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Mining the Qualitative from the Quantitative: Re-Evaluating Cemetery Survey for the Field of Historic Preservation

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Abstract
This thesis proposes to critique the process of the survey of historic cemeteries and the data and information that can be generated through them through the eyes of a historic preservationist, focusing on the data collection over the past 30 years at St. Louis Number Two Cemetery in New Orleans, Louisiana. Through this research, the process of cemetery survey is described from beginning to end, including what brings it about, what types of data are collected by what types of groups, and finally, a brief glimpse into the types of data analysis and measurement that can be done using this data. The conclusions of this research generate further questions on how to better collect, manage, and mine this data to make important contributions to the field of historic preservation.

Keywords
cemeteries, data management and dissemination, survey, documentation

Disciplines
Historic Preservation and Conservation

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MINING THE QUALITATIVE FROM THE QUANTITATIVE: RE-EVALUATING CEMETERY SURVEY FOR THE FIELD OF HISTORIC PRESERVATION

Kathryn Chambon Diserens

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Advisor and Acting Program Chair
Frank Matero
Professor of Architecture
To My Dad.
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Chapter I: Introduction

“Show me the manner in which a nation or community cares for its dead, and I will measure with mathematical exactness the tender sympathies of its people, their respect for the laws of the land, and their loyalty to high ideals.” – British Prime Minister William Ewart Gladstone

“Though preservation through documentation is certainly no substitute for a landmark serving a useful contemporary purpose, documentation can provide a valuable archival record. The ‘Alpha’ and the ‘Omega’ of the preservation movement, the architectural survey, is a tool for the preservationist and the planner, as well as the scholar and archivist.” – James C. Massey

Given the recent rise in genealogical research in the United States, driven primarily by the internet and therefore the vast array of data that is available for use by researchers, it has become imperative for the field of Historic Preservation to look at cemeteries from a different point of view and begin to critique and evaluate them as a source of data about the past, in addition to their use as an historical asset. Cemeteries are a complicated category of site; they have a particular and unchanging use, but are often also considered to be a cultural landscape, a sacred space, and often a direct reflection of the views of a particular society about death and afterlife. As such, a careful mapping and survey of a cemetery can provide massive amounts of data and knowledge for a particular community or group, if it is done properly and with an eye towards the future. Cemeteries are the ultimate resource for conducting prosopography: we can create a larger history and picture of a culture of place by analyzing the collective data available to us, even if specific histories of the individuals are not known. It is this use of the collective information about a defined group of individuals to create a larger narrative that can be a valuable tool for preservationists. However, in order to do so, we must manage the process of cemetery documentation and survey so that the data leading to interpretation takes center stage, and is not overlooked in the race to get to treatments and conservation plans.

Even in the small amount of time allotted for the research presented here, it can be seen that much of the data in a cemetery is ephemeral, it is subject to weather events, natural decay and even looting and destruction by human forces. It is important to both document and analyze the
data we collect, to paint a broader picture of the cemetery as an artifact of the society that created and used it, as well as a strong link to the past. This thesis proposes to critique the process of the survey of historic cemeteries and the data and information that can be generated through them through the eyes of a historic preservationist, focusing on the data collection over the past 30 years at St. Louis Number Two Cemetery in New Orleans, Louisiana. Through this research, the process of cemetery survey is described from beginning to end, including what brings it about, what types of data are collected by what types of groups, and finally, a brief glimpse into the types of data analysis and measurement that can be done using this data.

Preservationists should be just as interested in the preservation of the collected data and interpretations for future use as they are about the sites we are trying to research and save, which has not always been the case. The focus continues to be largely on collecting the data, and less on how it should be analyzed or used for specific purposes now and in the future.

In the field, scholars are just as interested in the dates of burial as in the stylistic changes; the different tomb elements that seem to change over time as the taste of those being buried, and that of their families, evolves. This is why countless studies on the differences in type and style, and how they might relate to ethnicity and race have been of great interest in relation to the burial practices of various groups which will be discussed in the following chapters. However, the practice and process of the acquisition of the data for these studies is rarely discussed in the scholarship produced.

The historian, archaeologist, preservationist, city planner, genealogist and tourist all have different perspectives on the value of cemeteries. The hope is that this thesis can help preservation professionals reconcile these differences, in order to create and utilize a better survey process that will help members of all fields interested in the research and study of these sites. Websites such as Find A Grave or US Gen Web Archives have created databases for registering grave sites and supported massive country wide efforts to document cemeteries big and small, yet they primarily collect the burial data, which although important, only captures a small piece of the information. In order to aid in the preservation of historic cemeteries at risk, preservationists
must also collect information on tomb type, style, weathering and condition, integrity, ethnicity and any other clues that will help to paint a picture of the inhabitants and their lives. It is this assortment of data types that separates the cemetery survey from a standard architectural survey—while both collect information on style, type, and condition, the cemetery survey also amasses written data on the individual and indirectly, his or her group.

The initial step in the analysis of these surveys is to provide some background of the St. Louis Cemetery II in New Orleans, Louisiana, which is the focus of the data critique in this research. This leads to a discussion of past uses and methods for data collection and data analysis in cemeteries. The output of data analysis can only be as good as the information that is input, and in the case of cemeteries, there are an extraordinary number of elements that contribute to the sets of data. These factors include the types of data, numeric versus text fields within a survey, ratings on a Likert scale versus the free from input of inscriptions, or the style of recording death dates and names of burials. This section addresses a few of the various ideas surrounding data dissemination, and what is either possible or feasible with the data collected. The background will also discuss the various types of data collection methods, a brief discussion of data worth given the constraints of time and resources, and consider the types of data management tools that are used by a selection of sites. A range of data formats are discussed, from photography, to survey, to mapping.

The second chapter of this work provides background into the process of cemetery survey and an analysis of the types of cemetery surveys that have been done over time, and how they contribute to the overall well-being of the site. It critiques of the standard methods of survey, the types of data collected, and the types of information that can be collected through the analysis of this data. This includes a range of case studies, from form cemetery surveys provided by national organizations to recent preservation and restoration efforts being done in various parts of the world.

The focus of the critique in this thesis is based on the evaluation of the case studies, but centers in on comparing them to the series of surveys that have been completed for the St. Louis
Cemetery II. It provides a basic analysis of the survey done in 1981 by the Historic New Orleans Collection, as well as the survey that was done in 2012 by faculty and students at the University of Pennsylvania. The chapter also provides a brief critique of how the data was managed and how the outcomes can and should be used, particularly focusing on the depth of information collected. In the end, the thesis makes recommendations as to whether this is a viable method for other surveys, and whether this can translate for use in creating a larger database for the Archdiocesan Cemeteries or the City of New Orleans if they desire one in the future.

The final step in this project is a description of the types of analysis and interpretation possible for St. Louis Cemetery II and others through the data they collect. There are many recommendations as to the types of information that can be gleaned just by appropriately storing, managing and scrutinizing the data collected. This can take the form of statistical analysis, narrative or image heavy typologies, a series of maps and graphs, and many more. Through the study of the tombs and the data they contain as an archaeological record of stylistic preferences, burial patterns and possible indicators of larger events, the survey of cemeteries can contribute to a much deeper history of a site, and make it accessible for the future generations to explore and learn from. The final chapters provide recommendations on the management of data and survey methods and propose how these tools can be used in historical sites similar to this one, even with limited resources.

As mentioned previously, much of the survey that is done in the field is concerned with the documentation and subsequent conservation of the tombs, monuments and grave markers. Very rarely is there any thought put into the survival of the data, how the data could be organized and placed into a usable form. The exploration in the coming chapters notes that according to most of the scholarship the process of survey appears to stop after the data is collected on forms in the field, and therefore rarely is there guidance on how to see the process through. Even some of the training methodologies and guidebooks offered by the National Center for Preservation Technology and Training and the National Trust for Historic preservation go from the physical survey to the conservation of the sites, with no insight into how to create the prioritization of what to conserve, let alone what to do with the massive amount of data that was collected. To keep
this process as a benefit to the cemeteries that professionals in the field are trying to save, it is imperative that the data gathered during these surveys be acknowledged for the value it provides.

If the analysis that is generated by these surveys is only as good as the data that goes into them, why is there not more time and effort placed on making sure the entire process is as streamlined and simplified as possible? This relies heavily on the middle section of the process, the data management, which is often the part that some preservationists are in a hurry to overlook or speed through due to its inherent complexities. In fact, the genealogists are very interested in this part of the process, as their goal is to build a database of names for generations of researchers to search, however they are not always in the position to make the right decisions about how that database should look or act. This is particularly true when the collected resources come to be used for other purposes, or combined with the type of information preservationists are collecting in the field.

To conclude, the fact that the process of survey and the subsequent evaluation of the survey are not so different is critical in understanding the purpose of this research. This is an ongoing and constant process to determine the best practices, and continue to adapt the past data to meet future needs.

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Chapter II: Background and Literature Review

Historical Context for St. Louis Cemetery II in New Orleans

The site for St. Louis Cemetery II was opened for burials in 1823, and was placed on the outskirts of the city in response to the belief that many epidemics of the time were caused by miasmas, or the bad air resulting from infirm or deceased people. This belief created a strong movement in the city to move the cemeteries well away from the center of city, (Huber 2004), which is how St. Louis II became situated where it is. It is now very centrally located in the city, as the expansion outward continued well after it was founded.

During the 1830s, New Orleans, like other American cities, was struck with the problems of rapid growth and urbanization. The expansion and influx of immigrants and settlers to the city brought with it overcrowding, disease and a widening gap between the rich and the poor. The population of the city grew from around 50,000 in 1830 to over 168,000 by 1860 (Boudreaux 1961). With this increase also grew a greater need for places to house the deceased. The frequent epidemics of yellow fever and other diseases like cholera, small pox, typhus or malaria did not help matters. These periodic events had “established New Orleans’ reputation as ‘the graveyard of the Southwest’ and gave her a ‘sad eminence in the list of plague-stricken towns’ which were another threat to economic security.” The death rate at the time was estimated to be as high as ninety persons out of every hundred for people between the ages of twenty and forty (Boudreaux 1961, 6).

At the time of its establishment in 1823, St. Louis II was a quite different cemetery from St. Louis I, the former with its meandering paths and randomly oriented burial plots. St. Louis II was strictly ordered, with wide alleys and a strong rectilinear order to the tomb plots (Appendix A.1) (Masson 2004). It is through this organization that we come to see the cemetery as a true city of the dead. Land was used judiciously, and the tombs were put in right up against one another (McDowell 1992). Additionally, there are not many overtly ornate or monumental tombs in the cemetery and those that are made of more elaborate design or more expensive stone came later in the life of the cemetery (McDowell 1992). The early styles were meant to be both economical
and functional, as the cemetery was developing during the time of the major epidemics. The later tombs are more elaborate, coming at a time when more permanent stones like marble were more readily available, and when architects working in tomb design became more commonplace. This is a shift from the tombs that were built by specialized craftsmen for function over form, and where the majority of the elaborate elements were limited to the tablets.

These cemeteries were overcrowded, and reused frequently. As Dell Upton puts it, these cemeteries that were once outside the city and then became part of the city are reflective of the city; they were crowded, somewhat anonymous due to re-use, and were a threat to a person’s well-being from both the sights and smells (1997). To him, the cemeteries like St. Louis II represent the evolution of the cities like New Orleans that were taking place during that same time. Therefore through them, there is much to be learned about the city and its inhabitants.

If this site is a reflection of New Orleans in the early nineteenth century, then there must be differences in the burials, as there were certainly differences in the people that called the city home. The idea that the squares in St. Louis 2 are each home to a distinct class of burials is not a new one (Huber 2004), yet there has been very little documented proof of this, beyond the “on the ground” feeling one gets walking through the three squares. There have been many references to the burials at St. Louis II being segregated, from the beginning, but Masson (2004) suggests that segregation of burials did not happen until the 1850s, although it could have been moving that direction in New Orleans as early as the 1830s with the start of documentation of race on burial records.

**What Data Come From the Study of Cemeteries?**

Cemeteries have been used by scholars in the past as treasure troves of information. They have been studied by historians, archaeologists, anthropologists, environmental scientists, geologists, epidemiologists, pathologists, soil scientists, genealogist, and many others (Liebens 2003). The vast array of data that they contain has merited study beyond their design and into the communities, culture and associations therein (Matero and Peters 2003). As stated in the scholarship regarding the Protestant Cemetery in Rome, “the study of the language used
in a particular ritual situation by different nationalities can lead to new insights into the way their cultures converge or diverge at the point where all physical differences are subsumed in the grave” (Ippolito and Vian 1989: 163). As heritage sites now at risk due to increasing pressures of urbanization, global change, and shifting ideas regarding death and burial, cemetery documentation and preservation have reached a critical point. Cemetery survey is also critical in areas where official records were often not kept in a centralized location, and individual death records can be difficult to unearth for research purposes.

In addition to the study of the architecture of the tombs, a great deal of the scholarship about cemeteries has focused on the ritual and burial practices that are used within them. This study can include ideas about social organization, socioeconomic trends that play out in style and architecture, trade, migrations and changing world views all being played out in the context of the tombs and the tomb scape (Carr 1995). This type of scholarship argues that the mortuary practices and the differences between cemeteries and even tombs will have everything to do with the social context in which they are set. It is not only the religious beliefs of a community that shape the development of the mortuary practices, it is the social hierarchy that does. This can also include the world view and perception of self as a means for expression in mortuary practice. While much of this scholarship relates to somewhat smaller burial grounds or networks of cemeteries, it is relevant to St. Louis II as a means of looking at the development of burial customs over time.

Still other scholarship has attempted to use ethnicity as a marker of ritual and style in American cemeteries (Meyer 1993). Meyer uses ethnicity and the idea of “strangers dying in a strange land” to help prove why we attempt to tie ourselves to a certain group, even in death. These examples are from people perishing abroad or in a faraway place, but can relate to the very diverse and immigrant nature of the city of New Orleans when St. Louis II was filling up. He also notes that cemeteries are more than just places of rest, they can be read like a cultural text if one knows what to look for, because they represent the physical remains of a culture and therefore some measure of their values and beliefs. As noted by David Charles Sloane (1991, 6), “The American Cemetery is a window through which we can view the hopes, fears, and designs of the generation that created it and is buried within it.”
Recently the risk of loss of heritage sites has prompted a desire for survey and documentation in a rapid way to prevent information from being lost (Letellier 2007). Lynnette Strangstad, who has written much of the literature on preservation of cemeteries for the National Trust for Historic Preservation, noted some years ago that the public interest and concern over historic burial grounds as a resource has increased, and the interest has gone beyond their value “as a collection of stones whose significance lay in recording genealogical data and denoting the final resting place of prominent individuals” (1993, 1). She also acknowledges that at that time, very little was written on the on the preservation process for the sites. Since then, a significant amount of literature has been written on the preservation, but it is still largely limited to the overall methods of documentation and survey that will be discussed later in this chapter. Even so, the process of the collection and use of the data that comes out of these surveys and overall preservation tactics is largely unavailable. It is this type of procedural writing that will help the field grow and evolve with the changing technology and expertise available in the field today; much like the publications about the preservation of cemeteries by Strangstad did earlier on. She acknowledges that often the resources are not available in preservation, and in order to perform the work, data needs to be standardized in order to determine what is actually needed (1988), which is perhaps the impetus for the later work in which she produces a standardized form for the survey of historic burial grounds that will be critiqued in the next chapter (1993).

**Documentation and Survey**

The vast quantity of information available has necessitated a meticulous type of documentation, often through the form of survey combined with other tools such as photography and mapping.¹ The origins of this type of recording in the United States can be tied to the large scale documentation of historic resources undertaken by the Works Progress Administration that was part of the New Deal to combat the Great Depression (Karamanski 1980). The outcome of the study of this magnitude was a greater documentation of cemeteries, genealogical records, vital statistics, archaeological sites, and many other sources, which prove invaluable today. The cemetery survey projects of the past were generally piecemeal and undertaken with a singular goal in mind, such as the recording of burial dates and names for genealogical research, or a
condition survey as the basis for a physical conservation plan. There is often less concern about the outcome of the study—the point was simply to record everything possible for future use. With a few notable exceptions, such as the Protestant Cemetery in Rome or the St. Louis Cemeteries in New Orleans, there have not been any truly comprehensive surveys of cemeteries that would produce data not only for the preservationist, but for any member of the fields noted above seeking the records for use in their own research. The creators of the Protestant Cemetery project even noted that early on, studies of gravestones had been little more than photographic essays (Ippolito 1989), a practice which their survey aspired to improve upon. In other cases where there is some documentation, the data that do exist consist of overly simple maps, lack attribute data about the markers, or lack specific details about the site itself (Liebens 2003).

Documentation is also a critical step for historic sites in terms of getting funding or recognition on a register of historic places, whether local or national. Recording the existing materials can help to prevent or document theft and vandalism. The ability to collect or organize any data about these sites can also benefit them by establishing preservation and conservation priorities (Liebens 2003).

As such, it is essential to the field that best practices for undertaking a survey of a historic graveyard come into practice, and that we are being held to the same high standards across all projects, to ensure continuity of data and its potential for further use in a streamlined manner. In 2007, the Getty Conservation Institute produced a document for professionals stating the importance of documentation and recording in preservation practice (Letellier et al. 2007). The guidelines put forth in this text help professionals understand the importance of the practice, as well as providing guidance on roles, responsibilities and decision making within the process. It also stresses the need to be transparent in recording in order for future generations to interpret and use the information. They also emphasize the need for training and the availability of information specialists on each project who can help to streamline the data processing and interpretation.

One of the first “guidebooks” regarding architectural survey in the field of preservation was created for the National Trust for Historic Preservation, written by a veteran of the Historic
American Buildings Survey, James C. Massey. This document was an acknowledgement that the field of preservation needed a more streamlined and standardized approach to the survey of buildings (Massey 1969). The text approaches the survey as both the beginning and end of the process of preservation, as it provides the importance of a structure or site, and then the means for analysis and future protection. His process for undertaking a survey, while somewhat dated in terms of technology available, nevertheless sets out a basic outline that is still very much in practice today. It even stresses the need to conduct survey at a low cost, with volunteers and local cooperation. His guidelines begin with the development of the survey, and ends with the evaluation of the survey, the analysis of the potential uses of the survey, and then the dissemination and analysis of the records for future use. This pattern can be used in both the description of the process of surveying, as he does, as well as in analysis of past methods of survey, that is the goal of this thesis. There are varying degrees of survey noted in his pamphlet, ranging from the detailed and more official surveys done by the National Park Service for the National Register, to Archaeological Salvage surveys, to basic inventories for the purpose of cataloguing buildings in a given area.

Architectural survey can be divided into two distinct categories: it either will be quantitative or qualitative. The quantitative based survey documents types and numbers of attributes, while the qualitative based survey captures information related to the massing or style of the building in a more visual form (Kalman 1976). Within these surveys, a rating system is inherent, and a grading can be developed for any of the fields collected. Cemetery survey tends towards a mix of these two ideas, as many of them document both the tomb and the people buried within. The rankings also don’t work quite as well, because the criteria applied to buildings and ranking them in terms of importance architecturally does not entirely apply, while some tombs are more ornate, they are all still monuments to the deceased.

The National Center for Preservation Technology and Training webinar on cemetery survey (Church 2012) gives a basic outline of the steps before, during, and after a cemetery survey, which is well thought out, and can apply to all types of surveys. First, historical documentation of the site should be conducted, using primary resources such as maps,
newspaper articles, burial records, historic photographs etc. Second, those interested in the site should complete community outreach and personal histories, as well as collecting more recent photographs that might document any changes over time. The third step in the process is to then create a survey and begin the collection of primary data. However, there is no discussion prior to moving into cleaning and stabilization techniques, on what to do with the surveys that have been collected.

Importance of Data Management and Collection

Scholars in the field of preservation, as well as those who read and study their work, can all too frequently be disappointed in the value of a project on the basis of the poor quality of the data or the analysis thereof. Commonly, this is directly related to the lack reporting on the research and data, or poorly designed methods for data collection. This is particularly prevalent in the preservation field where surveys are conducted with very little time or funding behind them. There is also something to be said for the fact that many preservation projects can be reactionary, either done quickly to either prevent the loss of a site, or to attempt to protect it from the threat of some outside force. Johan Liebens discusses the lack of comprehensive survey and data management that is available for cemeteries, and reiterates the need for good “baseline data, i.e. a map and a database” (2003, 57) when approaching any sort of preservation or conservation project. This paper goes on to focus on the advanced methods of collection that were used and any potential errors that were encountered in the field, which is an excellent case study for the process of intensive survey and subsequent data management and analysis, and brings to light many of the issues encountered when researching this type of site. He also notes that some of the more advanced techniques can be confusing to a layperson, so that some more basic forms of data dissemination should be incorporated. Training for local authorities or volunteers could be added to that suggestion as well.

Because of the more recent advances in computer programs, the field of statistical thinking has seen a shift away from solely depending on the math of statistics to focus on the planning of analysis and the interpretation of results (Hildebrand 1986). Data are defined as a
collection of numbers or pieces of information that contain an explicit statement of how they are obtained and therefore how they should be used. It is through this increased awareness of advanced capabilities that there is often a more careful analysis of how and why data is interpreted, and how it can be displayed for interpretation (Hildebrand 1986). This type of examination should become routine in all fields, but particularly in preservation which often must justify its end through its means and this is values-defined.

Survey can provide a range of data depth, from basic inventory of a site, to a complex set of measured drawings or maps, database entries, and photographs. This is highly dependent on the time and resources available for the documentation of any given site. The types of data collected in these surveys should include many but perhaps not all of the following: photos, maps, measured drawings, historic documents such as contracts, insurance surveys or inventories, and architectural descriptions (Massey 1969). To this should be added the various other elements of a survey in a historic cemetery, which is any of the data about those buried in the tombs, as well as the condition. These are types of data that allow for a critique or analysis of the structures and site.

Data Worth, Constraints and Limitations

When looking at the types of data and technology used to collect and interpret information, it is essential that professionals look not only at the means of collection, but at the influences and distortions of the interpretation of history that this technology can impart, and what problems might be associated with applying advanced technologies to the practice of preservation (Williamson and Warren-Findley 1991). Many technologies can enhance the capabilities of the professional, but it is important to remember that they can also alter the way in which the past is viewed. The problems associated with technology can be as basic as requiring a great need for training before a tool can be used or a high cost to acquire a tool with which to evaluate the data or materials, or as complex as setting standards for a technology that was not created for use in the field of preservation. In fact, much of the new technology being experimented within the profession today has come from other fields and been adapted for use through extensive research.
projects. The field is often still hesitant to completely rely on technology for the collection and management of data, as will be discussed in the chapter on survey methods, but it is important to understand the use of technology as a more recent consideration in the way we approach projects. This analysis of the tools used cannot be limited to their selection, but also to the types of data they input and generate as a part of a deeper investigation. This investigation and understanding of what data can contribute needs to be a central concept in the planning and process for preservation projects, particularly those that are producing such great quantities of data.

Therefore, if it is to become a central focal point in the process, the issue of data worth and constraints is a necessary evil to consider when approaching data analysis. It is even more problematic in cemeteries than in other types of survey. Because cemeteries are constantly changing while appearing to remain the same, and are often not looked after in the same manner as say a building that is continuously occupied, the data is often incomplete before the survey even begins. As part of a more formal analysis that might seek to provide patterns of population or culture, cemeteries are both extremely useful and perplexing. There are several biasing factors that occur as a natural factor of their development (Dethlefsen and Deetz 1967). Cemeteries are often related to religious sites, therefore limiting them to a specific portion of the population. Additionally, only the legible stones can be surveyed to the fullest extent, which is essential to note in the survey itself, in order for the data to reflect this. As a consequence, the results of survey of this kind can only be as good as the data that goes into them, which is why much of the preparation and prior analysis of the data to be collected is as important as the collection itself.

Management, Mapping, and Data Dissemination

Much has been written about the need to use technology to digitize and create databases for preservation projects (Geva 1996, Streeter 2010, and many others), and in fact, the Association for Preservation Technology frequently publishes papers on a wide range of new techniques and programs for use by professionals, yet rarely do preservationists actually analyze the format and quality of the data which they are digitizing and putting into a database. It is a time consuming process to analyze data, but even more so to try and get information for further
exploration or interpretation out of bad or incomplete data.

In fact, one could argue that it is in our DNA as preservationists to digitize and manage the data we collect in order to preserve it for future generations, much like we do with the buildings and sites we preserve (Williamson and Warren-Findley 1991). The training and education required to be able to accomplish this type of work is critically important in the ability of the field to move forward, as ease of access and management of data impacts the ability for future generations to both interpret and continue research into historic sites.

Collection and propagation of data digitally is done because it ‘should be’ but given the wide variety of tools available today, it is imperative that interested parties look at the tools themselves first, examining both the types of data they will gather and the types of analysis that will be available using that data. Advanced technologies cannot simply be used because they are new or impressive, they must contribute to the overall process. As noted by Liebens (2003), some databases and maps of cemeteries on a case by case basis are available, but they are usually not of a quality that would make them useful for future research or are overly simplistic. In many cases, he notes that cemeteries can be used as testing grounds for types of technology, but that they rarely use more than one system at time, or that mapping is done without providing attribute data for the tombs, or that monument condition and epitaphs are recorded, but without their spatial relationships. This study also notes a previous paper by Michael Trinkle and Debi Hacker in Savannah, where they attempted to use GPS to note more precise locations of the individual markers, but the tombs were too close together to get accurate readings. This was prior to the heyday of Google Earth when taking aerial photos was as simple as opening a browser window, assigning one GPS point, and then locating the rest of the tombs or plots relationally in a mapping software that can identify where points sit on the globe.

Since the mid-1990s, there has been a dramatic increase in the use of some form of Geographic Information System (GIS) for historic studies, particularly those fields in which both data and mapping are able to be combined (Gregory and Ell 2007). GIS software allows for the combination of many types of data: spatial and typological, quantitative and qualitative. It can
tie particular attributes to a place within a site, and that site to its larger context, and that context to similar sites, and so on. When using a software platform that is a relational tool, meaning it is built to create relationships, the possibilities for connecting the research on one site to others like it in the future are potentially endless. However, as this paper will explore, the thought of those connections as a possibility must be learned early in the process, as the standardization of data and methodology can have a large impact on the output of the data and its compatibility with other data sets.

It is this multiplicity of data input types that allows for deeper analysis of data, particularly in the case of historic cemeteries where each tomb represents a single structure, often on a lot, with a wealth of data associated with it, such as dates, symbols, materials, etc. This ability to process data in this way is particularly relevant in a site like St. Louis Cemetery II, where the tombs not only contain stylistic and architectural data, but in their constant re-use, the data for burials of many individuals. It is only a more complex system of data management, using both databases and a mapping software like GIS, that this one-to-many relationship can be represented both in a numeric and a more visual or graphic manner. The modeling of this type of data, with its multiple variables and disparate fields, requires complex software. And it is only through the use of this software that researchers can hope to see patterns develop that would remain unseen if not placed in a visual, spatial and temporal context, without it, the data would have to be simplified and therefore the outcomes of the research simplified (Gregory, Kemp and Mostern, 2001). However, the field of preservation does not always come with a wealth of data. In fact, much of the work undertaken can be about the production of data through mostly qualitative means, and that data tends to be full of errors or incomplete. Therefore, it is even more critical that the data being analyzed with the help of GIS is both thought about carefully prior to collection and then cleaned and standardized before use. GIS can be a cantankerous software program. It is worth the time and effort to get the data in the best shape possible before importing it. Lastly, GIS is often thought of or introduced as only a software program, and not as an approach to scholarship (Gregory and Ell 2007). This is a critical distinction, as it influences how a researcher views the project and then sets up their methodology to solve the problem at
hand. By viewing GIS as a part of the approach, it tailors before research even begins how the outcome will be seen and analyzed.

In addition to the breadth of data that can be incorporated using this software, the dissemination of data is that much stronger because it is visual. The idea of visualizing data for better analysis, while long been noted by experts such as Edward Tufte (1983), is a relatively newer concept in the fields of historic research and analysis. This visual aspect of the GIS software allows for easier pattern recognition, particularly in those data sets that are very large. It is much easier to determine ranges of data as well, particularly in this case the burial date ranges and density of burial. The data involved in the analysis does not have to be geographical, merely spatial and relational. GIS will create patterns and relationships as easily for a traditional map of a city as for the mapping of conditions on a façade of a structure. It is important to note however, that these maps serve a distinct purpose that is defined and put forth by the individual creating them. Maps are propositions (Hillier 2011) and are a subjective view of the mapmaker’s view of the topic he or she is displaying. Maps can be manipulated to show only one side of an issue, and often need to be examined through this lens of the identity of the creator. That is why the process by which the maps are created and manipulated is often just as significant as the map itself.

However, GIS has its limitations. It is difficult to map things that are in flux, or to integrate change over time, and there is always the issue of how to analyze and qualitative data. All of which are critical factors in the field of preservation.

In terms of preservation for many types of sites, it is essential to see the end goal of the project as its digitization or adaptation of data, so that it can be interpreted and used, not just by the professionals. In terms of this project, a few paper maps and a set of tables is not the entire outcome, nor should it be. The idea behind creating the database and the base GIS files is to create a fuller picture of the cemetery, and one that can be queried and manipulated by users of all types, to gain a better understanding and appreciation of the site as a historic resource. But this represents just one part in the process.
Data Usage after the Survey Completion

The current literature in preservation focuses on three categories of scholarship that are undertaken with the survey data from historic cemeteries. These include typology, conditions assessments, and genealogical or prosopographical studies. The critique in the following chapters will address surveys that deal with data for the purpose of each of these categories, and some even speak to multiple uses of the data.

Typology

When appropriately mined and organized, data can be organized into a typology of tombs or styles, which can subsequently allow for the determination of patterns, changing attitudes about death, cultural shifts, and many other important studies (Strangstad 1988).

Typology has been under scrutiny as a tool over the past few years, because of its use as a tool for explanation and organization, but also because of the lack to specific definition of the term (Bandini 1993). However, Bandini goes on to say that this openness is what helps it succeed as a tool, as it can fit to multiple uses. He goes on to speak about the uses of typology by Ayomino which are of particular use for a site such as a cemetery, where one can differentiate between the formal typology—related to style—and a functional typology—which helps to show the evolution and changes of a style over time (Bandini 1993). For the purpose of this study, a more hybrid approach to typology is best; its use as a tool to define and organize the development of the cemetery is the goal. However, it is important for this study to realize that there is often a differentiation between style as a part of human activity, and style as a characteristic of human activity. In using quantitative data, these two sides need to be bridged to relate both the subject and the objects (Hegmon 1992).

A considerable amount has been written on tomb typology as a way of defining a particular cemetery or the people who built it, but none specifically for the cemetery of St. Louis No. II. New Orleans cemeteries, because of their novelty, have been written about in depth, and from those writings one can begin to understand the origins and architecture of the tombs. Of
particular interest by past scholars have been the society tombs, the large tombs that are clearly visible in the landscape. (Walker 1936). An in depth architectural study was taken on for St. Louis Cemetery I (Masson 2004), and noted that the architectural style could be considered a “Creole vernacular,” which is difficult to define and that difficulty is then compounded by the constant re-use and alteration of the tombs. The majority of the tombs in the cemetery are constructed of brick because there was no local stone available (Huber 2004).

This shows a decided difference from the later romanticized rural cemeteries with their sweeping views, winding paths, and ornate mausoleums. The New Orleans tombs were primarily built for function and ease of use. As Masson (2004, 35) notes, the standard forms for developing a typology of other types of architecture such as “date, style, designer and geographic placement” cannot be used in this case, mostly because of the widespread repetition of forms in the cemetery. It is also important in this case to avoid the “preconceived categories” (Masson 2004, 36), and instead do a careful study of the data to create a new typology and organization as it relates to the specific site. While the tombscape of St. Louis Cemetery No. II might be slightly more regularized and therefore easier to categorize, there is still a need to distill the data down to form a picture of the cemetery through time, based to some extent on dates and where those are not available through the architectural features and the greater trends in the New Orleans society (Masson 2004); in keeping with the vernacular theme she mentions earlier, the sequence and development of the site here is the goal, not the focus on particular styles.

For the purpose of this thesis and the creation of a more ordered look at the cemetery through the amassed data on the architecture of the tombs, it is important to investigate the meanings of some of the terms for features of the tombs, which are the character defining features in the creation of a typology. This also reflects the survey methodology, in which those surveys that are most successfully coherent and cohesive in terms of data output have a list of definitions that accompany the survey². For the full set of definitions for the survey done on St. Louis Cemetery II in the spring of 2012, see Appendix B.1. Definitions of measurements, terms of tomb condition, and other pieces of the tomb not relating to typology are discussed in chapter IV, which discusses the survey itself. Some of these definitions will also be critiqued further in that
chapter.

*Style:* Style is both the way of doing something and the act of choosing between alternatives (Hegmon 1992). This will refer to the way the tombs look, and helps define an overall type. Using this definition it is important to remember that style is both an act of human choice, as well as a means for analyzing material culture. This fact is particularly critical when looking at the cemetery, as it is not the same as type.

*Tomb:* A structure consisting of at least one above ground burial chamber (vault) and associated closure tablet. (Despite this definition, those burial chambers with broken or missing tablets are still considered tombs).

*Monument:* A funerary marker that does not contain an above ground burial vault and is usually a simple or complex architectural or sculptural composition.

*Walk-in Mausoleum:* A structure, accessed through a door, for above-ground interments.

*Slab on Grade:* A flat stone/concrete slab on grade that serves as a memorial.

*Society Tomb:* Large tombs used by burial societies, benevolent and mutual aid societies, or religious groups to house their members. They developed at a time when these groups were popular in New Orleans, as well as when the Catholic Church was especially emphatic about the appropriate burial of the dead (Walker 1936). These are specifically designed in order to provide members of the society a guaranteed vault and a proper burial in an otherwise crowded cemetery. This is noted in the Penn survey with four choices, a simple yes or no, or possible and probable. The possible and probable aspects are somewhat difficult, but were almost totally based on the massing of the tomb, and when noted, can be re-checked in the field in order to make a determination as to whether the tomb was for a society.

*Family Tomb:* A tomb that has been specifically designated for use by one or more families through a pediment or other tablet showing the family name.

*Vault:* The space in the tomb used for burial.
**Sub-Vault:** Any vault which clearly appears below the principle vault(s). This vault may be the result of an alteration but is distinctive.

**Caveau:** A receptacle or smaller vault below the main vaults that serves to store the older remains once the tomb is reused by another burial. This construction allows for the ease of reuse by families or societies over the course of multiple burials (Huber 2004). This is often identified by the presence of a small rectangular tablet that could be inscribed.

**Vault Construction Type:** Basic method of the burial chamber (vault) roof construction. There may be multiple types within one tomb. Types include arched, slab, iron bars, and unknown, which is used when the tomb is still sealed.

**Bays:** The number of vertical columns of vaults that exist on a tomb.

**Tiers:** The number of horizontal rows of vaults that exist on a tomb.

**Tablet:** The marble, slate or granite stone that either covers the entrance to the vault or is positioned elsewhere on the tomb and provides burial information such as names and dates.

**Parapet:** The extension of the façade of a tomb upwards, creating the appearance of increased height.

**Tomb Elements—Columns:** upright pillar or posts; **Pilaster:** A rectangular support that resembles a flat column; **Raised Base:** the lowest visible element of a tomb that is distinct from the foundation or footing; **Steps and feet:** these project from the base of the tomb and are not to be confused with shelf; **Furniture:** presence of any vases or other elements separate from the tomb, often inscribed.

**Exterior Tomb Skin:** The material of the exterior of the tomb, which can include stucco, exposed brick, stone or no skin.

**Metalwork:** The metal work was identified by first its presence, then whether it partially or fully enclosed the tomb, then by type of metal working (wrought or cast iron) and then the presence of applied metal ornament actually on the surface of the tomb.
Conditions Assessments

Perhaps one of the best resources for conditions assessments is the glossary provided by the ICOMOS International Scientific Committee for Stone (Verges-Belmin 2008). It was designed to help eliminate confusion in the field due to professionals using distinct terminology from one another concerning conditions in stone. This allows for better documentation, but also for better comparison to the conditions on other sites if everyone is using a consistent vocabulary. The other benefit of this glossary is the definitions provided. It has a very clear set up, and provides at least two photographs, in different scales, as examples of each condition, further limiting any confusion. This is the basis of many conditions surveys, and having a resource such as this while setting up a survey to address conditions leads to better data output and makes it comprehensible across the field. This type of conditions glossary can also be adapted, and often is, to suit the needs of any survey of a building, including definitions for wood or ceramic deterioration conditions as well.

Conditions surveys in the past were designed to reflect only the current condition of a site or a collection of historic artifacts. Recent scholarship (Taylor 2005) has begun to integrate both conditions assessments and risk assessments as a better way to preserve the historic fabric and also predict patterns of deterioration and those segments of the site that are more at risk over time. As the study noted, this combination of complementary assessments allows for additional insights into the not only the past, but the future of the site. If meaningful conclusions can be drawn about patterns of deterioration in the past, it will be easier to predict them and prevent them in the future. These types of analyses could easily be worked into a survey for an historic cemetery, provided that the intention to integrate the surveys was made clear at the outset. This integrated approach also can help with the management of the site, in addition to directing future research.

For stone in particular, there is recent scholarship that suggest there are three distinct levels for its documentation: anamnesis, diagnosis and therapy (Fitzner 2004). This documents the overall condition, the causes of the decay and then what should be done to combat it. This study also highlights the importance of evaluation and graphic deterioration for in
situ investigations. These three stages further involve the identification of the object and its location, a description and background research, specific properties of the stone, the state of its deterioration and its progression, a rating of that damage, then the testing and application of interventions, including extensive monitoring. It is interesting to think about survey in general in terms of the different stages and the levels of information needed at each stage in the preservation process. This is certainly a notion that should be kept in mind when developing a survey methodology for any site, not just those focused on stone.

**Genealogical and Prosopographical Studies**

Studies from anthropologists and historians often focus on survey as a method for gleaning historical information about the people buried in the cemeteries. These range from studies looking at icons of cultural identity to determine patterns of burial and themes of religious style (Zelinsky 2007), to studies of status, marriage patterns, and stylistic evolution of communities (Deetz and Dethlefsen 1971), or to study changes in philosophical-religious beliefs of a certain community (Carr 1995). In some circles, these creations of collective biographies are termed prosopographical studies. Their use in history has typically been two fold, one for discovering the thought and ideas lying beneath politics of a given time, and the other to describe social structures and hierarchies as they changed over time (Stone 1971). The use in terms of thinking about cemeteries is to develop in depth insights about a particular culture based on their self-imposed identifying features at a set point in time.

Even further, cemetery study should be looked at as a means for conducting prosopographical research for a community because of the remote nature of cemetery sites places them in a historical area about which very little may be known. Dethlefsen (1981) argues that the study of cemeteries and other associated mortuary behavior should produce “a ‘filtered’ and modified reflection of the living community.” However, it is important to be careful of overgeneralizing a group of people because of the more homogenous nature of their tombs or the ritual they are a part of (Ippolito 1989), it is in the details that the real story can be sorted out, which causes the in-depth survey to become a critical piece of the puzzle.
**Gaps in the Literature**

These types of studies are all beneficial scholarly outcomes but the ways in which they can be tied together more fluidly with the same amount of data collection is the focus of the subsequent chapters. The methods of collection and use studied in later chapters will enable preservationists to get deeper analysis and insights out of the data, provided it is collected in a sensitive and well thought out manner. Even the most well rounded and preservation focused studies of cemeteries in the recent past (Matero and Peters 2003, Liebens 2003) have stressed the importance of building and using a database towards the analysis and mapping of the site as an integral part of the documentation and survey process, eventually leading to interventions on the sites. However, beyond the impactful results of such analysis, the actual process by which the data is molded to create these outcomes is still largely underrepresented in the scholarly literature, or in any of the procedural documents provided by professional organizations. It is this gap that this thesis proposes to address.

1 It is critical to understand that the surveys in question in this study are defined as a systematic accounting or documentation of each and every tomb within a site (within reason, some sites have tombs that are inaccessible or have been otherwise lost), and some level of documentation of various attributes thereof. This does not show a representative sample of a site, but rather a comprehensive picture of the whole as a sum of the parts and as defined by the parts.

2 These definitions are from the manual of definitions for the survey of St. Louis Cemetery No. 2, unless otherwise noted. This document was provided to the studio class in the spring of 2012 as part of the documentation efforts for the site and is provided in appendix B.1.
III. Survey Methodologies in Historic Cemeteries

As Edwin Dethlefsen and James Deetz so eloquently put it, from an archaeological research perspective, it is almost ironic that a place where it is known that something of interest is buried, and that could provide valuable information to the historical record, is a place where one is unable to dig (1967). It is for this reason that in order to glean historical, ethnographic, and preservation related information from cemeteries, the method of meticulous survey has become the technique of choice. The tombs themselves become the source of the data about those buried within them. In truth, this information is much more valuable and accurate than the information to be gathered from the material remains of the deceased themselves. This only occurs in cemeteries where stone or other lasting materials are used to mark the graves, but those are fortunately widespread in the United States. This type of data has long been acknowledged as important both anthropologically and demographically, and has naturally been drawn into the preservation field, not only for information on how to preserve the graves and landscapes, but to understand the people who both constructed them and are buried in them. Cemeteries can serve as a resource for data concerning the population of a larger area, the migration patterns, the cultural patterns and ideas towards death, as well as a reference towards fashion, social hierarchy and style of a particular time. Cemeteries show all of this, as well as the evolution of many of these patterns over a length of time, especially in those cemeteries where there is a strong familial presence or an extended period of use. Further, the documentation of one cemetery and its comparison to others either in the same city or different areas can help historians and preservationist to see if there are significant differences in the ages, seasons of mortality, death rates, life spans, family sizes, marriage patterns, and population density (Dethlefsen and Deetz 1967). The data for cemeteries that is collected can also provide a means for the conservation of the physical fabric, and clues as to appropriate methods and materials for reconstruction. As discussed previously, there are certain inherent weaknesses in the data to be collected from a cemetery, yet that should not hold the field back from collecting what can be collected and learning from it.

One of the final goals of the research in this paper is to show how these surveys can be
made more efficient—and therefore the data produced from them more useful—before, during, and after information collection in the field, while also providing insights into why certain decisions are made along the way. There is also a need to address the lack of scholarship in the field concerning the collection of data itself. It is not enough to teach those interested in these sites to create and execute surveys. There needs to be training for the cleaning, organizing, and use of the data itself. The analysis done and concluded in a lot of the studies examined below only shows the means of collection and then the results of the investigation put to use. The middle and unexamined part of that process is often the most critical in ensuring the preservation of the site and the future usability of the information that was collected.

**Methodology**

The primary step for this research is to gain an understanding of other cemetery surveys that have been done in the past, and then conduct a survey of surveys, so to speak. This analysis provides a basis for the critical analysis of the methods and practices of the past, in order to move forward and critique on a deeper level for the work conducted on St. Louis Cemetery II in the following chapter. There are no two projects that are the same, and as such, this thesis allows for that inevitability by suggesting flexibility wherever possible. Because of the nature of this study as an analysis of a process, that is, the entire survey practice from beginning to end, each section has additional background on some of the more recent best practices or thoughts concerning the more specialized practice.

After collecting various sources for the background of why this type of research is important, and giving a brief history of the primary cemetery under discussion in this work, it became necessary to pursue an in-depth analysis, beyond the present scholarship, into what types of surveys are currently being conducted in the field. This includes not just a look into the data generated, but a view into the minds of the survey creators to determine the purpose of the research, the outcomes and plan for the dissemination of data, and the many considerations into the methods of survey as well as providing a brief scrutiny of data worth.

Not all surveys fit all needs, but it is relatively simple to take a base survey and change
the vocabulary and terms slightly to fit a different style of cemetery or burial ground. As the following examples of survey methods will demonstrate, it is important to have the form set up for ease of use, as well as with considerations for the data that will be generated. The most important step is to decide what information is necessary, and what might be wanted in the future. Even if the primary goal of the research is the condition of the tombs or markers, a future researcher may want the burial information, or the style in which the tomb or marker was constructed. It is important to weigh these considerations prior to entering the field. This is also why it is critical to define all fields prior to beginning the data collection and then train the researchers in the definitions and methodology for the survey. All of these are considerations that are taken into account in the subsequent exploration. The project was undertaken with an acknowledgement of the wide variety of stakeholders and their different needs. The hope then is to give professionals in the field a clearer picture of what data should be collected to meet all of their needs in the most straightforward way possible.

The sites studied in this chapter were selected based on their primary objective being data to be used for conservation or preservation work. Those surveys that were done for purely genealogical reasons were not considered. Secondly, work done by major preservation institutions was prioritized due to the large scale and high-profile nature of the projects. Third, other cemeteries were selected based purely on availability of data in the public sphere or connections made through the preservation program at the University of Pennsylvania. And lastly, the site selection includes a mix of actual cemetery sites that have developed surveys and national or local groups of preservationists that specialize in cemetery survey and provide forms and how-to information as a guide for professionals. The sites and organizations studied include the following: Prospect Cemetery in Queens, NY; The Protestant Cemetery in Rome, Italy; The National Center for Preservation Technology and Training, both the rapid and the standard survey forms; The Chicora Foundation; The National Trust for Historic Preservation; and St. Louis Cemetery II in New Orleans, Louisiana. These will be critiqued using a matrix designed to answer the primary questions, based both on some best practices in a variety of fields, and also based on personal involvement and discussions with experienced professionals over the course of
the work on this project. The matrix allows for a general comparison based on basic information, as well as in depth analysis where data allows.

The matrix (see Appendix C.1) was set up based on answering the a set of questions about the purpose of the survey and then a more detailed examination of the fields collected and the formatting of the data, as well as any insights into what analysis was done or expected. These questions were distilled from the various methods used by architectural and cemetery surveyors as noted in the previous chapter, and then augmented based on the availability of the data for each of the case studies and a desire to learn more about the data itself. The sections and themes for the questions are loosely derived from the ideas on how to plan for the recording of a site in the Getty Conservation Institute’s publication *Recording, Documentation, and Information Management for the Conservation of Heritage Places* (Letellier et al. 2007, 6). The matrix is broken into two primary sections, the first being more general information about each cemetery and the method of survey, and the second being the survey specific information concerning collection and data entry.

The general method of survey or data acquisition section begins with the name and location of the cemetery, the date it was founded, and whether it is still active. The next section is the purpose, which lists the following questions:

- Was there a clearly defined purpose for the survey or an overarching research question to be answered?
- If yes, what is the primary goal of the survey (mapping, condition assessment, typology, etc.)?
- Are the objectives of the survey and subsequent analysis identified?
- What type of data dissemination is planned (published papers, maps, interpretive signage, etc.)?

These questions are designed to understand the intent of the survey, and what that site, or the people surveying, if they are distinct entities, are trying to achieve by undertaking the project.

The next section in the general section is the methods analysis, where the way in which the data was physically collected is observed. Note, this does not include any information about the types of data being collected, that will come in the survey specific information.

- Did the authors consider alternatives to using a survey technique to collect information? (i.e.,
did they justify using survey research methods?)

- Did the authors consider different types of technology used to collect data or the storage and analysis of data after collection? If yes, please indicate any specific software programs or storage methods that were considered.

These questions are aimed at discovering what was done in the field to gather the data, as well as determining the level of thought that was put into the survey prior to its application on the ground. This does not go into detail on the actual time spent in the field, the number of people collecting data, or any other considerations into how the data was collected on site other than the technology used. While these points are important, there is a large variety in resources that are available to undertake such a project, and the concern of this portion of the analysis is therefore focused on the prep work, and the quality of the resulting analysis.

The next set of questions in the general survey section concern data worth, and these are by far and away the most detailed in terms of gleaning the information on the process as a whole:

- Did the creators provide a description of potential errors or issues that could come from the specific site?
- Did the authors use designs that considered cost, technology, space, or personnel limitations?
- Is there a methodology in place for data checking and follow-up?
- Was the scoring method or data input type for each question sufficiently described?
- Was the survey tested or practiced by participants prior to use in the field?
- Were quality control measures used?
- Was a code book used?
- Did the authors discuss what techniques were used for verifying and cleaning data entry post collection?
- How many people participated in the data entry?
- Was there enough data to contribute to a valuable analysis?
- Are gaps in final data discussed?
- Were the statistical, analytic, and reporting techniques appropriate to the data collected?
- Were the authors transparent to ensure evaluation and replication?
- Was evidence for validity provided?
• Was evidence of reliability provided?

• Were results able to be easily interpreted? Are there extreme outliers to the set-up of the survey based on the projected data to be acquired and researched? Or, is the data overly homogenous, not allowing for the researchers to see patterns?

• Is replication possible given information provided? (within the site examined)

• Is replication possible on similar sites?

This section gets to the heart of the issues that could occur in the process, from the idea of quality controls, to the code book that helps to standardize the answers even if a large group of people are conducting the research. It also asks questions on the level of participation and training for those involved. The last few questions in this section concern the repeatability of the survey, both for people going back into the field with the same site, or the potential that the survey can be extended to other sites. The issue with the majority of these surveys is that they either not widely known and used, or that each site feels the need to create their own, therefore making it close to impossible to compare data across sites.

The last set of questions in this section relates to the availability of the data for other professionals or those who may be interested in it for other types of research. It has an open ended field for additional comments on the accessibility of the data because this portion of the process is often quite complex. There are a wide variety of tools for management of data, and yet another set for the dissemination. This field will allow for a general commentary, but with specifics in regards to programs, ease of use, or overall availability to the level professionals expect.

• Is data available online or in print?

• If yes, what is available?

• Please list any comments on the usability or accessibility of the data available

The survey specific data portion of this analysis includes basic information as to when and where the data was collected, and then a great deal of questioning regarding the survey form itself. This is intended to get more information about the physical process of creating the survey, and what decisions were made. This then can provide an estimate of what the data quality might
be if there is no access to it, as well the types of data that would be available. The list is by no means exhaustive, but merely an effort to gain a fuller understanding of the details behind the survey creation and perhaps of the underlying reason it was created. This section also gives a good idea of the depth of data available without even having to look at the data itself.

Survey Specific Data:

• Year survey began:

• Year survey was completed:

• Who participated in the planning of the survey?

• Who participated in the data collection?

• What tools were used?

Methods:

• What was the survey method used in the field (paper, GPS, cloud, etc.)

• What software programs were used for the digitization of the data collected, if any?

• Field Types for data entry - is there a variety? (yes/no, multiple choice, Likert scale(1 to 5), free form, etc.)

• Is condition of the tombs or lots specifically addressed?

• If condition, what type of scale is it on?

• Is the integrity of the tombs addressed?

• If integrity is addressed, what type of scale is used or how is it noted?

• Are there free form fields for names or epitaphs?

• Are measurements of the tomb lots or tombs recorded?

• Were photos taken of each tomb?

• Has mapping been done to show the spatial relationships of the tombs?

• Is the position of marker/tomb noted? Either the direction it faces, or where it is located on the map, or both?

• What types of tomb style data is collected? (Fonts, symbolism, color, etc.)

• What types of tomb type data is collected? (shape, size, general massing, roof type, etc.)

• Is the number of burials noted?
• Is tomb/ marker material noted?
• Is there ownership/ stakeholder information available?
• Are burial dates recorded?

As with any survey or research question, not all of the case studies examined can have answers to all of these questions. In fact, many only had a response for a few of the questions, based on the availability of a survey form. The mix of cemeteries investigated in the following section provide a good mix of sites where there is a wealth of background information, but with no access to a survey form, and others where there is only a survey form, and no specific site associated with it, and still others where there is a mix of both.

**Critique of Cemetery Surveys**

If cemetery surveys are to be used as a tool beyond simply the collection of the primary information available from the tombs on the site, and to give a background on the culture and community that created it, then the evidence collected must reflect that. For the full matrix composed for the analysis of each case study, see the appendices at the end of this paper. The following segments of this chapter represent a synthesis of the findings, and a brief summary of what can be learned from them for future use.

**The Protestant Cemetery in Rome (Appendix D):**

The Protestant Cemetery in Rome, Italy was founded in the 1730s as a place to bury the non-Catholic population who had perished during their time abroad. Given the urban context of the site, there have been many changes to the site over time, and the survey attempted to explain those changes thought documenting the current condition of the site and comparing it with known historical resources. It represents a particularly good example case because the authors of the study were critical of their methods in their assessment after the face, so the impact of their choices can be seen both in their writing and in the data that is available online. The survey was undertaken in response to storm damage, problems with theft and vandalism at the site, and the damage pollution was causing to the monuments. Prior to this survey in the early
1980s, there had been no comprehensive record, neither photographic nor written, of the tombs and monuments on the site. The goal of the study was to provide condition reports for the tombs, prevent further vandalism and decay of the site, provide a deeper analysis into the lives of those buried at the site, and provide evidence of the styles of the tombs as they changed over time. The overarching objective was to provide a deeper narrative for the site, going beyond the inscriptions on the tombs to create a deeper understanding of the individuals and cultures represented there.

Much of the information available about the survey itself is contained in the reflections of the authors after the survey was completed, and not during the process of developing it. However, it is just as valuable to evaluate their critique of their work. Some of the key issues they noted involved the collection of data as well as the interpretation. Because of the international nature of this site, there were as many as fifteen different languages represented in the inscriptions, which can cause issues if the person recording them is not familiar with the languages. The authors also noted that they perhaps should have hired a trained epigraphist to help with the documentation of the tombs. As with many cemeteries, the Protestant Cemetery deals with the issue of the cemetery being a living one. There are many generations of burial, and a tendency towards overcrowding. In those situations it is a natural progression that tombs or burials move and get lost, disappearing from the record permanently.

A key insight in this survey was the demonstrated need to know the history of the cemetery to understand the changes over time, and track that within the documentation of the site. There was an attempt to account for previous burials that might have been lost through movement of modification, which is very difficult to do. However, in the end, what was completed was just a pure record of what was there at the present. The authors present their documentation of the site in the frame of the ideal known as a “memorial diary” (Nylander 1989, 167), where all the stages that memorials go through are documented (or attempted where possible) from the construction to use to deterioration. Motifs are then documented as a separate entity from the form of the tomb; they reflect more about the people, and fall under the category of “burial diary.” However, in this and many other cemeteries, it is not always easy to document all of these changes, and we are left with only a piece of the puzzle with which to work.
The strength of this study was the conscious effort to limit the vocabulary used on the forms and therefore standardize the information that it would produce. This enables surveyors and those interpreting the data to start out at the same level and understand what they are recording in a much more streamlined manner. To that end, they utilized pre-printed forms, a unique numbering system for the memorials, with a photo and a location on each tomb, and trained people prior to the field work. Additionally, it is important that they noted future research to be done, particularly because acknowledging that upfront leads to more careful and comprehensive data collection--even if it will not be used right away, it will be ready for use in the next phase. This reflection also stresses the importance of recording in many ways, and linking all the data together. Using these links we can create more answers than just the recorded answers to the questions.

The comparison of their method of research to the 3D context model analogy used in archaeology is quite a good one, given that using a particular date as a set context it is possible to paint a larger picture of what was happening in the cemetery at a moment in time. Within this analogy, they express interest in tomb characteristics as parts of a whole, and therefore as a method though which to look at the cemetery, much like the typology discussion that will come in later chapters. This was also used in the creation of typology and evolution of styles that was to be the outcome of their work.

In regard to the efforts to display and publish the data to a wider audience, the intentions are there, but the data is not in a format that is designed for deep research. The database consists of a linked HTML document and a few different .pdf files, each one showing a different way of sorting the data, from the country of origin to death year. The links between these documents are confusing, and there would be no simple way to use the data for any type of tomb by tomb comparison or analysis. These are also not searchable documents unless the documents are downloaded and then text recognized. A few pictures are available but only if the name of the person is known—they are not organized by plot number. Given the wealth of software programs available today, it would be fairly simple to convert their database to be able to link between the available maps and the burial data or the stone number and burial information and its location or
In terms of the overall data quality within the survey, at first glance it appears quite complete, but upon further investigation it shows that there is only partial data in each form (Appendix D.2). There are a lot of zeros as place markers in the data and the wording for the iconography is quite confusing. To decipher the shorthand used on the records requires a key, which cannot be found online or in any of the documents available on the site. Additionally for a researcher looking to find inscriptions and similarities across cultures, the only input is in the original inscription language. This may eliminate some possibility of error in translation, but it also makes in-depth research more time consuming.

The maps on the tourist site, which appears to be separate from the cemetery operated site, are beneficial in terms of putting the user into the context of the cemetery or guiding them through it, but given technology today, much more could be done with them. For example, the maps could be linked to the burials that are highlighted for their importance, and the key could be exported as well when it is printed out. This would enable the maps to become a much more impactful interpretation tool, as this is a tourist attraction within the city of Rome. GIS mapping could help create these links and a more powerful tool for those researching prior to their visit, or if they are interested in more information regarding tombs they saw during a tour.

Overall, this was a largely successful effort of documentation, and much has been written as a result of the survey. Given the advances in recording technology since the completion of the survey, there could be a project undertaken to update the records and place them in more manageable and accessible formats.

**Prospect Cemetery in Queens, New York (Appendix E)**:

The Prospect Cemetery in Queens, New York has records of burials dating from as early as 1688. This date marks the site as the oldest burial ground in Queens, and unfortunately it suffered from neglect for many years. The restoration project started in 1999, as a joint effort of the New York City Department of Parks and Recreation, The New York Landmarks Conservancy,
The Greater Jamaica Development Corporation, and the Prospect Cemetery Association of Jamaica Village. The initial goals of the preservation plan and survey were to physically secure the site, restore the Chapel, and remove the overgrown vegetation on the site. As the project progressed, the goals shifted towards preservation and conservation of the site by documenting the tombs and markers, conserving individual markers that were in the worst condition, re-landscaping, and creating programs for interpretation and education about the site. Given the funding for the project, the stewards of the site have been selective in the work that can be accomplished, but various funders have come forward, and the work is moving along steadily. There had been previously very little documentation on the site, and in the older section, there is almost no record of the burials at all.

The survey form was not available for the purpose of this study, but the outcomes desired gave substantial insight into what the forms would have contained, if not the actual questions. Because of the previous neglect of the site, the initial goal of removing the vegetation had to take place before any documentation or restoration work could take place. The final preservation plan approved by the stakeholders consisted of producing a plot by plot map, website, and database where tomb information is tied to each plot. The focus of this database is to provide the descendants of people who might be buried in the cemetery or those interested in the development of Queens to have easy access to the information. There is even thought to house the data in some form at the Queens Public Library for easier public access. In order to make this a reality, burial information such as names, dates and inscriptions would need to be noted, as well as perhaps any identifying marks on the burial lots, like material, motifs, or enclosures.

A second goal is the development of conservation protocols for the site. This would require documentation of the various types of markers, their materials, as well as their degree of deterioration. A full conservation plan cannot be developed without knowing the range of conditions that would have to be treated.

In terms of technological tools, the stakeholders first considered an approach that would use open source software due to budget constraints; however they are now using a Trimble GPS
system for much of the data collection, and GIS as a method for displaying the results. Given that some of the site was overgrown, and New York sees its share of cloudy days, the GPS has proven difficult to use, some days doesn’t work at all. In cases like these, while the technology has the allure of being fast and streamlined, often a paper survey works just as well.

While moving along, this project is less than fifty percent complete as of February 2013. While all of the information as to why the survey is being delayed was not available at the time of writing, there is significant evidence to suggest that this survey could have been performed in a more straightforward manner, and the results could have been documented more rapidly. The initial ideas of making the information accessible using open source software were sound, particularly for a site like this with a local interest and significance. In addition to its reputation as sometimes challenging to use in the field, GPS as a locational tool has been proven to be difficult to use in cemeteries, as the grave makers are often too close to get an accurate reading of the positioning (Libens 2003). In this case, where the marker information and survey data are tied to the GPS system, this could require a significant amount of work on the back end in order to make the data accurate and therefore legible and useful.

This site and survey method can be used as a teaching tool; primarily because of the lack of records it gives almost a blank slate for survey. Additionally, an analysis of the one previous survey done in an informal manner by a woman in the early twentieth century would be an excellent exercise in creating an interpretive plan for using the data. If this could be paired with the data collected on the site in present day, it would have an interesting impact on documenting the changes over time. The implementation of the database as a public tool could also help alleviate what the stakeholders describe as a lack of connection between the place and the current residents. This could be improved by providing free access and contemporary uses for the site as there is a fear among stakeholders that due to the history of neglect, the conservation of the individual markers will prove unachievable in the long term.
**Chicora Foundation, Inc. (Appendix F)**:

The Chicora Foundation is a Columbia, South Carolina based preservation organization founded in 1983 that focuses on the Southeastern United States. Their particular focus is on the preservation and conservation of cemeteries and archaeological sites.

Their website provides a wealth of information and a very good start for professionals or amateurs seeking resources on how to document a cemetery. The intention to provide a one-size-fits-all solution to documentation is clear, but there are too many forms and the process and order of the forms is confusing. There are forms for recording the location of a cemetery, a conditions assessment, an individual marker recording form, a form to document family plots, a form for the identification of cemetery features, a form for recording monument fragments and removal, a vandalism reporting form, and a disaster assessment form specific to cemeteries. While each of these are beneficial, there is no clear link between them, and enough overlap that they could be pared down into fewer forms. Additionally, with such a great number of forms, there needs to be a clearly defined code book to define the terms used in them, and a description of what terms should be used when.

There is no clear definition of the order in which these forms should be tackled. Some are self-explanatory, but for an amateur coming into the process, a defined order would be beneficial. Also lacking is a mention of what the process should be for the management or consolidation of the data after completion of the various forms. There is no insight into the types of things that can or should be done with the data, no best practices. If one had time to delve deeper into the materials on their website, best practices could be generated from case studies of their past work, but a simple document pulling them together would be a much more rapid means of doing so.

In terms of the actual data that can be collected using these forms, the entry methods are fairly simple. They use mostly free form or multiple choice fields, and different people will have different standards for particular rankings, which is particularly problematic in the case of assessing condition. Condition should be placed in a set scale for severity or with a choice of types of deterioration that are occurring so that the responses are as objective as possible. The
forms are not as well designed for ease of use in the field as they could be. The pattern of the questions is not entirely sequential, which would facilitate ease of collection and recording.

On the more positive side, The Chicora Foundation notes that the first step in preservation and conservation is a survey in order to determine what assets are present on site. It could be argued that this should be taken a step further back, and that noting that the first step in documentation should be the discovery of what data is needed for analysis order to determine how the site should be documented. These notes are based on the forms available for download from the website, and it is likely that they tailor their forms to meet the individual needs of the sites where they work, but it provides a good base.

Lastly, the Chicora Foundation provides a large amount of data on their site, including reports, case studies, and examples of work done, which are very beneficial for the aspiring scholar of cemetery preservation.

**National Center for Preservation Technology and Training (Appendix G)**

The National Center for Preservation Technology and Training, a division of the National Park Service, provides two distinct surveys on their website. One is a standard cemetery analysis survey, and the other they call the rapid survey.

The first survey, which for the purposes of this thesis will be called the comprehensive survey, is a three page document that provides an extensive amount of information for the data collector. However, the length is something to be taken into consideration. Would it be possible to get the same amount of data from the first survey with the time it takes to do the rapid one? There is certainly some duplication. Some of the fields could be eliminated by placing a photo of the tomb with the form, or with identification of certain features on a map instead of writing them out, such as orientation or location. The definitions of type do not include any of the tomb types found in the New Orleans Cemeteries, and while this could be altered on a case by case basis, most other types are represented. Another way in which it could be streamlined would be eliminating the need for the fields to be calculated for the primary structure, the base, the surface
finish, the ornament, and the roof of each tomb. Particularly for condition and materials, this could be limited to just the base, primary structure, and roof, and if all of the material is the same, it would streamline this section, especially if there is a photograph of the tomb. The weather information at the top of each page does not need to be repeated twice, nor is it much of a factor unless that is specifically thought to impact the condition. If that is the case, it might be better to include that as an optional field, instead of a required one. Another section that should be eliminated, or moved to a free form section at the end should be the history of repairs question. That is often hard to make a judgment on, and a better way of approaching it would be to note any differences or discrepancies in the overall tomb or marker body instead of making the assumption that it is or is not an historic repair. Additionally, integrity and condition together should be able to provide a basis for whether or not repairs have been made. There are eighteen conditions listed on the form and might make sense to simplify those to the conditions that are causing significant damage. It would also make sense to limit the requirement of noting each piece of the tomb structure separately in terms of documenting condition, as noted in terms of material as well. Perhaps the overall condition rating could account for the differences.

The condition scale having only four levels is problematic. In general, it is nice to have a middle ground, with two options on either side, allowing for both extremes and grades of deterioration. The scale in the form says that the rank of 0 should be used for low deterioration, whereas in the codebook 0 indicates no deterioration. If there is no field for stating that a particular condition is not applicable, that should be added to speed the flow of the survey.

A benefit of using this particular system is that the NCPTT does a lot of training in the field for both professionals and amateurs, which if done prior to data collection could impact the speed at which collection could occur. This survey would take a long time per tomb, particularly in a site with multiple burials per tomb. The codebook is a great feature of the survey, but some of the definitions are not necessarily those that someone without training in the field would be able to understand enough to use to identify a condition or feature while in the field.

The rapid survey assessment was developed as a response to disasters occurring on sites,
and the need for a quick survey to determine the extent of the damage. However, with many historic cemeteries falling into disrepair, it might be hard to say to what degree damage has been caused in the recent past if there is not prior survey. Regardless, it is a useful tool to have.

Within this form, there is a recommendation section for the type of intervention that is needed based off this survey, a feature not seen in any other surveys analyzed. However, this is not a tomb by tomb survey, so the intervention is an overall assessment, but in order to get to this overall conclusion, the form does require the user to cursorily look at all tombs and the site. The recommendation field is something that could be added to other surveys as a method of assessing the type of condition and the severity of the condition by the surveyors. For example if the intervention recommended was to stabilize the walls of the tomb, it could be inferred that the walls were starting to deteriorate, and provide an additional level of risk assessment for each tomb or monument. This form could be easily adapted to be a more rapid version of the individual tomb survey by adding just a few fields on material and massing, and removing the information about storm damage.

The National Trust for Historic Preservation (Appendix H)\textsuperscript{5}

The survey template provided by the National Trust for Historic Preservation published in 1993 is found within a pamphlet entitled “Preservation of Historic Burial Grounds,” by Lynette Strangstad. The survey form is almost an afterthought in the pamphlet, as if the editor mentioned that it might be needed to explain the ideas she writes about. It is a very straightforward form for the documentation of individual grave markers.

Like the other surveys and primers on data collection, the publication does not discuss what to do with the survey data, the narrative moves from the survey directly into conservation techniques. She notes that it is a labor intensive process, but that refers to the process in its entirety. In addition, the section that describes the types of surveys to be undertaken states: “Survey should be undertaken by professionals.” However, there is no description of what that means in this context.
The physical survey is confusing in the order and set up of the fields, they are disconnected and do not flow one to another, which could cause it to take longer. Overall it is a very short form, but there is a lot of information left out, particularly regarding the documentation of the information about the person or people buried in the tomb.

**Woodlawn Cemetery in the Bronx, New York**

There was not enough time to adequately study the complex case of the Woodlawn Cemetery in the time allotted for this study. However, it should be noted that this is one of the sites that has been making great strides in terms of the digital management of the assets of the site. The stewards of the site recently completed a complete GIS survey and mapping project of the site, in order to better display and prioritize the conservation work being done on site as well as provide a basis for requesting grant money and other funding. This would be an excellent case study for further research.

**Summary of Findings**

In addition to the critiques provided above, the major weakness in the majority of these survey techniques and examples is what to do in the middle portion of the data collection process. In almost all of these examples, the questions of what is to be done with the data, how it should be looked at, and if there even a database set up to handle the amount of data we are generating are asked but not answered. There is almost no discussion beyond how to fill out the survey, but what happens to that large stack of paper after the initial documentation is completed? This can be the most time consuming part of the process, but there is little to no mention in the literature or how-to guides on this step. They tend to shift directly into treatment of the markers, without thought for the process of cleaning, storing, analyzing, and then interpreting the data for actionable results. It is clear that the field cannot let this continue without some form of standardization and training for data management and analysis. Each preservation agency and site cannot move forward with their own survey and expect the vocabulary and labels to carry through to the rest of the field.
The following chapters discuss the case of St. Louis Cemetery II, when a survey was undertaken with the full understanding that the data was needed for analysis and was therefore a major factor in the development of the survey. The impact this has on further study of the cemetery is clear. The amount of data—when appropriately cleaned and managed—can directly impact the quality of the research produced regarding the location.


and http://www.acdan.it/protcem/

2 All information transcribed from conversations in the spring of 2013 with Ashley Hahn, who worked for the NYC Landmarks Conservancy during the initial phases of the survey creation, and Cate Ludlam, the President of the Prospect Cemetery Association.

3 All information obtained from the Chicora Foundation, Inc. website: www.chicora.org, copyright 2008.

4 All information adapted from the NCPTT website: http://ncptt.nps.gov/blog/documentation/

IV. Data Testing: A Critical Look at the Survey for St. Louis Number II

Given the vast array of surveys that have been done over time, it is interesting to see how they have evolved, and particularly how the knowledge generated by them has shaped subsequent projects. This can perhaps best be seen in the evolution of the surveys undertaken for the St. Louis Cemeteries in New Orleans. Both St. Louis Cemetery I and II have been studied in great depth by the Architectural Conservation Lab at the University of Pennsylvania. The progression of the survey in the span of years between the two projects demonstrates how the increased knowledge about a site and a context can impact how the documentation is undertaken. The survey of number one was vastly more complex, requiring much more time in the field per tomb, and resulted in a wealth of data, but perhaps more than was eventually needed. The surveys of St. Louis Cemetery II have also evolved from many of the surveys looked at in the previous chapter. In fact, the National Center for Preservation Training and Technology survey is very similar to a survey produced earlier by the ACL in 2006. The influences of the other surveys on the field is also apparent as the years progress, but until the survey done in 2012, the focus was mainly on the collection of data for future use, and not an exercise into creating data for a specific use. This thought process, and the foresight to accommodate the wealth of data already available is what truly differentiates the second survey of the cemetery from the others.

This chapter addresses the evolution by engaging in an almost question by question critique of both assessments used for the documentation of St. Louis Cemetery II since 1981. It will also comment on the overall data worth by analyzing issues that have come up during both the physical input of data into a Microsoft Access database, and the analysis of the results of both sets of investigations. This is a critical step that can only truly be investigated after the collection is complete and the data is put to use. However, as seen in other examples, the amount of thought put into the process prior to implementation in the field can impact data worth a great deal. By comparing these two surveys, there is room for discussion on how the survey evolved, and then how they combined can paint a broader picture of the whole site by building off of each other, and creating new insights through analysis and unification of sources.
In 1981, The Historic New Orleans Collection conducted a survey of all of the tombs in St. Louis Cemetery II. The survey collected basic condition and material data, as well as the information regarding every burial and epitaph on site. Due to the weathered nature of the stone and the environmental damage to the site, not all data is complete, and there is no way to know how many burials might be missing. However, it is a valuable document given that in the years after the survey was undertaken, both hurricanes and vandalism on site have contributed to further damage. In some cases, this record is all that exists documenting the burials in a particular tomb. This survey also documented the wall vaults, which are the burials located in the brick walls surrounding the cemetery. Given the limited time the field team had in 2012, there was no additional survey of these burials, but they can and should be analyzed in a future study.

The records of the 1981 survey are typewritten cards, with at least one card per tomb. The center of the card is a blank space used for recording the names, burial dates and inscriptions for each tomb. Some condition or significant features could also be noted in this section, such as the motif, material or style of the tomb that would not be noted in other sections of the card. Along the top, there is space for recording the cemetery number, the square number, and the tomb number. At the bottom, for those tombs that required more than one card, there is space allowing the person inputting the data to indicate that there is a subsequent card. The right side of the card has spaces for indicating the location of the inscription, the material and the condition of the tomb tablet, but not the overall tomb, and the symbols or decorations that appear on the tablets. However, in some cases, this information was not filled out, or was only filled out once per tomb, even though most tombs have multiple tablets. There is also no indication of the size of the tablets, or a place for the total number present on each tomb. When materials or condition are noted for multiple tablets, there is no indication which belongs to which. The real value in this survey is the record of the names, dates and epitaphs. However, during the analysis, it was found that some of the names were misspelled, and some of the dates were recorded incorrectly. It is for this reason that a field check should occur for most of this data that cannot be resolved using photographs. For some of the tombs that have been lost, this record will have to suffice, but given the discrepancies found during this examination, there should be a disclaimer
on any analysis done.

The physical form of the data for this survey was also problematic. It only existed in the form of cards with a number and square to tie the records to the tomb. In some cases, there were multiple cards per tomb, or even per single person entry. In order to get it into a usable form, each entry had to be input manually into a database. Given the fact that there could be multiple burials per tomb, this was taken into account and each person was input as a separate entry, which would then be tied to the condition and tomb data collected in 2012. This data entry was done by many graduate students over the course of a year and a half. It was time consuming, but now that the data is digital, it is much more useful for the site and future researchers.

Using the data provided by The Historic New Orleans Collection (THNOC) as a base, a follow-up to that survey was performed over a week-long visit to New Orleans in the spring of 2012 as part of a semester long course on the cemetery taught by Frank Matero of the University of Pennsylvania. Prior to the site visit, extensive work was put into determining the best way of surveying, and what types of questions would be asked for each tomb. The key decisions for the survey were made with the input of many people, including the members of the studio class, as there was survey practice done prior to the trip. The combined effort put together a streamlined survey that could be done rapidly in the field.

On site, each team of two was given a binder full of paper surveys and photographs of the tombs, along with a locator map. Prior to beginning the survey, each team was required to determine whether the location on the map was correct, and then note the direction the front of the tomb faced. Each sheet was an 11x17 piece of paper, with fifty-four questions on it (Appendix I.2). There is a mix of free form, multiple-choice, yes/no, and Likert scale questions. While long, it was able to be done in about ten to fifteen minutes per tomb, and faster as the week went on and surveyors became more comfortable with the site and the overall terminology.

Assessing the Survey

First, before analyzing the actual data that came as a result of the field work, the primary
step is to determine how this survey relates to those critiqued in chapter III. It is important to note that because of the data available from the THNOC survey, there was not the same need for capturing the data about the people buried in the tombs, so the focus could be made on the condition and style of the tombs. The true strength of this survey was in the pre-planning that occurred prior to the field work. The survey went through many revisions, and the final product of usable data was always kept in mind. Many of the questions, when combined with a second question, create a third category that gives new information about the tomb. This is particularly true in the fields for input where the sub-vault presence is noted in conjunction with whether it is also a caveau. The answers of these two combined give the person doing the analysis an idea of whether the tomb was built to have a secondary vault, or whether the tomb might have been altered over time to accommodate more burials or different stylistic preferences.

While the survey was quite successful in terms of the rapidity with which the data were able to be collected, there were are few questions or definitions that could be changed for future use or removed entirely.

The first point of analysis involves whether or not some of the questions were needed, like the question relating to the “furniture.” While there are data to be collected from the presence of “furniture” or funerary and memorial items such as vases or benches that are left around the tombs, the surveyors were told to be wary of such items, as they have a tendency to move around the cemetery with some frequency. Therefore, furniture was likely only noted if it was cemented in place outside a tomb, or if it had exact dates and names that matched a tablet, therefore rendering the data to be collected from it duplicitous. This question, given that such doubt was cast onto the importance of it to begin with, was unnecessary in terms of the analysis to be done.

The questions on the first and last burial date are not all that valuable, given the many changes that could have happened to the tombs over time. It would be useful in the case of more recent burials since the 1981 survey. However, if there was more than one burial since 1981, it would still give an incomplete picture of the tomb when put into the combined data. If the date
of the last burial was after 1981, then it would be beneficial in indicating which tombs should be
looked at to first during a field check. The first burial date field also is problematic if there has
been damaged or missing tablets in the last 30 years, which is likely. Both of these fields should
be checked against the data from the 1981 survey, and then again during a field check. However,
as noted before, there is no guarantee that any of these dates are in fact the first and last burials;
they could just be one more number in the density of burials at the site.

The overall account of the number of tablets, and the differentiation between detached,
missing, and attached to the tomb provided some misunderstanding and much of this was
rechecked by the staff of the ACL during the time in the field, however not all of it was able to be
verified. The intent of this question was clearly to identify what tablets were still attached, how
many could possibly be missing, and then provide some documentation of the tablets that might
be on the ground or leaning against the tomb, without assuming they belong to the tomb, which
is a very intelligent way of looking at it. However, there should be more clarity in the questions,
perhaps asking a total number of tablets that could be present on the tomb, then the counts of
numbers that are attached either to the front, sides or back, and then the count of those that are
detached and not necessarily of the tomb. The other issue with this system of counting is that the
detached tablets were not included in the first and last burial dates, and therefore their inscriptions
and data may have been lost. It would require some intense detective work to try and pair these
tablets to the data recorded in 1981 and determine whether they had been attached or accounted
for previously.

For the society tomb question, the concern is with the multiple choice answers that were
provided. The possible and probable options produced different results for different surveyors.
Some categorized a tomb as possible or probable based on the size, others based on the ability to
read fragments of the tablets, which produced drastically different results. In some cases, looking
back at the photograph in comparison to the data, it was clear that the tomb was in fact neither
possible nor probable. In this case, one option for the potential (either possible or probable,
not both) of the tomb should have been included, and then the data analyzer can make a better
distinction using a combined data set and a photograph to make the final determination. This is
a particularly important point: the use of the combined data in conjunction with the photographs and the maps will produce the most accurate analysis. In none of these surveys should the person conducting the research use only one portion of the data in a vacuum. This is part of a system and a process for producing better information and gaining deeper insights.

Integrity was a challenging question as well, given that it was on a scale that was not clearly defined. The NCPTT survey (Appendix G.2) does an excellent job with the definitions of both integrity and condition by defining each level in the scale based on percentages of original material remaining, or percentages of the tomb that the conditions cover. Condition overall can be used as a good indicator of those tombs that are at the highest risk for increased deterioration, but in this survey there was no indication of what types of conditions were present on site. A second question, perhaps multiple-choice, related to common types of deterioration seen in cemeteries or in New Orleans might have been a useful addition. Currently, there is not a clear way to move forward with a recommendation for stabilization or treatment of the tombs without a more complete documentation of the conditions occurring on site.

Insights from Use

The actual use of the survey in the field produced valuable insights into how to improve the planning process, and the collection methods employed. Some of the insights concern the questions themselves, and others concern the information that is produced as a result of the type of question.

Using Likert scales ranking condition or integrity is advisable, but if used, it should be done on at least a one to five scale. This is because people are often hesitant to pick an extreme one way or the other, and will then gravitate naturally to the middle ground, which when there are only three options gives no truly meaningful information. When there are five selections, there is still the possibility of using one of the extremes in a case of need, but there are two extra options on either side of the middle ground to indicate a shift towards either the positive or negative of a condition or characteristic. Additionally, as noted above in the section on condition, assigning more specific or numeric definitions to each level of a Likert scale will improve the quality of the
output.

Yes and no options to questions are the best way to avoid any ambiguity in the question, and are also a way to ensure a quick response rate on the survey. It is much easier to simply pick one answer than have to write a free form response or even pick form a larger section. That being said, if there are multiple options for entry in a field, it is advisable to use multiple choice where possible, to again speed the process and allow for less disparity in the final data set.

If ‘other’ is a needed option in any field, particularly to gain knowledge of outliers in the data set, there should be a free form option where the ‘other’ characteristic is defined by the user. This will allow for anyone using the data to help contextualize and define the ‘other’ during the analysis, particularly if that same one appears multiple times. This field can then be looked at in the analysis and standardized by the person doing the analysis, to maintain consistency. For example, if on other there are roof types noted as slopped step and slanted step, the person looking at that for their analysis can look at the survey and the photographs and decide to merge both into the step roof category, streamlining the data.

In other general formatting matters, some of the type and style questions could be better and more quickly answered in a chart form, such as the columns, pilasters, raised base, steps, feet, furniture, and sculpture questions. All of these could be placed into a single chart, where a check mark would indicate the presence of the item. This would cut down on the time taken on each question, and provide more space on the physical form in case questions need to be added.

Moving to the questions regarding the inscriptions on the tombs, legible is a hard characteristic to define in this particular cemetery and others with either advanced stages of deterioration or change. Because some of the tablets are partially legible but on their way to theoretically being lost forever to deterioration, many surveyors try very hard to get something off of the tablet to record as a part of the data. There needs to be more flexibility in this field, to allow for partial legibility, this would also give the person analyzing the data a higher degree of confidence in what has been recorded. There should also be training on exactly how to record what data is legible. Too often it either gets eliminated entirely or done in a manner that has no
use in the end. If this change is to be made, there needs to be a system in place for the database to accept partial data, whether it is adding an X in place of a missing number or letter, or using the standard ‘9999’ as a placeholder for missing information. In the input of the THNOC data, students were instructed to use a space for missing data, which became a difficulty in placing the data into both Access and ArcGIS, because either the spaces were eliminated, or the software would count the number or name as something else entirely. This was particularly problematic in the cases of dates and ages, because instead of reading an age as X5 and acknowledging that the person buried was at least 15 years old, it often came through as 5, which is known to be incorrect and could easily skew any demographic analysis being done. In this case, some ambiguity is preferable to an incorrect entry. The use of X works when dealing with numbers, and then conversely a number or bracketing could be chosen for any text fields.

In terms of the process of the survey collection, it seems logical that the measurements of the tomb or monument should be taken at the beginning of the survey. This gives the surveyor time to familiarize themselves with the tomb and note the specific features, even if somewhat subconsciously. It will give the assessor a general feel for the tomb by simply walking around it, and they will be more apt to complete the form more rapidly and accurately because of that added awareness.

As stated above in the case of the caveau question on the survey of St. Louis Cemetery II, the creation of additional answers by taking simple questions and putting their answers together for an additional question during the analysis is a great way to save time and also avoid confusing questions. Developing a survey that can ask two straightforward questions that would give a combined answer to explore through future research should be done wherever possible. This is the type of pattern that should be explored prior to the finalization of the survey, as was done in this case.

Data Quality

In terms of rating the overall data quality, it is imperative that the authors of the survey note things that need to be a part of the final data set prior to the entire process, including any
background or additional material that will be incorporated like prior surveys, maps, historic records, etc. This will help the surveyors to see the bigger picture and focus beyond the data collection itself and into ways to best combine it with all of the other sources. In the case of this survey, a few of the tweaks above could have impacted the data worth and accuracy.

If possible, it might be advisable do a pre-survey based on the most recent photographs of each tomb prior to going into the field. This would aid in the confirmation of the existing data, if any, and consequently the survey in the field might be faster, and would also allow for less input error as a result of duplication of data. The field survey would then provide a check on that which was already input into a database, and then augment it with the types of data that can only be obtained in the field, like measurements. If a full pre-survey is not possible, the time prior to the field work could be used as time for the surveyors to fill out the basic information on each sheet, giving them more time in the field. This data could include surveyor name, what is present on the lot, and tomb number. Adding either or both of these steps to the process would cut down on input errors, and make it easier for the surveyor to note the changes that have occurred to the tomb over time, particularly in the case of St. Louis II, where there have been gaps in time between each survey.

Overall data quality for this project could have been excellent, but we will see in the following chapter where the errors and frustrations can occur. This is particularly true because of the large number of people who were collecting and then later inputting their results into a form, not to mention the manipulation for the creation of a global geodatabase, which adds fields for spatial information to the already complex data. Using Google forms for the first round of data input was a decided benefit to the students, as it allowed for multiple users to enter data at the same time. However, there was no way of getting back to correct data that was entered wrong, which impacted the overall clean up and use of that data for individual projects. However, duplicates were not always removed, and there continue to be some inconsistencies in the data.

Field Check Methodology

Because the potential for errors or confusion as noted above, and the large amount of
data that has been collected over the past 30 years, it would be prudent to conduct a field check of the newly combined database. As seen, there is a high degree of potential for error along the way given the multiple processes of collection, input, sorting, cleaning, and analysis the data has gone through. However, there could be two levels of field check. One could be to take the full set of data for each tomb into the field and check the majority of it for accuracy. However, given the large amount of information for a cemetery of any size, it is highly unlikely that there will be time or resources to do this for any site larger than a handful of burials. Therefore, given the initial survey and its potential for error, a researcher could develop a field check methodology similar to the one proposed in the following paragraphs (Appendix J).

The first stage would be to confirm the tomb number and location, as well as the actual appearance of the tomb based on a past photograph in order to ensure continuity and accuracy of the data. If the tomb has significantly changed since the previous survey that should be noted and new photographs should be taken. Notes should be written that describe exactly what has changed, with a multiple choice question as the base. This question would address a few of the potential changes that might have occurred to get the surveyor comfortable with what types of changes he or she should be looking for. This can include but is not limited to: metalwork missing, tablet missing or further deteriorated, skin missing or further deteriorated, new burial(s) since the last survey, vault lost, major structural damage, other. By collecting this data, it also provides another benchmark in time for the condition data, which could contribute to a risk assessment or analysis of the overall rate of deterioration.

After the initial documentation, the next step would be to check those fields that have the highest potential for error; meaning the survey should check any entry that had a unique value or a written-in portion to the record. In addition, the surveyor should check those tablets that were considered illegible or indiscernible as it might have been due to conditions in the field that day.

For this particular data set, because of the time lapse between the collection of data between 1981 and 2012, there should be a record created all of the new burials since 1981, listing the names, dates, and epitaphs for each. This would supplement the current data to create a
more robust picture of the density of the burials on the site, as well as provide insight into how the cemetery is still being used, and where in the cemetery there are still links to the community. The count of burials could be confirmed by checking the master database against the number of names on each tomb. This might not be feasible due to the deterioration of the tombs; however it would be a good idea to try and note it as another indicator of change or decay. It would also be beneficial to update this field in the data, because the assumption is that if a tomb was built on the lot, it must have had at least one burial in it, and there are many tombs that have no recorded burial in the database, which skews the data significantly. This is also an area where research into the burial records held by the Archdioceses might be very helpful in confirming or augmenting these numbers. Lastly, confirming the spelling of some of the names would be worthwhile, due to human error. Some of the errors were caught by those entering the data though matching it with photographs prior to entry, but a full check would be beneficial.

If necessary based on the resources available, this field check could be started off-site, by verifying the database very quickly against the most recent tomb photos. This would enable the project team to create a short list of what absolutely needs to be checked.

Because of the large amount of data to be checked in St. Louis Cemetery II, it might be constructive to investigate in some type of electronic survey method which would allow full access to the record for each tomb while in the field. A few of these systems will be discussed in the conclusions of this thesis.

Value of the Data Collected

Overall this chapter has served to show that the data collected by the survey is extremely valuable in terms of the depth of the data, and the means in which it was collected as an example process for other sites. Because of this it is important to know the potential for the replication of a process like this for other sites. In general, it is mostly replicable, with a few definition updates for different cemeteries, and the elimination of some fields that are not necessary. It also serves as an extremely useful base for learning about data entry and pre-planning when undertaking a project like this. The numbering system of the tombs is probably the least replicable portion of the
site. Not all sites are arranged within city blocks, and this system could not be extended to other cemeteries in New Orleans. A standardized numbering system could be developed fairly simply, if there was the desire for comparison across multiple cemeteries in the city. However, the errors and other discrepancies in the data can be corrected over time, and must be in order to do any deeper analysis using the data beyond this critique of the process.

Lastly, it is necessary to note, that given the vast resources of the University of Pennsylvania, and the desire of students to work on field projects such as this, that this process would take much longer under a different set of circumstances.

1 Information available courtesy of the Architectural Conservation Lab at the University of Pennsylvania.

2 Survey forms courtesy of The Historic New Orleans Collection and the Architectural Conservation Lab at the University of Pennsylvania.
V. Making Sense of the Data and Putting it to Use

The final chapter of this work is an effort to define and briefly demonstrate potential methods for analyzing and disseminating the outcome of the data collected in cemetery surveys. If the survey of St. Louis Cemetery II was successful, which it largely was, what can be done with the plethora of data it generated, particularly when looked at in combination with the data from the previous survey? It is important to note that these types of inquiries are most effective in circumstances where the process has been carefully monitored and managed from beginning to end. This is not meant to be an exhaustive analysis using the data, but rather a basic set of ideas that can be used by similar sites to both broadcast and scrutinize their data and recommendations for further study. It is the hope that this will also spark new ideas on how to manage the process from the beginning in order to get new information out of data, and provide potential methods for how to use the output as a benefit to the sites. The types of output proposed here could be of use in interpretation or marketing for a site. Generally, not all of the software programs discussed here are affordable for smaller sites, however open source software is available, and some of this analysis can be done in a simple Excel spreadsheet. Tools like Access and ArcGIS do provide more in depth analysis, but for some sites, this level of detail is not feasible. Just as the survey is not a one size fits all tool, the analysis needs to be tailored to the sites as well. However, everything ties back to the quality of the data obtained. It is critical to keep in mind when producing these surveys and their subsequent data bases, that the quality, not the quantity of the data is the most significant factor. The availability of good data should be a jumping off point for determining what types of analysis are desired, but it has to be good to be useful. Finally, most of this can be done before the field check survey is completed, but using that data post correction will provide more insights and better data.

Data Input and Cleaning

After the initial input into a combined database, the data from these surveys is first cleaned and edited, placed into a geodatabase and linked in both Microsoft Access and ArcGIS.
The cleaning process involves knowledge of the fields, and the way that both programs will read it. Some of the fields in this survey were not adapted for GIS and therefore when put into the program the field names become cut off, causing confusion in the data. Cleaning also involves querying and sorting the data to look for misspellings, inaccurate or incomplete data, or fields that did not translate entirely. This can be done manually or by find and replace. This stage requires use of the photographs, the original survey forms and any other documentation that is related to the tombs.

The second stage of data cleaning is to try and streamline the data using the insights gained during the survey process. This step includes both trying to limit the outliers in the data, and also making sense and standardizing any responses that were manually input into the survey forms in the free form questions. This is why it is critical that the surveyor is noted on the forms, so that any person doing the analysis can contact them for clarification of what was meant by their entries.

Mapping

GIS is not just a powerful tool to help visually display the data that is collected in the field. It can also help incorporate primary sources into the research, such as importing historical maps to generate comparisons of the tombs over time by comparing plot boundaries, or demonstrating how the site has evolved visually. This could also analyze how the different impressions of the cemetery have changed over time, by integrating historic photographs into the maps as underlays.

In addition, GIS can help create maps like the density map in Appendix K.1. This was created by joining the database to the shape file, then sorting by death date (where known) for each tomb. A count was then run to indicate the number of burials by tomb and that is what is graphically displayed in this map. There are outliers in the data, for example the tomb in Square 2 that shows a total of 328 burials. Here is a case where outliers can create an impetus for further study. The other problem with this data is the large number of tombs, almost one third, that do not have a recorded burial date. It is a fair assumption that if a tomb was built, there would be at
least one burial in it. The visual display of this density is somehow much more powerful than a list of tombs with numbers. This map could be made even more powerful by overlying other data pieces into it, or using a dot density map to show one dot in the tomb body for each burial. This would require breaking the map into squares for dissemination, as the size of the paper used in this case would not allow this to work as well visually.

The possibilities for mapping with GIS for this cemetery are endless, and almost all of the fields can be displayed in a visual manner. However, it is up to the quality of the data, and the discretion of the user as to how this gets implemented.

**Analysis and Pattern Finding**

This section will discuss counting and statistics tools that can be used to determine ranges in the data. Professionals understand the great value in numbers and data, yet often there is little thought or training on the significance of how they can be presented. In fact, tables and charts and graphs are so prevalent in the professional arena that it is often assumed that there is enough training on their effective use is commonplace as well, which is not the case (Few 2012). Charts and forms should be simple, eliminating distractions, but should still be able to achieve their goal, which is to display information in a relational way, be it over time, or as a ration of a portion to a whole. Sometimes simplicity works, other times, the simplicity has to be carefully constructed.

ArcGIS is not always the best tool for looking into patterns where there is a large variety of types or distinct entities within the data, as the maps can become cluttered. The charts concerning the stylistic roof choices in the cemetery depicted in Appendix K.2 are much clearer in terms of quantifying the data than the map in Appendix K.3. This map has too much clutter, and by trying to tie the skin type to the roof type to the presence of a parapet it creates a false sense of type that does not tie to the tombs. There is no consideration of massing or date in this either. Because of the discrepancies in the data, and the wide range of styles include, the attempted typology for the tombs doesn’t come across in this map. Additionally, there are too many choices for roof type because of the free form entry available, which adds to the clutter of the map. This is a case, as discussed in the previous chapter, where a field check could limit
the outliers, and create a more streamlined set of options. This will then in turn contribute to
a better explanatory and visual experience for the end user. Additionally, while historians and
preservationists are used to the limits of collected data, they are not often concerned with the
limits of spatial data (Gregory and Ell 2007), that come into being when working with GIS. This
makes greater demands on the quality of the data being used, and this in turn limits some of the
analysis that can be done.

Another trend to look into using parts of the data is the changes to the cemetery over
time. This can begin with charts documenting the known dates of burials in the cemetery
(Appendix K.4 and K.5). While Few (2012) or Tufte (1983) might say the charts are too basic,
they show the data in a basic and straightforward way. Few (2012) would also argue that this
chart is not as affective at showing changes by decade however, in the case of a cemetery where
the burials are cumulative, a bar graph shows the addition of burials over time, and should not
necessarily be looked at as trending data. Again here, the data is incomplete, so any analysis
using it should be preceded by a disclaimer. The difference between the two is that one contains
the unknown burial dates of the sample, while the other does not. Because there are such a
large number of unknown burial dates in the data set, this skews the graph and by removing
it the trends become more legible. However, given the very fragmented nature of the data for
burial dates, particularly where the year is only partly legible, this becomes difficult to do in the
software. There are place markers, spaces or and X that note the missing data, but the analysis
software programs do not pick this up in the same way the person doing the analysis does, and
therefore much of the work has to be done manually to combine the fields, and separate them
into different categories. This is another consideration to take into account when cleaning and
preparing the data for use.

Given the size of the cemetery and the quantity of data, in this case it might be easier
to break down the cemetery blocks into quadrants (Appendix K.6) to determine whether there
are patterns in each quadrant that could be compared first to the block and then to the cemetery
overall. This can be done in GIS by selecting the individual tomb polygons, or the group of
them, and then creating a shape file that will have all of the attributes of the tombs within that.
Then smaller scale analysis can be done in GIS by using the categories or quantities tools in the symbology properties, or this data can be exported out of GIS for use in Excel or Access. This technique of dividing the site could be used for many other cemeteries, particularly those that might have a documented pattern of development. By creating smaller pieces of the puzzle, the analysis becomes more simplified, and the connections more evident.

The mapping and analysis presented above represent a very small portion of the studies that can be done with the collected data once it has been appropriately cleaned and verified. Any set of the data that has a range of values can be viewed in chart form or map form, depending on what output is desired. Additional research could be done by mapping any of the characteristics of the tombs over time, determining whether there are in fact fundamental differences in the tombs over time, determining whether there is any data correlation between burials and larger contextual events like epidemics or political and cultural shifts.

**Deeper Analysis: Across Cemeteries and Languages**

Many of the patterns that researchers hope they will see do not pan out at the end of this preliminary analysis, but these tools are ways in which to fairly simply gather and organize data to look for them, or find others that were unexpected. Deeper analysis comes as a result of carefully considering all of the above options, then using the knowledge about the patterns and fields that have been collected in order to prove or disprove a hypothesis. This intermediate step, of using the data to learn about which tools can fit the best for each project, is missing in the overall process of cemetery survey.

Through the data available in cemeteries, the field has seen many good examples of different scholarship that has come from the analysis of cemeteries. What have been described in this thesis are only a few examples, and those that are most relevant to the study of St. Louis Cemetery II. This is the type of qualitative analysis that can come from what is almost entirely quantitative data.

One additional example which demonstrates what can be done with large quantities of
data is a study from 2007. Using a standardized form across cemeteries can forge patterns and connections across the country and the globe, Wilbur Zelinsky (2007) created a massive database of over 100 burial grounds in order to track personal religion and religious sentiment over time. Through his survey of the text on memorials, he attempted to quantify the trends using symbols images and text. In order to accomplish this, he created counts and percentages over time to support his hypotheses. It is this type of simple database analysis that can lead to more complex networks and

Language and country of origin are also pieces of the data that can be used to create a picture of the culture surrounding those buried in the cemetery. The “study of the language used in a particular ritual situation by different nationalities can lead to new insights into the way their cultures converge or diverge at the point where all physical differences are subsumed in the grave” (Nylander 1989, 163). Both the language in which the tombs are inscribed and the self-denoted countries of origin as part of those epitaphs can lead to valuable insights about heritage and sense of belonging in New Orleans at the time when the cemetery was active. Alternatively, looking at potential shifts in the use of language could give new insights into assimilation and identity.

Typology and Technology

Typology and the technology of the tomb builders are two major categories of interest in St. Louis Cemetery II. However, distinguishing and categorizing of types becomes difficult due to the complexity of the data. Should the typology for this study then be more about distinguishing parts of the whole and identifying them, looking at them as pieces of a whole that could be selected interchangeably by the creators of the tombs to reflect their personal style? There are certainly commonalities in that sense. There are only a few options for roof type, indications of whether they have steps or not, parapets or not, or columns and pilasters are all pieces of the tomb that could make up a particular type. Color would also have followed as another stylistic choice to be made. However, because there are only a few options for each of these style choices and that fact makes the cemetery cohesive, it is hard to argue that there is a
certain type associated with the distinct combinations of these parts. The exception to the rule of this idea is therefore those tombs that we can say with some certainty were altered from their original form, those with the lower vaults that are either sunken into the earth, or that have had a larger tomb attached over them. These were made with distinct decisions to make the tomb either bigger, or more like those around it.¹

The limits of the data in this survey become apparent during even this very cursory analysis. In order to try and piece together a sequence of development of the various styles of tombs in the cemetery, it is important to link each tomb with the first date, as that gives the indication of when the style was used, if there is a pattern to be found. However, given the physical state of the cemetery, it is not always possible to determine whether the earliest date on the tomb is in fact the closest to when it was constructed. There is the possibility that tombs were built when plots were purchased, and the styles set at that time, or were the different styles all available at the onset, and it was up to personal preference to choose among them, and then there can be no distinguishing style or type for a particular moment in time. This is different than the typologies and stylistic aspects looked at by Deetz and Dethlefsen (1971), because those revolve around singular burials and can more easily be associated with a specific style and time. This idea concerning style also extends to architectural dictionaries, where they have stopped attempting to place buildings into a specific stylistic category, and rather are categorizing pieces of each building that fall into particular traditions or styles. Even with frequency counts of tomb types, it is impossible to use that method as a predictive model for what the missing or destroyed tombs might have looked like. It seems more in this case that there was a type of pattern book, whether real or imagined, that those wishing to build tombs could choose from, and each tomb exists as evidence of the selections of the people buried there. Further analysis should be done to clarify the individual pieces of the tombs and their frequencies over time, which is exactly the type of study to be done when the entire process of survey is completed.

¹ The exceptions to these standard types are the more grandiose tombs that appear in the center of Square Two. While some have select elements that fit them in stylistically with the rest of the cemetery, they are much more ornate and intricate, often made with more expensive materials for the body, not just the tablets.
VI. Implications and Conclusions

Hindsight is always twenty/twenty. However, in this case, the critique of a process that has evolved over many years offers insight into how to move forward in the future. For the site of St. Louis Cemetery II, the evolution of the type of information and the desired outputs has contributed greatly to a better understanding and pre-knowledge of what type of data will come as a result of the survey, and therefore what can be done with it in terms of analysis. This type of discussion and training on the process of data collection and management will become critical as the use of technology in the preservation field continues to advance at a rapid rate.

Survey is both one of the most used and most beneficial tools in the field of preservation, and is capable of enriching the field through providing a wealth of data. The act of survey creates a primary source for research by future scholars. As seen in the previous chapters, this data is only as good as those collecting it are willing to make it, which requires just as much work before the physical collection as does the analysis afterwards. In fact, the analysis can be made that much easier by doing more of the critical thinking about the data prior to going into the field. There must be an equal value placed on the data that is being collected and the thought that is put into how it can be used in the future. The hierarchy placing the value of the collection over the management of the data is still largely present in the study of cemeteries, as the focus continues to be on documentation without aggregation or dissemination of data. For cemeteries to truly use the output of these surveys, training and technology for how to deal with the data must move forward at the same rate as the desire to collect the data more efficiently. This is a process, and the middle section of the process, the data analysis and cleaning, cannot be overlooked simply because of excitement about the end process, or the physical conservation of the site. In fact, it is this middle section that allows professionals to prioritize which tombs are in the worst condition by comparing all the data.

It is critical that the survey of the past looks towards the future. Can this format be adapted into future use ten or one hundred years down the road? Is the software going to be available? In the case of St. Louis Cemetery II, all of the software programs used to process or
evaluate the data do not appear to be going anywhere any time soon, they are adaptable to some extent, and they are able to communicate with each other.

The data collected, while all quantitative, should have applications that are qualitative. That is, one would hope to see patterns in the data that will enable the researcher to make inferences about the people that created the site and those that are buried there. The data should also be used for the visualization of patterns and hypotheses about the evolution of the site: ideas about the people who are buried there and about the culture that created the site in the first place. The visualization of the data makes it mean something, it connects it to people, and it is a means of access. We cannot just provide spreadsheets and hope that people will glean the correct interpretation. If in fact maps are propositions, we need to make them work for us.

All of this is incremental to the information that is gleaned during the historical and primary source research. It is only when sites have taken the time to think about what they want as the final outcome of the survey that we are starting to see consideration for this middle step in the process. By deciding what the data need to do in the long run, those studying it are better equipped to handle it and manage it throughout the development of a project.

Suggestions for Future Research

There needs to be a greater availability of the data on the web for use by those interested. Investigation into open source database software and its potential applications would be beneficial to the field, both for ease of data entry and public use of the data. Recommendations for which types of software to use should be included in any document describing the process of cemetery survey. This includes training on how to use and manage data in a streamlined way with new technologies. Many people shy away from large quantities of data and the software programs that manage them, but this is easily changed by increasing the knowledge base and therefore comfort level of those involved. One such example of a way to move forward in a more streamlined manner would be to employ a company or technology like that of Local Data (2013). Local Data is a company that uses open source data to help professionals in the planning and preservation fields collect data in the field using simple open source based GIS and database tools through
smart phones and tablets. All data is backed up in the cloud, and available for use in a web based format. Additionally, for those skeptical of the all-digital survey method due to technological problems that may occur, they have an option where a paper survey form can be developed and used, and then a photograph or scan can be taken of the sheet and uploaded and processed into the database through their website. This software was tested in the spring of 2013 by Donovan Rypkema, Principal of PlaceEconomics and adjunct faculty member at the University of Pennsylvania, and the results should be available shortly, but it begs consideration for future placed base surveys on the conservation side of the field.

Even more recently, data management for heritage sites, particularly regarding databases and mapping of sites in an accessible and standardized format, has become a much publicized topic. The Arches program, a joint effort of the Getty Conservation Institute and the World Monuments Fund, which will be releasing in a limited manner in June of 2013, is an open source system for the documentation of heritage sites. It would be interesting to see what impact this can have on streamlining the documentation process for historic sites, and setting further standards, particularly given the players involved. As there is not much information about the program just yet, it is hard to say exactly what the data will look like, but it is certainly an exciting development. One of their particular focuses appears to be creating “controlled vocabularies” in order to ensure that both creators and users of the data will be employing the same concepts, even if they might be using different terminologies (J. Paul Getty Trust and World Monuments Fund Press Release March 2013). This is an exciting development in the field, and one that should be investigated further as it moves into the beta testing stages.

In conclusion, the field is moving in the right direction with regard individual projects, but the fact remains that the standards by which the majority of these surveys are being conducted are not taking this step into account when they are collecting the data. There dozens of examples of ‘preservation primers’ that give professionals or amateurs the basics on how to preserve and document historic cemeteries and burial grounds. However, as a field, preservationists have not gone far enough in terms of standardization of the data collection and how it is used post collection. There are a plethora of individual organizations that all provide their own method and
survey form, and while there is certainly overlap in the information collected, as there is a finite amount of data to be had from an individual tomb or grave marker, but the outcomes are not standard or organized in a manner that they can be easily compared across sites. And as with each survey that was examined, there is no clear rule of thumb that would apply to all sites in terms of their management of data. What is clear, however, is the need to standardize a way of thinking about data, confronting them as one of the first steps in the process of documenting a site, training the personnel to handle them, and using them to the fullest extent possible. Pre-planning plays a large role in this process, but there is no clear way to set forth a set of guidelines, instead best practices should be implemented, and certain survey fields and collection methods should be prioritized. What we as a field need to get to is a point where we collect as much information as possible, in a short amount of time, but making sure we are collecting it in a way that it can produce other data over time if needed. It is not an easy task, but it is one that cannot continue to be overlooked. This method requires an interdisciplinary approach—the field needs to reach out to different disciplines to determine what should be included in the process survey, so that future work can be undertaken jointly.
VII. Bibliography


Figure A.1: Aerial View of St. Louis Cemetery II, showing the location of each square.
Penn ID

The unique identifier for each tomb/monument obtained from the corresponding image.

Example: T1256

Surveyor(s)

The first initial and last name of the person(s) filling out the survey.

Example: F. Matero

What is PRESENT ON THE LOT?

*Tomb*: A structure consisting of at least one above-ground burial chamber (vault) and associated closure tablet.

*Monument*: A funerary marker that does not contain an above ground burial vault and is usually a simple or complex architectural or sculptural composition.

*Walk-in mausoleum*: A structure, accessed through a door, for above-ground interments.

*Slab on grade*: A flat stone/concrete slab on grade.

*Unique*: A structure not classified by the above definitions, or only the tomb foundation remains.
Is this a RUIN?

Yes: The tomb/monument has collapsed or partially collapsed and no functional burial chambers remain.

No: The tomb/monument stands, even if in a deteriorated state, with at least one functional burial chamber.

Is this a DEMOLISHED REMNANT?

Yes: The tomb has been cleared from the lot so only the foundation remains, or it is now slab on grade.

No: Part of the structure still stands.

Is there an ORANGE STICKER on the tomb image?

What is the HEIGHT of the tomb? **TWO MEASUREMENTS: FRONT AND SIDE**

Round to the NEAREST QUARTER INCH.

*Do NOT use feet or fractions. Record only in decimal inches.

FRONT: Measured in decimal inches from grade to the top of the roof. Enter “F” before measurement (e.g., F87.50")

SIDE: Measured in decimal inches from grade to the bottom of the roof/cornice. Enter “S” before measurement (e.g., S63.25")

Example: F74.75", S59.50"
What is the LENGTH of the tomb?
Round to the NEAREST QUARTER INCH. Decimal inches only; do not use feet or fractions.
Measured in decimal inches from front to rear along one side at mid way (e.g., 106.25”).

What is the WIDTH of the tomb?
Round to the NEAREST QUARTER INCH. Decimal inches only; do not use feet or fractions.
Measured from side to side at the front and at mid way of the wall (e.g., 46.75”).

Number of BAYS
The number of horizontal units (vault spaces) in a tomb.

Number of TIERS
The number of vertical units (vault spaces) in a tomb. Sub-vaults should not be counted in the total number of tiers.
Appendix B

HSPV 743: Dead Space Studio
St. Louis Cemetery No. 2

Does the tomb have a SUB-VAULT?

Any vault which clearly appears below the principle vault(s). This vault may be the result of an alteration but is distinctive. Although it may be subgrade, it is not always. It will often be found below a shelf, which designates the bottom of the principle vaults.

Is the sub-vault a CAVEAU?

A caveau is an ossuary where bones are stored below the burial chambers and is typically designated by a small, rectangular uninscribed tablet. The caveau should not be confused with an early semi-subterranean vault which can be identified by the inscribed tablet near the base of the tomb.
Appendix B

**What is the tomb’s VAULT CONSTRUCTION TYPE(S)?**

Basic method of burial chamber roof (vault) construction. Tombs with multiple vaults may contain more than one construction type.

- **Arched:** The roof of the burial chamber is arched *(see graphic below).*
- **Slab:** The roof of the burial chamber is flat *(see graphic below).*
- **Iron Bars:** Iron bars comprise the floor of the chamber.
- **Unknown:** A closure tablet covers the burial chamber, or the chambers are no longer intact.
- **The tomb is a ruin with no discernible vaults:** No vaults/vault roofs
- **Other:** A burial chamber roof other than those listed above.

![Diagram of tomb with labeled parts: Arched, Slab](image)

**How many BREACHED VAULTS does the tomb have?**

A vault not sealed and the inside of which can easily be seen without excessive effort.

**How many VAULTS have been LOST?**

The vault has clearly lost integrity to a point where a coffin could no longer be sealed into the chamber and/or the vault roof is missing (i.e., the chamber no longer functions).
ROOF TYPE

Includes Flat, Step, Gable, Hip, Barrel, Cross, and Other.

<table>
<thead>
<tr>
<th>Flat</th>
<th>Step</th>
<th>Gable</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Flat Roof" /></td>
<td><img src="image2" alt="Step Roof" /></td>
<td><img src="image3" alt="Gable Roof" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hip</th>
<th>Barrel</th>
<th>Cross</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image4" alt="Hip Roof" /></td>
<td><img src="image5" alt="Barrel Roof" /></td>
<td><img src="image6" alt="Cross Roof" /></td>
</tr>
</tbody>
</table>

EXTERIOR TOMB SKIN

Does not include tablets or sculpture.

_**Stucco** (lime or concrete):_ The exterior coating of lime/cement/sand generally applied to the tomb body.

_**Exposed Brick (intentional)**:_ The brick is currently exposed and never had stucco or finish applied.

_Stone:_ The exterior is marble, granite, a veneer stone.

_No Skin:_ The tomb is a ruin or no evidence of its skin remains.

_Other:_ Any other skin material, such as tile.
Has the skin been RESURFACED?

The original skin has been changed to give the tomb a different appearance (Note: excludes partial repairs). Resurfacing can include the application of a concrete plaster, rubble stone veneer, tiles, or other applied finish. The reapplication of a lime plaster should not be considered resurfacing.

Does the front of the tomb have a PARAPET?

A low, upward projecting wall surmounting the structure’s front, usually in the form of a flat, triangular, or segmental pediment.

Does the tomb have COLUMNS?

An upright pillar or post. Columns may support a roof or pediment and may be free standing or engaged.
Does the tomb have Pilasters?

A pilaster is a rectangular support that resembles a flat column. The pilaster projects only slightly from the wall, and usually has a base, a shaft, and a capital.

Does the tomb have a Raised Base?

The lowest visible element of a tomb/monument that is distinct from the foundation or footing.
Does the tomb have FEET and/or STEPS?

Steps and feet project from the base of the tomb and should not be confused with a shelf.

Is there INTEGRAL SCULPTURE (finial, cross, urn, statue)?

Yes: Sculpture is present and is anchored to the tomb body or roof.
Appendix B

HSPV 743: Dead Space Studio
St. Louis Cemetery No. 2

No: There is sculpture within the precinct that is not affixed to the tomb, or there is no sculpture present.

Missing: There is evidence of but no longer sculpture attached to the tomb body or roof.

Damaged: Anchored sculpture is present but broken.

Is FURNITURE present?

Objects related to but not integrally attached to the tomb/monument, including a bench, sculpture, urn, planter, or cross.

TABLETS

Is there a FAMILY NAME TABLET?

The tablet containing the family name is typically found at the top of the tomb above the upper tablet or within the tomb’s pediment; however, the family name can be inscribed on a closure or other tablet (e.g., “Famille Duret”) and is differentiated from an individual burial.

NAME INSCRIBED on family name tablet

Enter the family name with all accents.

DESIGNER/BUILDER

Original name and sometimes address of artist, architect, designer, stone mason, marble carver, or builder of tomb or monument. Identified by signature inscribed on tomb or tablet, usually in lower corner. Enter “X” if none present. NOTE: common names include Monsseaux, Isnard, and Florville Foy.

Number of closure tablets ATTACHED TO BURIAL CHAMBER

A closure tablet currently covering the burial chamber and which is typically inscribed with the names of the interred. Society tombs, for example, may have more than one closure tablet and
may have burial vaults on the sides or rear of the tomb. Any fragment should be included in the total

**Number of closure tablets MOVED FROM BURIAL CHAMBER AND ATTACHED TO SIDES OR REAR**

Any closure tablet removed from a burial vault and attached to the tomb body (usually sides or rear).

**Number of MISSING closure tablets**

A closure tablet is missing only if the burial chamber has no tablet fragment. It is important to note that many tombs have a single closure tablet over two or more burial chambers. The surround and/or shelves as well as closure pins usually provide a good indication of the number of missing closure tablets.

**Number of DETACHED tablets**

Tablets that are no longer affixed to the tomb but are leaning against or within close proximity of the tomb to which they were originally attached.

**How many closure tablets are LEGIBLE?**

Include tablets that are partially legible (inscription). Enter “0” if none are legible or no closure tablets exist.

**Number of CORNER TABLETS or MEMORIAL PLAQUES (excluding military markers)?**

Non-vault closure masonry plaques on the front façade of the tomb that have been used to inscribe names and other information. These tablets usually look like engaged pilasters and are typically vertical. Military markers should not be counted.

**EARLIEST BURIAL DATE**

The date of the earliest interment, whether found on the current closure tablet or an earlier associated tablet on sides or rear. Enter date as MM/DD/YYYY: 05/03/1886. If only a month and year are given, enter as 05/00/1886. If no date is found, enter “X.”
LAST BURIAL DATE

The date of the latest (most recent) interment taken from the closure tablet. Enter date as MM/DD/YYYY: 10/15/1921. If only a month and year are given, enter as 10/00/1921. If no date is found, enter “X.”

Is there a TABLET SURROUND?

A masonry framing or casing intended to surround the closure tablet when in place.

Is there a SHELF(VES)?

A masonry slab projecting from the bottom of the closure tablet intended for the placement of votive offerings.

Is there a MILITARY MARKER on the tomb or tablet?

A military marker is a plaque or inscription that clearly indicates service in the military and/or a specific war.

Is there a PERPETUAL CARE marker?

An identifying marker denoting that a fee has been paid for its general maintenance.

Is this a SOCIETY TOMB?

Contains interments of members of a communal organization. Must have a society plaque or evidence of one present.

YES: Has plaque or inscription naming the society.

NO: A family or individual tomb, or no evidence and little likelihood that a society owns the tomb

POSSIBLE: The tomb is relatively large with diverse names, but no society inscription

PROBABLE: The tomb is large with many diverse burials and appears to have lost its society inscription
SOCIETY NAME
The name of the organization that owns the tomb.

TOMB/MONUMENT INTEGRITY

OVERALL TOMB INTEGRITY based on degree of repairs and alterations to original

Integrity denotes the degree of original detail and material not obscured by loss, repair, or modern interventions. A rating of 5 designates a tomb with a high degree of originality (in craftsmanship, material, and design); a rating of 1 designates a low degree of integrity in tombs showing major repairs or those that have been restored. A rating of 0 indicates that the tomb is a ruin.

TOMB/MONUMENT CONDITION

CONDITION OF TOMB BODY

A rating of 5 designates a tomb body that is in good condition and is structurally sound with decorative features and finishes largely intact. A rating of 1 designates a significant threat of structural failure and/or significant loss of brick/other material. A rating of 0 indicates that the tomb body is missing.

CONDITION OF TOMB ROOF

A rating of 5 designates a tomb roof that is in good condition and is structurally sound with decorative features and finishes largely intact. A rating of 1 designates a significant threat of structural failure and/or significant loss of brick/other material. A rating of 0 indicates that the roof is missing.

METALWORK

Is there a METAL ENCLOSURE?

FULL: The enclose spans the entire perimeter of the tomb or precinct.

PARTIAL: The enclosure spans the tomb front or does not fully connect around the tomb or
precinct perimeter.

NONE: No enclosure.

If full or partial metal enclosure, is it predominantly:

Wrought/Rolled Iron: hand worked

Cast Iron: formed in a mold

N/A: Not applicable because no metalwork is found.

If there is no clear enclosure, is there EVIDENCE that one existed in the past?

Evidence may be found on the tomb or in the precinct.

Is there APPLIED METAL ORNAMENT to the tomb/monument?

A separate structure of ironwork not related to the enclosure.

If not, is there EVIDENCE?

Evidence may be found on the tomb or in the precinct.

Did you indicate tomb/monument FRONT FACING DIRECTION on site plan?

The site plan attached to the tomb image must indicate which direction the tomb front faces by the placement of a dot on the plan.

Does this form contain any LETTERS WITH ACCENTS?

Accents (such as É, Ê, Â, À, Ç, Ú, Ô, Î, Í, etc.) must be recorded as inscribed on the tablet. This is critical when merging the new data with the 1981 data.
# General Method of Survey or Data Acquisition

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cemetery name:</td>
<td></td>
</tr>
<tr>
<td>Date founded:</td>
<td></td>
</tr>
<tr>
<td>Is it still active?:</td>
<td></td>
</tr>
<tr>
<td>Cemetery type and location:</td>
<td></td>
</tr>
<tr>
<td><strong>Purpose:</strong></td>
<td></td>
</tr>
<tr>
<td>Was there a clearly defined purpose for the survey or an overarching research question to be answered?</td>
<td></td>
</tr>
<tr>
<td>If yes, please what is the primary goal of survey (mapping, condition assessment, typology, etc.)</td>
<td></td>
</tr>
<tr>
<td>Are the objectives of the survey and subsequent analysis identified? Are they different from the purpose?</td>
<td></td>
</tr>
<tr>
<td>What type of data dissemination is planned? (Published papers, maps, interpretive signage, etc.)</td>
<td></td>
</tr>
<tr>
<td><strong>Methods:</strong></td>
<td></td>
</tr>
<tr>
<td>Did the creators consider alternatives to using a survey technique to collect information? (i.e., did they justify using survey research methods?)</td>
<td></td>
</tr>
<tr>
<td>Did the authors consider different types of technology used to collect data or the storage and analysis of data after collection? If yes, what please indicate what was considered.</td>
<td></td>
</tr>
<tr>
<td><strong>Data Worth:</strong></td>
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<td>Did the creators provide a description of potential errors or issues that could come from the specific site?</td>
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<tr>
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<tr>
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<tr>
<td>Were quality control measures used?</td>
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<td>Was a code book used?</td>
<td></td>
</tr>
<tr>
<td>Did the authors discuss what techniques were used for verifying and cleaning data entry post collection?</td>
<td></td>
</tr>
<tr>
<td>How many people participated in the data entry?</td>
<td></td>
</tr>
<tr>
<td>Was there enough data to contribute to a valuable analysis?</td>
<td></td>
</tr>
<tr>
<td>Are gaps in final data discussed?</td>
<td></td>
</tr>
<tr>
<td>Were the statistical, analytic, and reporting techniques appropriate to the data collected?</td>
<td></td>
</tr>
<tr>
<td>Were the authors transparent to ensure evaluation and replication?</td>
<td></td>
</tr>
<tr>
<td>Was evidence for validity provided?</td>
<td></td>
</tr>
<tr>
<td>Was evidence of reliability provided?</td>
<td></td>
</tr>
<tr>
<td>Were results able to be easily interpreted? Are there extreme outliers to the set-up of the survey based on the projected data to be acquired and researched? Or, is the data overly homogenous, not allowing for the researchers to see patterns?</td>
<td></td>
</tr>
</tbody>
</table>
Is replication possible given information provided? (within the site examined)  
Is replication possible on similar sites?  

**Output and Dissemination**  
Is data available online or in print?  
If yes, what is available?  
Please list any comments on the usability or accessibility of the data available  

<table>
<thead>
<tr>
<th>Specific Surveys Details</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year survey began:</td>
<td></td>
</tr>
<tr>
<td>Year survey was completed:</td>
<td></td>
</tr>
<tr>
<td>Who participated in the planning of the survey?</td>
<td></td>
</tr>
<tr>
<td>Who participated in the data collection?</td>
<td></td>
</tr>
<tr>
<td>What tools were used?</td>
<td></td>
</tr>
<tr>
<td>Methods:</td>
<td></td>
</tr>
<tr>
<td>What was the survey method used in the field (paper, gis, cloud, etc.)</td>
<td></td>
</tr>
<tr>
<td>What software programs were used for the digitization of the data collected, if any?</td>
<td></td>
</tr>
<tr>
<td>Field Types for data entry - is there a variety? (y/n, multiple choice, likert scale(1 to 5), free form, etc.)</td>
<td></td>
</tr>
<tr>
<td>Is Condition of the Tombs or Lots Specifically Addressed?</td>
<td></td>
</tr>
<tr>
<td>If Condition, what type of scale is it on?</td>
<td></td>
</tr>
<tr>
<td>Is the integrity of the tombs addressed?</td>
<td></td>
</tr>
<tr>
<td>If integrity is addressed, what type of scale is used or how is it noted?</td>
<td></td>
</tr>
<tr>
<td>Are there free form fields for names or epitaphs?</td>
<td></td>
</tr>
<tr>
<td>Are measurements of the tomb lots or tombs recorded?</td>
<td></td>
</tr>
<tr>
<td>Were photos taken of each tomb?</td>
<td></td>
</tr>
<tr>
<td>Has mapping been done to show the spatial relationships of the tombs?</td>
<td></td>
</tr>
<tr>
<td>Is the position of marker/tomb noted? Either the direction it faces, or where it is located on the map, or both?</td>
<td></td>
</tr>
<tr>
<td>What types of tomb style data is collected? (Fonts, symbolism, color, etc.)</td>
<td></td>
</tr>
<tr>
<td>What types of tomb type data is collected? (shape, size, general massing, roof type, etc.)</td>
<td></td>
</tr>
<tr>
<td>Is the number of burials noted?</td>
<td></td>
</tr>
<tr>
<td>Is tomb/marker material noted?</td>
<td></td>
</tr>
<tr>
<td>Is there ownership/stakeholder information available?</td>
<td></td>
</tr>
<tr>
<td>Are burial dates recorded?</td>
<td></td>
</tr>
</tbody>
</table>

**Any additional notes:**  

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### General Method of Survey or Data Acquisition

<table>
<thead>
<tr>
<th>Cemetery name:</th>
<th>Protestant Cemetery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date founded:</td>
<td>1730s</td>
</tr>
<tr>
<td>Is it still active?:</td>
<td>Yes</td>
</tr>
<tr>
<td>Cemetery type and location:</td>
<td>Rome, Italy. Large urban site, older part is more picturesque rural cemetery from, later part adheres mostly to a grid</td>
</tr>
</tbody>
</table>

### Purpose:

| Was there a clearly defined purpose for the survey or an overarching research question to be answered? | Yes, storm damage, problems with restoration, vandalism and theft of sculpture, decay due to pollution made the documentation for future generations an imperative. |
| If yes, what is the primary goal of the survey (mapping, condition assessment, typology, etc.) | Documentation. Previously had been no record, photographic or written, of any of the tombs. Analysis of styles over time. |
| Are the objectives of the survey and subsequent analysis identified? Are they different from the purpose? | Provide conditions reports, prevent further vandalism, stem decay and deterioration. Ended up mostly being a pure documentation of what was there at present. Also provide an analysis of the lives of the tomb, and the styles over time. |
| What type of data dissemination is planned? (Published papers, maps, interpretive signage, etc.) | Creating a narrative about the lives of the people buried there, even in a collective sense, because often the inscriptions are not enough (prosopography). |

### Methods:

| Did the creators consider alternatives to using a survey technique to collect information? (i.e., did they justify using survey research methods?) | No known alternatives. But archaeological survey had been done previously. |
| Did the authors consider different types of technology used to collect data or the storage and analysis of data after collection? If yes, please indicate any specific software programs or storage methods that were considered. | Likely just considered a paper survey due to timing when it was conducted. |

### Data Worth:

| Did the creators provide a description of potential errors or issues that could come from the specific site? | Inscriptions in as many as fifteen languages, and several scripts. Worn state of inscriptions, re-carving of stones, potential errors by author and/or masons. |
| Did the authors use designs that considered cost, technology, space, or personnel limitations? | Yes, and in fact looked back upon this as well. |
| Is there a methodology in place for data checking and follow-up? | No. |
| Was the scoring method or data input type for each question sufficiently described? | Unknown |
Appendix D

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Was the survey tested or practiced by participants prior to use in the field?</td>
<td></td>
</tr>
<tr>
<td>Were quality control measures used?</td>
<td></td>
</tr>
<tr>
<td>Was a code book used?</td>
<td>Yes</td>
</tr>
<tr>
<td>Did the authors discuss what techniques were used for verifying and cleaning data entry post collection?</td>
<td>Unknown, but there were considerations for adaptation and use of the data post processing</td>
</tr>
<tr>
<td>How many people participated in the data entry?</td>
<td>Unknown</td>
</tr>
<tr>
<td>Was there enough data to contribute to a valuable analysis?</td>
<td>Yes</td>
</tr>
<tr>
<td>Are gaps in final data discussed?</td>
<td>Yes, notes that things have been moved or have disappeared, or the damage is great.</td>
</tr>
<tr>
<td>Were the statistical, analytic, and reporting techniques appropriate to the data collected?</td>
<td>The data is difficult to mine and use in its present format.</td>
</tr>
<tr>
<td>Were the authors transparent to ensure evaluation and replication?</td>
<td>Yes</td>
</tr>
<tr>
<td>Was evidence for validity provided?</td>
<td>Unknown</td>
</tr>
<tr>
<td>Was evidence of reliability provided?</td>
<td>Yes, consistency in the data that is available.</td>
</tr>
<tr>
<td>Were results able to be easily interpreted? Are there extreme outliers to the set-up of the survey based on the projected data to be acquired and researched? Or, is the data overly homogenous, not allowing for the researchers to see patterns?</td>
<td>Results were easily sorted and grouped, pattern analysis is unclear.</td>
</tr>
<tr>
<td>Is replication possible given information provided? (within the site examined)</td>
<td></td>
</tr>
<tr>
<td>Is replication possible on similar sites?</td>
<td></td>
</tr>
<tr>
<td><strong>Output and Dissemination</strong></td>
<td></td>
</tr>
<tr>
<td>Is data available online or in print?</td>
<td>Yes. Online. Print Unknown.</td>
</tr>
<tr>
<td>If yes, what is available?</td>
<td>Linked HTML and pdf showing the country of origin for the people buried there. Actual records require a key, which cannot be found online. A few pictures are available but only if you know the name you are looking for, not by plot number. No link between the available maps and the burial data or the stone number and burial information and its location or photo. Only partial data, so there are a lot of zeros as place markers in the data. Wording for the iconography is quite confusing, only a few are documented with photographs that are not linked. Not searchable. Only input in the original inscription language, no translation. HTML links are confusing, and by year, but not searchable or sortable to do any sort of comparison.</td>
</tr>
<tr>
<td>Please list any comments on the usability or accessibility of the data available</td>
<td>See above.</td>
</tr>
</tbody>
</table>
## Appendix D

### Specific Survey Details

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year survey began:</td>
<td>1981</td>
</tr>
<tr>
<td>Year survey was completed:</td>
<td>1981?</td>
</tr>
<tr>
<td>Who participated in the planning of the survey?</td>
<td></td>
</tr>
<tr>
<td>Who participated in the data collection?</td>
<td></td>
</tr>
<tr>
<td>What tools were used?</td>
<td></td>
</tr>
<tr>
<td><strong>Methods:</strong></td>
<td></td>
</tr>
<tr>
<td>What was the survey method used in the field (paper, GPS, cloud, etc.)</td>
<td>Likely paper</td>
</tr>
<tr>
<td>What software programs were used for the digitization of the data collected, if any?</td>
<td>Unknown, but some sort of database software, but sorting and searching is not available in the online version of the data.</td>
</tr>
<tr>
<td>Field Types for data entry - is there a variety? (y/n, multiple choice, likert scale (1 to 5), free form, etc.)</td>
<td>Unknown.</td>
</tr>
<tr>
<td>Is Condition of the Tombs or Lots Specifically Addressed?</td>
<td>Yes</td>
</tr>
<tr>
<td>If Condition, what type of scale is it on?</td>
<td>1 to 5</td>
</tr>
<tr>
<td>Is the integrity of the tombs addressed?</td>
<td>Unknown.</td>
</tr>
<tr>
<td>If integrity is addressed, what type of scale is used or how is it noted?</td>
<td>n/a</td>
</tr>
<tr>
<td>Are there free form fields for names or epitaphs?</td>
<td>Yes</td>
</tr>
<tr>
<td>Are measurements of the tomb lots or tombs recorded?</td>
<td>Yes</td>
</tr>
<tr>
<td>Were photos taken of each tomb?</td>
<td>No. Only a few have photos available online.</td>
</tr>
<tr>
<td>Has mapping been done to show the spatial relationships of the tombs?</td>
<td>Yes, but doesn’t appear to have attribute data linked to it fully.</td>
</tr>
<tr>
<td>Is the position of marker/tomb noted? Either the direction it faces, or where it is located on the map, or both?</td>
<td>Yes. Both are known, only the direction is noted on the survey</td>
</tr>
<tr>
<td>What types of tomb style data is collected? (Fonts, symbolism, color, etc.)</td>
<td>Funerary symbols and other iconographic elements, done according to a preliminary classification of the styles, meant to be a point of departure for further research</td>
</tr>
<tr>
<td>What types of tomb type data is collected? (shape, size, general massing, roof type, etc.)</td>
<td>Size, basic form, masons name, number of inscribed faces</td>
</tr>
<tr>
<td>Is the number of burials noted?</td>
<td>Where possible</td>
</tr>
<tr>
<td>Is tomb/marker material noted?</td>
<td>Yes</td>
</tr>
<tr>
<td>Is there ownership/stakeholder information available?</td>
<td>Yes, for some plots and for the overall cemetery</td>
</tr>
</tbody>
</table>
Appendix D

Are burial dates recorded?  Yes. Dates is a help for developing a 3D like model of the cemetery, like the one used by archaeologists to explore the relationships between artifacts within contexts.

Any additional notes:
Much of this information is reflections after the survey was done, and not the pre-process of developing it. Some issues noted: many languages, should have had trained epigraphists, the issue of the cemetery being a living one, i.e. many generations of burial, overcrowding, things move and get lost, disappear. Demonstrated a need to know the history of the cemetery to understand the changes over time. Have to account for previous burials that might have been lost through movement of modification, which is very difficult to do. In the end was just a pure documentation of what was there at the present. Map on the tourist site is good, but given technology today, could be linked to the burials that are highlighted on the maps, and the key should be exported as well when it is printed out. GIS mapping would help with this. Could be used as a much more impactful interpretation tool, as this is a tourist attraction within the city of Rome. Important that they noted future research to be done, particularly because acknowledging that upfront leads to more careful and comprehensive data collection—even if it will not be used right away, it will be there for the next phase. Stress the importance of recording in many ways, and linking all the data together. Using these links we can create more answers than just the basic answers to the questions. The 3D model analogy is quite a good one, given that using dates as contexts, one can paint a larger picture of what was happening in the cemetery at exactly that moment. Express interest in parts of a whole as a method to look at the cemetery, much like the typology discussion that will come in later chapters. Ideal of the “memorial diary” (p. 167), where all the stages that memorials go through are documented (or attempted where possible), from the construction to use to deterioration. Motifs are separate from this, they reflect more about the people, and fall under the category of “burial diary.” Conscious effort to limit the vocabulary used and standardize the information. Pre-printed forms, unique numbering, with a photo and a location on each tomb.

Appendix D

Figure D.2: Example Data from Protestant Cemetery
http://www.acdan.it/protcem/

1 south side, reasonable condition, incised, primary inscription, English
BENEATH THIS STONE IS BURIED
FRANCIS KINLOCH
A NATIVE OF CHARLESTOWN SOUTH CAROLINA
IN THE UNITED STATES OF AMERICA
DIED IN ROME
THE XXIII OF JULY MDCXCV
AGED FORTY-TWO YEARS AND SEVEN MONTHS
SM FRANCISKINLOCH
HIS BROTHER IN LAW AND HIS SISTER
WHOM DISTANCE DEPRIVED OF THE CONSOLATION
OF WATCHING OVER HIS DEATH BED
HAVE CAUSED THIS MONUMENT TO BE ERECTED
AS A TRIBUTE TO HIS WORTH
AND A TESTIMONY OF THEIR AFFECTION

Notes: S face, relief. An angel is summoning a male figure, presumably the deceased. Both figures fly above ground, angel first with right hand pointing upwards and the left holding on to the male figure. On the ground lies a torch. (Photo *H.26224) (Photo W.24)
See also Timodajo Godfrey (stone 1417), listed under country RU (1), Nicola Myttoff (1841)

2 east side, reasonable condition, incised, primary comment, English

3 west side, reasonable condition, incised, secondary comment, English

486 Zona Primia; Headstone. 165 × 85 × 40 [in] Hans Straub
*0/0/19/62
Nationality: German Language
*f/0/0/19/77
Nationality: German Language

[f] Klara Straub

1 south side, excellent condition, raised metal, primary inscription, German
HANS STRAUB
* 30 NTV 1865
+ 24 JUN 1892
KLARA STRAUB
GER SCHMIDT
* 18 AUG 1892
+ 2 JUNI 1897

2 south side, excellent condition, raised metal, primary comment, German
EINTAGSWEBENI
WAS SIND WIR, WASSIND WIR NICHT?
EINES SCHATTENSTRAUM IST DER MENSCH.

3 east side, excellent condition, raised metal, primary comment, Italian
PROGENIE
D'UN GIORNO,
CHE COSA NON SAMO?
CHE COSA NON SAMO?
E' SONO D'UN OMBRA
IL MORTALE

Iconography: major on south side (626) [1] dog 2 × dominant on south side (114) [3] star and + symbols (birth and death) major on south side (121) [9-2] lotta mayor on in general (6999) [11] extra—see notes
Notes: On the S face is a seated classical figure reading from a scroll. Underneath his seat is a dog lying down. There is one Greek inscription at the bottom of the scene. (Photo *H.26270) (Photo N.8)
**Appendix E**

All information transcribed from conversations in the Spring of 2013 with Ashley Hahn, who worked for the NYC Landmarks Conservancy during the initial phases of the survey creation, and Cate Ludlam, the President of the Prospect Cemetery Association.

<table>
<thead>
<tr>
<th>General Method of Survey or Data Acquisition</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cemetery name:</td>
<td>Prospect Cemetery</td>
</tr>
<tr>
<td>Date founded:</td>
<td>1668 but maybe before, might have been a Native American site prior</td>
</tr>
<tr>
<td>Is it still active?:</td>
<td>Yes, technically</td>
</tr>
<tr>
<td>Cemetery type and location:</td>
<td>Jamaica, Queens, NYC. Colonial Cemetery</td>
</tr>
</tbody>
</table>

**Purpose:**

- Was there a clearly defined purpose for the survey or an overarching research question to be answered? Yes
- If yes, please what is the primary goal of survey (mapping, condition assessment, typology, etc.)
  - Mapping, condition assessment, identification of tomb location (many unknown), database generation for descendants of those buried there
- Are the objectives of the survey and subsequent analysis identified? Are they different from the purpose?
  - Hope that this analysis will bring more money into the cemetery for future work. Trying to find a contemporary use for the site. Match the data to a survey done in 1910.
- What type of data dissemination is planned? (Published papers, maps, interpretive signage, etc.)
  - Plot by plot map, website and/or database where tomb information is tied to each plot. Development of conservation protocols.

**Methods:**

- Did the creators consider alternatives to using a survey technique to collect information? (i.e., did they justify using survey research methods?)
  - Looked for examples of surveys, but couldn’t find many, survey seemed to best fit the needs and means.
- Did the authors consider different types of technology used to collect data or the storage and analysis of data after collection? If yes, what please indicate what was considered.
  - At first considered more open source software due to budget constraints, now using GIS and GPS data collection methods. No expensive data management, thought to house data at the Queens Public Library for public access.

**Data Worth:**

- Did the creators provide a description of potential errors or issues that could come from the specific site?
  - Issues: GPS is difficult to use, some days doesn’t work. No records at all in the older part of the cemetery.
- Did the authors use designs that considered cost, technology, space, or personnel limitations?
  - Yes but taking longer than expected.
- Is there a methodology in place for data checking and follow-up?
  - Survey not complete yet.
- Was the scoring method or data input type for each question sufficiently described?
- Was the survey tested or practiced by participants prior to use in the field?
  - No.


<table>
<thead>
<tr>
<th>Were quality control measures used?</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Was a code book used?</td>
<td></td>
</tr>
<tr>
<td>Did the authors discuss what techniques were used for verifying and cleaning data entry post collection?</td>
<td></td>
</tr>
<tr>
<td>How many people participated in the data entry?</td>
<td>Unknown, but a small number</td>
</tr>
<tr>
<td>Was there enough data to contribute to a valuable analysis?</td>
<td>There should be upon completion</td>
</tr>
<tr>
<td>Are gaps in final data discussed?</td>
<td></td>
</tr>
<tr>
<td>Were the statistical, analytic, and reporting techniques appropriate to the data collected?</td>
<td>Somewhat complicated for the site, could have been done more simply and cheaply.</td>
</tr>
<tr>
<td>Were the authors transparent to ensure evaluation and replication?</td>
<td></td>
</tr>
<tr>
<td>Was evidence for validity provided?</td>
<td></td>
</tr>
<tr>
<td>Was evidence of reliability provided?</td>
<td></td>
</tr>
<tr>
<td>Were results able to be easily interpreted?</td>
<td></td>
</tr>
<tr>
<td>Are there extreme outliers to the set-up of the survey based on the projected data to be acquired and researched? Or, is the data overly homogenous, not allowing for the researchers to see patterns?</td>
<td>Unknown.</td>
</tr>
<tr>
<td>Is replication possible given information provided? (within the site examined)</td>
<td>Yes but needs field check</td>
</tr>
<tr>
<td>Is replication possible on similar sites?</td>
<td>Possible</td>
</tr>
</tbody>
</table>

### Output and Dissemination

<table>
<thead>
<tr>
<th>Is data available online or in print?</th>
<th>Mostly narrative at this point. Plans to publish once survey is complete</th>
</tr>
</thead>
<tbody>
<tr>
<td>If yes, what is available?</td>
<td>Press releases, some information on partner websites, only data is an alphabetical listing of burials by name, and it is not searchable.</td>
</tr>
<tr>
<td>Please list any comments on the usability or accessibility of the data available</td>
<td>Plan is for data to become easily available through a database housed either online, or accessible at the Queens Public Library, or both. Map, Location and Tomb attributes will be available.</td>
</tr>
</tbody>
</table>

### Specific Survey Details

<table>
<thead>
<tr>
<th>Specific Survey Details</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year survey began:</td>
<td>1999?; Jan 2012?</td>
</tr>
<tr>
<td>Year survey was completed:</td>
<td>not completed.</td>
</tr>
<tr>
<td>Who participated in the planning of the survey?</td>
<td>New York Landmarks Conservancy; Cutsogeorge, Tooman &amp; Allen; NYC Dept. of Parks and Rec; Prospect Cemetery Association</td>
</tr>
<tr>
<td>Who participated in the data collection?</td>
<td></td>
</tr>
</tbody>
</table>

---

*Figure E.1: Continued*
### Appendix E

<table>
<thead>
<tr>
<th>What tools were used?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Methods:</strong></td>
</tr>
<tr>
<td>What was the survey method used in the field (paper, GPS, cloud, etc.)</td>
</tr>
<tr>
<td>What software programs were used for the digitization of the data collected, if any?</td>
</tr>
<tr>
<td>Field Types for data entry - is there a variety? (y/n, multiple choice, likert scale(1 to 5), free form, etc.)</td>
</tr>
<tr>
<td>Is Condition of the Tombs or Lots Specifically Addressed?</td>
</tr>
<tr>
<td>If Condition, what type of scale is it on?</td>
</tr>
<tr>
<td>Is the integrity of the tombs addressed?</td>
</tr>
<tr>
<td>If integrity is addressed, what type of scale is used or how is it noted?</td>
</tr>
<tr>
<td>Are there free form fields for names or epitaphs?</td>
</tr>
<tr>
<td>Are measurements of the tomb lots or tombs recorded?</td>
</tr>
<tr>
<td>Were photos taken of each tomb?</td>
</tr>
<tr>
<td>Has mapping been done to show the spatial relationships of the tombs?</td>
</tr>
<tr>
<td>Is the position of marker/tomb noted? Either the direction it faces, or where it is located on the map, or both?</td>
</tr>
<tr>
<td>What types of tomb style data is collected? (Fonts, symbolism, color, etc.)</td>
</tr>
<tr>
<td>What types of tomb type data is collected? (shape, size, general massing, roof type, etc.)</td>
</tr>
<tr>
<td>Is the number of burials noted?</td>
</tr>
<tr>
<td>Is tomb/marker material noted?</td>
</tr>
<tr>
<td>Is there ownership/stakeholder information available?</td>
</tr>
<tr>
<td>Are burial dates recorded?</td>
</tr>
</tbody>
</table>

**Any additional notes:**

This can be used as a teaching tool, because of the lack of records can also be used to show more of the change over time than the records of physical burials. Lack of connection between the place and the current residents. Hope for free access and contemporary uses for the site. Not much able to be conserved. Overgrowth and neglect was a theme for many years.

*All information transcribed from conversations in the Spring of 2013 with Ashley Hahn, who worked for the NYC Landmarks Conservancy during the initial phases of the survey creation, and Cate Ludlam, the President of the Prospect Cemetery Association.*
Appendix F

**General Method of Survey or Data Acquisition**

<table>
<thead>
<tr>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>n/a: Chicora Foundation. The foundation is a non-profit heritage preservation organization that was founded in 1983. Their work focuses on the Southeastern United States, doing both preservation and conservation work, they have a particular interest in archaeology and cemetery conservation and documentation issues in the US.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cemetery name:</th>
<th>n/a: Chicora Foundation.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date founded:</td>
<td>n/a</td>
</tr>
<tr>
<td>Is it still active?:</td>
<td>n/a</td>
</tr>
<tr>
<td>Cemetery type and location:</td>
<td>n/a</td>
</tr>
</tbody>
</table>

**Purpose:**

<table>
<thead>
<tr>
<th>Was there a clearly defined purpose for the survey or an overarching research question to be answered?</th>
<th>Yes. This foundation has designed a variety of forms and tools for the documentation and preservation of cemeteries.</th>
</tr>
</thead>
<tbody>
<tr>
<td>If yes, please what is the primary goal of survey (mapping, condition assessment, typology, etc.)</td>
<td>Many goals, forms include those for recording cemetery locations, conditions assessment, recording individual markers, typology, family plot recording, identification of cemetery features, monument fragment and removal recording, vandalism reporting, guilds on how to measure heights of monuments, and disaster assessment forms for cemetery assessment.</td>
</tr>
<tr>
<td>Are the objectives of the survey and subsequent analysis identified? Are they different from the purpose?</td>
<td>Objectives defined for each form, but there is some overlap.</td>
</tr>
<tr>
<td>What type of data dissemination is planned? (Published papers, maps, interpretive signage, etc.)</td>
<td>None specified.</td>
</tr>
</tbody>
</table>

**Methods:**

| Did the creators consider alternatives to using a survey technique to collect information? (i.e., did they justify using survey research methods?) | n/a |
| Did the authors consider different types of technology used to collect data or the storage and analysis of data after collection? If yes, what please indicate what was considered. | Use GPS, total stations, and paper surveys. |

**Data Worth:**

| Did the creators provide a description of potential errors or issues that could come from the specific site? | Did note that each cemetery is different and forms would need to be adapted |
| Did the authors use designs that considered cost, technology, space, or personnel limitations? | No, but not a full project, just information from the Foundation, for free |
| Is there a methodology in place for data checking and follow-up? | No. |
| Was the scoring method or data input type for each question sufficiently described? | No, but it is quite simple on all forms, and only free form or multiple choice. Some of the other rankings have either satisfactory or unsatisfactory, which is not described, and various cemeteries will have different standards for that. This should have been done on a different type of scale. |
| Was the survey tested or practiced by participants prior to use in the field? | n/a |
| Were quality control measures used? | n/a |
| Was a code book used? | Only visual for marker types, and other tomb design aspects. |
| Did the authors discuss what techniques were used for verifying and cleaning data entry post collection? | n/a |
| How many people participated in the data entry? | n/a |
| Was there enough data to contribute to a valuable analysis? | n/a |
| Are gaps in final data discussed? | n/a |
| Were the statistical, analytic, and reporting techniques appropriate to the data collected? | No reporting methods discussed |
| Were the authors transparent to ensure evaluation and replication? | Free forms for download on their website |
| Was evidence for validity provided? | n/a |
| Was evidence of reliability provided? | Proven based on their in field experience |
| Were results able to be easily interpreted? Are there extreme outliers to the set-up of the survey based on the projected data to be acquired and researched? Or, is the data overly homogenous, not allowing for the researchers to see patterns? | No plan in place for reporting and interpretation of data. |
| Is replication possible given information provided? (within the site examined) | Yes. This foundation has designed a variety of forms and tools for the documentation and preservation of cemeteries |
| Is replication possible on similar sites? | Yes. This foundation has designed a variety of forms and tools for the documentation and preservation of cemeteries |
| Output and Dissemination | |
| Is data available online or in print? | n/a |
| If yes, what is available? | |
| Please list any comments on the usability or accessibility of the data available | Forms are easily accessible. |

**Specific Survey Details** | **Response**
---|---
Year survey began: | n/a
Table 1: Survey Methodology

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year survey was completed:</td>
<td>n/a</td>
</tr>
<tr>
<td>Who participated in the planning of the survey?</td>
<td>Chicora Foundation team members</td>
</tr>
<tr>
<td>Who participated in the data collection?</td>
<td>n/a</td>
</tr>
<tr>
<td>What tools were used?</td>
<td>in field, some GPS could be done, paper surveys</td>
</tr>
<tr>
<td>What was the survey method used in the field (paper, GPS, cloud, etc.)</td>
<td>paper</td>
</tr>
<tr>
<td>What software programs were used for the digitization of the data collected, if any?</td>
<td>n/a, but digitization would be difficult if there was no resource provided on how to set a database up</td>
</tr>
<tr>
<td>Field Types for Data Entry - is there a variety? (y/n, multiple choice, Likert scale (1 to 5), free form, etc.)</td>
<td>Free form and Multiple choice check boxes</td>
</tr>
<tr>
<td>Is Condition of the Tombs or Lots Specifically Addressed?</td>
<td>yes, with a few condition phrases, no definitions or code book provided. Would not fit all cemeteries.</td>
</tr>
<tr>
<td>If Condition, what type of scale is it on?</td>
<td>Just multiple choices for conditions, no scale of degree of deterioration</td>
</tr>
<tr>
<td>Is the integrity of the tombs addressed?</td>
<td>no</td>
</tr>
<tr>
<td>If integrity is addressed, what type of scale is used or how is it noted?</td>
<td>n/a</td>
</tr>
<tr>
<td>Are there free form fields for names or epitaphs?</td>
<td>yes, but no real provision for dates or consideration for multiple burials</td>
</tr>
<tr>
<td>Are measurements of the tomb lots or tombs recorded?</td>
<td>size of gravestone, but not plot sizes.</td>
</tr>
<tr>
<td>Were photos taken of each tomb?</td>
<td>Suggested, not required</td>
</tr>
<tr>
<td>Has mapping been done to show the spatial relationships of the tombs?</td>
<td>No</td>
</tr>
<tr>
<td>Is the position of marker/tomb noted? Either the direction it faces, or where it is located on the map, or both?</td>
<td>Note the orientation and the direction the inscription faces, but not on a plot map, just directionally. Do make a note of grave number, section and lot at the top of the form, suggesting that step should have been done prior, but there is no form that sets this up or provides best practices on how to create a locational numbering system</td>
</tr>
<tr>
<td>What types of tomb style data is collected? (Fonts, symbolism, color, etc.)</td>
<td>Symbols, material, type, inscription technique, design of other elements of the burial ground, footstone, coping, fencing, etc.</td>
</tr>
<tr>
<td>What types of tomb type data is collected? (shape, size, general massing, roof type, etc.)</td>
<td>Height, width, thickness</td>
</tr>
<tr>
<td>Is the number of burials noted?</td>
<td>No</td>
</tr>
<tr>
<td>Is tomb/marker material noted?</td>
<td>Yes</td>
</tr>
<tr>
<td>Is there ownership/stakeholder information available?</td>
<td>On a separate form</td>
</tr>
<tr>
<td>Are burial dates recorded?</td>
<td>Not explicitly.</td>
</tr>
</tbody>
</table>

99
Any additional notes: This provides a very good basis for how to document a cemetery, but is restricted to certain types. Clearly, the intention is there, but there are too many forms and the process is made out to be confusing. There needs to be a clearly defined code book for the forms, and a description of what the specific terms mean. No clear definition of the order these forms should be tackled in. Additionally, there is no process for what to do with the data after completion of the various forms. No insight on the types of things that can be done with the data or should be done, no best practices on that score. The forms are not as sequential in the information as they could be, facilitating ease of collection and recording. They also note that the first step in preservation and conservation is a survey in order to determine what the assets present on site are. It could be argued that this should be taken a step further back, and noting that the first step in the documentation is discovery of what data is needed to be collected in order to determine how the site can and should be documented. These notes are based on the forms available for download from the website.

**Figure F.2: Chicora Foundation Survey Form**


<table>
<thead>
<tr>
<th>Cemetery:</th>
<th>Grave #:</th>
<th>Section #:</th>
<th>Lot #:</th>
<th>Photo No:</th>
</tr>
</thead>
</table>

**Name(s) on marker:**

**Type of Marker/Monument:**
- tablet headstone
- government issue
- raised top
- bedstead/cradle
- ledger
- die in socket
- lawn-type
- pulpit
- table tomb
- obelisk
- die on base
- plaque
- die, base, cap
- box tomb
- other:

**Inscription:**

**Inscription Technique:**
- carved
- painted
- other:

**Material:**
- marble
- granite
- limestone
- fieldstone
- cast iron
- zinc
- other material:
- sandstone
- other stone:
- wood
- concrete
- slate

**Gravestone Size (ft/in):**

**Height:**
- Bible
- willow and urn
- lamb
- Masonic
- finger pointing
- clapping hands
- cross
- dove
- other fraternal order:
- other design:

**Condition of Marker:**
- weathered
- unattached
- biologicals
- cracked
- loose
- stained
- broken
- vandalized
- leaning
- repaired
- portions missing:

**Stonemaster’s Name:**

**City:**

**Location of Mark:**

**Footstone:**

**Material:**

**Design/initials:**

**Condition:**

**Coping:**

**Material:**

**Design:**

**Condition:**

**Fencing:**

**Material:**

**Design:**

**Condition:**

**Grave Orientation:**

Marker inscription faces what direction:

**Grave Goods:**

**Surveyor:**

**Date:**
### General Method of Survey or Data Acquisition

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cemetery name:</td>
<td>n/a National Center for Preservation Technology and Training - A Department of the National Park Service</td>
</tr>
<tr>
<td>Date founded:</td>
<td>n/a</td>
</tr>
<tr>
<td>Is it still active?:</td>
<td>n/a</td>
</tr>
<tr>
<td>Cemetery type and location:</td>
<td>n/a</td>
</tr>
<tr>
<td><strong>Purpose:</strong></td>
<td></td>
</tr>
<tr>
<td>Was there a clearly defined purpose for the survey or an overarching research question to be answered?</td>
<td>General purposes defined for why to survey</td>
</tr>
<tr>
<td>If yes, please what is the primary goal of survey (mapping, condition assessment, typology, etc.)</td>
<td>Concerned with mostly condition assessment, typology and burial records to a lesser extent. This is the rapid assessment for</td>
</tr>
<tr>
<td>Are the objectives of the survey and subsequent analysis identified? Are they different from the purpose?</td>
<td>Yes, same as the purpose in this case</td>
</tr>
<tr>
<td>What type of data dissemination is planned? (Published papers, maps, interpretive signage, etc.)</td>
<td>No clear plan for what to do with the data after it is collected.</td>
</tr>
<tr>
<td><strong>Methods:</strong></td>
<td></td>
</tr>
<tr>
<td>Did the creators consider alternatives to using a survey technique to collect information? (i.e., did they justify using survey research methods?)</td>
<td>Generally just recommending collection of data on a paper form in the field.</td>
</tr>
<tr>
<td>Did the authors consider different types of technology used to collect data or the storage and analysis of data after collection? If yes, what please indicate what was considered.</td>
<td>Just survey from, no note of storage or analysis</td>
</tr>
<tr>
<td><strong>Data Worth:</strong></td>
<td></td>
</tr>
<tr>
<td>Did the creators provide a description of potential errors or issues that could come from the specific site?</td>
<td>No.</td>
</tr>
<tr>
<td>Did the authors use designs that considered cost, technology, space, or personnel limitations?</td>
<td>Likely, given that it is paper forms and free to all on the website.</td>
</tr>
<tr>
<td>Is there a methodology in place for data checking and follow-up?</td>
<td>No.</td>
</tr>
<tr>
<td>Was the scoring method or data input type for each question sufficiently described?</td>
<td>Yes</td>
</tr>
<tr>
<td>Was the survey tested or practiced by participants prior to use in the field?</td>
<td>It is suggested in their training videos that this should be done prior to the start of any survey work.</td>
</tr>
<tr>
<td>Were quality control measures used?</td>
<td>n/a</td>
</tr>
<tr>
<td>Was a code book used?</td>
<td>Yes, an extensive one.</td>
</tr>
</tbody>
</table>
### Appendix G

**Did the authors discuss what techniques were used for verifying and cleaning data entry post collection?**  
No.

**How many people participated in the data entry?**  
n/a

**Was there enough data to contribute to a valuable analysis?**  
n/a

**Are gaps in final data discussed?**  
n/a

**Were the statistical, analytic, and reporting techniques appropriate to the data collected?**  
n/a

**Were the authors transparent to ensure evaluation and replication?**  
Yes, survey is a standard

**Was evidence for validity provided?**  
n/a

**Was evidence of reliability provided?**  
n/a

**Were results able to be easily interpreted? Are there extreme outliers to the set-up of the survey based on the projected data to be acquired and researched? Or, is the data overly homogenous, not allowing for the researchers to see patterns?**  
n/a

**Is replication possible given information provided?**  
Yes, survey is a standard

**Is replication possible on similar sites?**  
Yes, survey is a standard

### Output and Dissemination

**Is data available online or in print?**  
n/a

**If yes, what is available?**  
n/a

**Please list any comments on the usability or accessibility of the data available**  
There is no process laid out for what to do with the data collected

### Specific Survey Details

<table>
<thead>
<tr>
<th>Specific Survey Details</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year survey began:</td>
<td>n/a</td>
</tr>
<tr>
<td>Year survey was completed:</td>
<td>n/a</td>
</tr>
<tr>
<td>Who participated in the planning of the survey?</td>
<td>NCPTT</td>
</tr>
<tr>
<td>Who participated in the data collection?</td>
<td>n/a</td>
</tr>
<tr>
<td>What tools were used?</td>
<td>Paper Survey, 2 versions, rapid version created in response to disaster relief</td>
</tr>
<tr>
<td>Methods:</td>
<td></td>
</tr>
<tr>
<td>What was the survey method used in the field(paper, gps, cloud, etc.)</td>
<td>Paper Field survey</td>
</tr>
<tr>
<td>What software programs were used for the digitization of the data collected, if any?</td>
<td>n/a - no provision for training or techniques on this, either</td>
</tr>
<tr>
<td>Field Types for data entry -is there a variety? (y/n, multiple choice, Likert scale(1 to 5), free form, etc.)</td>
<td>Yes, multiple choice, free form, yes/no, Likert scales of 0 to 3 (why? This is odd and confusing, also only 4 fields no average level)</td>
</tr>
<tr>
<td>Question</td>
<td>Answer</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Is Condition of the Tombs or Lots Specifically Addressed?</td>
<td>Yes</td>
</tr>
<tr>
<td>If Condition, what type of scale is it on?</td>
<td>Multiple choice for different words describing the condition, and then later a very long survey of individual conditions with a scale for the primary structure, the base, the surface finish, the ornament and the roof.</td>
</tr>
<tr>
<td>Is the integrity of the tombs addressed?</td>
<td>Yes</td>
</tr>
<tr>
<td>If integrity is addressed, what type of scale is used or how is it noted?</td>
<td>Likert 0 to 3 for each feature, primary structure, base, surface finish, ornament and roof</td>
</tr>
<tr>
<td>Are there free form fields for names or epitaphs?</td>
<td>Yes</td>
</tr>
<tr>
<td>Are measurements of the tomb lots or tombs recorded?</td>
<td>Yes</td>
</tr>
<tr>
<td>Were photos taken of each tomb?</td>
<td>No field for recording</td>
</tr>
<tr>
<td>Has mapping been done to show the spatial relationships of the tombs?</td>
<td>n/a</td>
</tr>
<tr>
<td>Is the position of marker/tomb noted? Either the direction it faces, or where it is located on the map, or both?</td>
<td>Yes, but only orientation</td>
</tr>
<tr>
<td>What types of tomb style data is collected? (Fonts, symbolism, color, etc.)</td>
<td>Inscription, material, ornament, furniture, enclosure, landscape, pedestal, grade</td>
</tr>
<tr>
<td>What types of tomb type data is collected? (shape, size, general massing, roof type, etc.)</td>
<td>Type, condition of interment (i.e. ruin, altered), materials of each piece.</td>
</tr>
<tr>
<td>Is the number of burials noted?</td>
<td>Not a total number</td>
</tr>
<tr>
<td>Is tomb/marker material noted?</td>
<td>Yes, of each piece</td>
</tr>
<tr>
<td>Is there ownership/stakeholder information available?</td>
<td>Yes, field for it provided</td>
</tr>
<tr>
<td>Are burial dates recorded?</td>
<td>Yes, first and last</td>
</tr>
</tbody>
</table>

**Any additional notes:**

Provide 2 surveys, one very long and involved, the other shorter for a “rapid” assessment. Is it possible to get the same amount of data from the first survey with the time it takes to do the rapid one? There is certainly some duplication. Definitions do not include any of the tomb types found in the New Orleans Cemeteries. Do a lot of training in the field for both professionals and amateurs. Too many fields, material for each piece not needed, especially if there is a photograph. Weather does not need to be repeated twice. Orientation is unclear. History of repairs? How is that able to be determined? Can’t integrity and condition together take care of that field? For conditions could have used a scale from 0 to 2, 0 being not present, 1 being moderate, 2 being severe. Or added a 5th that breaks out the severe and total deterioration. There needs to be a middle ground. There are a lot of conditions, might make sense to simplify further and not have all the components need to be measured. Perhaps the overall condition rating could account for the differences, wasting a lot of time circling things, there is no not applicable options for these either. This would take a long time per tomb, particularly in a site with multiple burials per tomb. Codebook is a great addition, but some of the definitions are not necessarily someone with out training in the field would be able to notice and identify on the spot.

## Conditions Survey Form

<table>
<thead>
<tr>
<th>Site:</th>
<th>Street Address:</th>
</tr>
</thead>
<tbody>
<tr>
<td>City:</td>
<td>County:</td>
</tr>
<tr>
<td>UTM Coordinates:</td>
<td>Owner:</td>
</tr>
<tr>
<td>Surveyor:</td>
<td>Date:</td>
</tr>
</tbody>
</table>

### Identification:

<table>
<thead>
<tr>
<th>Plot identification:</th>
<th>plot designation:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name(s) of interred:</td>
<td>First burial date:</td>
</tr>
<tr>
<td>Inscription:</td>
<td>Stone carver (if known):</td>
</tr>
</tbody>
</table>

### Description:

| Type of interment (circle one): | tomb | marker | family name marker |
| Type of tomb (circle one): | mausoleum |
| Type of marker (circle all that apply): | headstone | footstone | ground tablet | basal | pedestal column | funeral home plaque | Woodmen of the World | bedstead |
| Dimensions (primary stone): | Height: | Width: | Depth (or L): |
| Dimensions (base): | Height: | Width: | Depth (or L): |
| Dimensions (other): | Height: | Width: | Depth (or L): |
| Orientation (circle one): | North | South | East | West | unknown |
| Interment status (circle one): | active | inactive | abandoned |
| State of interment (circle all that apply): | standing | ruin | fragment | relocated | altered | replica | tilted | sunken |
| Type of interment (circle one): | individual | family | undeterminable |
| Pedestal (circle one): | yes | no | Base (circle one): | yes | no |
| Ornament (circle all that apply): | urn | sculpture | cross | plaque | relief decoration | incised decoration | ornamental vase | none |
| Furniture (circle all that apply): | sculpture | container/vase | plaque | immortelles | none |
| Landscape (circle all that apply): | brick | asphalt | concrete | soil | grass | vegetation | other |
| Enclosure (circle all that apply): | curb | wall | fence | none |
| Grade slope (circle one): | positive | negative | cross-slope | none |
| Degree of grade (circle one): | 0 (low) | 1 | 2 | 3 (high) |
**Surveyor:**

**Date:**

**Plot identification:**

**Weather (circle all that apply):**

- hot
- warm
- cool
- cold
- dry
- humid
- sunny
- rain/snow/fog
- overcast
- windy

**Materials:** Check appropriate fields

<table>
<thead>
<tr>
<th>Type of material</th>
<th>Primary structure</th>
<th>Base</th>
<th>Surface Finish</th>
<th>Ornament</th>
<th>Roof</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marble</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limestone</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Granite</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brick</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concrete</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stucco</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Modern Coating</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limewash</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cement wash</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**History of Repairs**

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Primary structure</th>
<th>Base</th>
<th>Surface Finish</th>
<th>Ornament</th>
<th>Roof</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collapse</td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
<td></td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
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<tr>
<td>Loss</td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
<td></td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>Fragmentation</td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
<td></td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
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<tr>
<td>Disaggregation</td>
<td>0 1 2 3</td>
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<td></td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
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<tr>
<td>Erosion</td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
<td></td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
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<tr>
<td>Cracking</td>
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<td>0 1 2 3</td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>Exfoliation</td>
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<td>0 1 2 3</td>
<td></td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
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<tr>
<td>Efflorescence</td>
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<td>0 1 2 3</td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>Finish detachment</td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
<td></td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>Corrosion</td>
<td>0 1 2 3</td>
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<td></td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
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<tr>
<td>Bio-growth</td>
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<td>0 1 2 3</td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
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<td>0 1 2 3</td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>Alterations</td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>Open/missing joints</td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
<td></td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>Soiling</td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
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<td>Graffiti</td>
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<td>Metallic staining</td>
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<td>0 1 2 3</td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>Other (describe)</td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
</tr>
</tbody>
</table>

**Conditions: Rank conditions from 0 (low) to 3 (high)**

**Rank conditions from 0 (poor) to 3 (high)
<table>
<thead>
<tr>
<th></th>
<th>Primary structure</th>
<th>Base</th>
<th>Surface Finish</th>
<th>Ornament</th>
<th>Roof</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overall Condition</strong></td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>(0=poor  3=high)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Overall Integrity</strong></td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>(0=poor  3=high)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comments:**
Appendix G

CONDITIONS SURVEY DEFINITIONS

Site: Full name of cemetery with no abbreviations
Street Address: Approximate address of the cemetery, with no abbreviations.
City: City in which the cemetery is located, with no abbreviations.
Parish: Parish or county in which the cemetery is located, with no abbreviations.
State: State (no abbreviations) in which the cemetery is located, followed by the two-letter postal abbreviation for the state (ex. Louisiana--LA).
GPS Coordinates: A set of coordinates for the Global Positioning System.
UTM Coordinates: A set of coordinates (easting and northing) that indicates a unique location according to the Universal Transmercator Grid appearing on maps of the United States Geological Survey (USGS). Indicate the centermost coordinate within the cemetery boundary (include Zone, Easting and Northing coordinates).
Owner: Full name of the owner of the cemetery, with no abbreviations.
Contact: The name of the person representing the cemetery owner.
Phone: The telephone number of the contact person for the cemetery.
Surveyor: The first and last name of the surveyor.
Date: Date of the survey (ex: 01/01/2002)
Weather: Weather conditions at the time when survey form completed.

IDENTIFICATION:
Plot identification: Includes block number and plot number on site map.
Name(s) of interred: First and last name(s) of interred.
First burial date: Date of earliest interment (ex: 1802)
Last burial date: Date of most recent interment (ex: 2002)
Inscription: A transcription of the tomb or marker inscription recorded in the language in which it has been written. Include abbreviations, punctuation and historic spellings. The transcription is a document of what the surveyor sees and should not include any guesses.
Stone carver (if known): First and last name (if available) of stone carver. The stone carver may "sign" his or her work on the base of the marker or tomb, on the rear elevation, or on the top of the marker. Often, the carver's "signature" is in a different font than the inscription on the tomb or marker.
Location of mark: Location of the stone carver's "signature" in terms of geographic orientation. It may be found on the top, rear, bottom, or on the side of the stone.

DESCRIPTION:
Type of interment:
Tomb: mortuary structure associated with or containing one or more burial vaults.
Type of tomb present in the American Cemetery, Natchitoches, LA:

- Mausoleum: a tomb with accessible interior space, often containing wall or subterranean vaults and a small area intended for private prayer or contemplation accessed by a door. (Note: there is only ONE mausoleum in the American Cemetery, that of John Gideon Lewis, Sr.)
Marker: any non-tomb mortuary structure which does not accommodate an interment and whose form is often sculptural.

Types of markers present in the American Cemetery, Natchitoches, LA:
- **Headstone**: An upright slab embedded in the ground or in a separate stone base and which is inscribed.
- **Footstone**: An inscribed upright slab embedded in the ground or in a separate stone base that is associated with and commonly smaller than a headstone.
- **Ground tablet**: An inscribed marker laid flush with or slightly above ground level.
- **Basal**: A table grave supported by a low, solid wall base. It does not contain a casket or coffin within the walls.
- **Ruin**: A marker that has been destroyed and no longer retains its original shape.
- **Cross**: a cross, with or without inscription, placed in the ground or supported by a pedestal.
- **Pedestal obelisk**: A monumental, four-sided stone shaft, usually monolithic and tapering to a pyramidal tip, and stands on a pedestal.
- **Woodmen of the world**: a marker carved in the shape of a tree stump or wood stack, often including an inscription and a Woodmen of the World insignia. The Woodmen are a benevolent fraternal organization founded in 1890.
- **Pedestal column**: A single pillar standing alone as a monument surmounting a pedestal or pedestal base.
- **Funeral home plaque**: A small metal plaque that is the only marker (for recent burials).
- **Bedstead**: a marker with a headstone, footstone, and side rails designed to imitate the form of a bed.

### Types of Markers:

<table>
<thead>
<tr>
<th>Headstone</th>
<th>Footstone</th>
<th>Ground tablet</th>
<th>Funeral home plaque</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Basal</th>
<th>Pedestal column</th>
<th>Pedestal obelisk</th>
<th>Cross</th>
<th>Woodmen of the World</th>
<th>Bedstead</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image5.png" alt="Image" /></td>
<td><img src="image6.png" alt="Image" /></td>
<td><img src="image7.png" alt="Image" /></td>
<td><img src="image8.png" alt="Image" /></td>
<td><img src="image9.png" alt="Image" /></td>
<td><img src="image10.png" alt="Image" /></td>
</tr>
</tbody>
</table>
Family name marker: A large headstone inscribed with the name of the family to whom the plot belongs. A family name marker does not indicate a burial—it only indicates a family plot.

Dimensions: The height, width and depth (or length) of the primary stone, base, and other features of the tomb or marker, in inches.

Orientation: Compass direction of the primary face or surface that contains the inscription (the orientation of unmarked graves is "unknown").

Interment status:
- Active: A body has been interred in the past twenty years.
- Inactive: No bodies have been interred in over twenty years, but the space is still usable because it is sealed. (Most grave markers and tombs in the American Cemetery are "inactive.")
- Abandoned: The tomb/marker is open, vacant, or derelict.

State of interment:
- Standing: The tomb or marker maintains its structural form and support.
- Ruin: The tomb or marker has been destroyed through collapse or demolition.
- Fragment: A piece or pieces of a tomb or marker that have dissociated from the original fabric. The tomb or marker no longer reads as a whole.
- Relocated: The tomb or marker has been moved from its original site and relocated to another portion of the cemetery. (Note: relocation of a tomb or marker must be verified through historic documentation.)
- Altered: The tomb or marker has been modified through patching or reassembly, or by replacing parts of the monument.
- Replica: The original tomb or marker has been removed from its original site and replaced with an exact copy. (Note: replication of a tomb or marker may be indicated on the new gravestone inscription, but this must be verified through historic documentation.)
- Tilted: The tomb or marker has shifted horizontally due to settling of the earth.
- Sunken: The tomb or marker has shifted below or partially below grade.

States of Interment:
Appendix G

Type of interment:
- Individual: The tomb or marker contains only one interment.
- Family: The tomb or marker contains two or more interments from the same or related family.
- Undeterminable: Interment representation is not clear (unmarked graves are always "undeterminable").

Pedestal: A support for a column, statue or urn consisting of a base, dado or die, and a cornice, surbase or cap. A pedestal has more tiers than a base.

Base: The lowest visible element of a tomb or a marker that is above ground level. (Many unmarked basal markers have lost their primary stone and only have a base showing.)

Ornament: Ornament is integral to the structure of the tomb or marker.
- Urn: A cylindrical container with a foot that is integral to the structure of the tomb or marker. It may be open or closed.
- Sculpture: Any masonry ornament integral to the structure of the tomb or marker which is not a plaque, urn, or relief or incised decoration.
- Cross: A cross that is integral to the structure of the tomb or marker.
- Plaque: A thin, flat piece of cast metal applied to a tomb or marker.
- Relief decoration: Decorated carved relief above a background plane.
- Incised decoration: Decorated carved incision below a background plane.
- Ornamental vase: Vase that is integral to the structure of the marker.
- None: No ornament present on the tomb or marker.

Types of Ornament:

<table>
<thead>
<tr>
<th>Urn</th>
<th>Sculpture</th>
<th>Cross</th>
<th>Plaque</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Urn Image]</td>
<td>![Sculpture Image]</td>
<td>![Cross Image]</td>
<td>![Plaque Image]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Relief decoration</th>
<th>Incised decoration</th>
<th>Ornamental vase</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Relief Image]</td>
<td>![Incised Image]</td>
<td>![Ornamental Image]</td>
</tr>
</tbody>
</table>
**Furniture:** objects related to but *not permanently attached* to the tomb or marker.
- *Sculpture:* Any three-dimensional object not permanently attached to the tomb or marker. Sculpture may include urns, figures, crosses, etc.
- *Container/vase:* A container not permanently attached to the tomb or marker that holds flowers or other immortelles.
- *Plaque:* A commemorative tablet or medallion unattached to the tomb or marker.
- *Immortelles:* Temporary ephemeral offerings.

**Types of Furniture:**

<table>
<thead>
<tr>
<th>Sculpture</th>
<th>Container/vase</th>
<th>Plaque</th>
<th>Immortelles</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Sculpture" /></td>
<td><img src="image2.png" alt="Container/vase" /></td>
<td><img src="image3.png" alt="Plaque" /></td>
<td><img src="image4.png" alt="Immortelles" /></td>
</tr>
</tbody>
</table>

**Landscape:** The setting surrounding the tomb or marker. May include one or more of the following: brick, asphalt, concrete, soil, grass, vegetation or other ("other" includes leaves).

**Enclosure:** A curb, wall or fence separating a tomb, marker or family plot from the remainder of the cemetery.
- *Curb:* A low edging that surrounds the plot and is six inches high or less.
- *Wall:* A structure that surrounds the plot and is greater than six inches in height.
- *Fence:* A metal enclosure that surrounds the plot.

**Grade slope:** The slope of the land on which the tomb or marker lies.
- *Positive:* The tomb or marker is at the top of a rise.
- *Negative:* The tomb or marker is at the bottom of a rise.
- *Cross-slope:* The tomb or marker intersects a slope.
- *None:* The tomb or marker is on flat ground.

**Types of Grade Slope:**

<table>
<thead>
<tr>
<th>Positive slope</th>
<th>Negative slope</th>
<th>Cross-slope</th>
<th>No slope</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image5.png" alt="Positive slope" /></td>
<td><img src="image6.png" alt="Negative slope" /></td>
<td><img src="image7.png" alt="Cross-slope" /></td>
<td><img src="image8.png" alt="No slope" /></td>
</tr>
</tbody>
</table>

**Degree of slope:** Rated from 0 (low) to 3 (high). (Degree of grade does not need to be indicated if there is no slope).
M A T E R I A L S:
Primary structure: The portion of the tomb or marker which contains the inscription.
Base: The lowest element of the tomb or marker that supports the primary structure (ex: bricks or concrete supporting a basal marker).
Surface finish: The stucco, concrete and/or paint applied to the surface of the tomb or marker.
Ornament: Decorative elements that are an integral part of the tomb or marker. These include most urns, crosses, sculpture, plaques, and all relief and incised decoration.
Roof: The top covering of a tomb. (Note: this applies only to the mausoleum.)

Types of material:
- Marble: A metamorphic stone, white or variously colored and sometimes streaked or mottled; can take a high polish. Usually white and crystalline, although may be pink.
- Limestone: A sedimentary rock consisting mainly of calcium carbonate or magnesium carbonate often containing fossil remains. May be cream, tan or dark gray.
- Granite: A hard igneous crystalline rock consisting of small, visible amounts of other materials. Usually red or gray variegated.
- Brick: A solid masonry unit of clay or shale molded into a rectangular shape while plastic and burnt in a kiln. Usually red, salmon, or red-orange colored.
- Concrete: A hard, compact material consisting of cement mortar, sand aggregate, gravel and water. Usually gray or white, although may be colored.
- Metal: Includes wrought or cast iron.
- Stucco: A plaster made of lime, cement and sand used for surface finishes and decorative work.
- Modern coating: A thin exterior coating based on oil or emulsion.
- Limewash: A thin exterior coating of calcium or magnesium carbonate (lime) and water. Usually white, although may be tinted.
- Cement wash: A thin exterior coating of cement which is harder and more durable than limewash.

History of repairs: Indicate visible or historical repairs made to the tomb or marker. Indicate repairs on the primary structure, base, ornament, surface finish and roof.

C O N D I T I O N S:
Conditions: Indicate degree of deterioration for the primary structure, base, surface finish, ornament and roof.
0 = no deterioration
1 = slight deterioration
2 = moderate deterioration
3 = significant or total deterioration

Forms of deterioration include:
- Collapse: Complete or partial failure of the structure.
- Loss: Absence of all or a portion of the original fabric.
- Fragmentation: Fragments from a tomb or marker that have dissociated from the original fabric. The tomb or marker no longer reads as a whole.
- Disaggregation: The loss of granular material when a masonry unit is touched or rubbed.
- Erosion: The gradual surface loss of material and/or detail caused by weathering that results in an overall granular texture.
- Cracking: Fractures of various lengths on the surface material that have not developed into fragments. Indicates structural damage.
Appendix G

- **Exfoliation**: Loss of material along the surface of a masonry unit (especially in brick).
- **Efflorescence**: White, crystalline surface deposits caused by the presence of water-soluble salts.
- **Finish detachment**: The failure of surface finish attachment to masonry resulting in flaking, peeling or complete loss of material.
- **Corrosion**: Surface oxidation of metals resulting in color, texture and dimensional changes.
- **Bio-growth**: Growth of microflora (usually algae, fungi or lichen) on the surface of the tomb or marker.
- **Vegetation**: Growth of macro plant forms (ivy, moss, grass, vines, etc.) or their roots.
- **Alterations**: Intentional modifications to the original fabric.
- **Open/missing joints**: Loss or deterioration of mortar between masonry units.
- **Soiling**: Surface deposits usually dark in color that are caused by moisture, pollution or anthropogenic origins (bird droppings, paint, etc.).
- **Graffiti**: Intentionally inscribed or applied markings, often the result of vandalism but may also occur from gravestone rubbings. May include visible footprints or cat scratches.
- **Metallic staining**: Colored stains on masonry units caused by the corrosion of metals.

**Overall condition**: Rank the overall state of the entire tomb or marker.

- **0 = extremely deteriorated condition** (structural failure)
- **1 = poor condition** (significant threat to structure and/or total loss of decorative features)
- **2 = moderate deterioration** (structurally stable, significant or progressive loss of decorative features)
- **3 = good condition** (structurally stable, decorative features and finishes largely intact)

**Overall integrity**: Rank the overall authenticity and retention of original fabric for the entire tomb or marker.

- **0 = total loss of integrity** (25% or less of original materials remain, or an overwhelming presence of inappropriate replacement materials or alterations)
- **1 = low integrity** (26% - 50% of original materials remain, or a significant presence of inappropriate replacement materials or alterations)
- **2 = moderate integrity** (51% - 75% of original materials remain, or an obvious presence of tolerable replacement materials or alterations)
- **3 = high integrity** (76% or more of original materials remain, or a minimal presence of tolerable replacement materials or alterations)

**Inappropriate replacement materials or alterations**: Replacement materials or alterations that are not in keeping with historic materials and/or use of the tomb or marker. Examples include the application of a concrete surface finish, repointing brick with cement mortar, etc. (Does not include traditional maintenance regimens).

**Comments**: Please include any comments you may have regarding the tomb or marker.
### General Method of Survey or Data Acquisition

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cemetery name:</td>
<td>n/a</td>
</tr>
<tr>
<td>Date founded:</td>
<td>n/a</td>
</tr>
<tr>
<td>Is it still active?:</td>
<td>n/a</td>
</tr>
<tr>
<td>Cemetery type and location:</td>
<td>n/a</td>
</tr>
<tr>
<td><strong>Purpose:</strong></td>
<td></td>
</tr>
<tr>
<td>Was there a clearly defined purpose for the survey or an overarching research question to be answered?</td>
<td>General purposes defined for why to survey</td>
</tr>
<tr>
<td>If yes, please what is the primary goal of survey (mapping, condition assessment, typology, etc.)</td>
<td>Concerned with mostly condition and damage assessment, typology and burial records to a lesser extent. Survey was developed as a disaster response tool.</td>
</tr>
<tr>
<td>Are the objectives of the survey and subsequent analysis identified? Are they different from the purpose?</td>
<td>Yes, same as the purpose in this case. Not a tomb by tomb survey, just an overall assessment.</td>
</tr>
<tr>
<td>What type of data dissemination is planned? (Published papers, maps, interpretive signage, etc.)</td>
<td>No clear plan for what to do with the data after it is collected.</td>
</tr>
<tr>
<td><strong>Methods:</strong></td>
<td></td>
</tr>
<tr>
<td>Did the creators consider alternatives to using a survey technique to collect information? (i.e., did they justify using survey research methods?)</td>
<td>Generally just recommending collection of data on a paper form in the field.</td>
</tr>
<tr>
<td>Did the authors consider different types of technology used to collect data or the storage and analysis of data after collection? If yes, what please indicate what was considered.</td>
<td>Just survey from, no note of technology</td>
</tr>
<tr>
<td><strong>Data Worth:</strong></td>
<td></td>
</tr>
<tr>
<td>Did the creators provide a description of potential errors or issues that could come from the specific site?</td>
<td>No.</td>
</tr>
<tr>
<td>Did the authors use designs that considered cost, technology, space, or personnel limitations?</td>
<td>Likely, given that it is paper forms and free to all on the website.</td>
</tr>
<tr>
<td>Is there a methodology in place for data checking and follow-up?</td>
<td>No.</td>
</tr>
<tr>
<td>Was the scoring method or data input type for each question sufficiently described?</td>
<td>Yes</td>
</tr>
<tr>
<td>Was the survey tested or practiced by participants prior to use in the field?</td>
<td>It is suggested in their training videos that this should be done prior to the start of any survey work</td>
</tr>
<tr>
<td>Were quality control measures used?</td>
<td>n/a</td>
</tr>
<tr>
<td>Was a code book used?</td>
<td>Yes, an extensive one.</td>
</tr>
<tr>
<td>Question</td>
<td>Response</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Did the authors discuss what techniques were used for verifying and cleaning data entry post collection?</td>
<td>No.</td>
</tr>
<tr>
<td>How many people participated in the data entry?</td>
<td>n/a</td>
</tr>
<tr>
<td>Was there enough data to contribute to a valuable analysis?</td>
<td>n/a</td>
</tr>
<tr>
<td>Are gaps in final data discussed?</td>
<td>n/a</td>
</tr>
<tr>
<td>Were the statistical, analytic, and reporting techniques appropriate to the data collected?</td>
<td>n/a</td>
</tr>
<tr>
<td>Were the authors transparent to ensure evaluation and replication?</td>
<td>Yes, survey is a standardized form.</td>
</tr>
<tr>
<td>Was evidence for validity provided?</td>
<td>n/a</td>
</tr>
<tr>
<td>Was evidence of reliability provided?</td>
<td>n/a</td>
</tr>
<tr>
<td>Were results able to be easily interpreted? Are there extreme outliers to the set-up of the survey based on the projected data to be acquired and researched? Or, is the data overly homogenous, not allowing for the researchers to see patterns?</td>
<td>n/a</td>
</tr>
<tr>
<td>Is replication possible given information provided? (within the site examined)</td>
<td>Yes, survey is a standard</td>
</tr>
<tr>
<td>Is replication possible on similar sites?</td>
<td>Yes, survey is a standard</td>
</tr>
<tr>
<td>Output and Dissemination</td>
<td></td>
</tr>
<tr>
<td>Is data available online or in print?</td>
<td>n/a</td>
</tr>
<tr>
<td>If yes, what is available?</td>
<td>n/a</td>
</tr>
<tr>
<td>Please list any comments on the usability or accessibility of the data available</td>
<td>There is no process laid out for what to do with the data collected</td>
</tr>
</tbody>
</table>

### Specific Survey Details

<table>
<thead>
<tr>
<th>Specific Survey Details</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year survey began:</td>
<td>n/a</td>
</tr>
<tr>
<td>Year survey was completed:</td>
<td>n/a</td>
</tr>
<tr>
<td>Who participated in the planning of the survey?</td>
<td>NCPTT</td>
</tr>
<tr>
<td>Who participated in the data collection?</td>
<td>n/a</td>
</tr>
<tr>
<td>What tools were used?</td>
<td>Paper Survey, 2 versions, rapid version created in response to disaster relief, definitions sheet.</td>
</tr>
</tbody>
</table>

### Methods:

- **What was the survey method used in the field (paper, GPS, cloud, etc.)?** Paper Field survey
- **What software programs were used for the digitization of the data collected, if any?** n/a - no provision for training or techniques on this, either
- **Field Types for data entry - is there a variety? (y/n, multiple choice, Likert scale (1 to 5), free form, etc.)** Yes, multiple choice, free form, yes/no, scales for the degrees of damage, 0, 1 to 10, 10 to 30, 30 to 60, 60 to 90, 90 to 100. describes overall damage to the site
<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is Condition of the Tombs or Lots Specifically Addressed?</td>
<td>Yes</td>
</tr>
<tr>
<td>If Condition, what type of scale is it on?</td>
<td>Multiple choice for different words describing the condition, a scale for the level of damage as noted above.</td>
</tr>
<tr>
<td>Is the integrity of the tombs addressed?</td>
<td>No</td>
</tr>
<tr>
<td>If integrity is addressed, what type of scale is used or how is it noted?</td>
<td>n/a</td>
</tr>
<tr>
<td>Are there free form fields for names or epitaphs?</td>
<td>Yes</td>
</tr>
<tr>
<td>Are measurements of the tomb lots or tombs recorded?</td>
<td>No</td>
</tr>
<tr>
<td>Were photos taken of each tomb?</td>
<td>Photos are requested and there is an area to record the numbers.</td>
</tr>
<tr>
<td>Has mapping been done to show the spatial relationships of the tombs?</td>
<td>No</td>
</tr>
<tr>
<td>Is the position of marker/tomb noted? Either the direction it faces, or where it is located on the map, or both?</td>
<td>No.</td>
</tr>
<tr>
<td>What types of tomb style data is collected? (Fonts, symbolism, color, etc.)</td>
<td>Just material, but overall presence.</td>
</tr>
<tr>
<td>What types of tomb type data is collected? (shape, size, general massing, roof type, etc.)</td>
<td>None.</td>
</tr>
<tr>
<td>Is the number of burials noted?</td>
<td>No</td>
</tr>
<tr>
<td>Is tomb/marker material noted?</td>
<td>Yes, but overall materials for the site, and also materials for enclosure and landscape</td>
</tr>
<tr>
<td>Is there ownership/stakeholder information available?</td>
<td>Yes, but overall cemetery only.</td>
</tr>
<tr>
<td>Are burial dates recorded?</td>
<td>No</td>
</tr>
</tbody>
</table>

**Additional Notes:**

Provide 2 surveys, one very long and involved, the other shorter for a “rapid” assessment. Is it possible to get the same amount of data from the first survey with the time it takes to do the rapid one? There is certainly some duplication. Definitions do not include any of the tomb types found in the New Orleans Cemeteries. Do a lot of training in the field for both professionals and amateurs. There is a recommendation section for the type of intervention that is needed based off this survey. Not a tomb by tomb survey, just an overall assessment, but requires user to look at all tombs and the site. Could be easily adapted to be a more rapid version of the individual tomb survey. By adding just a few fields and removing the information about storm damage. Codebook is a great addition, but some of the definitions are not necessarily something someone with out training in the field would be able to notice and identify on the spot.

## Rapid Cemetery Assessment Form

### Inspection
- **Inspection date/time:**
- **AM**
- **PM**
- **Inspector:**
- **Affiliation**

### Cemetery Description
- **Cemetery Name:**
- **Address:**
- **County/Parish Name:**
- **Est Cemetery Size:**

### Record
- **Lot/Section # or I.D.:**
- **Interment Type:**
  - Individual
  - Family
  - Multiple
  - Other
- **Est number of structures:**
  - 1
  - 2-4
  - 5-6
  - 6-10
  - >10

### Structures
- **Materials Found:**
- **Type of damage:**
- **Level of damage:**

### Enclosures
- **Materials Found:**
- **Type of damage:**
- **Level of damage:**

### Landscapes
- **Materials Found:**
- **Type of damage:**
- **Level of damage:**

### Comments/observations
- **Visible human remains/coffins:**
  - Yes
  - No
  - Don’t know

### Storm Data
- **Nature of water:**
  - Standing
  - Flowing
  - Seepage
  - Water Marks
  - Other
- **Sediment deposited:**
  - On Site
  - In Structure
  - Site erosion
  - Yes
  - No
  - Don’t know

### Further Actions
- **Further actions:**
  - Emergency Stabilization
  - Urgent Attention
  - Brush/Tree Clearing
  - Cleaning
  - Repairs

### Posting
- **Inspected**
- **Unsafe**
- **Restricted Use**
- **Historic Designation**
- **Detailed Evaluation Needed**

---

**Figure G.5:** National Center for Preservation Technology and Training Rapid Survey Form

Definitions for Rapid Cemetery Assessment Form

**Structures**
- **Marker** - sign or indication of a burial placed at the head of the body.
- **Footstone** - sign or indication of a burial placed at the foot of the body, usually smaller.
- **Box tomb/basal** - box shaped monument built above ground; burial usually takes place below ground, usually about 3’ by 6’ and 2’-3’ high.
- **Vault** - burial chamber commonly below ground.
- **Mausoleum** - large structure or building built above ground for burials.
- **Bedstead** - resembles the framework of a bed with side pieces and end pieces in addition to marker.
- **Obelisk** - stone pillar with a rectangular cross section tapering towards a point (Example Washington Monument).

**Materials**
- **Marble** - A hard usually white rock with visible crystals that fizzes with a drop of vinegar. This metamorphic rock contains calcium and is usually polished.
- **Limestone** - This medium to soft rock consists mainly of calcium, and is white to buff color. It also fizzes with vinegar or other acids.
- **Granite** - This igneous rock has visible medium to large crystals, usually grey in color but commonly found in pink, red, or black.
- **Slate** - A fine-grained metamorphic rock, with naturally smooth finish that tends to separate along bedding planes, commonly a grayish color.
- **Sandstone** - (also known as brownstone), a sedimentary rock consisting of sand consolidated with binder, porous and easily worked, and susceptible to separating.
- **Schist** - metamorphic rock with banded layer and medium crystals, color is streaky, silver, black, white, and green.
- **Brick** - used in foundations for markers and construction of monuments, historically pointed with lime-based mortar although it was repointed a Portland based mortar possibly (and incorrectly) used.
- **Wood** - Produced from trees, this material is used commonly in fences and markers, deteriorates much more quickly than stone.
- **Cast Iron** - An iron-based metal that is fabricated in sections and bolted together, cast in a mold allowing for greater detail. Sections are usually bolted together.
- **Wrought Iron** - An iron based metal that is shaped by forging allowing for more delicate pieces, lighter than cast iron.
- **Bronze** - A copper and tin metal alloy that usually forms a brown or possibly green patina.
- **Lead** - A soft malleable metal with several historical uses including to hold fence pieces together or in place, to shim stones, and cast in sculpture.
- **Zinc (White Bronze)** - cast metal that has a bluish color and is very durable.
- **Concrete** - Lime or Portland cement based used in construction and markers themselves, concrete markers often with a less refined appearance.
- **Glass** - commonly found as windows in mausoleums, may be leaded or stained glass.

**Coatings**
- **Limewash** - finish made from lime and water used to protect surfaces.
- **Cement Wash** - more modern wash with a cement additive.
- **Stucco** - finish made from sand, water, and lime to coat exterior, also concrete stucco.
- **Paint** - pigment suspended in liquid used to coat a surface.

**Types of Damage**
- **Collapse** - loss of structural integrity.
- **Fallen** - monument is not in its original position.
- **Broken** - forcibly separated into pieces.
- **Missing Pieces** - parts of the stone are no longer there.
- **Stained** - surface shows signs of stains that can not be removed with water alone.
- **Biological Growth** - lichen, mold, or mildew found on the surface.
- **Erosion** - areas have been removed by wind or water.
Appendix H

General Method of Survey or Data Acquisition | Response
--- | ---
Cemetery name: | n/a: The Preservation Information Bulletin on the Preservation of Historic Burial Grounds, a Publication of the National Trust for Historic Preservation
Date founded: | n/a
Is it still active?: | n/a
Cemetery type and location: | For general use

**Purpose:**

Was there a clearly defined purpose for the survey or an overarching research question to be answered? | Yes.
If yes, please what is the primary goal of survey (mapping, condition assessment, typology, etc.) | Documentation of individual grave markers.
Are the objectives of the survey and subsequent analysis identified? Are they different from the purpose? | No discussion of what to do post survey, except for appropriate cleaning and conserving techniques
What type of data dissemination is planned? (Published papers, maps, interpretive signage, etc.) | Not addressed.

**Methods:**

Did the creators consider alternatives to using a survey technique to collect information? (i.e., did they justify using survey research methods?) | No.
Did the authors consider different types of technology used to collect data or the storage and analysis of data after collection? If yes, what please indicate what was considered. | No.

**Data Worth:**

Did the creators provide a description of potential errors or issues that could come from the specific site? | Noted that it is a labor intensive process, and that no two sites are exactly the same, which could cause issues.
Did the authors use designs that considered cost, technology, space, or personnel limitations? | They are considered in the process, but only noted, not specifically planned around.
Is there a methodology in place for data checking and follow-up? | No
Was the scoring method or data input type for each question sufficiently described? | Fairly straightforward on the survey sheet.
Was the survey tested or practiced by participants prior to use in the field? | n/a
Were quality control measures used? | n/a
Was a code book used? | No.

Did the authors discuss what techniques were used for verifying and cleaning data entry post collection? | No. No discussion of data entry or database creation.

Figure H.1: National Trust for Historic Preservation Survey Analysis
**Appendix H**

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>How many people participated in the data entry?</td>
<td>n/a</td>
</tr>
<tr>
<td>Was there enough data to contribute to a valuable analysis?</td>
<td>n/a</td>
</tr>
<tr>
<td>Are gaps in final data discussed?</td>
<td>n/a</td>
</tr>
<tr>
<td>Were the statistical, analytic, and reporting techniques appropriate to the data collected?</td>
<td>n/a</td>
</tr>
<tr>
<td>Were the authors transparent to ensure evaluation and replication?</td>
<td>Yes. Standardized form.</td>
</tr>
<tr>
<td>Was evidence for validity provided?</td>
<td>n/a</td>
</tr>
<tr>
<td>Was evidence of reliability provided?</td>
<td>n/a</td>
</tr>
<tr>
<td>Were results able to be easily interpreted? Are there extreme outliers to the set-up of the survey based on the projected data to be acquired and researched? Or, is the data overly homogenous, not allowing for the researchers to see patterns?</td>
<td>No analysis of data.</td>
</tr>
<tr>
<td>Is replication possible given information provided? (within the site examined)</td>
<td>Yes. Standardized form.</td>
</tr>
<tr>
<td>Is replication possible on similar sites?</td>
<td>Yes. Standardized form.</td>
</tr>
</tbody>
</table>

**Output and Dissemination**

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is data available online or in print?</td>
<td>Form available in print or from the National Trust for Historic Preservation</td>
</tr>
<tr>
<td>If yes, what is available?</td>
<td>Form available in print or from the National Trust for Historic Preservation</td>
</tr>
<tr>
<td>Please list any comments on the usability or accessibility of the data available</td>
<td></td>
</tr>
</tbody>
</table>

**Specific Survey Details**

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year survey began:</td>
<td>n/a. Published in 1993</td>
</tr>
<tr>
<td>Year survey was completed:</td>
<td>n/a</td>
</tr>
<tr>
<td>Who participated in the planning of the survey?</td>
<td>National Trust</td>
</tr>
<tr>
<td>Who participated in the data collection?</td>
<td>n/a</td>
</tr>
<tr>
<td>What tools were used?</td>
<td>Paper form</td>
</tr>
<tr>
<td><strong>Methods:</strong></td>
<td></td>
</tr>
<tr>
<td>What was the survey method used in the field (paper, gps, cloud, etc.)</td>
<td>Paper form</td>
</tr>
<tr>
<td>What software programs were used for the digitization of the data collected, if any?</td>
<td>n/a</td>
</tr>
<tr>
<td>Field Types for data entry - is there a variety? (y/n, multiple choice, Likert scale (1 to 5), free form, etc.)</td>
<td>Free form, circle, multiple choice, Likert scale (1 to 5) for condition</td>
</tr>
<tr>
<td>Is Condition of the Tombs or Lots Specifically Addressed?</td>
<td>Yes</td>
</tr>
<tr>
<td>Question</td>
<td>Answer</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>If Condition, what type of scale is it on?</td>
<td>1 to 5 with multiple choice for types of causes and repairs</td>
</tr>
<tr>
<td>Is the integrity of the tombs addressed?</td>
<td>No</td>
</tr>
<tr>
<td>If integrity is addressed, what type of scale is used or how is it noted?</td>
<td>n/a</td>
</tr>
<tr>
<td>Are there free form fields for names or epitaphs?</td>
<td>No</td>
</tr>
<tr>
<td>Are measurements of the tomb lots or tombs recorded?</td>
<td>Just marker/tomb</td>
</tr>
<tr>
<td>Were photos taken of each tomb?</td>
<td>Yes, field for photo number entry</td>
</tr>
<tr>
<td>Has mapping been done to show the spatial relationships of the tombs?</td>
<td>n/a but recommended by National Trust earlier in the manual</td>
</tr>
<tr>
<td>Is the position of marker/tomb noted? Either the direction it faces, or where it is located on the map, or both?</td>
<td>Orientation noted</td>
</tr>
<tr>
<td>What types of tomb style data is collected? (Fonts, symbolism, color, etc.)</td>
<td>Motifs, repairs, vegetation</td>
</tr>
<tr>
<td>What types of tomb type data is collected? (shape, size, general massing, roof type, etc.)</td>
<td>Size, type, material, inscription type</td>
</tr>
<tr>
<td>Is the number of burials noted?</td>
<td>No</td>
</tr>
<tr>
<td>Is tomb/marker material noted?</td>
<td>Yes</td>
</tr>
<tr>
<td>Is there ownership/stakeholder information available?</td>
<td>No</td>
</tr>
<tr>
<td>Are burial dates recorded?</td>
<td>No, but inscriptions that may contain them are.</td>
</tr>
</tbody>
</table>

**Any additional notes:** Like others, the publication does not discuss what to do with the survey data, moves from the survey directly into conservation techniques. “Survey should be undertaken by professionals.” No exact examples of what that means. Confusing order to the fields, could cause it to take longer. But very short survey in general.

**Figure H.2: National Trust Survey Form**


### Sample Survey Sheet for Individual Grave Marker

<table>
<thead>
<tr>
<th>Name of Burial Ground: ___________________________</th>
<th>Marker Number: ___________________________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact Person: ________________________________</td>
<td>Other I.D.: ______________________________</td>
</tr>
<tr>
<td>Marker Orientation: E SE S SW W NW N NE</td>
<td></td>
</tr>
<tr>
<td>Name/Date: ___________________________</td>
<td>Photo Number: ___________________________</td>
</tr>
<tr>
<td>Dimensions: high ______ wide ______ thick</td>
<td></td>
</tr>
</tbody>
</table>

#### Marker Type:
- □ tablet  □ tablet-on-base
- □ foot  □ box
- □ table  □ obelisk
- □ tomb  □ mausoleum
- □ cradle  □ grave depression
- □ statuary  □ barrel vault
- □ monument  □ grave
- □ goods  □ plaque
- □ modern flat  □ other: ___________________________

#### Material:
- □ marble  □ limestone
- □ brownstone  □ sandstone
- □ slate  □ granite
- □ dolomite  □ fieldstone
- □ cast stone  □ brick
- □ stucco  □ white bronze
- □ iron  □ wood
- □ pottery  □ other: ___________________________

#### Severity of Condition:
- (least) 1 2 3 4 5 (most)
- Causes:
  - □ settling  □ weathering
  - □ vegetation  □ paint
  - □ graffiti  □ vandalism
  - □ other: ___________________________

#### Previous Repair:
- □ cement  □ adhesive
- □ iron pins  □ iron braces
- □ stucco  □ mortar
- □ cement  □ encased
- □ rebuilt  □ coatings
- □ other: ___________________________

#### Enclosure Type:
- □ none  □ iron/wood fence
- □ brick/stucco/stone wall
- □ brick/stucco/concrete/stone coping
- □ vegetation  □ other: ___________________________

#### Motif(s):
- □ death’s head  □ soul effigy
- □ urn and willow  □ portrait
- □ clasped hands  □ open book
- □ dove  □ lamb
- □ cross  □ florals
- □ cross and crown  □ fraternal
- □ other (describe): ___________________________

#### Complete Inscription:

- □ inscribed  □ raised
- □ painted  □ other: ___________________________

*Note back of survey form, copy exactly as found on marker*
### General Method of Survey or Data Acquisition

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cemetery name:</td>
<td>St. Louis Cemetery II</td>
</tr>
<tr>
<td>Date founded:</td>
<td>1823</td>
</tr>
<tr>
<td>Is it still active?:</td>
<td>Yes</td>
</tr>
<tr>
<td>Cemetery type and location:</td>
<td>Above ground urban cemetery, New Orleans Louisiana</td>
</tr>
<tr>
<td><strong>Purpose:</strong></td>
<td></td>
</tr>
<tr>
<td>Was there a clearly defined purpose for the survey or an overarching research question to be answered?</td>
<td>Yes</td>
</tr>
<tr>
<td>If yes, please what is the primary goal of survey (mapping, condition assessment, typology, etc.)</td>
<td>Document the cemetery and update the survey done in 1981. Mapping, burial information, type and style, some condition and integrity, tomb functions.</td>
</tr>
<tr>
<td>Are the objectives of the survey and subsequent analysis identified? Are they different from the purpose?</td>
<td>Yes, data management was a big objective, as was the development of the types and tomb styles over time, the development of the cemetery overall, language, ethnicity studies</td>
</tr>
<tr>
<td>What type of data dissemination is planned? (Published papers, maps, interpretive signage, etc.)</td>
<td>Research papers, maps, genealogical research information</td>
</tr>
<tr>
<td><strong>Methods:</strong></td>
<td></td>
</tr>
<tr>
<td>Did the creators consider alternatives to using a survey technique to collect information? (i.e., did they justify using survey research methods?)</td>
<td>Survey was the most feasible option, it also built on other surveys</td>
</tr>
<tr>
<td>Did the authors consider different types of technology used to collect data or the storage and analysis of data after collection? If yes, what please indicate what was considered.</td>
<td>Yes, open source database management, different methods of entry and mapping techniques considered</td>
</tr>
<tr>
<td><strong>Data Worth:</strong></td>
<td></td>
</tr>
<tr>
<td>Did the creators provide a description of potential errors or issues that could come from the specific site?</td>
<td>Somewhat, there was training on what to look for in terms of potential problems with the data collection</td>
</tr>
<tr>
<td>Did the authors use designs that considered cost, technology, space, or personnel limitations?</td>
<td>Some, but as it was a class, labor was largely free, technology is available through the school.</td>
</tr>
<tr>
<td>Is there a methodology in place for data checking and follow-up?</td>
<td>In the field yes, no post survey field check created yet</td>
</tr>
<tr>
<td>Was the scoring method or data input type for each question sufficiently described?</td>
<td>Yes</td>
</tr>
<tr>
<td>Was the survey tested or practiced by participants prior to use in the field?</td>
<td>Yes</td>
</tr>
<tr>
<td>Were quality control measures used?</td>
<td>Yes</td>
</tr>
<tr>
<td>Was a code book used?</td>
<td>Yes</td>
</tr>
</tbody>
</table>
### Did the authors discuss what techniques were used for verifying and cleaning data entry post collection?
Yes, data entry and cleaning of data was discussed, but due to the needs of multiple students, was often done by each person to fit their own needs, there is no one fully cleaned data set.

### How many people participated in the data entry?
12 students, 6 staff members/professors.

### Was there enough data to contribute to a valuable analysis?
Yes.

### Are gaps in final data discussed?
They were throughout the class, and will be discussed further in this thesis.

### Were the statistical, analytic, and reporting techniques appropriate to the data collected?
Yes, given the fact that it was a class, a lot more could have been done.

### Were the authors transparent to ensure evaluation and replication?
Yes.

### Was evidence for validity provided?
Yes.

### Was evidence of reliability provided?
Yes, to some extent. Training helps, but consistency is always an issue with more opinion based questions.

### Were results able to be easily interpreted? Are there extreme outliers to the set-up of the survey based on the projected data to be acquired and researched? Or, is the data overly homogenous, not allowing for the researchers to see patterns?
Yes, data can be easily interpreted to find basic patterns, and deeper analysis can be done with more time and technology.

### Is replication possible given information provided? (within the site examined)
Yes.

### Is replication possible on similar sites?
Likely. This is a very specific survey to a specific site. Parts could be replicable on other New Orleans cemeteries, but not in its entirety.

### Output and Dissemination

<table>
<thead>
<tr>
<th>Is data available online or in print?</th>
<th>In print and in an Access database, but only in the office, no large scale dissemination yet.</th>
</tr>
</thead>
<tbody>
<tr>
<td>If yes, what is available?</td>
<td>1981 Survey, 2012 Survey, Mapping, Analysis done by the class as part of the final projects</td>
</tr>
<tr>
<td>Please list any comments on the usability or accessibility of the data available</td>
<td>Plans for availability for researchers should be made. Large amounts of data are present</td>
</tr>
</tbody>
</table>

### Specific Survey Details

<table>
<thead>
<tr>
<th>Year survey began:</th>
<th>2012, but prior survey was done in 1981.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year survey was completed:</td>
<td>2013 with the completion of data entry.</td>
</tr>
<tr>
<td>Who participated in the planning of the survey?</td>
<td>Director and Staff of the Architectural Conservation Lab at the University of Pennsylvania.</td>
</tr>
<tr>
<td>Who participated in the data collection?</td>
<td>Students of the Historic Preservation program at the University of Pennsylvania</td>
</tr>
<tr>
<td>Question</td>
<td>Answer</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>What tools were used?</td>
<td>Paper survey in the field, photos and locator maps. Access for data entry and analysis, GIS for mapping and visualization</td>
</tr>
<tr>
<td><strong>Methods:</strong></td>
<td><strong>Methods:</strong></td>
</tr>
<tr>
<td>What was the survey method used in the field (paper, GPS, cloud, etc.)</td>
<td>Paper survey in the field, photos and locator maps, based off of aerial photography and a GIS map</td>
</tr>
<tr>
<td>What software programs were used for the digitization of the data collected, if any?</td>
<td>Access, scanned records from 1981, Google forms</td>
</tr>
<tr>
<td>Field Types for data entry - is there a variety? (y/n, multiple choice, Likert scale (1 to 5), free form, etc.)</td>
<td>Yes, all of the above</td>
</tr>
<tr>
<td>Is Condition of the Tombs or Lots Specifically Addressed?</td>
<td>Yes</td>
</tr>
<tr>
<td>If Condition, what type of scale is it on?</td>
<td>1 to 5</td>
</tr>
<tr>
<td>Is the integrity of the tombs addressed?</td>
<td>Yes</td>
</tr>
<tr>
<td>If integrity is addressed, what type of scale is used or how is it noted?</td>
<td>1 to 5</td>
</tr>
<tr>
<td>Are there free form fields for names or epitaphs?</td>
<td>Yes.</td>
</tr>
<tr>
<td>Are measurements of the tomb lots or tombs recorded?</td>
<td>Yes.</td>
</tr>
<tr>
<td>Were photos taken of each tomb?</td>
<td>Yes, in 2010. Only taken in 2012 if a change was noted between the present condition and the photograph.</td>
</tr>
<tr>
<td>Has mapping been done to show the spatial relationships of the tombs?</td>
<td>Yes, and was revised after the survey.</td>
</tr>
<tr>
<td>Is the position of marker/tomb noted? Either the direction it faces, or where it is located on the map, or both?</td>
<td>Yes. Both</td>
</tr>
<tr>
<td>What types of tomb style data is collected? (Fonts, symbolism, color, etc.)</td>
<td>Columns, pilasters, steps, raised base, integral sculpture, furniture,</td>
</tr>
<tr>
<td>What types of tomb type data is collected? (shape, size, general massing, roof type, etc.)</td>
<td>Shape, size, roof type, tomb skin type</td>
</tr>
<tr>
<td>Is the number of burials noted?</td>
<td>Only through the analysis post-field work.</td>
</tr>
<tr>
<td>Is tomb/marker material noted?</td>
<td>Yes</td>
</tr>
<tr>
<td>Is there ownership/stakeholder information available?</td>
<td>Yes, background information was collected, and burial records are available, but not easily accessible.</td>
</tr>
<tr>
<td>Are burial dates recorded?</td>
<td>Yes.</td>
</tr>
<tr>
<td><strong>Any additional notes:</strong></td>
<td>Strength of this survey is that the data management plan was an integral part of the process from the very beginning. It also builds off of previous survey, which helps to manage what the strengths and weaknesses of the site are. Even a basic guide for data entry.</td>
</tr>
</tbody>
</table>

* All information obtained from the Architectural Conservation Laboratory at the University of Pennsylvania, 2012 to 2013.
**UPenn Architectural Conservation Lab Survey Form for St. Louis Cemetery II, Spring 2012**

**Figure I.2**

1. Verify location on site plan.
2. Identify front of tomb.
3. Enter data in CAPITAL LETTERS ONLY.
4. Record ALL ACCENTS when entering family name data.

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>How many BREACHED VAULTS does the tomb have?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length is measured in inches from front to rear along one side at mid way. Enter &quot;0&quot; if the tomb is a ruin.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of TIERS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of BAYS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the sub vault a CAVEAU?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Is the tomb a ruin with no discernible tiers.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the vault an individual interment chamber. Check all that apply.</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Is there a FAMILY NAME TABLET?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there a TOMB ROOF?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there a MILITARY MARKER on the tomb or tablet?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Is there a SOCIETY TOMB?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there a METAL ENCLOSURE?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there a CAVEAU?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there a DESIGNER / BUILDER *</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:**
- Always record family name tablets. Enter "X" if none are present.
- Name inscribed on family name tablet usually recorded in the family or society name.
- Sometimes recorded in the family or society name but not always.
- The tomb is not functional and NO burial chambers remain intact.
- Discernible bay.
- Partial repairs (e.g., bench, sculpture, urn, planter)
- Metal ornament, usually recorded as sub-vaults.
Appendix J

Figure J.1: Field Check Methodology Chart

<table>
<thead>
<tr>
<th>Question</th>
<th>Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confirm Tomb Number and Location on the map based on photograph</td>
<td>Correct / Incorrect</td>
</tr>
<tr>
<td>Has the tomb significantly changed since the last photograph?</td>
<td>Yes/No</td>
</tr>
<tr>
<td>If Yes, take a new photo</td>
<td>Note photo number</td>
</tr>
<tr>
<td>What has changed?</td>
<td>Metalwork missing, tablet missing or deteriorated, shell deteriorated, new burial, vault lost, major structural damage, other</td>
</tr>
<tr>
<td>Check the unique values, those that were written in, particularly any where the handwriting is illegible</td>
<td>Are they correct? Y/N, if No, write in new values</td>
</tr>
<tr>
<td>Check any of the tombs where the 'verify in field' box has been checked in the database.</td>
<td>Free form for what might be missing or need to be verified.</td>
</tr>
<tr>
<td>Please indicate the number of new burials since 1981</td>
<td>Free form.</td>
</tr>
<tr>
<td>Please list names and dates for each new burial</td>
<td>Free form.</td>
</tr>
<tr>
<td>Confirm the count of burials according to the data with the number of names you can see</td>
<td>Correct / Incorrect</td>
</tr>
<tr>
<td>Confirm the names according to the database, are they spelled correctly?</td>
<td>Y/N and note any discrepancies</td>
</tr>
</tbody>
</table>
Appendix K

St. Louis Cemetery II: New Orleans, Louisiana

Figure K.1 Burial Density in St. Louis Cemetery II

Number of Known Burials by Tomb
## Appendix K

### Figure K.2: Charts Depicting Burial Type Counts by Block and by Total Cemetery for St. Louis Cemetery II

<table>
<thead>
<tr>
<th>BLOCK</th>
<th>Roof Type</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BARREL</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>BARREL WITH STEP</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>BEVEL AND FLAT</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>CROSS</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>FLAT</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>GABLE</td>
<td>175</td>
</tr>
<tr>
<td></td>
<td>HIP</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>HIP AND BARREL</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>MONUMENT</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>NO ROOF</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>SLANT STEP FLAT</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>STEP</td>
<td>113</td>
</tr>
<tr>
<td></td>
<td>STEP AND GABLE</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>STEP AND SLOPED</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>UNKNOWN</td>
<td>18</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BLOCK</th>
<th>Roof Type</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>BARREL</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>BELLCAST</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>CROSS</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>FLAT</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>GABLE</td>
<td>248</td>
</tr>
<tr>
<td></td>
<td>HIP</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>NO ROOF</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>SHALLOW GABLE</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>STEP</td>
<td>169</td>
</tr>
<tr>
<td></td>
<td>UNKNOWN</td>
<td>9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BLOCK</th>
<th>Roof Type</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>BARREL</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>BELLCAST</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>CURVE STEP</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>FLAT</td>
<td>89</td>
</tr>
<tr>
<td></td>
<td>GABLE</td>
<td>147</td>
</tr>
<tr>
<td></td>
<td>HIP</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>NO ROOF</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>STEP</td>
<td>97</td>
</tr>
<tr>
<td></td>
<td>STEP AND GABLE</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>STEP GABLE</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>STEP WITH CUPOLA</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>UNKNOWN</td>
<td>19</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Roof Type</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>BARREL</td>
<td>47</td>
</tr>
<tr>
<td>BARREL WITH STEP</td>
<td>1</td>
</tr>
<tr>
<td>BELLCAST</td>
<td>3</td>
</tr>
<tr>
<td>BEVEL AND FLAT</td>
<td>1</td>
</tr>
<tr>
<td>CROSS</td>
<td>4</td>
</tr>
<tr>
<td>CURVE STEP</td>
<td>1</td>
</tr>
<tr>
<td>FLAT</td>
<td>166</td>
</tr>
<tr>
<td>GABLE</td>
<td>570</td>
</tr>
<tr>
<td>HIP</td>
<td>15</td>
</tr>
<tr>
<td>HIP AND BARREL</td>
<td>2</td>
</tr>
<tr>
<td>MONUMENT</td>
<td>1</td>
</tr>
<tr>
<td>NO ROOF</td>
<td>23</td>
</tr>
<tr>
<td>SHALLOW GABLE</td>
<td>1</td>
</tr>
<tr>
<td>SLANT STEP FLAT</td>
<td>1</td>
</tr>
<tr>
<td>STEP</td>
<td>379</td>
</tr>
<tr>
<td>STEP AND GABLE</td>
<td>2</td>
</tr>
<tr>
<td>STEP AND SLOPED</td>
<td>1</td>
</tr>
<tr>
<td>STEP GABLE</td>
<td>1</td>
</tr>
<tr>
<td>STEP WITH CUPOLA</td>
<td>1</td>
</tr>
<tr>
<td>UNKNOWN</td>
<td>46</td>
</tr>
</tbody>
</table>
Figure K.3 Roof Type and Skin Style Comparison in St. Louis Cemetery II
Appendix K

Figure K.4: Burial Dates by Decade, with unknowns.

Figure K.5: Burial Dates by Decade, without unknowns.
Figure K.6 Quadrant Map of St. Louis Cemetery II

St. Louis Cemetery II: New Orleans, Louisiana

Squares Divided into Quadrants
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