking care of these things quickly will help prevent accumulative deterioration and vandalism.

Beyond documentation, the most important step to be taken is planning. It is, of course, impossible to account for every possible disaster scenario, but it is possible to have in place procedures to guide activities after something happens. Simply having phone numbers at hand makes establishing contact easier if there is vandalism (police) or trees damaged during a storm (arborist). Hopefully, any specialists needed would have already been contacted as part of the cemetery preservation process but if not a list of specialists should be prepared. A list should also be kept of any volunteers who would be willing to lend a hand to assist with repairs.

It would also help matters to have an individual who is familiar with the agencies and departments to contact. Each of these entities will have specific procedures for reporting property damage and different ways to help in the aftermath. If the damage occurred as part of a presidentially declared disaster, it may be appropriate to involve the Federal Emergency Management Agency (FEMA) to determine if federal assistance is available to conduct repairs. States have their own emergency assistance agencies that can also be contacted during federal- and state-declared emergencies. When the damage is the result of vandalism it is important to know which law enforcement agency has jurisdiction over the area and what their procedures are for reporting the incident.

Having the documentation and contact information at hand will reduce confusion and conflict if something does happen, especially in the event of a catastrophe. Whatever the scale of the event, it is important to set the stage for repairs as soon as it is safe to do so. The first step is to document the damage. As important as it was to develop comprehensive information about the property before the event, it is just as important to develop such information after the event. It needs to be noted, however, that if the damage is the result of vandalism then the site is a crime scene. It should only be entered after the proper law enforcement agency has said they have completed their investigation. When the site can be entered approach the documentation as was done in the pre-event work. Photograph every element of the cemetery that was damaged. Provide a written description of the damage. These steps are necessary to provide a clear picture of what has happened for agencies and specialists who may need to be called on to assist.
These steps can help with funding assistance, insurance claims, or fund raising.

Once the proper authorities have been contacted, have completed their work and the damage has been documented the clean-up work can begin. These efforts need to be organized in such a way that they don’t have adverse impacts themselves. For instance, if the ground is soft from flooding no vehicles should be allowed off of paved roadways. If trees branches are tangled up with headstones bring in an arborist to safely remove the vegetation. It is also necessary to keep in mind what will be needed to conduct effective repairs. Do not throw away fragments of broken architectural elements until it has been positively determined that these will not be needed to put the feature back together. Insuring that the damage is not inadvertently compounded may require any workers be briefed on what can and cannot be done.

Protection

Cemeteries unfortunately are targets of vandalism. Monuments get defaced, broken or toppled (Figure 82). Landscaping, likewise, may be damaged or removed. Cemeteries at night are dark, unpopulated, wrought with eeriness, and security measures may be few. These qualities attract individuals who commit vandalism inspired more by spontaneous dare and adventure than by premeditated criminal intent. Whatever the motivation, the result is destroyed or damaged property. Simple changes in cemetery security can greatly reduce or end the problem. Installing locked gates, lights, and cameras are an important albeit potentially costly method of making unauthorized visits to a cemetery less attractive. Also contacting local law enforcement, engaging the services of a security company, or taking advantage of a volunteer site steward program to make regular patrols during days and nights goes a long way in stopping the behavior. In addition, marshalling groups of concerned citizens to visit the cemetery during the day will help identify and reduce vandalism. Cemeteries managers and those with loved ones interred there have to make a cemetery a place where vandalism is discouraged.

On rare occasions some damage to cemeteries does have more than a mischievous motivation. These more serious motivations require more than superficial security remedies. There are times when damage to cemetery property is done for economic reasons.

Headstones and other objects are removed to be sold. There has been a recent upswing in this type of crime involving the removal of brass and bronze nameplates. The plates are removed and then sold to scrap dealers. Of course, the damage done to the monuments is financially and emotionally more extensive than any money gained from the sale of the metal. Beyond economics, vandalism can also be motivated by hate. Cemeteries are subject to defacement and destruction caused by groups involved in racial or religious intolerance. Whether spurred by economics or hate this type of impact is extremely serious and clearly requires working closely with local law enforcement to determine appropriate protective measures.

Figure 82: Phoenix Pioneer Cemetery, Phoenix, Arizona
Image by authors
A Condition Assessment Survey should be completed prior to the implementations of any preservation activities at the site. The survey will document current conditions, type of materials, and the need for possible preservation treatments. A preservation plan should be in place to guide any activities. Preservation specialists need to be consulted if major interventions are needed. All preservation activities need to be documented. Always use the gentlest, least invasive treatment. Do not apply a preservation treatment unless it is necessary to stop or slow deteriorations. If repairs are needed, seek the assistance of a professional. A professional assessment will document the current condition of different elements in the cemetery, document prior repairs, and make recommendations on preservation priorities for intervention.

Consult the Condition Assessment Survey and follow the priorities and procedures set out in the Cemetery Preservation Plan. If using volunteers, implement the volunteer training established in the Cemetery Preservation Plan. Always establish safety procedures and provide proper safety equipment.
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.

The National Park Service’s “Secretary of Interior’s Standards for the Treatment of Historic Properties” can be found at http://www.nps.gov/hps/tps/standguide/. National Park Service also publishes a “Preservation Briefs” series with technical information on the treatment of specific historic materials and architectural elements. Briefs are available at http://www.nps.gov/tps/briefs/presbhom.htm
Grave markers and monuments were constructed of numerous types of materials. It is important to know the materials types used when determining approaches for documentation, diagnosis of deterioration, and deciding on cleaning and preservation interventions.

Never clean or treat a grave marker or monument without a complete understanding of the type of material, evaluation of the problem, and an understanding of the results of preservation treatment. Identifying the material and the appropriate preservation treatments may require the assistance of a professional conservator. Repairs need to be carefully implemented to maintain the aesthetic of the marker or monument (Figure 85). Cultural and religious practices also need to be considered. Some groups do not want grave markers treated.

Figure 85: Phoenix Pioneer Cemetery, Phoenix, Arizona
Image by authors
STONE MARKERS AND MONUMENTS

Types of Stone

Marble and Soapstone

Marble is a crystalline metamorphic rock made up of calcite grains that are tightly bound together (Figure 86). Marble is susceptible to acid damage. Acid rain and other types of chemical weathering may cause deterioration between the calcite grains. This will cause the stone to have a sugary texture. White marble will naturally yellow with age. Marble may also warp and erode.

Soapstone is also a metamorphic rock. It is fine-grained rock with a greasy feel. It is a soft stone that is subject to damage through erosion caused by natural weathering and mechanical action from string trimmers for weeds and lawn mowers.

Granite

Granite is an igneous, coarse-grained rock that contains feldspar and quartz (silica). It is harder than marble and commonly used for headstones and monuments. Because the material is so hard and difficult to work, design motifs on granite markers are generally not as elaborate as those fashioned in marble (compare Figures 86 and 87). The invention of steam-generated compressors that powered pneumatic carving tools in the mid-1800s made granite a viable material for grave markers. The hardness of the stone makes it desirable because of its resistance to weathering. It also provides a wide variety of color choices.

Sandstone and Limestone

Sandstone is a sedimentary stone created from pressurized sand. It is granular, porous, contains quartz, and may have visible striations or layers. It is sensitive to deterioration from weathering and water (Figure 88). Water damage will result in cracking or the spalling off the surface or base of the stone. Deterioration at the base of the stone is an indication of water being introduced into the stone from the ground surface moisture (known as rising damp).

Limestone is a soft sedimentary rock composed of organic material like shell or plankton. It is susceptible to acid damage and tends to absorb water. A black outer crust may develop that should not be scrapped off.
Cleaning of Historic Stone Grave Markers

Cleaning should never be done to make the stones “look nice.” Cleaning should only be carried out to remove pollutants or biological surface growth that is causing damage to the marker. The following are some general guidelines for cleaning markers. More detailed information on the cleaning of specific types of markers is cited in the references section.

1. Before cleaning identify the reason for needing to clean the marker.

2. Identify the material from which the marker is constructed.

3. Inspect the marker to be sure there are no structural issues or accelerated deterioration such as cracking, spalling, sugaring, or iron jacking (damage caused by the expansion of rusting iron) that may be made worse by cleaning. Do not attempt to clean or remove the dark outer crust that sometimes forms on limestone markers, as this will expose the softer inner surface and accelerate deterioration of the stone.

4. Have access to water or bring large quantities of clean water. Completely soak the stone with water prior to cleaning. Thoroughly rinse the stone after cleaning.

5. Do not use any solutions that will damage the stone such as acids, beaches, detergents, Borax, Tilex, or other household cleaners. Do not sandblast or use high pressure cleaners on stones.

6. Clean with water. Spray bottles and misters may be used to apply the water. If a brush is needed, use only soft bristle brushes with wooden unpainted handles (Figure 89).

7. Biological growth such as moss, algae, and fungus may be able to be gently brushed off or scrapped off with a Popsicle stick. Be sure to identify the type of biological growth prior to treatment. Some types of growths, such as lichens, grow into stone. Removal of these types of growths with a brush or Popsicle stick may cause damage to the stone.
Repair of Stone Markers and Monuments

Repairing stone markers, requires an understanding of the type of stone and the causes for the deterioration. Stone markers will erode over time from exposure to weather conditions. Marble and the other softer stones are particularly susceptible to acid rain. Freezing and thawing will cause expansion and contraction and may result in cracking. Unless the cracks are large or appear to be threatening the integrity of the marker, it is probably better not to attempt any repairs.

The rusting of internal iron pins used to attach stone markers to a base often causes more serious cracking. If the internal pins are exposed to water, the pins will rust and expand (iron jacking), resulting in cracking (Figure 90). Simple repairs and cyclical maintenance should include sealing joints to prevent water penetration. If there is evidence of rusting of the internal pins, they may need to be removed and replaced with stainless steel or threaded nylon pins (Strangstad 1995). This involves the removal and resetting of the headstone. Instructions for removing rusted pins and resetting the headstone are available in a video and text entitled Basic Resetting Vol. 1: Stacked Base With Pins, which is available from the National Park Service, National Center for Preservation Technology and Training.

Only materials compatible with the stone should be used to repair cracks or reattach broken pieces of markers. Compatibility refers to a material's hardness, porosity (ability to absorb water), and compression strength (ability to expand and contract). The application of an incompatible material will result in additional damage to the monument (Figure 91).

The appearance of the repairs is also a concern (Figure 85). Adhesive materials should match the color and texture of the original stone as much as possible and should be applied in a way that minimizes the visual signs of the repair. Lynette Strangstad (1995) discusses the advantages and disadvantages of different bonding materials in A Graveyard Preservation Primer.

Continual or excessive exposure to water at the base of the stone will lead to deterioration of the base through rising damp. Sandstone and limestone monuments and markers are particularly susceptible to this type of damage (Figure 88). Identifying and eliminating the sources of the water is the first corrective measure. If damage is extensive a professional conservator should be consulted.

Stone markers and monuments that have fallen over or are in danger of falling over may be reset. Resetting stones is a potentially dangerous undertaking for both the stone and the people resetting the stone. Do not attempt to reset stones that are in poor condition. Always have the proper equipment and number of people, and follow safety procedures. Instructions on how to reset stones, recommended materials, and safety procedures are available on the National Park Service, National Center for Preservation Technology and Training web site.
Zinc

In the mid-1870s, the Monumental Bronze Company, a foundry in Bridgeport, Connecticut, began trying to develop a metal material that would be resistant to lichen and moss growth, which may form on granite, and erosion, which deteriorates marble. The foundry was also interested in finding a metal that could easily be formed into the elaborate grave marker designs popular in the Victorian era.

By the end of the decade the company had developed a formula for making memorials from zinc (also called white bronze). Separate pieces were cast in sand and fused together using molten zinc (Figure 92). The monument was sandblasted to give it the texture of granite. It was then brushed with a chemical, which immediately produced the blue-gray color (Atchison 2004).

Repair of Zinc Markers and Monuments

Zinc is not subject to mold or fungal growth but it will develop a grayish coating, which helps protect the metal and should not be removed. Zinc is brittle and the monuments and markers are hollow. This makes them susceptible to denting and breaking. If impacted the marker or monument will require professional repair. Damage to these monuments may be cause by the careless use of lawn equipment and falling tree limbs.
Iron

Cast iron is an alloy made up of carbon, silicon, sulfur, manganese, and phosphorus that is heated to a liquid state and poured into molds. Cast iron markers were easily obtained and inexpensive. They had the added advantage of being easily cast into different shapes and could include elaborate designs. The elaboration and uniformity of design elements and the presence of cast lines can be used to identify cast iron markers (Waite 1991). Sections were attached together with bolts. Ornamental cast iron was also used for cemetery gates, perimeter fences, grave plot fences (Figure 93), statues, and monuments. Cast iron markers are still available but were most popular during the second half of the nineteenth and early twentieth centuries.

Deterioration issues include rusting, galvanic corrosion, and graphitization. Rusting occurs when cast iron is exposed to moisture. Sulfur compounds in the air can accelerate the process of corrosion. Some grave markers were coated in zinc to help prevent rusting. Some types of painting also helps protect against rusting and other types of corrosion. Galvanic corrosion is caused by electrochemical action that occurs when cast iron is adjacent to a “noble” metal (higher in the electrochemical series) (Waite 1991). Graphitization is caused by acid rain. Cast-iron markers subject to graphitization may appear sound on the exterior but have a weakened interior structure. A detailed description of these problems and treatment options is provided in National Park Service Preservation Brief No. 27 (Waite 1991).

Wrought iron is primarily pure iron with a small amount of carbon. “Compared to cast iron, wrought iron is relatively soft, malleable, tough, fatigue-resistant, and readily worked by forging, bending and drawing” (Waite 1991). Because wrought iron elements are often handmade, designs are less elaborate, lighter in weight, and uniform (Figure 94). Sections are usually fused together. Wrought iron is susceptible to deterioration through rusting.

Repairing Iron Grave Fencing and Markers

Cast and wrought iron was used for the fencing of grave plots as well as for grave markers. Before beginning any repairs identify whether the piece is fabricated from cast or wrought iron. Some fences and markers may include both types of fabrication. If the fence or marker is constructed of iron and another type of material, it is best to consult a conservator because treatments used to preserve and repair the iron may damage the other material. Protect any adjacent monuments or other cemetery elements from chemicals and paints used in the repairs.

Before beginning any repairs, inspect the fence or marker for signs of damage. Jason Church hosts an on-line video on iron fence repair through the National Park Service’s National Center for Preservation Technology and Training website information. Reviewing this video is recommended for anyone who

![Figure 93: Phoenix Pioneer Cemetery, Phoenix, Arizona Image by authors](image1)

![Figure 94: Phoenix Pioneer Cemetery, Phoenix, Arizona Image by authors](image2)
is planning historic iron fence repairs. If the fence or marker is in a very deteriorated or fragile state, do not attempt repairs without the assistance of a professional. If the item is structurally sound, some simple repairs may be performed. If bolts are missing, replace them with like-size iron or stainless steel bolts. Apply the following steps to stabilize rusting iron:

1. Remove loose oxidation and rust with a fine stainless steel brush. Do not try to remove all rust just the loose surface material.

2. Wash surface with a non-ionic detergent. Allow the surface to dry completely before starting the next step.

3. Apply a rust converter. Application with a brush will help to minimize any chances of this material coming in contact with other markers or the soil. Follow the manufacturer's instructions and avoid contact with moisture until the converter has cured.

4. If the fence or marker was previously painted, try to determine the original color. Apply an oil based metal primer with a brush. Once the primer is dry, apply oil-based paint in an appropriate color (try to match original color if possible).

Supplies
- Paint brushes
- Tarps to cover and protect areas and features not being treated
- Fine-wire bristle brush
- Hardware (bolts, rivets, etc.)
- Protective glasses and gloves
- Non-ionic detergent
- Commercial rust converter
- Oil-base primer
- Oil-based paint

Bronze

Bronze is an alloy formed from a mixture of copper, lead, and tin. It was used in the manufacturing of Confederate crosses for Civil War veterans (Figure 70). Bronze may also be used to make plaques that are attached to grave markers or monuments. If the bronze is structurally sound there are a number of commercial products designed for the cleaning it. If the bronze is attached to another material, care needs to be taken to avoid having any bronze cleaning materials touch the other material.
Adobe

Adobe has been used as a building material for thousands of years. The word adobe is derived from the Arab word at-tub meaning earth bricks. Adobe is made from sand, clay, and silt that is combined with water, shaped into bricks, and dried in the sun. Organic materials such as straw may also be added to the mixture. Adobe was used in the Southwest during both the prehistoric and historic periods.

Repair of Adobe Structures and Objects

Adobe will erode as a result of exposure to natural elements such as rain and wind. In the Southwest, this natural erosion is about one inch in twenty years (Garrison and Ruffner 1983). Exposure to additional water through poor drainage, sprinklers, etc., will hasten the deterioration of the adobe. These problems need to be eliminated prior to the application of any treatments to repair damaged adobe. The application of incompatible materials such as commercial sealants or Portland cement products will also increase the rate of deterioration. Adobe was used most often in the construction of church buildings, cemetery walls, and mausoleums in Arizona cemeteries (Figure 95).

It is important to insure that any materials used to repair adobe be compatible (have the same properties as) with the adobe being repaired. Adobe is made from different soil in different areas so it may vary in color, texture, particle size, clay type, compressive strength, and moisture content. Texture refers to the proportions of sand, silt, and clay used to form the adobe. “Several investigators have suggested soil of adobe bricks should contain between 70 to 80 percent sand and 20 to 30 percent silt and clay” (Niebla 1983). An analysis of these properties should be completed on the original adobe so that materials used for repairs can be made to match the original fabric as closely as possible. Mortars and surface coverings
Brick

Brick was used in historic cemeteries to construct fencing, mausoleums (Figure 96), church buildings, monuments, and markers. Brick is made from a mixture of clay, sand, and water that is formed in a mold, dried, and fired in a kiln. Bricks vary in qualities, such as color, hardness (compressive strength), and water permeability, because of different raw materials and firing temperatures. Bricks made in the historic period tend to be softer than modern bricks because they were fired at lower temperatures. Historic bricks were more subject to the absorption and evaporation of moisture.

Repair of Historic Fired Brick Structures and Objects

The most common repair needed is repointing of the mortar joints. The new mortar used in repointing needs to be compatible with existing mortar in color. It must also be compatible with the mortar and brick in compressive strength and water permeability. Historic mortars were often lime mortars. Lime mortar has a compressive strength that is less than or equal to the compressive strength of the historic bricks. This will allow both the mortar and the bricks to expand and contract at the same rate. Modern mortar products made from Portland cement have a higher compressive strength. If the mortar has a higher compressive rate than the brick, it will expand and contract at a different rate and eventually cause damage to the brick. Lime plasters are also more water permeable like softer historic bricks. This will allow water to be absorbed and expelled at the same rate as the brick. Modern Portland cement mortars are not as water permeable and if placed next to softer bricks will cause water to build up in the bricks and will eventually cause the surface for the brick to spall off. In order to determine the type of mortar to use, it is best to analyze the properties of the brick and the historic mortar. Portland cement was not introduced into America until 1871, so any cemetery features dating prior to 1871 could not have used Portland cement.

Figure 96: Phoenix Pioneer Cemetery, Phoenix, Arizona
Image by authors
Concrete

Concrete is a mixture of sand, gravel, aggregate (such as crushed stone or shell), a binder (such as hydraulic lime or cement), and water. Although it was originally invented in ancient Rome, it was not used in the United States until the 1800s. The popular use of concrete for construction did not occur until after 1880. Concrete reinforced with rebar was patented in 1884 but rare before 1906.

Concrete offered a less expensive and more readily available material for constructing grave markers and plot perimeters. Markers may consist of very simple slabs or more elaborate molded designs and treatments made to resemble natural stone. Concrete markers could be purchased or made by the family and friends of the deceased (Figure 97). While concrete is a fairly durable material, its ability to withstand deterioration through time is dependant in part on the original quality of its construction. “The quality of the concrete is dependant on the ratio of water to the binder; binder content; sound, durable, and well graded aggregate; compaction during placement; and proper curing. The amount of water used in the mix affects the concrete permeability and strength. The use of excess water beyond that required in the hydration process results in more permeable concrete, which is more susceptible to weathering and deterioration” (Gaudette and Skaton n.d.).

In addition to deterioration related to the quality of the original fabrication, temperature variations as well as freezing and thawing may cause expansion and retraction of the concrete resulting in cracking and spalling. Exposure to excessive water will accelerate the deterioration, particularly with freezing. Cracking will also occur if metal imbedded in the concrete is exposed to water and expands with rusting (Figure 98). Metal pins were often used to attach headstones to a base. If the joints between the headstone and the base are not sealed and moisture is able to reach the iron pins, the pins will rust and expand cracking and breakage of the concrete.

Repair of Concrete Markers

Repairing concrete markers requires and understanding of the causes for the deterioration. Over time, concrete markers will weather and may develop small surface cracks. Unless the cracks are large or appear to becoming larger and threatening the integrity of the marker, it is probably better not to attempt any repairs. Simple repairs may include sealing joints to prevent water penetration. If there is evidence of rusting of the internal pins, they may be removed and replaced with stainless steal pins. This involves the removal of and resetting of the headstone, and should only be attempted after a professional evaluation of the problem and with work being carried out by a professional.

Figures 97: Phoenix Pioneer Cemetery, Phoenix, Arizona
Image by authors

Figure 98: Phoenix Pioneer Cemetery, Phoenix, Arizona.
Image by authors
Wood

Wood crosses and headstone grave markers were commonly used in Arizona cemeteries because it was inexpensive and easily available. These markers may be made from a variety of types of wood and may be constructed of milled wood or be in a more natural state. Wooden Artifacts in Cemeteries: A Reference Manual by Mary Striegel provides a comprehensive review of factors that contribute to the exteriorization of wooden markers as well as preservation guidance.

Repair of Wooden Grave Markers and Cemetery Elements

Wood is the least durable of the materials used in cemeteries and generally does not survive well, even in Arizona’s dry climate (Figure 99). If historic wooden grave markers and other elements are still present, they should not be replaced with new material. They are important artifacts that are part of the character and history of the cemetery. Conservation efforts should include documentation, evaluation of any active agents of deterioration, and mitigation or lessening of the causes of deterioration if possible.

Wood will naturally deteriorate through weathering. The rate of weathering will depend on a number of factors including the species of wood; the original condition of the wood; how and if it was milled; and exposure to water, wind, and ultraviolet light. “In general, however, wooden artifacts lose up to a quarter inch of thickness per century of exposure, depending on wood species” (Striegel 2009).

Moisture is probably the most detrimental environmental factors in the long-term preservation of wood. Moist wood provides condition favorable to insect infestation and the growth of various fungi, mosses and lichen. Generally mosses and lichens are not detrimental to the long term preservation of wood but they are indicative of high levels of moisture, which does threaten preservation. Removing lichens and mosses will
usually cause more damage than if they are left in place. “Because most lichens are extremely embedded in their substrates, forcible removal of lichens can cause significant surface damage to wood artifacts and is not recommended” (Striegel 2009). Wood decay fungi will destroy wood fibers. Insects such as termites, carpenter bees, and carpenter ants will also cause damage to wooden cemetery elements. Some of these insects, such as the subterranean termite, thrive in moist environments. While extermination is an option, the use of chemicals can be damaging to other cemetery elements and the environment.

The best and most cost effective ways to preserve wooden artifacts are to control moisture and keep vegetation and decaying debris away from the base of wooden markers, fences, and other features (Striegel 2009).

References

Stone


Bronze


Iron


Adobe


Brick


Concrete


Wood

There may be instances where the expertise of a professional is required. It is important to choose a professional with the right kind of qualifications and expertise. Projects involving the assessment and repair of buildings and structures in the cemetery should include an architect. The analysis and repair of erosion and decay of markers and monuments should include conservators with expertise in treatment of the specific materials. Landscape architects, arborists, and botanists will have expertise useful in addressing issues related to landscape survey, landscape design, plant care, and plant replacement. Archaeologists should be involved in the identification of unmarked graves, testing for graves, and establishing cemetery boundaries. Skilled craftsman may also be required to perform repairs of masonry, metal, and other materials.

In choosing a professional, the Chicora Foundation has a helpful listing of “Things to Consider when Selecting Someone to do Cemetery Conservation Treatment.” Some of these considerations include qualifications and experience, recommendations, size of firm, training and supervision of employees, documentation, time frames, client involvement and responsibilities, safety practices, and future involvement. The Secretary of Interior’s Professional Standards provide guidance on the professional qualifications for a number of historic preservation professionals including architects, archaeologists, landscape architects, and historians.

There are a number of sources of information on historic cemeteries as well as some companies that specialize in the evaluation and conservation of historic cemeteries. A few sources are listed below.

The American Institute for Conservation of Historic and Artistic Works
1156 15th Street, NW, Ste 320
Washington, D.C., 20005
Phone: 202.452.9545
Fax: 202.452.9328
www.conservation-us.org
e-mail: info@conservation-us.org

Arizona State Historic Preservation Office
1300 West Washington Street,
Phoenix, AZ 85007
Phone: 602.542.4009
www.pr.state.az.us/SHPO

Association for Gravestone Studies
Greenfield Corporate Center
101 Munson Street, Ste. 108
Greenfield, MA 01301
Phone: 413.772.0836
www.gravestonestudies.org
e-mail: info@gravestonestudies.org

Chicora Foundation, Inc.
P.O. Box 8664
Columbia, SC 29202-8664
Phone: 803.787.6910
www.chicora.org
e-mail: info@chicora.org

National Center for Preservation Technology and Training
645 University Parkway
Natchitoches, LA 71457
Phone: 318.356.7444
Fax: 318.356.9119
www.ncptt.nps.gov

Technical Preservation Services, National Park Services
1201 “Eye” Street, NW, 6th Floor
Washington, D.C. 20005
Phone: 202.513.7270
www.nps_tps@nps.gov
e-mail: nps.gov/tps
National Trust for Historic Preservation
1785 Massachusetts Avenue, NW
Washington, D.C. 20036-2117
Phone: 202.588.600/800.944.6847
Fax: 202.588.6038
www.preservationnation.org
e-mail: infor@nthp.org

Olmstead Center for Landscape Preservation
Boston National Historic Park
Charlestown Navy Yard, Quarters C
Boston, MA 02129
Phone: 617.241.6954
Fax: 617.241.3952
www.nps.gov/oclp
e-mail: olmsted_center@nps.gov
APPENDIX A

ARIZONA STATE HISTORIC PRESERVATION OFFICE

Historic Property Inventory Form for
Cemeteries and Graves
Fill out each applicable space accurately and with as much information as is known about the property. Use Historic Property Inventory Form Continuation Sheets, if necessary. Send completed form to: State Historic Preservation Office, 1300 W. Washington St., Phoenix, AZ 85007.

PROPERTY IDENTIFICATION
Enter the name(s), if any, that best reflects the property’s historic importance.

1. Cemetery/Burial Historic Name(s) or Designations: ________________________________

2. City, Town, or Community: __________________ 3. County: __________________

For Location, enter the street address, if any, or specific directions from nearest town, distance from nearest intersection or permanent landmark or state or county road.

4. Location: __________________________________________________________________

5. GPS (UTM) Coordinates: _____________________________________________________

Map Attach a map indicating the location of the cemetery/burial or sketch the location on a continuation sheet.

6. Tax Parcel No.: _____ - _____ - _____  This cemetery filed for tax exemption since 1998

7. Township: _____ Range: _____ Section: _____ 1/4Section: _____

8. Acreage: __________

9. UTM Reference (On a continuation sheet, list the UTM location reference for the point of a single burial, or the corner points of the parcel encompassing the cemetery.)

10. Ownership Public  Private  Corporation  Tribal  Unknown

11. Age of Cemetery – Earliest Burial _______ Last Burial _______ In Use – Yes  No

CONTACT INFORMATION
12. Owner (Provide contact information concerning the owner or a responsible person with the owning entity.)

   Owner Name or contact: ________________________________

   Owner or contact address: ________________________________

   Phone: __________________ E-mail: __________________

13. Record Keeper (Provide contact information concerning the person responsible for maintaining cemetery records.)

   Name: ______

   Address: ________________________________

   Phone: __________________ E-mail: __________________

14. Sexton/Burial Authority (Provide contact information for the person responsible for opening graves in the cemetery.)

   Name: ________________________________

   Address: ________________________________

   Phone: __________________ E-mail: __________________

DESCRIPTION (Use continuation sheets where needed.)


17. Description of Grave Marker(s): Mark all that apply

   Stone  Wood  Handmade  Obelisk  Military

   Concrete  Zinc/White Bronze  Mausoleums  Statuary  Other

If other please describe _________________________________________________________________
18. Additional Description/Features: _____________________________________________

19. Condition: Mark all that apply

Well Maintained  Soil Disturbed  Vandalized  Not Easily Identifiable  Other
Poorly Maintained  Disturbed Markers  Overgrown  Easily Identifiable

If other please describe __________________________________________________________

20. Ethnic/Social Associations: __________________________________________________

21. PHOTOGRAPHS

Attach representative photographs of the cemetery/grave illustrating its general features and characteristics and specific features of interest. All photographs should include the following information: the name of the cemetery/grave, name of the county where it is located, date the photo was taken, and the view direction (looking towards).

22. Ethnic/Social Associations: __________________________________________________

23. INTEGRITY

To be eligible for the National Register of Historic Places, a property must have integrity, that is, it must be able to visually convey its important. Provide detailed information about the property’s integrity in this section. Use continuation sheets where necessary.

24. Location

Original Site  Moved  Original Site: _____________________________________________

25. FORM COMPLETED BY

Name and affiliation: __________________________________________ Date: __________
Mailing address: ____________________________ Phone No.: __________

26. FIELD DOCUMENTATION BY: (if different from form completed by)

Name and affiliation: __________________________________________ Date: __________
Mailing address: ____________________________ Phone No.: __________

REGISTER OF HISTORIC PLACES STATUS

SHPO Use Only

27. Individually listed  Contributor  Non Contributor

28. Date Listed: _________________

RECOMMENDATION OF ELIGIBILITY

29. Property is  is not (eligible for the NRHP) individually  as a contributing property

30. __________________________________________ Historic District
Name of Property: ________________________________  Continuation Sheet No.: ________

======================================================================================================
APPENDIX B

Prescott Citizen Cemetery
Base Survey Map
from
Grave History: A Guidebook to Citizens’ Cemetery, Prescott, Arizona.

By Terrance L. Stone, 2006
IMPORTANT – PLEASE READ

The following grave locator map contains a general overview of Citizens' Cemetery. The next few pages will contain larger portions of the map for easily browsing the cemetery.

OVERVIEW MAP

LEGEND

CITIZENS' CEMETERY
MARKED GRAVES

〇 GRAVE MARKER

□ GRAVE ENCLOSED BY ROCKS, CONCRETE, FENCE, ETC.

★ NEW MARKER (2004)

△ SIGN

★ TREE

● FLAGPOLE

© T. STONE 2004
Historical cemeteries are important to families and communities.

This importance has been recognized in state legislation. They are the final resting place of our ancestors. They have religious, cultural, and research values.

When visiting a historical cemetery, leave it as you find it.

Inappropriate actions, whether intentional or unintentional, may cause irreversible damage to these fragile resources.
If you find vandalism or maintenance issues, contact the landowner. Cemeteries occur on both public and private land. Local mortuaries and/or cemetery associations will have information on land ownership.

Help preserve Arizona's historical cemeteries by following visitor etiquette:

**Do:**

- Obtain permission to be on the land from the landowner.
- Be respectful.
- Follow specific rules established by the cemetery.
- Report damage and/or vandalism to the landowner and/or local law enforcement.
- Take photographs and make sketches rather than rubbings.

**Do Not:**

- Stand on, remove, move, deface, damage, handle, or tamper with any of the grave markers, fences, rock outlines, graves, or cemetery architecture. These activities may result in criminal violations under Arizona Revised Statutes 13-1604; 13-1802; 41-865 and/or civil violations under § A.R.S. 41-856; 41-841 to 41-846.
- Clean gravestones without following prior evaluations, recommendations, and preservation plans completed by professional conservators.
- Make chalk or charcoal rubbings of gravestones.
- Weed, dig, or plant without permission of the landowner.