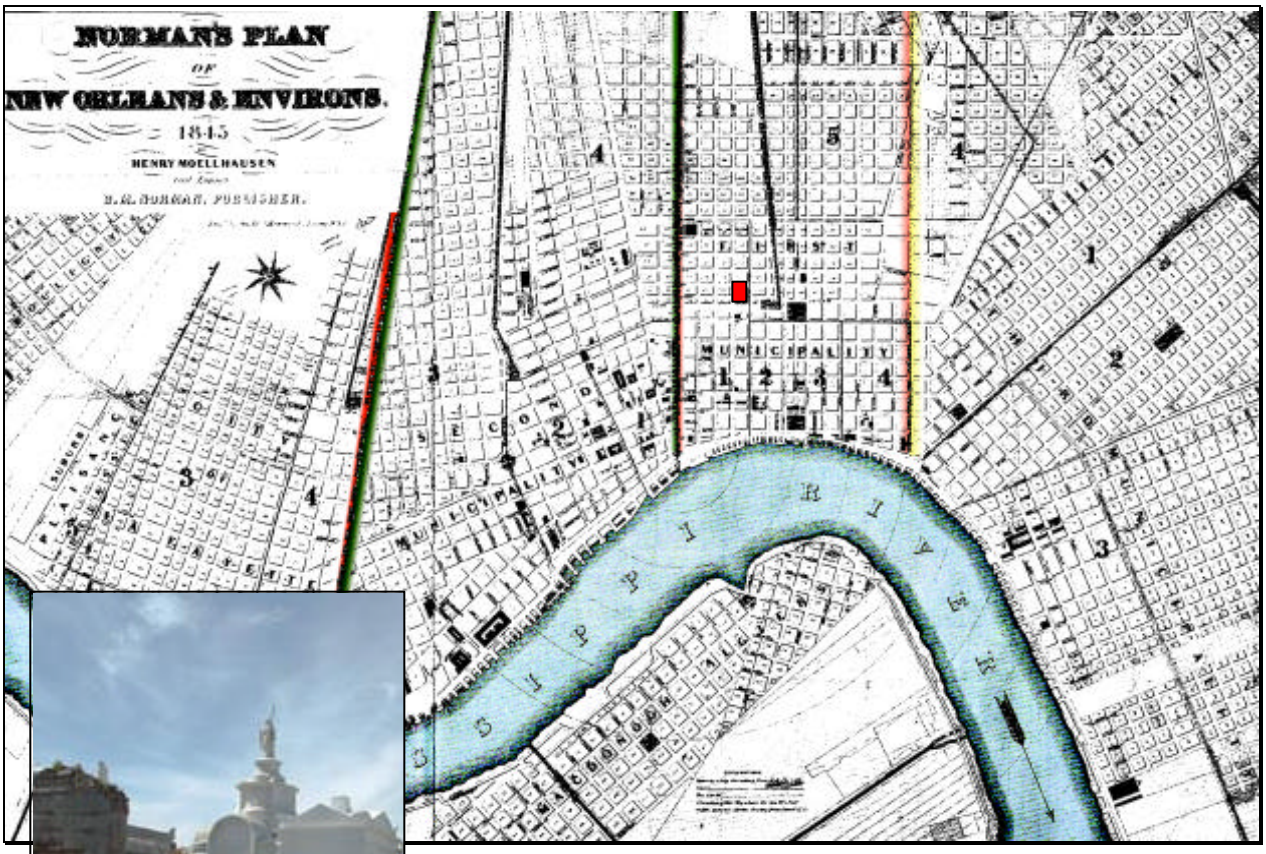

DEAD SPACE

Defining the New Orleans Creole Cemetery

A Site Conservation and Management Plan for St. Louis 1 Cemetery

A Collaborative Studio

The Department of Historic Preservation and Landscape Architecture

The Graduate School of Fine Arts, University of Pennsylvania

Spring 2001

Major Support Provided By:

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Background

The early Creole cemeteries of New Orleans, long appreciated and promoted as historic sites as well as traditional burial places, are currently experiencing renewed popularity through heritage tourism. Yet with this revived interest, has come commercialization, overzealous restoration and opportunistic vandalism in addition to existing neglect and abandonment. As a result many of these sites are now at serious risk through loss of physical integrity and historical character as well as changing social and cultural contexts. A new approach to their care and management as cultural landscapes is urgently needed to make more informed decisions regarding their preservation and long-term development.

New Orleans's earliest burial grounds were established in close proximity to the young city, first along the high ground of the natural levee, and later in designated lots within the urban grid. According to early accounts and archaeological investigation, interment for most of the population was below ground, the disadvantages being obvious during periods of flooding. Following earlier European traditions, only the clergy and citizens of the highest status warranted burial within the sacred precinct of the Catholic church. In 1789, after previous relocations due to city expansion, the dead were moved again outside city boundaries to the new St. Louis Cemetery in the swampy area known as the King's Commons between the inhabited city and the wilderness of Lake Pontchartrain beyond.

The result of Spanish Royal decree in response to urban crowding and the fear of disease and a disastrous flood and Yellow Fever epidemic the year before, this extramural site reassigned the dead to a marginal realm away from the living in terrain traditionally associated with the undesirable, the unhealthy, and the dangerous. Here, outside the ramparts, was also located the city's drainage and sewage collection point, as well as the expansive cypress and palmetto swamp separating Lake Ponchartrain from the northern

edge of the city. Later, during the late eighteenth century, Carondelet's canal and commercial basin was constructed on the eastern and southern perimeter of the cemetery and efforts were made to drain the swamp. By the mid nineteenth century, the cemetery would find itself encroached yet again, this time by the expansion of Basin and the surrounding streets and the activities of the lumber mills, breweries, and rail yards. By the end of the century, the cemetery shared the neighborhood with the social fringes of society in the infamous area known as "The District" or Storyville. In the 1940s, Storyville gave way to public housing and the construction of the interstate in the 1970's.

By the beginning of the nineteenth century, the city's unusual ethnic mix of Indian, African, French, and Spanish inhabitants offered an exotic 'other' to foreign and northern visitors after the Louisiana Purchase opened the city and territory in 1803. The Creole French Quarter with its old buildings and archaic customs attracted a growing number of tourists in search of different and authentic experiences as well as a warm winter climate. The cemeteries with their dense concentration of aboveground sepulchers and the spectacle of public Catholic rituals provided an endless source of commentary and were among the city's most visited tourist attractions by the end of the nineteenth century. This tourist activity, promoted by the city's commercial leaders during the International Cotton Exposition of 1884, became a major industry by the turn of the century and a principal factor in shaping the current prospects and problems of these sites as cultural landscapes today.

As in other American cities, the preservation of New Orleans Creole cemeteries began with public concern and activism during the early decades of the twentieth century. Later through the efforts of private and government professional institutions and advocacy groups, the protection and documentation of these sites began. This eventually resulted in federal designation and an extensive survey of the city's major historic cemeteries, coordinated by The Historic New Orleans Collection from 1981 through 1983 and the creation of private advocacy groups such as Save Our Cemeteries, Inc. In 1985 and 1998 further preservation work was accomplished through the development of conservation surveys and tomb treatment programs through state and private funding.

Over the past decade, an increased awareness of the complexity of issues required for the interpretation and care of historic and cultural sites has generated new approaches and techniques under the expansive concept of Heritage Management. Formerly termed Cultural Resource Management or CRM and long associated with archaeological sites, the concept has been expanded as a total planning strategy for the documentation, conservation, development and management of all cultural heritage sites, especially cultural landscapes and traditional places. Similarly, federal, state and municipal agencies, and preservation professionals are increasingly exploring new technologies such as Geographic Information Systems (GIS) to aid in the planning and management of cultural and natural resources focusing on current and future use, development and long-term maintenance needs.

The **Graduate School of Fine Arts Collaborative Studio** was developed in2000 in conjunction with Save our Cemeteries, Inc., and the Roman Catholic Church of the Archdiocese of New Orleans by the University of Pennsylvania's Graduate School of Fine Arts Departments of Historic Preservation and Landscape Architecture with Tulane University's School of Architecture/Preservation Studies. The project proposed to address the following objectives:

- develop a model conservation plan for New Orleans's early cemeteries
- offer education and training on the methodologies employed in this effort
- initiate public outreach activities to publicize its results and the preservation of other historic cemeteries

This project was funded by grants from the Louisiana Division of Historic Preservation, Office of Cultural Development, and the Samuel H. Kress Foundation. St. Louis 1 Cemetery was selected to serve as a model for other New Orleans historic cemeteries, with possible future application to other sites within the city and state.

Studio Concept

The Collaborative Studio sought to develop a model conservation plan through the documentation, recording and analysis of this urban landscape and its context through time. This was realized through a visual mapping and survey of the cemetery coupled with a practical conservation program for the care, development, and maintenance of these unusual necrogeographies and their features (e.g., tombs, paths, vegetation, etc.) The project focused on St. Louis I Cemetery, the oldest and most heavily visited of the city's many historic cemeteries. Central to the studio phase of the project was the utilization of digital technology such as Geographic Information Systems (GIS) as a descriptive, analytical and communication tool to better survey, analyze, and ultimately manage similar sites throughout the city and state. It sought to develop and implement practical technical solutions to the increasing material problems of tomb degradation and loss of place by preparing specific technical and design guidelines for site managers and tomb owners.

In the process of developing and testing these tools, the program also addressed the social and cultural realities of these places through research into past and current uses and associations by different stakeholders using archival research, oral history, and photography. It developed a local public interface by including professionals and community members in the processes of documentation and preservation thus establishing and re-enforcing connections between communities, heritage and place.

The results of all phases of this project will be reported through the construction of an active website, **www.noladeadspace**, as well as more traditional vehicles such as locally published articles *(SOC Newsletter* and *Preservation in Print*) and a workshop on the preservation of culturally significant urban cemeteries and burial grounds in September 2001.

By focusing on the immediate practical and long-range management issues of these unique sites, it is hoped that other less obvious, but no less important considerations

responsible for the creation and evolution of these places will be addressed. Through the benefits of a multi-disciplinary approach and the use of GIS, various aspects of the cemetery will be explored including the physical evolution of the site over time and the mapping of cultural influences (Spanish, French, Anglo-American, African) on tomb location, type and style. Existing conditions and treatment recommendations have begun to be studied through the construction and manipulation of relational datasets. Also addressed will be the role of past invented histories and tourist development in the decline and revival of the historic cemeteries of New Orleans. Such concerns are related to the larger cultural questions of the 'construction of identity' and the 'invention of tradition', which have been of interest to public historians, anthropologists, and preservationists in understanding people's changing relationships to specific sites. For preservation, these issues beg renewed consideration of such places as social constructs rather than only as designed entities, both necessary for the continued use and preservation of these places as unique culturally-defining elements for New Orleans and the region.

Project Participants

Under the direction of Professor Frank G. Matero, Program in Historic Preservation, and Dana Tomlin, Department of Landscape Architecture, Graduate School of Fine Arts, University of Pennsylvania, the following 27 students participated in the study of the Saint Louis 1 Cemetery:

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Elizabeth Haydon, Lauren Meyer, Judy Peters, and Carla Radlosovich compiled, edited, and produced the final document under Professor Frank Matero.

INTRODUCTION

1.0 PROJECT INTRODUCTION

1.1 Goals and Statement of Purpose

The primary goal of this project has been to provide a conservation and management plan for the St. Louis 1 Cemetery in New Orleans, Louisiana. This site is the city's oldest surviving urban cemetery and is of national, as well as local, historical significance. Among the many reasons for its importance are the cemetery's unique and early design, its reflection of New Orleans's social diversity, the high quality and integrity of its architecture and the continuity of its traditional use to the present day.

New Orleans was founded along a sharp bend of the Mississippi River, on the east bank, from which its popular name, "Crescent City," is derived. The modern metropolis has spread far beyond this original location. Because the saucer-shaped terrain lies as low as five feet (1.5 meters) below sea level and has an average rainfall of 57 inches, a levee system and adequate drainage have always been of prime importance. St. Louis 1 Cemetery is located to the north of the original colonial city in the Tremé neighborhood, within a square bounded by Basin, St. Louis, Conti, and Tremé Streets.

In 1819, Benjamin Latrobe wrote that the cemetery was approximately 300 feet square, a larger space than the cemetery occupies today. Basin Street cut through the site by 1834, and was enlarged around the turn of the twentieth century, overtaking part of the cemetery. The extension of Tremé Street cut off more of the site to the rear.[1] The cemetery today contains 644 identified tombs, with a total of 730 burial lots, including the wall vaults which are herein counted as one lot each. Owned by individuals, families, or societies, the tombs of St. Louis 1 Cemetery are multi-burial, above ground interments. The site contains a large variety of tomb types, styles, construction methods, and materials. Brick structures were usually plastered and limewashed, and had flat, barrel, gable, or hipped roofs, however beginning in the mid nineteenth century, marble tombs of

[1] *National Registration Nomination for St. Louis 1 Cemetery*, July 30, 1975.

elaborate design were introduced. Regardless of tomb type or style, it became common practice for owners to use the same tombs for several generations of burials, recycling the valuable and limited property.

St. Louis 1 Cemetery, along with seven other Archdiocesan cemeteries within the city limits, are owned and managed by the Office of Cemeteries of the Archdiocese of New Orleans. It is maintained by Our Lady of Guadalupe church, the former mortuary chapel, located directly across Basin Street from the cemetery. The Office of Cemeteries employs a director and an individual cemetery superintendent crew of six workers to perform the upkeep required by perpetual care obligations, as well as to fill inscription orders for tablets and maintain the cemetery grounds.

Saint Louis 1 Cemetery is a living cultural landscape. It is a dynamic space where religious devotion and cultural tourism coexist. It is one of few cemeteries in the United States that has been accepted for the National Register (July 30, 1975) and has recently been identified as one of the Save America's Treasures sites.

This conservation plan seeks to identify the historic framework that defines the physical and cultural character of the cemetery and proposes a set of guidelines and recommendations for the sustainable management and protection of the site as a cultural resource. Additionally, the plan recognizes that St. Louis 1 Cemetery is, at its core, a sacred space reserved for the consecrated burial of the dead in accordance with Roman Catholic Church doctrine. The plan bases its recommendations and proposals for intervention in alignment with, and sympathetic to, this primary purpose and set of core beliefs.

Before conservation recommendations could be made and a management plan proposed, the strengths, weaknesses, threats, and opportunities of the site were identified. Analysis shows multiple strengths. St. Louis 1 Cemetery has an organized and cooperative management structure in the Archdiocese of New Orleans. This framework provides a stable structure through which a management plan can be implemented. The current use

of the site continues its historical function as a burial ground; an activity that is, and has always, been accompanied by tourism, (which has escalated significantly in the past decade.) Both uses can be continued indefinitely into the future.

The site possesses cultural and historical significance at the local, state, and national levels. Its physical location marks the early limits and the expansion of the city, while its tombs and monuments showcase the region's wealth of artistic design and the many ethnic influences in the region. In addition, the cemetery encapsulates the very essence of the city's Creole origins in its mixture of European and native influences upon the environmental conditions. The site also possesses great integrity in its tombs, walls, artwork and landscape. It is well documented in photographs and journal accounts, and is, itself, a valuable historic research tool. It also presents a quiet respite in the midst of a bustling city.

Although the site displays many strengths, weaknesses are also present. Changing demographics have made communication with tomb owners difficult, if not impossible, which, in turn, impedes the maintenance and repair of the tombs. Financial resources are limited, resulting in years of deferred maintenance. In addition, physical isolation has made on-site security insufficient to protect visitors and cemetery resources.

The opportunities for the site are many and varied. New techniques for conservation can be developed and used in the repair and cyclical maintenance of the cemetery's tombs and landscape. In addition, continued use of traditional building materials and techniques can be reinstated to demonstrate and educate the growing market in the preservation trades. Current restoration/reconstruction guidelines can be revised to align new construction and restored tombs with the existing historical character. Landscape restoration guidelines can be integrated with tomb guidelines to create a more historically accurate site that can combine the qualities of an outdoor museum with a park-like setting. Tour groups can be organized and restricted to promote site safety, cemetery etiquette, and historical accuracy. Pedestrian and vehicular access to the site can be improved. Development of the surrounding area can better integrate the neighborhood

with the site. In addition, new burials can be promoted by emphasizing the traditional and primary use of the site. All of these efforts could have a positive impact on the local economy.

Threats are also present at the site. Deferred maintenance and improper repair have resulted in increased damage and loss to the tombs and landscape. This represents not only a safety hazard to visitors as tombs become unsafe, but has resulted in diminished historical integrity and character of the site. Current restoration/reconstruction guidelines have also led to the loss of architectural and historical character. Tomb, tablet and concrete roof replacements; cement stuccos; and concrete aprons and paving have all compromised the design and potential long-term performance of the old tombs and their setting. Such repairs will eventually lead to significant tomb damage and eventual loss. On the tourism front, the lack of programming has led to the distribution of inaccuracies in historical information and has eroded the experiential quality of the place due to overcrowding. In the past, a lack of security has created a vandalism problem that could recur, leading to the attrition of the overall site.

In summary, this management plan has five main objectives:

1. To provide for the management of the St. Louis 1 Cemetery as a cultural landscape that is a functioning cemetery and cultural tourist site so that the inherent historical value of the place is conserved and improved for all users and visitors alike

2. To increase public awareness of and interest in the historical value of St. Louis 1 Cemetery, and to promote the educational and cultural value of the cemetery as a whole

3. To outline a sustainable approach to the future conservation and management of the cemetery's landscape including its built features and immediate environs. This approach will balance the cemetery's use as a functioning burial ground, the conservation of its historic features, its environmental context, and issues involving visitor safety and access

4. To identify the economic and cultural benefits of the St. Louis 1 Cemetery and work with partners in the local community to maximize these benefits without interfering with the site's use as a burial ground or damaging the site's historic resources

5. To suggest a program of action that is achievable and will contribute to the conservation, understanding and, where appropriate, the improvement of the St. Louis 1 Cemetery for all those who visit the cemetery.

1.2 Stakeholders

Many different people, groups, and organizations are associated with St. Louis 1 Cemetery. This conservation plan has sought to identify these groups and address their diverse wants and needs. The following is a current list of such stakeholders and their interest in the site.

The Roman Catholic Archdiocese of New Orleans: The New Orleans Archdiocesan Cemeteries, or the Cemeteries Office of the New Orleans Roman Catholic Archdiocese, came into being in 1966 with the following mandate:

- to run and operate the eight Archdiocesan cemeteries in the city of New Orleans
- to represent the Archbishop in the supervision of the fourteen parish cemeteries in the region

As cemetery managers, this office handles all upkeep and development within the Archdiocesan cemeteries. With this comes the obligation to restore, rehabilitate and preserve these formerly "neglected" sites, which include St. Louis 1. In addition to this tenet, this office operates a program that attempts to bring memorials under "Perpetual Care" contracts. [2] Under Perpetual Care, a tomb owner is able to set up an endowment with which the Archdiocese is able to care for the tomb indefinitely. This management plan seeks to provide well-documented options for the care and repair of the above ground masonry tombs of the St. Louis 1 Cemetery, to be used in others of the same type in the future.

Private tomb owners (including friends and relatives of the deceased): As owners of the tombs and plots of land upon which they sit, this group has the final say in the care of the memorials within St. Louis 1 Cemetery. Though many of the families with tombs within the walls of St. Louis 1 are long since gone from the city of New Orleans, several do remain. With limited knowledge of the care needed for their tombs, and how these tombs deteriorate, they often depend upon the Archdiocese to maintain and repair, when necessary. A key aspect of this management plan is to clearly state that there are

[2] New Orleans Archdiocesan Cemeteries, "Document I: Cemeteries Office or The New Orleans Archdiocesan Cemeteries (Corporate Title)."

preservation options available to the tomb owner who seeks to retain the historic character of his/her family memorial.

Tourists and tourist organizations: From the time of its inception, St. Louis 1 Cemetery was an attractive destination for the tourist. At this point in history, the site is more a destination for the traveler than a burial place for the deceased. It is for this reason that a sustainable management plan must include recommendations for the management of tourism within the site. Both tour guides and tourists must be made aware of the importance of the cemetery as a historic site, a sacred site, and an invaluable cultural resource if they are to participate in the preservation of the place whose tombs and history have drawn them through the gates.

Save Our Cemeteries, Inc.: Established in 1974, Save Our Cemeteries, Inc. (SOC) is an organization dedicated to the preservation and protection of the historic cemeteries of New Orleans. SOC's goal is to provide tomb owners and cemetery operators with information outlining proper restoration techniques suitable for historic tombs through special programs, education, tours, and fundraisers. SOC has participated in several pilot studies that monitor conservation techniques for above ground burial monuments, including the tomb restorations currently underway in St. Louis 1 Cemetery. The SOC hopes to develop a training program for local trades and artisans that will aid in the restoration of historic tombs, making use of the guidelines laid out in this management plan.

Other bodies and individuals with a direct interest in the management and care of St. Louis 1 Cemetery include:

- **Friends of New Orleans Cemeteries**
- **New Orleans Community: the general public and the Tremé neighborhood residents**
- **National, State, and local preservation organizations**

These are the primary stakeholders taken into account during the compilation of this plan. This list is not meant to be all-inclusive, as there are many more people and groups with an active interest in the site.

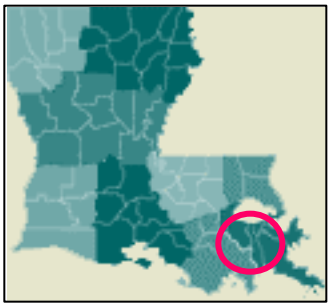
HISTORICAL BACKGROUND

2.0 HISTORICAL BACKGROUND

2.1 The City Landscape

United States (www.maps.com)

The city of New Orleans and Orleans Parish are coextensive, covering an area of 199 square miles (518 kilometers). The boundaries are formed by the Mississippi River and Jefferson Parish to the west and Lake Pontchartrain to the north. Lake Pontchartrain is connected by the Rigolets Channel to Lake Borgne on the east, and the southern boundary of New Orleans is made up of St. Bernard Parish and, again, the Mississippi River. The city is divided by the Mississippi, with the principal settlement on the east bank. The west bank, known as Algiers, has grown rapidly. It is connected to eastern New Orleans by the Greater New Orleans Bridge. The early city was located on the east bank along a sharp bend in the Mississippi, from which its popular name, "Crescent City," is derived. The modern metropolis has spread far beyond this original location. Because its saucer-shaped terrain lies as low as five feet (1.5 m) below sea level and has an average rainfall of 57 inches (1425 mm), a levee, or embankment system and proper drainage have been crucial to the city's development.



Louisiana state (www.louisiana.com)

Topographical and Drainage Map of New Orleans and Surroundings, 1878, by T.S. Hardee, (THNOC). St. Louis 1 Cemetery is highlighted in red.

2.2 Urban History

New Orleans's rich and varied history draws from its past population as well as its key location. Three different nations have occupied and ruled the city and together with native American and black African peoples, each group has contributed its culture, language, and traditions that define the city today.

2.2.1 French Colonization

As early as the seventeenth century, France had established settlements in North America in the region now known as Quebec, Canada. By the mid seventeenth century, in order to insure their presence on the continent and to minimize that of the British, the French determined that control of the Mississippi River and its tributaries was critical. To do so, they would need to control the mouth of the river in the delta at the Gulf of Mexico. The problem with this site was the lack of high ground because the delta was—and is—primarily swamp, marshes, and water. Nevertheless, the site was deemed strategically necessary and was thus chosen for the new city.

Map of the Louisiana Coast, 1719-20, by M. de Serigny.

New Orleans is situated on the northern bank of a great curve in the Mississippi River, with natural levees averaging ten to fifteen feet above sea level and only one to two miles in depth. The levees gradually drop off into swamplands.[1] While the oldest part of the city rests on these levees, the majority of the modern city rests at or below sea level and is subject to flooding. New Orleans was originally the size of what is now known as the French Quarter or *Vieux Carré*. The city was founded in 1718, and by 1720 Adrien DePauger and LeBlond de la Tour had drawn up plans in an orthogonal gridiron pattern. A central location was reserved for royal buildings and public squares, including the parish church, later to become St. Louis Cathedral.[2]

In 1731, France appointed a governor to act as the new colony's representative and executive. The governor exercised dictatorial, judicial, and legislative control.[3] During this period of French rule, development of New Orleans progressed slowly. Immigration was encouraged only among Catholic Frenchmen, who usually preferred to remain in France, due to their general distrust and dislike of Englishmen and Protestants.[4]

New Orleans law is based on French Civil Law, a form of legislature that continues to serve Louisiana at its base. (The rest of the United States laws are based on British Common Law.)[5] One of the most influential laws was the Black Code *(Code Noir)* that dealt with slavery and racial issues. While some of the codes were severe, many others were lenient, especially in light of the rest of the continent's laws. Slaves could be educated, baptized, and married with the church's recognition, and sue their masters for abuse. Free people of color could own land and run businesses.[6] Many of these rights were revoked once Louisiana passed into the hands of the United States.

[1] Donnald McNabb and Lee Madere, *A History of New Orleans* (New Orleans: Lee Madere, 1997),p.5.
[2] McNabb, pp.6-7.
[3] Federal Writers' Project, *New Orleans City Guide*, revised by Robert Tallant, (Boston: Houghton Mifflin Company, 1952), p.11.
[4] Mcnabb, p.7.
[5] Robert Florence, *City of the Dead: A Journey Through St. Louis Cemetery #1* (Louisiana: The Center for Louisiana Studies), p.34.
[6] *Ibid*,p.35.

The economic policy of French Louisiana benefited France, the mother country. Raw materials were transported back to France, while finished materials were sold in markets in the colony. It was this emphasis on containing commerce between France and its colony that limited Louisiana's growth and development. The French considered the area a buffer zone to English and Spanish expansion and a symbol of French dominance in North America.

This *laissez-faire* attitude changed when John Law, a Scotsman, gambler, and financial advisor to the Duc d'Orleans, developed a plan in which the Louisiana colony would be operated by his newly formed Mississippi Company. Sales of shares in the company would pay off France's debt and increase Louisiana's appeal as a place to live and conduct business. The plan failed. Due to the lack of profits, the territory reverted back to the Crown's control, and, after this debacle, France did little to encourage the colony's development. The shortage of immigrants led to large importation of slaves, which in turn resulted in a population surge: in 1800 the population was approximately 50% black.[7]

2.2.2 Spanish Colonization

At the end of the Seven Years War in 1763, the Treaty of Paris transferred Louisiana and New Orleans from France to Spain. However, it was not until 1764 that French officials in New Orleans relinquished the colony.[8] Such confusion characterized the first few years of Spanish control and resulted in much animosity towards the new administration. The French population refused to acknowledge Spanish rule until 1769 when the Spanish military arrived.[9] Eventually Spain gained firm control. The French law and government system was abolished as the Spanish installed a governor and established the *Cabildo,* a legislative and quasi-administrative council.[10]

[7] McNabb, p.8.
[8] Federal Writers, p.13.
[9] McNabb, p.9.
[10] Federal Writers, p.13.

Trade increased dramatically under Spanish rule, largely due to English and American settlers further up river in the Ohio Valley. New Orleans grew to better accommodate such commercial enterprises as were necessary for business.[11] Due to two major fires in 1788 and 1794, most of the remaining early architecture in the old city reflects a mixed Spanish and French influence. New Orleans remained under Spanish rule until 1803. At that point, the French momentarily came back into power before the city and territory were transferred to the United States through the Louisiana Purchase.

2.2.3 Statehood

Spain ceded to France in 1802, but the news traveled slowly to the colony, reaching the city in 1803. Peace under the Spanish had been a welcome lifestyle that many were unhappy to relinquish.[12] A mere three weeks after France regained control, New Orleanians were informed that they were, yet again, under a different flag. The United States, under the leadership of Thomas Jefferson, purchased a large tract of land to the west of the Mississippi River from the French in 1803. The "Louisiana Purchase" included New Orleans and was one of the greatest real estate deals in history.[13] This event brought an end to French and Spanish rule, but not to the two cultures. In fact, many New Orleanians were as dissatisfied with this transfer as they had been with the previous ones, especially since English became the official language and the cultural background of the residents were not well represented in the new government.

New Orleans was incorporated as a city in 1805 with a mayor, recorder, treasurer, and council of aldermen who acted as the legislators of the municipality.[14] Louisiana became a state in the Union in 1812, and New Orleans was named the capitol. The British tried invading the city during the War of 1812, after the attack on Washington, D.C. The Battle

[11] McNabb, p.9.
[12] Federal Writers, p.15.
[13] McNabb, p.9.
[14] Federal Writers, p.19.

of New Orleans (the last of the war) in January of 1815, was a decided victory for the United States under the leadership of General Andrew Jackson.

The settlement of New Orleans is distinctive from that of any other city in the United States. The combination of people, cultures, languages, and traditions create a unique society that is often referred to as Creole. *Creole* is a complex word that has changed meaning over time. Originally used to refer to the children of French and Spanish blood born in New Orleans[15], the word *creole* now represents "the synthesis of the various cultures in the unique New Orleans melting pot."[16] It is definitively descriptive of the new and old world syncretism of New Orleans.

The mix of people—from the earliest days of settlement—has had a profound impact on the city as a whole. Traditions and practices intermingled and influenced one another. Interracial relationships were common and resulted in a large population of "free people of color" This community had a great influence on the culture of New Orleans, especially in art and music.

The primary religion in the area was, and continues to be, Roman Catholicism. Colonization by both the French and the Spanish emphasized Catholicism and made it the official religion of the colony. Although Catholicism is no longer the official religion of New Orleans, its influence can still be felt. For example, the tradition of All Saints' Day, celebrated on November 1st, continues to be an important day of observance for both Catholics and non-Catholics alike. Cemetery celebrations are held the day after Halloween as families of the deceased visit and care for the tombs. Tomb repair and whitewashing were once common practices as well as decorating with flowers and immortelles.[17]

[15] Lyle Saxon, Edward Dreyer and Robert Tallant, *Gumbo Ya Ya* (New York: Bonanza Books, 1945), p. 138-9.
[16] George F Reinecke, "The National and Cultural Groups of New Orleans" in *Louisiana Folklife*, edited by Nicholas R. Spitzer (Baton Rouge: The Louisiana Folklife Program, 1985).
[17] Samuel Wilson Jr. and Leonard V. Huber, *The St. Louis Cemeteries of New Orleans* (New Orleans: St. Louis Cathedral, 1963), p.40.

2.2.4 Immigration

During the city's first forty years, French immigrants arrived in New Orleans from both Canada (from the area now known as Quebec) and France. [18] The earliest to arrive were clergymen, administrators, and social outcasts: criminals, vagrants, and women "of immoral life."[19] This latter group was sent, in particular, to make the colony appear prosperous by simply enlarging its population.

Around 1763, at the end of the French and Indian War, refugees fleeing the British from Nova Scotia began to arrive in New Orleans. These "Acadian" people became known as "Cajuns," as they settled and farmed in the bayous surrounding New Orleans. Settlers also came from the other direction, fleeing Saint Dominique (Haiti) after a slave uprising around 1790.[20] This swell of refugees, along with the Americans who moved into the city and region after 1803, made the population of New Orleans rise dramatically to almost 25,000 in 1810.[21] The population virtually doubled within the first decade of the nineteenth century.

Slaves themselves were also brought into New Orleans, primarily from the western coasts of Africa and later from the French Islands. Slaves were used to mitigate the labor shortage due to slow immigration. This combination of slaves and free people of color contributed, as stated before, to blacks representing 50% of New Orleans's population by 1800.[22]

The Spanish were the other major group to settle New Orleans beginning in the 1760s. The installation of the Spanish colonial government in 1763 brought many immigrants with it, and they continued arriving well into the nineteenth century.[23] Post World War

[18] Reinecke.
[19] *Ibid.*
[20] *Ibid.*
[21] Wilson, p.19.
[22] McNabb, p.8.
[23] Reinecke.

II, there was another influx of Spanish-speaking immigrants from Cuba, Honduras, and the Canary Islands.

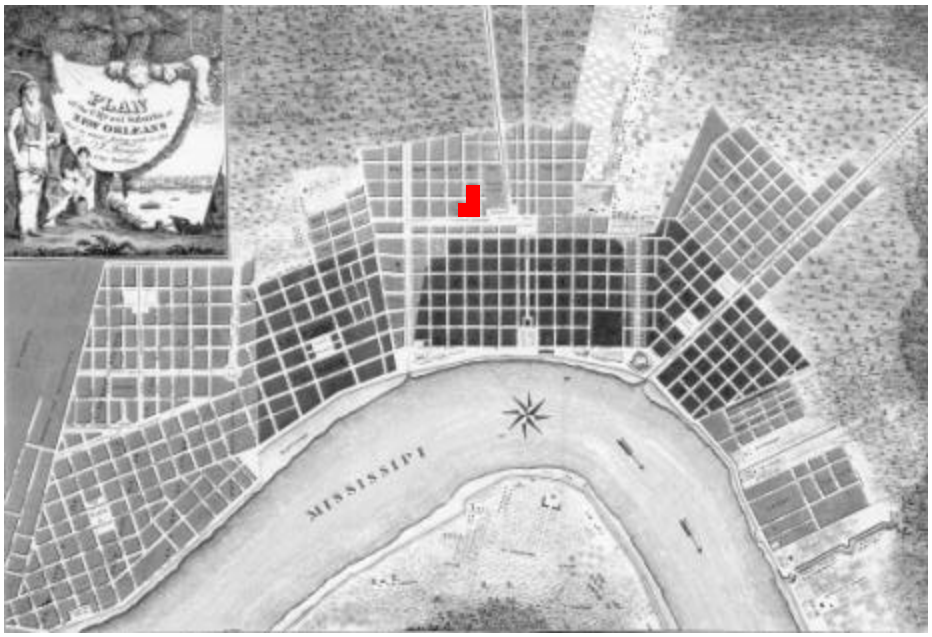
There were fairly significant numbers of immigrants from other parts of Europe in the nineteenth and twentieth centuries. Germans, Irish, and Italians founded their own churches, schools, social clubs, and other organizations, thereby adding their contribution to and influence on the city around them.[24]

2.2.5 Expansion and Growth

In the first half of the nineteenth century, the population of New Orleans increased from 8,000 to nearly 170,000.[25] This huge population increase can be attributed to the annexation of the territory and the continued expansion westward by the United States, as well as the increasing industrialization of the country. New Orleans's situation at the mouth of the Mississippi River made it crucial as a trading and economic center.

After the initial development of the city along the levee, the city began to expand outward as immigration continued. The arrival of the Americans after the Louisiana Purchase started the first wave of expansion. Immigrants of varying nationalities established communities in the less-settled areas in the nineteenth century. During the twentieth century, improvements to drainage made once swampy areas available for settlement.[26]

[24] *Ibid.*
[25] McNabb, p.12.
[26] *Historic Neighborhoods of New Orleans* (New Orleans: Preservation Resource Center of New Orleans).



Plan of the City and Suburbs of New Orleans, 1815, by J. Tanesse, (THNOC). St. Louis 1 Cemetery is highlighted in red.

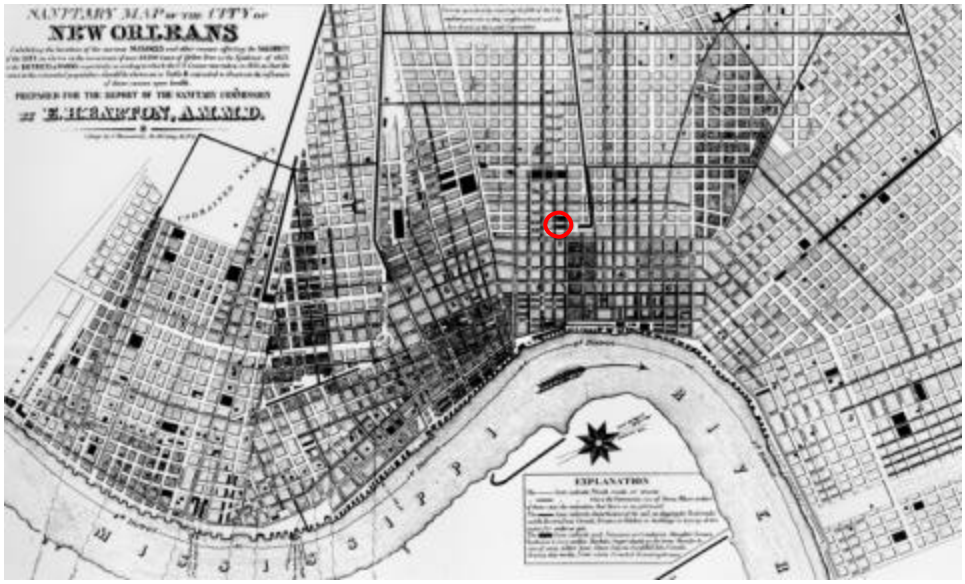
When the Americans began settling in New Orleans, they avoided the French Quarter, settling instead to the west of the Quarter in Faubourg St. Mary or what became known as the American sector.[27] To the east of the Quarter, the Creole aristocrat, Bernard de Marigny subdivided his large plantation to create the area known as the Faubourg Marigny. This suburb, together with the French Quarter and the American sector, comprised the main sections of the city in the 1830s.[28]

Norman's Plan of New Orleans & Environs, 1845, (THNOC). St. Louis 1 Cemetery is highlighted in red.

[27] McNabb, p.12.
[28] McNabb, p.18.

2.2.6 Society and Cultures

The city continued to expand westward to the "Irish Channel," an area north of the American Sector. Irish immigrants came to work in the growing city near the docks and helped to build the new canal established in the area.[29] The Americans continued settling westward by purchasing old plantations and establishing the Garden District in the 1830s and 1840s. Expansion continued upriver, spawning Lafayette and Jefferson City and also continued northward as drainage improved and the marshy land was made habitable.[30]



Sanitary Map of the City of New Orleans Exhibiting the location of various Nuisances and other causes affecting the Salubrity of the City, as shewn [sic] in the occurrence of near 30,000 Cases of Yellow Fever in the Epidemic of 1853…(Special Collections, Tulane University). St. Louis 1 Cemetery is circled in red.

The development of the population and its growth did not proceed without problems. The climate, natural environment, and a lack of sanitation caused major health epidemics for many of the new unacclimated immigrants. Flooding and yellow fever took its toll on the population on numerous occasions (see map, above): 2,200 people succumbed to the disease in 1818; 2,800 in 1847; and 9,000 in 1853. Small pox and cholera also affected

[29] *Ibid.*
[30] *Ibid.*

the population.[31] This alarming surge in the number of deaths resulted in a dramatic demand for cemetery space.

2.3 Neighborhood History

Site neighborhood. St. Louis 1 Cemetery is highlighted in red. (Map digitized from Sanborn map photographed at The New Orleans Public Library, March 2001.)

In New Orleans, the Faubourg Tremé lies north of the Vieux Carré within an area generally agreed to lie between Canal, North Broad, Saint Bernard, and North Rampart Streets. This area also encapsulates the site currently occupied by St. Louis 1 Cemetery.[32] The Faubourg Tremé is considered to be of national historical significance as it is one of the oldest African-American neighborhoods in the nation. It is said that "the culture of the Creoles and the free persons of color is rooted, to a large extent, in Tremé and the sixth ward, which were substantially developed in the late nineteenth century."[33]

[31] *Ibid*, p.19-20.
[32] Robert J. Cangelosi, *Which Way Treme? An Architectural Terminal Project* (Baton Rouge: LSU Department of Architecture, 1975).
[33] Office of Policy Planning, *Sixth Ward / Treme / Lafitte Profile* (City of New Orleans: The Historic New Orleans Collection, December 1978).

2.3.1 Early Settlement and Development

Settlement of the area began in 1731 when Chevalier Charles de Morand, an employee of the Company of the Indies, established the city's first brickyard in the area of Bayou Road above Claiborne. Soon afterwards, Morand purchased the brickyard and much of its surrounding land and developed a large plantation upon the grounds. At this time his holdings included the area surrounded by what is currently North Rampart, Claiborne Avenue, and Bayou Road. In 1756, Morand extended his holdings to include the area bounded by Governor Nicholls, St. Bernard, Galvez, and Rampart Streets. In 1774, his occupation came to a close when he sold his land to Pablo Moro and his wife, Julie Prevot.[34]

By 1780, most of the area had been acquired by Claude Tremé, the husband of Madame Moro's granddaughter and the namesake of the area. This land was given further value in 1794 when the Baron de Carondelet, Spanish Governor of Louisiana, decided to create a canal, "half a league long" from Bayou St. John to the town.[35] This would serve the dual purpose of draining the swampland to the north and establishing a navigable route from New Orleans to the Bayou and then on to the Gulf of Mexico. By 1796, the canal was well traveled and had been christened "Canal Carondelet."[36]

The Canal ended in a square basin, to allow boats to turn, at what is currently the intersection of St. Louis and Basin Streets (see map below). Basin Street was later created and then widened to accommodate better travel to Canal Street in the 1820s. Until the construction of the New Basin Canal, the Carondelet Canal served as the only means of transporting products produced on the north shore of the lake to the city. The terminus of the canal in Tremé was used as a landing depot for schooners carrying lumber, firewood, charcoal, and other commodities. Warehouses soon appeared along the canal's borders in Tremé to store these goods.[37]

[34] *Ibid.*
[35] Cangelosi.
[36] *Ibid.*
[37] *Ibid.*

Plan de la Ville…de la Nouvelle Orléans by Jules Allou D'Hemecourt, 1870s, after Jacques Tanesse, 1812, (THNOC). Note the encroachment of St. Louis 1 Cemetery (highlighted in red) by lots planned for development.

The Canal gave the area some commercial viability and soon Claude Tremé began to subdivide his plantation for further development. In 1798, Christoval T. de Armas purchased a portion of the plantation below Bayou Road, and in 1799, Tremé began subdividing his remaining land. In 1810, the remainder of the Tremé plantation was sold to the Corporation of New Orleans for $40,000 and by 1816, the city was selling this land in smaller subdivided lots for a profit.[38] These lots were sold to both white people and free people of color, most of whom were either the children of white men or individuals who fled the slave uprisings in the West Indies. The free men of color who resided in Tremé were often musicians, craftsmen, and artisans. It was at this point in the late eighteenth and early nineteenth centuries that this suburb began to establish itself as a unique neighborhood of mixed ethnicities.[39]

[38] Office of Policy Planning, *Sixth Ward / Treme / Lafitte Profile.*
[39] *Ibid.*

Although Tremé had developed somewhat separately from the rest of the city, it still had not gained acceptance as a separate entity when in 1836, it was included with the Vieux Carré as the city's first municipality.[40] This concept would begin to change throughout the 1840s as the neighborhood continued to grow and was augmented by such structures as the Tremé market, the city's fourth largest public market, and St. Augustine Church, the city's third oldest Catholic church.

1896 Urban Context of St. Louis 1 Cemetery (highlighted in red). (Map digitized from 1896 Sanborn map photographed at The New Orleans Public Library, March 2001.)

By 1883, there were few undeveloped lots left in the area, which was densely populated with predominantly small shotgun houses and Creole cottages. Larger dwellings were situated along the major avenues. These Creole cottages were typically simple four room houses with separate kitchens and servant's quarters, which were located in two story buildings in the rear of the main houses. Neighborhood groceries and bars were characteristic of the area, as were halls, Benevolent Societies, Social and Pleasure Clubs.[41] According to the 1896 Sanborn Map, (above) this was an area of extensive residential settlement.

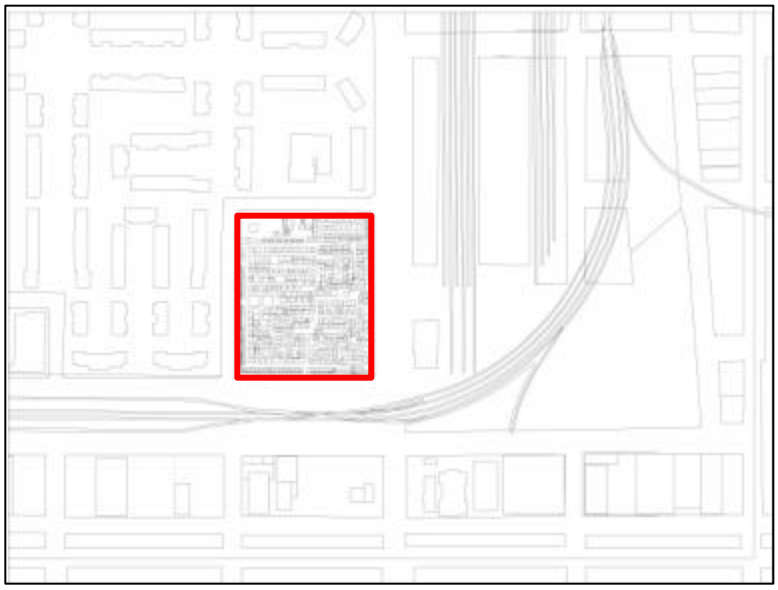
2.3.2 Storyville

Storyville, a region that covered 16 square blocks in its entirety (Iberville to St. Louis and North Robertson to North Basin Streets), began in 1897 when Alderman Sidney Story

[40] Cangelosi.
[41] Office of Policy Planning, *Sixth Ward / Treme / Lafitte Profile.*

proposed a legal "red-light district" to be located within this existing section of the city as a means of controlling and regulating prostitution in New Orleans. "Storyville," or "the District" as it was coined, was established on January 1, 1898, and "for years, the area between North Rampart and North Claiborne, existed as a haven for jazz and brothels"[42] and at one point housed as many as 2000 prostitutes.[43] Many important jazz musicians performed in these bordellos, including Jelly Roll Morton, Sidney Bechet, King Oliver, Buddy Bolden, Paul Barbarin, Kid Ory, Freddy Keppard, Bunk Johnson, Henry "Red" Allen, and Manuel Perez.[44] In 1917, the era of "Storyville" ended, when the Department of the Navy closed down the district.

2.3.3 Iberville to the Present



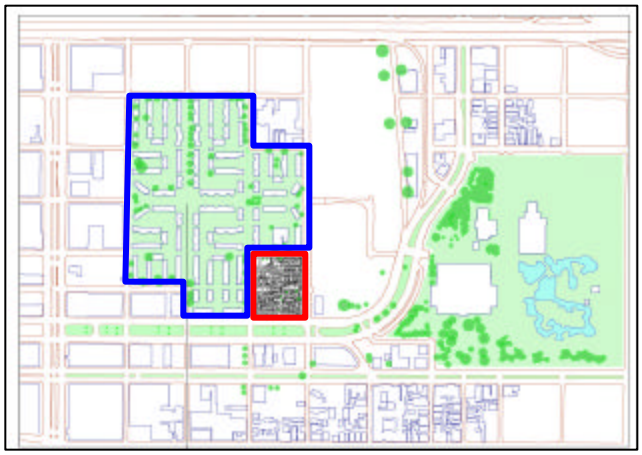
1940 urban context of St. Louis 1 Cemetery (highlighted in red). (Map digitized from 1940 Sanborn map photographed at The New Orleans Public Library, March 2001.)

It was not until the mid-twentieth century, however, that the area began to physically change. The canal was gradually filled in between 1927 and 1938, usurped by the New Basin Canal. In addition, by 1940, the Municipal Auditorium was built in what was known formerly as Congo Square and the Tremé Market was demolished. It was also in 1940 that the remains of Storyville were demolished and in its stead the Iberville Housing Project was built, on the north and western edges of St. Louis 1 Cemetery, bounded by Iberville, Claiborne, St. Louis and Basin Street. This project

[42] Faubourg Treme in New Orleans http://www.travelape.com/neworleans/attractions/faubourg-treme/
[43] Al Rose, *Storyville* (Alabama: The University of Alabama Press, 1974), p. 73.
[44] Rudy Lombard, Robert Perkins, William Lorway, and Anthony Gendeson, *1-10 Multi-Use Study* (Claiborne Avenue Design Team Report: New Orleans City Archives, 1976).

resulted from the nationwide effort by the Public Works administration to "clear slums and construct low rent housing projects."[45] In all, seventy-three two- and three-story brick colonial revival units were constructed, housing 858 apartments.[46] This was accompanied by the Lafitte Housing Project and a trend toward converting single-family houses into multi-family residences in the area.

By 1969, significant social changes had occurred in the neighborhood. Although many of the old creole cottages, corner groceries, and neighborhood bars remained. The predominately Catholic neighborhood had seen the introduction of several protestant churches and small apartment complexes. In addition, the introduction of Interstate 10 Expressway to the north, (moved by preservationists from its planned waterfront location) resulted in the demolition of Claiborne Avenue's nineteenth century allee of oak trees. By the 1970s, the area had become known as a low rent neighborhood housing predominantly African-American citizens.[47] During this time, the city made several major attempts to rehabilitate the area. Many of these efforts, such as the building of a large cultural complex, were not completed due to a lack of funding. However, one such attempt, Louis Armstrong Park (see map, above), was constructed in 1976 on the site of the former Congo Square, and still acts as a major gathering place for city functions.



Current urban context. Iberville Housing Project (blue). Louis Armstrong Park (large green area to the right of the picture). St. Louis 1 Cemetery (red). (Maps digitized from New Orleans City Commission files.)

[45] Office of Policy Planning, *Iberville Project Neighborhood Profile* (City of New Orleans: The Historic New Orleans Collection, December 1978).
[46] *Ibid.*
[47] Office of Policy Planning, *Sixth Ward / Treme / Lafitte Profile*.

Throughout its history, the Faubourg Tremé has been a crucible of Creole culture. From the architectural and cultural heritage present in St. Louis 1 Cemetery to the active African-American history of many of its inhabitants, this neighborhood still maintains a unique place within the greater cityscape of New Orleans. Interest in the area continues today in part because of its affordable historic housing and neighborhood identity, as well as the presence of the St. Louis cemeteries. Within walking distance from the French Quarter, Tremé represents an interesting and distinctive cultural landscape. There have been recent announcements that the National Park Service will soon develop and manage the Louis Armstrong Park as a national heritage site dedicated to jazz.

2.4 Site History and Physical Changes

St. Louis 1 Cemetery, New Orleans, LA. 1970's Aerial Photo, (THNOC).

Built in 1789, St. Louis 1 is New Orleans's oldest extant cemetery. Before its construction, prominent citizens were entombed within the parish church located at the head of the Place des Armes, now St. Louis Cathedral in Jackson Square. In 1725, New Orleans's first independent cemetery

was opened outside of the city limits on the upriver west side of St. Peter Street, presently the area between Burgundy and Rampart Streets. Known as St. Peter's Cemetery, this site utilized underground burial. To make up for New Orleans's low and swampy elevations, the ground level of the cemetery was raised using soil from surrounding ditches.[48]

The history of St. Louis 1 Cemetery began in 1788, one year before its construction. This was a year of great trauma for the city because the river flooded, a great fire destroyed 856 buildings (80% of the city), and a serious yellow fever epidemic broke out among the populace.[49] At this time, the Cabildo simultaneously realized that the cemetery at St. Peter's had been filled and was warned by local physicians that the proximity of the cemetery to the city could cause another serious epidemic. In response, a new cemetery was located farther away from the population, just outside the city in an area north of current Rampart Street.[50]

On August 14, 1789, by Spanish royal decree, "His Majesty was pleased to approve the construction of a new cemetery."[51] It featured above ground brick tombs covered in plaster, set within a system of shelled paths and grassy aisles, and surrounded by a palisade. By the early 1800s, New Orleans had moved to using primarily aboveground tombs. Brick seemed the most logical material for the construction of the tombs, as there was no natural source of stone in New Orleans and brick could be produced locally in a much less costly manner. As with buildings in the French Quarter, tombs were constructed of plaster-over-brick construction, many with decorative ironwork. In 1803, with the opening of the city to northern immigration, a strip in the rear of the original cemetery was set aside as a burial place for Protestants.[52]

The building of the Carondelet Canal in 1795 to the north led to the construction of a navigational road that eventually caused the western end of St Louis 1 to be removed

[48] Wilson, pp.7-8.
[49] *Ibid*, p. 8.
[50] *Ibid.*
[51] *Ibid.*
[52] *New Orleans City Guide* (Boston: Houghton Mifflin, 1938), p. 189.

during the first half of the nineteenth century. This road, owing to failed plans to construct a waterway along Basin and Canal Streets, later became the site of a railroad line at the end of the nineteenth century.[53] In 1822, the rear of the cemetery was diminished when part of the Protestant section was removed to allow an extension of Tremé Street. The city offered Christ Church a tract of land on Faubourg Street, at the head of Girod Street, for the building of a new Protestant cemetery. Upon acceptance of this offer, the remains of several Protestant occupants of St. Louis 1 were removed to Girod Street,[54] though a portion of the Protestant section of the older cemetery was retained.

In 1817, an epidemic resulted in the formation of a city board of health. This office decided that the display of bodies at funeral services and their subsequent transportation to the cemetery could spread disease. This decision led to the passage of a city ordinance on March 22, 1821, forbidding the placing on view of the dead during any funeral service from the first day of July through December.[55] Before this time, all funerals took place at St. Louis Cathedral and processed to St. Louis 1 Cemetery from there. To rid the city of the danger that these funeral processions might present, a mortuary chapel (currently Our Lady of Guadalupe Church) was built adjacent to the cemetery on Rampart Street. Originally the Mortuary Chapel of St. Anthony, the church was designed by the French architects Gurlie and Guillot[56] and today stands as the oldest church in the city.

Saint Louis 1 Cemetery is a microcosm of New Orleans history. The diversity and integration of the early city's population is as evident in death as it is in life. Some of its more famous inhabitants include (refer to numbered Site Map, Appendix A):

1. **Barbarin Family** – One of the most significant New Orleans jazz dynasties. Tomb #218.

[53] *Ibid*, p.6.
[54] Wilson, p.12.
[55] Florence, p. 53.
[56] The History of Our Lady of Guadalupe Church, http://www.saintjudeshrine.com/history.htm

2. **Etienne de Boré** (1741-1820) - New Orleans's first mayor. He is credited with being the first person to successfully granulate sugar. His grandson, Charles Gayarré, a noted Louisiana historian, is also buried in St. Louis No. 1 Cemetery. Tomb #224.
3. **Blaize Cenas** (1776-1812)**, Dr. Augustus Cenas** (1809-1878) – Blaize Cenas was the first Postmaster General of the New Orleans. Tomb #108.
4. **Eliza Lewis Claiborne** (1784-1804) – First wife of William C.C. Claiborne, the first American Governor of Louisiana. Also entombed here is her son and her brother, Micajah Green Lewis, who died in a duel defending the honor of his brother-in-law, the governor. Tomb #640.
5. **Clarice Durlade Claiborne** (1788-1809) – The second wife of William C.C. Claiborne, Governor of the territory of New Orleans. Tomb #589.
6. **Daniel Clark** (?-1812), **Myra Clark Gaines** (1810-1887) – Daniel Clark was the American Consul when Spain ruled New Orleans, and later the Territorial Delegate to Congress. Myra Clark Gaines, his illegitimate daughter, gained notoriety due a court case regarding her claim to Clark's large land tracts after his death, resulting in litigation which lasted over 65 years. Tomb #590.
7. **Pierre Derbigny** (?-1829) – A noted jurist who, along with Louis Moreau-Lislet, drew up the Civil Code of Louisiana. He was Governor of the state from 1828 until his death in 1829. Tomb #476.
8. **Colonel Michael Fortier** (1750-1819) – Royal armourer and soldier. Fortier fought with the Spanish under Galvez, aiding in the capture of Manchac and Baton Rouge, LA, from the British. He later became a member of the first New Orleans city council. Tomb #81.
9. **Grima Family** – A prominent family descending from Albert Xavier Grima who emigrated from Malta in 1780. Descendants include a notary, a lawyer, a judge, an ophthalmologist, and a writer. Tomb #72.
10. **Benjamin Latrobe** (1764-1820) – Founder of the architectural profession in the United States. He was buried in the Protestant section, but only a plaque stands in his memory, as his remains may have been lost when graves were moved. Location unknown.

11. **Marie Laveau** (1794-1881) – Well known Voodoo Queen. Her remains are reputed to be interred in the Glapion family tomb although there is no solid proof. Tomb #347.
12. **Louis Moreau-Lislet** (1767-1832) – Co-author of the Louisiana Civil Codes of 1808 and 1825. Tomb #105.
13. **Bernard de Marigny** (1788-1871) – Wealthy French landowner who participated in early Louisiana government. He lost most of his wealth through gambling. He is credited with introducing the game of craps to the United States. Tomb #606.
14. **Dr. Joseph Montegut** (1735-1819); **Edward Montegut** (1806-1880) – Dr. Joseph Montegut was a leading physician and surgeon in Charity Hospital and his grandson, Edward, was mayor of New Orleans from 1844-1846. Tomb #144.
15. **Ernest "Dutch" Morial** (1929-1989) – New Orleans's first African-American Mayor. Tomb #2003.
16. **Paul Morphy** (1837-1884) – World famous chess champion. Tomb #366.
17. **Homer Plessy** (1862-1925) – Plaintiff in the landmark 1896 Supreme Court Case Plessy vs. Ferguson, which declared separate as being equal. This was overturned by the landmark case Brown vs. the Board of Education in 1954. Tomb #619.
18. **Carlos Trudeau** (?-1816) – Surveyor General of Louisiana and a leading French and Spanish Colonial surveyor. Tomb #54.
19. **Numerous veterans of all the wars fought by residents of the area.**

2.5 Tourism through Time

The above ground cemeteries of New Orleans have long been a source of awe and inspiration to the visitor and tourist. Travelers' accounts dating from the earliest years of the nineteenth century, and continuing through to the present day, reference these "cities of the dead" as curiosities not to be missed on a visit to New Orleans. Even arm-chair travelers of the nineteenth century could visit one of these other-worldly places through the many travel accounts in publications such as the *Daily Advertiser* (1802), *Scribner's*

Monthly Magazine (1873), and various *Harper's Weekly* articles and sketches dating from the 1860s through the early 1900s.

> *When I entered the gateway, I was struck with surprise and admiration. Though destitute of trees, the cemetery is certainly more deserving, from its peculiarly novel and unique appearance, of the attention of strangers, than...any other in the United States.*[57]

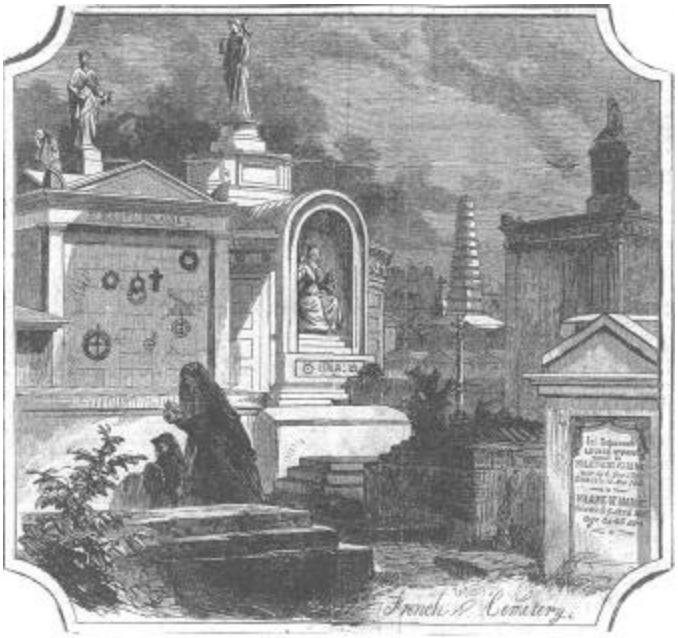
St. Louis 1 Cemetery, 1834, by John H. Latrobe, (THNOC).

Unlike other nineteenth century cemeteries located elsewhere in the United States, St. Louis 1 truly resembles a dense miniature city. With structures of varying styles and sizes, housing all classes, races, and ethnicities representing New Orleans society, St. Louis 1 Cemetery is a tangible record of a continuously developing cultural history. The existing landscape of tomb styles, types, and sizes is a landscape that tourists of the past would still recognize. Accounts dating back to the earliest years of the cemetery's

58 Joseph Holt Ingraham, *The South-West by a Yankee*, Vol. 1, 1835, p. 154.

visitation describe the mixture of rich, well-kept, limewashed tombs with unkempt monuments and ruins. This contrasting picture of richness and decay is part of the significant historical landscape.

In the early 1800s, travelers sought out the cemetery to enjoy a sublime and foreign experience. Upon entering the wrought-iron gates and passing through the "tortuous paths,"[58] visitors allowed the visual experience of the place to stimulate emotion and reflect on life, death, and mortality – common themes of romanticism in the nineteenth century. Later visitors came to see this unique cemetery to view the "sepulchral houses" of the famous and infamous of New Orleans. Today, the cemetery is still a major tourist draw, and cemetery tours are a key element for the total New Orleans experience. Many visitors are drawn by the architectural and historical content of the cemetery, while others come for the modern intrigue of voodoo, vampires, ghosts, and the sensationalism created by fictional accounts in popular books and movies.



"French Cemetery." (View of Societé Ste. Anne, Italian Benevolent Tombs). Wood engraving, 1867, after a sketch by A. R. Waud, Harper's Weekly, 1867, (THNOC).

Historically, the cemetery was visited because of its unusual appearance and emotive qualities. It evoked a sense of melancholy and nostalgia with its maze of paths, decaying brick tombs and unusual epitaphs. Today, architecture, intrigue, history, and memory draw the modern tourist to this place. Whether it is through one of the many organized tours, or through individual discovery, each

[58] Emmeline Stuart Wortley, *Travels in the United States etc. during 1840 and 1850* (New York: Harper & Brothers Publishers, 1851), p. 127.

visitor who walks through the iron gates of St. Louis 1 Cemetery is cast into a world separate and unlike their own.

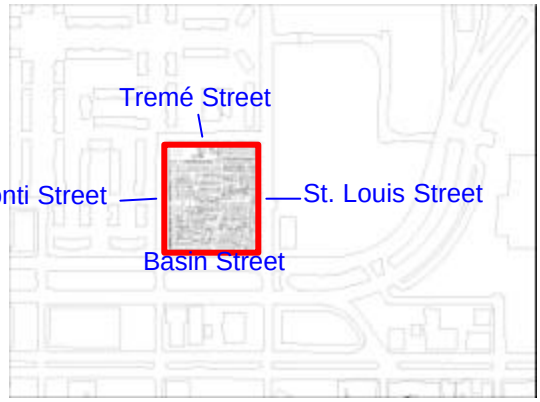
2.6 Physical Evolution of Surrounding Urban Context

1896 Sanborn Map. St. Louis 1 Cemetery in red.

1908 Sanborn Map. Railroad built. Storyville still present. Carondelet Canal partially filled.

1940 Sanborn Map. Iberville Housing Project replaces Storyville. Basin Street buildings largely demolished. Carondelet Canal filled.

1994 Sanborn Map. Railroad removed and replaced by Interstate 10 exit/entrance.



2001 Sanborn Map. Warehouses replaced by parking lot.

SURVEY OF EXISTING CONDITIONS

3.0 SURVEY OF EXISTING CONDITIONS

3.1 Previous Documentation

In 1981, a full survey of St. Louis 1 Cemetery was made by Save Our Cemeteries, Inc., and all documentation was housed at The Historic New Orleans Collection (THNOC). The surveyors documented all tablet locations and inscriptions, names, and dates. Minimal information was collected on the materials of construction, decoration, and tomb condition. Each tomb was photographed. Tombs were numbered generally according to an earlier hand-drawn survey map from the Archdiocese and were cross-referenced to an older Archdiocese numbering system that locates tombs by their street or alley address.

Copies of the hand-drawn map, the list of cross-referenced Archdiocese and THNOC tomb numbers, and survey forms of all tombs were copied for this project by The Historic New Orleans Collection, Williams Research Center and generously given to the University of Pennsylvania, GSFA Collaborative Studio. The information in these documents formed the basis of our first maps and the database.

Save Our Cemeteries, Inc. (SOC) has also developed a database of much of the 1981 information, plus additional condition data recorded in the 1990s. At this time, the studio database has not incorporated this information. In future work it would be beneficial to link these two databases, as the SOC, Inc. database has the comprehensive inscription and "resident" data and the U. Penn database has a much greater level of tomb construction, location and condition survey detail.

In addition to the pre-existing survey data, background information was collected in published sources on Louisiana and New Orleans culture and history, cemeteries, cultural resource management, material conservation, tourism, city planning, and environmental deterioration. Archival research was conducted at the Williams Research Center of The Historic New Orleans Collection, the New Orleans Public Library, the Louisiana State

Museum Library, and the Tulane Architectural Archives. The *New Orleans Strategic Land Use Plan of 1999* and the current *Vieux Carré Historic District Guidelines* were used to study the planning issues and the cartographic information from the State of Louisiana and the New Orleans City Commission were downloaded for study and use.

3.2 Methodology

3.2.1 Cartography

For mapping data onto the site maps, a true base map was first needed. This took several steps to achieve.

1.

2.

3.

4.

Map 1above illustrates the earlier hand-drawn site survey received from the Archdiocese that was used to identify tomb placement, scale, and numbering. This is a small portion

of a much larger drawing that was brought into the digital realm by scanning the document and then digitizing the configurations of the tombs in AutoCAD® 2000.

Map 2 is an aerial satellite image taken in the 1990s of the cemetery that was used as a reference guide for its projected orientation known within the World Coordinate System. Small changes in tomb location and the existence of empty spaces were also verified through the use of this aerial map and one taken in the 1970s.

Map 3 is an example of an Arc View® base map, one of many provided to our studio group by the New Orleans City Commission. St. Louis 1 Cemetery is the red box placed within its neighborhood surroundings. These maps are stored as separate layers that can be overlayed to reveal site context according to specific represented themes.

Map 4 is the culmination of the on-site survey studies and the geo-referenced, digitized site layout. It was possible to marry all these efforts (from hand surveys to paper documentation to cartographic material to database entries) allowing the establishment of relationships between the tombs, not only placed within the cemetery walls, but within a correct universal spatial arrangement. This map is properly oriented to the north as shown. Throughout this report, and on the studio web site, several of the maps are oriented differently, with the northeast street of St. Louis to the top of the page, for easier viewing and readability.

3.2.2 Landscape Features Survey

Before the site visit, historical images and references to landscape features were collected and analyzed. On site, a complete inventory of the current features, vegetation, ground covers, path materials, drains, and individuation plantings was taken. Further topographic mapping information was collected and all interior and exterior paths and sidewalks were surveyed. The results of this complete landscape survey comprise section 3.3.1 of this report.

3.2.3 Tomb and Marker Survey

The cornerstone to any conservation plan is an accurate and comprehensive survey. The individual tombs, markers and landscape features of St. Louis I Cemetery were documented and assessed using a descriptive survey form and field guide developed by Studio during the months of January through March 2001 (see Appendix D and E). While the survey form was produced to determine the historical/cultural significance, architectural significance, and existing conditions of St. Louis 1 Cemetery exclusively, it is intended to serve as a model for surveys at other sites as well.

Creating, organizing, and implementing a physical survey of the over 700 tombs and markers at St. Louis 1 Cemetery was itself a challenging undertaking. However, in terms of the overall objectives of the collaborative studio, the survey was only the beginning. The information gathered was entered into a Microsoft Access® 2000 database then into Arc View® 3.2 , a geographic information system, where data could be plotted and analyzed through spatial mapping.

3.2.4 Implementation of the Survey

After reviewing various models of surveys used for other cultural landscapes and cemeteries, a pilot survey form was developed and the development group prepared a field manual to assist and aide in the use of the survey on site (see Appendix E). The manual covered all sections of the physical survey including identification, environment, description, condition (masonry), landscape, and metals.

The purpose of providing a manual for participants in the survey was twofold. First, it contained clear guidelines as to how the survey form was to be completed, thereby controlling the process in which the data was collected. It was necessary that elements and conditions were accounted for in a uniform and controlled manner in order to accurately map the information and analyze the data by querying the database. Second,

the manual provided a specific definition and complete explanation for each item in the survey. To supply further clarification for certain items on the survey, such as tomb type and planting materials, illustrations or photographs accompanied the definitions. By providing a manual to those involved, the survey team hoped to ensure accurate observations in the field and to record standardized, uniform results.

To help participants locate the tombs within the cemetery, each tomb on the original Archdiocese map was numbered. A grid was superimposed over the entire cemetery and assigned alphanumeric designations. The cemetery was divided into 25 sections, with 30 tombs per section. Each surveyor was assigned one section. During the week of March 10, 2001, each surveyor completed their assigned surveys.

3.2.5 Database Design

To be able to gather, summarize and analyze the many data aspects of this site, a database was created in Microsoft Access® 2000 (Access). Access is a relational database that allows for the efficient processing of multiple data tables, as long as they are related to a common field. Based on historical surveys of St. Louis 1 Cemetery, a numbering system had already been created by The Historic New Orleans Collection (THNOC), and this number was used as our initial key index value. The filled database was linked directly to the Arc View® GIS mapping program through an ODBC (Open Data Base Connectivity) translator for Access. This allowed a direct SQL (Structured Query Language) connection from within the Arc View® program. The "live" Dead Space database tables and queries were available for mapping and analysis.

To link our data with a map of the site, we transferred our text based THNOCs into a numerical set of almost identical PNTHNOCs (a new almost identical set of numbers to THNOC, devised the U. Penn team to allow layered mapping over time). During the survey we realized that there were completely new tombs that had been built since 1981, often replacing an old tomb and its owners. There were also unmarked spaces for empty

lots and/or ruins. Additionally, the wall vaults were not numbered with a THNOC in 1981. PNTHNOC numbers were assigned as follows:

1-649	Original 1981 THNOC numbers
650 – 999	Tombs that existed in 1981, and were missed in the survey
1000-1999	Wall Vaults (see comment below)
2000-2999	New Tombs added since 1981
3000-3999	Empty Spaces

If a tomb existing in 1981 had been replaced with a new one, both records will exist in the database, even though the 2001 base map will not show the 1981 tomb. The wall vaults created a great deal of discussion, as there were very many of them, yet each vault was not individually surveyed. The map should represent each individual wall vault and a database record should exist for each. However, since we did not collect the information as such, we reduced each wall vault to a single record and polygon on the map and gave it one PNTHNOC. In a future project, the wall vaults should be individually surveyed and mapped. The map should be in both 2D and 3D to show the uneven alignment of the vaults and the various use and restoration campaigns. In anticipation that this later work will occur, the PNTHNOCs assigned allow for the addition of new records once surveyed (1000, 1200, 1300, 1500).

Access® was an appropriate database program to use for its recognizable interface, the ability to pull data into MS Excel® and ESRI Arc View®, and for the ease with which non-Access® programmers can learn and manage data entry. Forms were created for the database tables that very closely matched the paper survey forms that needed to be entered. With only a one-hour training session, the 22 surveyors were able to enter the approximately 30 surveys that they had completed in the field. The form design used the general table information on the top of the form and incorporated tabs of separate pages for each different section of the survey form. Each sub-form tab was linked or related by PNTHNOC number.

3.3 Survey Data Analysis

3.3.1 Existing Landscape

Over the course of two centuries, a combination of environmental and cultural processes has left St. Louis 1 Cemetery with its current spatial configuration of disjointed alleys, intimate pockets of open space, dramatic vistas, and sudden dead-ends. The cemetery shares many of the characteristics of the historic city, implying a long-established sense of order, but one that has succumbed, incrementally, to centuries of small and large-scale changes. Its architecture is a rich palate of forms and details, jumbled together in a miniaturized city of tombs, tombscapes and open spaces.

A variety of maintenance and repair approaches, weather cycles, and a stream of visitor interactions have left their mark on the physical fabric of the cemetery. Some of these processes have affected the site on a relatively large scale, such as the movement of water across the cemetery, and some were limited to a small area like the inscribed graffiti of individual celebrity tombs. Whether changes are caused by nature or by humans, many alterations to the cemetery have accumulated over the centuries, giving its form a dynamic quality, as processes of accretion and subtraction happen simultaneously to make a space that, despite its apparent age and stasis, is characterized by spatial, material, and cultural flux.

The cemetery is characterized by a complex assembly of material and spatial features, interwoven and overlaid through time. In an attempt to physically analyze the cemetery as to its elemental components, a series of inventories was completed during the site visit.

The following place-defining landscape components were identified and inventoried during the site visit:

a. Ground Surface: Ground surface refers to any material used to create surfaces between and around tombs, as well as path systems. The ground surfaces currently present in the cemetery include asphalt, concrete, crushed shell, flagstone, sandstone,

soil, grass and ivy/ground cover, with asphalt, concrete and bare soil being the most prevalent.

b. Vegetation: Vegetation refers to the plant-life found as either plantings or groundcover throughout the site. Included in this category are trees, ivy/groundcover and grass.

c. Topography: The topography of the site refers to the variations in ground level as measured with a theodolite, which is a device that uses lasers to determine elevations. There is little variation in topography within the site, which mimics that of the city.

d. Drainage System: The site's drainage system consists of surface inlets and sub surface conduits that are scattered throughout the cemetery, all which lead into the city sewage system. It is likely that the drains were installed at the same time as the concrete paving, as both serve to control the flow of water through the cemetery. The drainage of the site is affected by the limited topographic differentiation throughout.

e. Enclosures/Entrances: Enclosures refer to the walls and gates associated with the cemetery. There are three gates, which were used throughout the site's history, though only one currently admits visitors. Throughout the St. Louis 1 Cemetery's over two hundred-year history, its dimensions have been altered several times, which would explain the various entrance/exit gates. These gates are wrought iron, and are attached to brick walls that surround the entire cemetery. These walls serve to denote the limits of the cemetery in its current state.

f. Open Spaces: Open spaces refer to areas free of tombs. There are few areas in the cemetery that are currently, if not historically, considered open spaces.

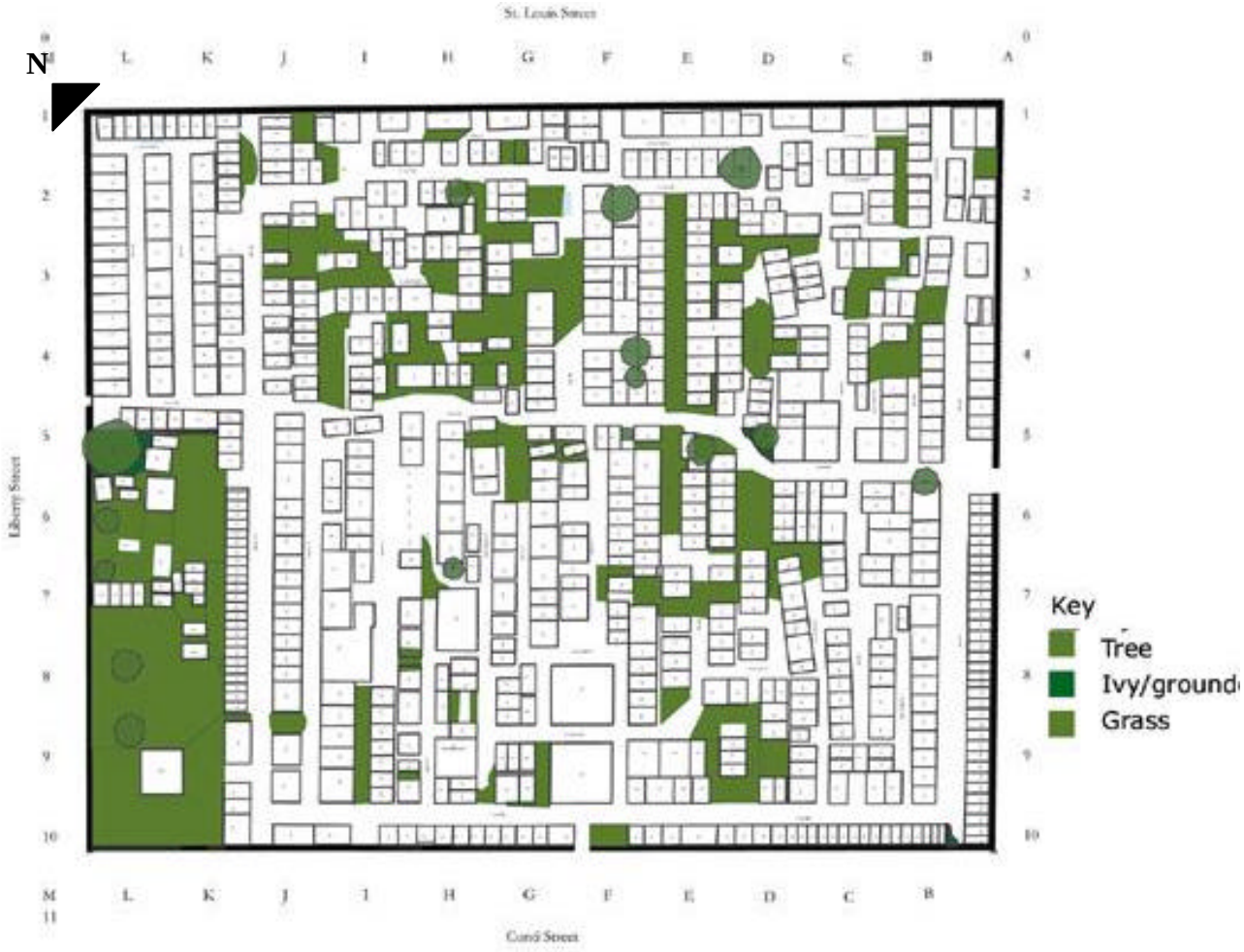
3.3.1.1 Ground Surface

The above figure illustrates the current ground surfaces of the cemetery. Ground surface refers to all surface materials not directly related to a tomb or its precinct, and includes bare soil, vegetation (grass, ivy, etc.), shell, asphalt, stone paving and concrete used on

paths and open areas. The resulting loose grid apparent in plan view defines circulation paths and open areas, both planned and *de facto* through visitation and collapse. The origins of these components are further obscured by the various surface treatments that have been applied over the years. Conti, Center and St. Louis Alleys are the three continuous paths that run from the south to the north ends of the cemetery. All three have been given hard surface treatments, with St. Louis and Center Alleys paved entirely in asphalt. The east–west alley system is more continuous, though none of these alleys are continuously paved in any one material.

Traditionally, the materials that were used to pave pathways were crushed shell. Numerous nineteenth century accounts describe the shell paths and a 1948 *Souvenir Booklet St. Louis Cemetery Number One* clearly shows these shell paths well surviving to that time. The crushed shell, dredged from Lake Pontchartrain, would have been mounded to provide dry access to the tombs during periods of flooding. Asphalt was introduced in the 1960s to coincide with tour routes through the cemetery as delineated in *The St. Louis Cemeteries of New Orleans* by Samuel Wilson, Jr., F.A.I.A and Leonard V. Huber, 1963. Arrows were drawn on this surface to lead the visitor through the site. Most recently, concrete has been introduced as a ground cover for the major paths. This concrete acts as a water collector, preventing rainwater from draining directly into the ground and helps to regulate the drainage of the entire site into subsurface drains. Pathways, open areas of grass, and, to a lesser extent, bare soil, also exist. These are largely relegated to the center of the site and in the entire Protestant section. Their survival can be attributed to low visitor impact in these areas, although as tombs are restored through Perpetual Care, concrete pads are added, invading the traditional grass and shell ground surfaces.

3.3.1.2 Vegetation



The survey classified existing vegetation into three components:

- **Tree**: all evergreen, deciduous trees and shrubs
- **Ivy/groundcover**: all beds of periwinkle and other groundcovers
- **Grass**: also considered a paving surface

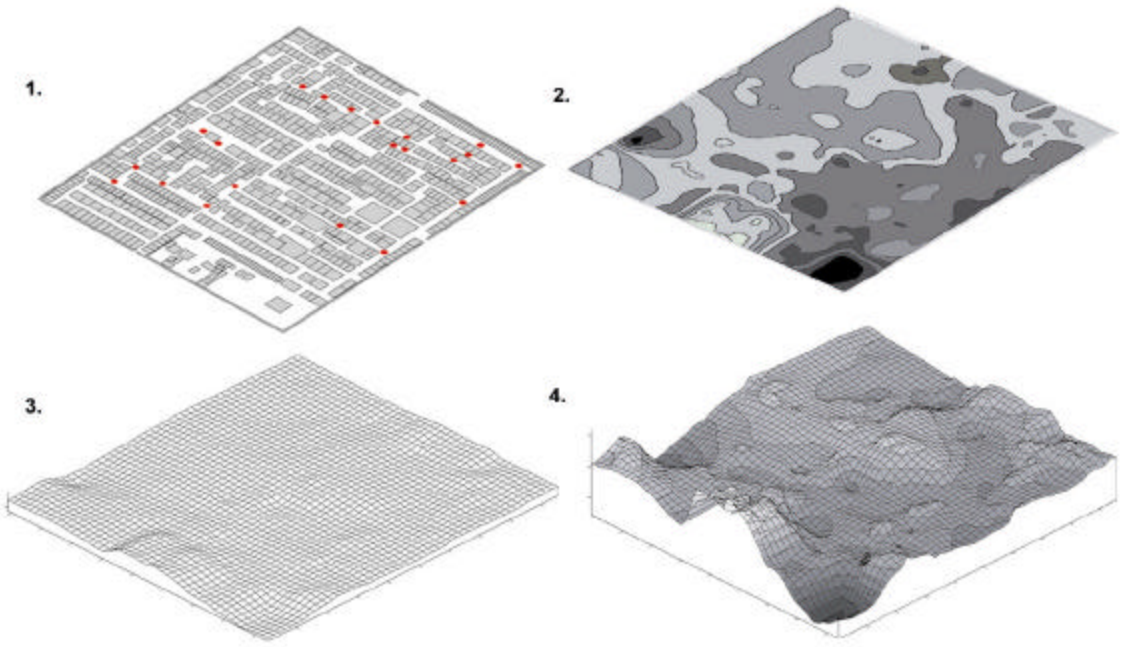
Aside from the Protestant section, most of the trees were located on the east side of the cemetery, which, as it happens, has less hard surface paving than the west side of the cemetery. The majority of trees on site are palm trees, though camphor and crepe myrtles were among other species that were identified. The majority of trees do not provide substantial shade, either because they have small canopy (e.g. palm trees) or because their placement is inopportune, having been planted or grown adjacent to a tomb or group of tombs.

Though in its current state, the vegetative materials associated with St. Louis 1 Cemetery are sparse, historically this was not so. As witnessed in several historical images, the cemetery was greener throughout the nineteenth and well into the twentieth century.

St. Louis 1 Cemetery in 1834, watercolor by John H.B. Latrobe, (THNOC).

Postcard Image of St. Louis 1 Cemetery, New Orleans, LA, 1979, (THNOC).

3.3.1.3 Topography



Topographic recording of the site was undertaken through the aid of the Department of Anthropology, University of Pennsylvania.

Map 1 illustrates the location of the drain inlets and their proximity to the tombs.

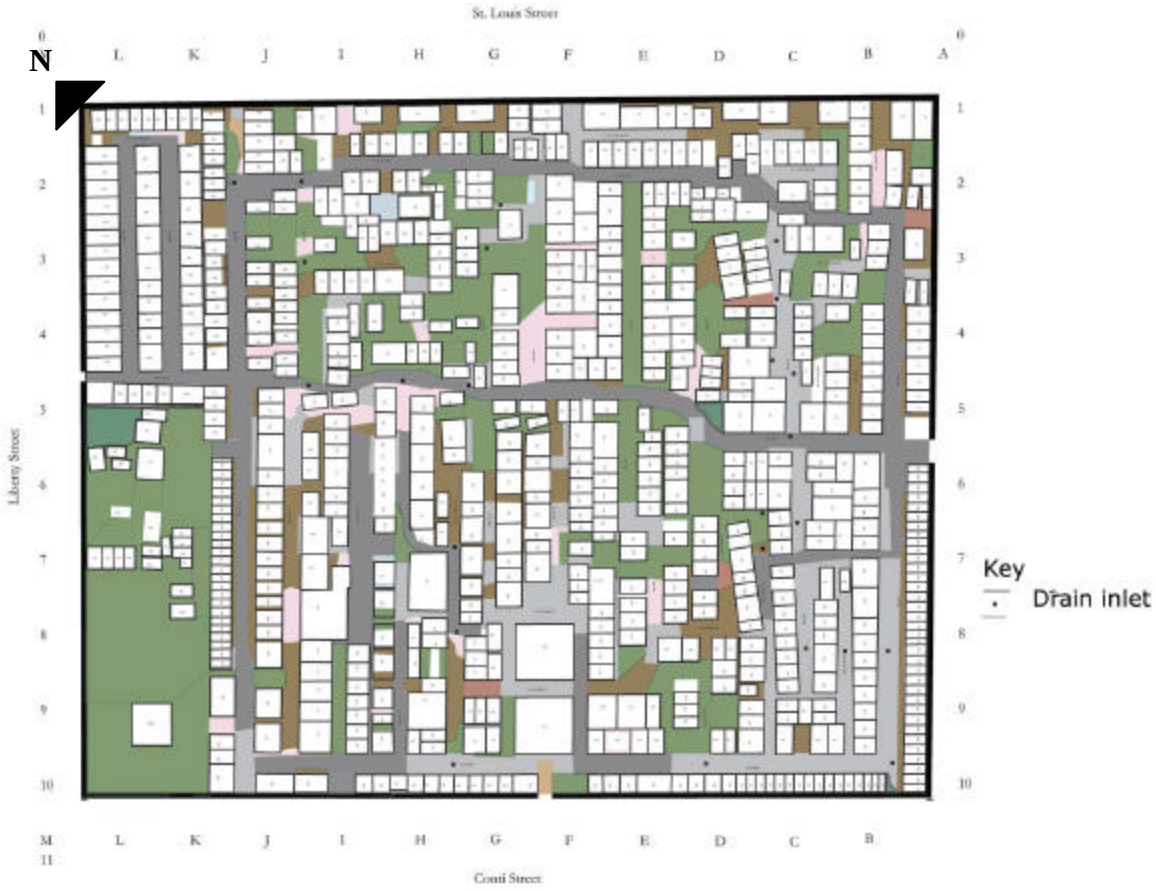
Map 2 illustrates the topography gradient, taken from 500 spot measurements and reveals the pattern of ground surface elevations across the entire site. The darker regions illustrate lower elevations within the cemetery verses the lighter regions representing higher elevations. While variations exist, it should be noted that there is only about 1 foot of elevation difference across the whole site.

Map 3 is a topographic map made through the use of a laser transit with an attached handheld data collector. A program designed for use on archaeological and historic sites translated the highly accurate 3D measurements into a format easily compatible with a variety of rendering programs. In this case, SURFER, the 3D modeling program was used to produce these topographic maps.

Map 4 is an exaggerated 3D model of the elevation topography. Exaggerations such as this are useful for "what-if" analysis of extreme conditions or changes expected to occur over a long period of time. Examples might include the position of St. Louis 1 Cemetery in times of heavy flooding or for a prediction of future sinking, in a 20-30 year time span.

While it is known that the cemetery was originally and continually "raised" by the dumping of soil fill excavated from ditch and canal construction and dredging, it is difficult to establish original and subsequent grades without geo-technical site testing. Over time, grade levels have locally changed as a result of debris accumulation from path maintenance and tomb subsidence.

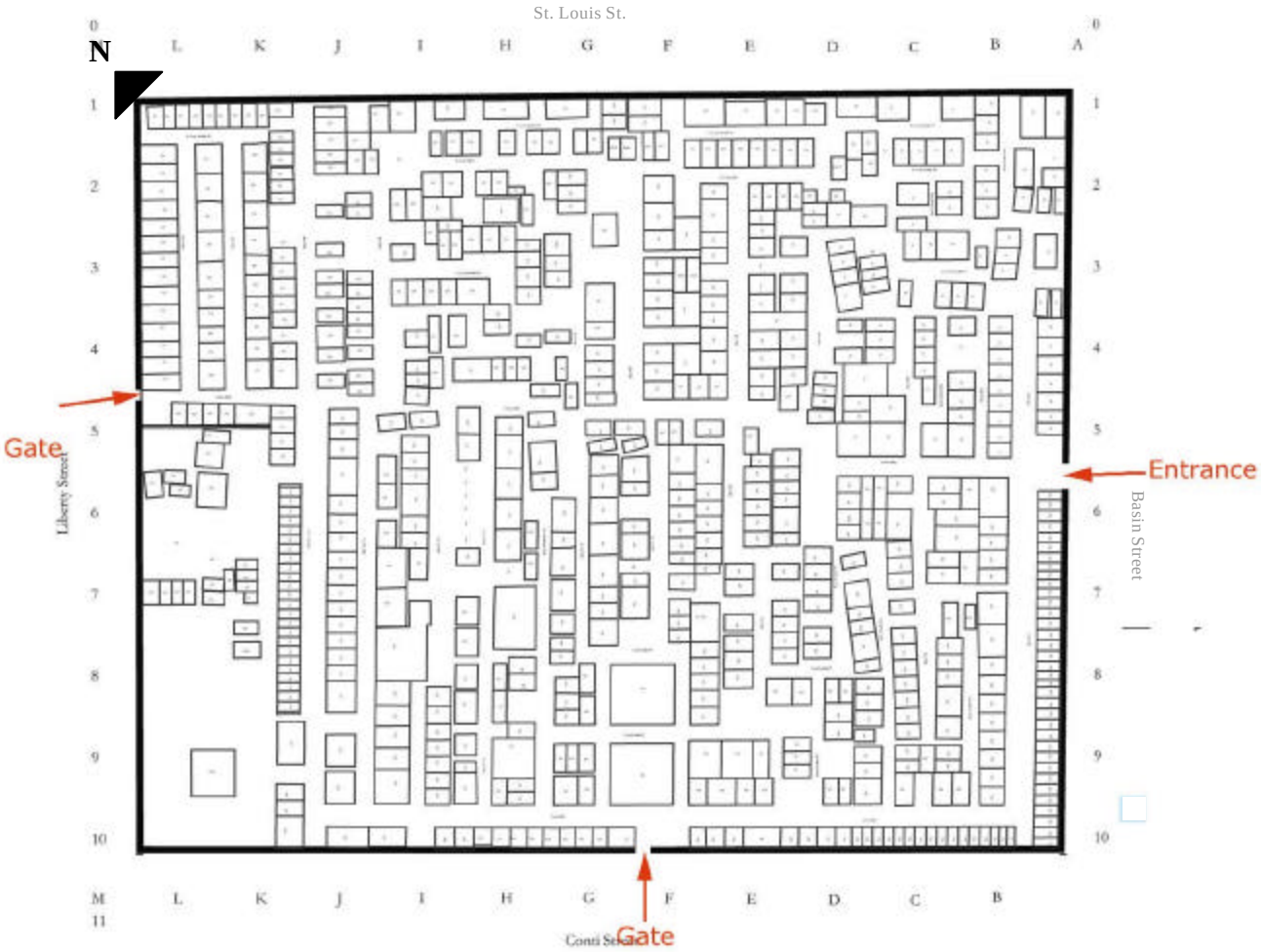
3.3.1.4 Drainage System



Along with topography and surface materials, a surface drain inlet survey was completed to assist in tracking the movement of water through the site. According to the survey, most of the drainage system appears to have been installed on the south end of the cemetery, in the northwestern corner of the cemetery and along Basin Parallel No. 4-L. The cemetery's drainage channels flow to the city's drainage/sewage system.

Drainage has been a problem at the cemetery since its beginning. Isolated in swampy terrain, St. Louis 1 Cemetery frequently flooded during heavy rains or crevasse breaches, periodically closing the site to interment. Raised shell paths and above-ground burial counteracted the inconveniences, but not the frequency of flooding. Topographic analysis reveals the site to be mainly flat, with a slight rise along the west wall of the site. The current subsurface drainage system was installed in the 1970s per Michael Boudreux of the Archdiocese in conjunction with new concrete pavements.

3.3.1.5 Enclosures/Entrances



This Enclosures/Entrances map shows the position of the current main entrance along Basin Street on the south end of the cemetery and also two additional gates, which were locked at the time of the site visit, on Conti Street and Liberty Street. Along the Liberty Street side, a plain wall segment extends into the cemetery to separate the Protestant section on its west side in conjunction with the wall vault segment on its south side. The site is completely enclosed by high walls, approximately 6 feet high, although originally, the site was enclosed by a wooden palisade still extant and visible in the 1834 Latrobe watercolor view. By this date, perimeter wall vaults were also constructed to provide more permanent and functional enclosure.

3.3.1.6 Open Spaces

One of the most distinctive spatial features of St. Louis I Cemetery is the interplay between the dense configuration of tombs and the open spaces that are shaped by the absence of tombs. The density of tombs in this cemetery is such that these open spaces take on qualities—in volume and character, directly related to the scale and qualities of the tombs that surround them. The spaces are energized by the physical processes of accretion and removal of surrounding tombs and often have a distinct pattern creating a local or neighborhood organization specific to their placement in the cemetery. The origins of open space in the cemetery are unclear at this time. Further analysis should shed some light on which factors affected the placement of tombs and paths. Current open spaces appear to be the result of tomb placement, as well as tomb demolition.

Out of many possible identifiable open spaces in this cemetery, six will serve as case study areas for examination. The photographs below are by studio participants.

Open Space Area 1: This space is at the south entrance to the cemetery, and is adjacent to the Varney tomb. It is at the base of Center Alley and at the midpoint of Alley No. 1-L, the southernmost pathway along the cemetery's east/west axis. Associated with this area is the cemetery's entrance shed and numerous Archdiocese information signs. It currently serves as the formal entrance to the cemetery, in part created by truncation of the cemetery in the early nineteenth century with the widening of Basin Street and the relocation of the original entrance gate, probably on the St. Louis Street side, as well as the position of the Varney tomb itself.

Open Space Area 2: Alley No. 3-R's angular arrangement of tombs gives it a feeling different from alleys located near the edges of the cemetery. It is unclear why the tombs on the southern side of the alley slant in, though the effect is perspectival, leading toward a mature palm tree along St. Louis Alley in the background. These irregular spaces are fairly common in the center of the cemetery, where the spatial ordering caused by the presence of the perimeter walls is less evident. These interior spaces have more commonly been left unpaved as well, supporting grass and other groundcover.

***Open Space Area 3*:** This area is adjacent to the west wall and the western gate which opens up to Conti Street. This space has been created by the loss of two tombs and subsequent grass overgrowth. The area is empty aside from an assortment of gardening tools and a statue of Aesculapius, God of Medicine, located there since at least the late nineteenth century, according to a watercolor sketch by W.A. Rogers published Dec. 30, 1899, by *Harper's Weekly*.

***Open Space Area 4*:** This area is located in front of the east façade of the Italian Society tomb. It is defined by surrounding tombs that are over 3 tiers high, giving it a greater feeling of enclosure and spatial definition more than other open areas. The ground surface is paved, including several historic planting beds that have been filled with concrete.

Open Space Area 5: While this space is not devoid of tombs, the large society and family tombs on the perimeter of the space frame the area and create a distinct volume of enclosed space, despite the presence of smaller scaled tombs filling the area at the ground level. There is a strong interplay of tomb scale, endowing the society tombs with a heightened feeling of mass and monumentality.

Open Space Area 6: This area is the "Protestant section" of the Cemetery, a remnant of the city's denominational past. Though this section was reduced in density through the removal of burials to Girod Street Cemetery in 1806, and was reduced in size with the construction of Tremé (Marais) Street in 1822, this open space yet retains the open qualities that John H.B. Latrobe painted in his 1834 watercolor of the cemetery proper before the advent of later infill.

3.3.2 Existing Tomb and Marker Inventory

3.3.2.1 Survey Data Analysis

The site survey created an accumulation of data so immense that the most efficient way of analyzing it map the information according to set queries. As mentioned earlier, the data from the condition survey was entered into an Access Database. These data were then linked into Arc View® to make the data capable of mapping.

To date, these data have not been completely analyzed or field checked. One of the goals this studio set was to create the ability to make diverse analyses possible. Experimental queries on the data have been run and and mapped accordingly, and many more are possible. The types of queries that have been applied have attempted to map the evolution of the site through time by tomb type, materials. and condition (See Appendix I and J).

The querying of the data has lead to some preliminary assessments of the built features of the site. In the test queries it was determined that the majority of the tombs on site, about 75%, are of brick with most of them finished in stucco. The only stone evident is in the few marble tombs, making up ~5% of the tombs. According to the initial survey

assessment, 9% of the tombs are of concrete. Although wall vaults and society tombs are most often mentioned in the many books and guides, the most prevalent tomb types are the platform and pediment tombs. Together, they make up 60% of the site. The experimental querying determined that approximately 50% of the tombs were built before 1900, based on the first interment dates visible. However, many of the oldest appearing tombs no longer have closure tablets with legible inscriptions, so the percent of existing tombs built before 1900 is probably a much higher number.

3.3.2.2 Tomb and Marker Typology

- Wall Vaults
- Step Tombs
- Platform Tombs
- Pediment Tombs
- Parapet Tombs
- Sarcophagus Tombs
- Lg. Society Tombs
- Mausoleum
- Markers
- Other
- Empty, Ruin, or Paved

NOTE:
Based on the Survey Manual definitions, (See Appendix E) all of the tombs were defined by type. The photo inventory (see Appendix K) was used in lieu of field verification and can be referred to for many photographs of each tomb type.

At this stage of the project, we did not survey the site for tomb style.

A review of previous literature and studies of the city's cemeteries revealed inconsistencies in the description and classification of mortuary structures. In order to produce an accurate survey, typological description was deemed critical, and clear and concise terminology necessary. Therefore, tomb and marker types were identified and recorded during the site survey. A **tomb** was defined as any mortuary structure associated with or containing one or more burial vaults. The definitions used to describe these tomb types in the survey manual are as follows (see Appendix E – Survey Manual for examples):

1. Tombs

a. Wall Vault: Multiple tiers of individual burial vaults, usually of brick vault construction, arranged to form an isolated block arranged as perimeter enclosure walls.

b. Pediment Tomb: A multiple vault tomb whose height is greater than its width or length and top is surmounted by a pediment. (Pediment: the flat, triangular or curved gable end of the roof surmounting the end walls.) These are usually family tombs.

c. Mausoleum: A tomb with accessible interior space, often containing wall or subterranean vaults and a chapel (a small area intended primarily for private prayer, contemplation) and accessed by a door.

d. Tumulus: A tomb or mausoleum surmounted by banked earth.

e. Society Tomb: A large multi-vault tomb in a complex architectural form with any roof or façade type not belonging to any other specific type.

f. Simple Tomb: This tomb type has multiple variations that will be referred to as the sub-types. A simple tomb is a small mortuary structure, that contains one or more burial vaults within solid walls and whose length is greater than its width or height. There are several classifications of simple tombs:

- **Parapet tomb:** A simple tomb possessing a raised front creating a parapet (a low wall surmounting the structure's exterior walls or at a roof's perimeter), with or without embellishment.
- **Platform tomb:** A simple tomb whose length is greater than its width or height and whose base is solid or open (on piers or columns).

- **Sarcophagus tomb:** A simple tomb resembling a sarcophagus, typically with canted sides and usually on a raised base.
- **Step tomb:** A simple tomb possessing a stepped or corbelled top.

2. **Marker:** Any non-tomb mortuary structure which does not accommodate an interment and whose form is often sculptural.

   a. **Simple**: A single element marker.

   - **Headstone/footstone**: An associated pair of upright slabs, usually of different height embedded in the ground or in a separate stone base which defines the grave and are inscribed.
   - **Stele**: A carved or inscribed stone slab or pillar used for commemorative purposes, taller and thinner than a headstone. Base not required.
   - **Plaque**: Non-freestanding plain or ornamental tablet affixed to a wall or structure, but not a tomb/marker.
   - **Pyramid**: A freestanding architectural form with four adjacent triangular walls that meet at a common apex and rest on a square base.
   - **Other:** Any simple architectural or sculptural form that marks a grave.

   b. Compound: A multiple element marker.

   - **Table**: A horizontal tablet supported by the individual uprights, often in the form of a table.
   - **Basal**: A horizontal tablet supported by a low solid wall base. (Resembles a platform tomb but does not house a casket or coffin within the walls.)
   - **Pedestal**: Any combination of column, obelisk, urn, or sculpture surmounting a pedestal or pedestal-base.
     1. **Column**: A full or truncated single pillar standing alone as a monument.
     2. **Obelisk**: A monumental, four-sided stone shaft, usually monolithic and tapering to a pyramidal tip.
     3. **Other:** Any architectural or sculptural combination.

3.3.2.3 Materials and Methods of Construction

Bricks and Mortar

The majority of the tombs in St. Louis 1 Cemetery are of brick construction covered with stucco. Tomb bricks range in quality, but most are soft and porous, and appear to be both

hand and early machine made.[1] Early brick production traditionally relied on local clays and sands for supplies; New Orleans bricks are no exception. The dominant materials used in the manufacture of the bricks are clays from the Mississippi River and Lake Pontchartrain, producing the area's characteristic River (red) and Lake (spotted orange) brick types.

Historically, mortar mixes contained two constituents: a binder and an aggregate. Formulations depend on usage: typically, tomb bedding mortars were 1 part binder to 3 parts aggregate, while stuccos were richer in binder, generally 1:2 (by volume). Mortar binders were a mixture of lime and clay, while stuccoes tended to be of lime and/or natural cements. Portland cements were not commonly used until the early twentieth century.

Stucco

Historically at St. Louis 1 Cemetery, the mortars and bricks were covered with a protective layer of stucco. Unlike the mortar, most stucco mixes were hydraulic lime or natural cement-based with aggregates derived from local sources. Portland cement is not usually found in stuccos until the early twentieth century.

Stone

Predominately four types of stone are found at St. Louis 1: white marble, cream and dark gray limestone, slate, and granite. Marble is a calcareous metamorphic rock, originating from calcareous sedimentary limestone. Slate comes from metamorphosed siltstone. Granite is an intrusive igneous rock that is extremely hard and dense. Marble and limestone are used for closure tablets, as well as veneer on some brick tombs. Marble became the stone of choice for its white color and fine texture and association with

[1] Weaver. ***Conserving Buildings.*** p. 103.

classicism. The slate is found mostly on the interior of the tombs, functioning as the shelf for the vault, as well as for tomb precinct pavements. The granite is used for new closure tablets.

Lime and Lime Wash

All stuccoes were finished with plain and pigmented lime washes. Lime washing was done frequently for protection and aesthetic enhancement and often was part of the All Saints' Day activities. Lime wash is essentially a mixture of slaked lime putty (calcium hydroxide) in water that sets slowly by absorbing carbon dioxide from the air. The chemical reaction that occurs produces crystals of calcite. These crystals are unusual because they have a double reflective index; light entering each crystal is reflected back in duplicate. This results in the characteristic surface glow of lime-washed surfaces, not found in modern organic paint products. Lime washes were applied unpigmented as well as colored yellow and red with natural earths (red and yellow ochres) and grey with lampblack.

Metalwork

Metalwork in St. Louis 1 Cemetery is predominately relegated to single elements and architectural components such as gates and railings. The most common metals are wrought and cast iron and cast zinc.

Wrought Iron

For New Orleans, the earliest metalworking technology was the hand forging of wrought iron originally brought by the French. Forging, or the forming of heated wrought iron with hammer and anvil, was used to produce the earliest ironwork in St. Louis 1 Cemetery 1, mostly surviving in the form of simple crosses. It involved the change in the section of the wrought iron bar stock and the use of other basic blacksmithing techniques such as hot splitting, swaging, and forge welding.

Traditional Fabricated Metalwork

Wrought iron bar stock and cast iron production started in New Orleans by the 1820s and was imported from England, Sweden, and domestic sources as raw material and finished products. Some small decorative cast iron elements seem to have found their way into the designs of the cemetery work early on. Pieces were mostly supplanted in the 1850s with finer detailed and less expensive decorative zinc elements, cast separately or directly on a wrought iron structure and then attached to a fabricated wrought iron frame. Zinc rosettes were also cast directly onto the wrought iron, doubling as clamps holding the fabric together. This transitional period of expression in metal saw the slow demise of hand forging. Wrought iron bar stock was available in most any dimension and was increasingly used "as-is" without change in section. The stock was given form with the use of jigs and all the parts put together or fabricated with traditional assemblages often mimicking those used in woodwork, such as the dovetail and mortise and tenon.

Cast Iron

Cast iron is a manufactured product involving the collaboration of a team of specialists. Starting with designers and pattern makers, and followed by foundry men, who would execute the work by pouring molten iron into molds, the resulting castings would be cleaned by finishers. By the 1850s, cast iron panels were taking the place of fabricated work, first mounted in wrought iron frames. As the technology became more sophisticated in the 1870s and 1880s, completely cast systems including posts and gate doors became very popular. Their intricate patterns would come to dominate the metalwork in the cemetery, out-pricing the more labor-intensive traditional metalwork.

PHASE I RECOMMENDATIONS

4.0 PHASE I RECOMMENDATIONS

4.1 Site Management Philosophy

Any attempt at preserving an object, building, or site invariably causes a disruption in the natural life cycle of the subject. St Louis 1 Cemetery is a living, dynamic place with many historical uses, meanings, and appearances that must be understood to be stewarded properly. As an overall site management philosophy, we believe gradual integration of specific guidelines and interventions based on the balance between values, use, and economy to be the best means of achieving this goal.

This philosophy of integration requires looking at the site as a whole in terms of how the tombs and the landscape work together to create the physically defining characteristics that make this site unique. The cemetery should be encouraged to continue in its historical roles as an active place of burial and family visitation, as well as a tourist destination and a place for contemplation. Future changes to facilitate these uses, and to conserve the physical fabric, should be planned and managed to preserve and enhance the character of the site. This section details specific recommendations for landscape, tombscape, and tomb conservation, and examines how the external issues of tourism and neighborhood planning can affect successful preservation and management of cultural resource.

St. Louis 1 Cemetery was not originally intended to be viewed as a collection of decayed tombs. However, over time, the cemetery, like many such sites, has become defined by, and admired for, its picturesque decay. Indeed, much of its past and current appeal is tied to this aspect of age. Decay and age are essential components of the site. However, these components must be counteracted by sensitive and timely repair and maintenance.

The philosophy of integration recommends repair techniques and cycles that are maintainable and sympathetic with the existing materials. This strategy is meant to impose an aesthetic prescription on the site, to attempt to prevent jarring changes, and to ensure long-term sustainability.

Integration as a holistic management philosophy for the cemetery addresses the importance of the whole site, rather than each individual tomb or material change. If a new tomb is to be built, the data collected for this study can be used to suggest new tomb types and locations based on their relationship to existing tombscapes. Construction guidelines that recommend changes from historic materials and building technologies need to also be reviewed. How do these new recommended materials and technologies perform alone and in combination with existing materials and construction systems? How will they age, and how will the site be impacted when these individual changes have been applied across most, or all, of the site?

Two material changes in the past thirty years highlight this issue; the substitution of blue granite as a closure tablet for white marble and the use of concrete for roofs and pavements. These material changes can be seen in some of the historical photograph comparisons in Appendix C.

Marble tablet deformation is the result of dimensional undersizing (thickness), unsupported installation, climate, and material. While all of these factors cannot be easily remedied, such as climate, increasing the thickness of the slabs to 1¼ - 1 ½" would dramatically improve marble tablet rigidity. Substituting other varieties of white marble (for the original Carrara), that are less prone to bowing, would be preferable to using the popular and widely available dark gray granite and anorthosite.

These granite closure tablet replacements are dramatically different both in color and reflectivity from their marble precedents. Their widespread use is significantly impacting the appearance of the site as a whole. Paint samples show that historically, the tombs were white-washed or colored red, yellow, or grey. Current paint used is a modern white surface coating. Tomb colors are now inverted: white tombs with colored tablets are appearing. While the closure tablet issue may seem like a minor aesthetic debate, it is indicative of the larger question of the contribution of repetitive architectural elements to the visual integration of the overall site and the impact of such changes.

Replacement also encourages loss of critical information if tablets are not remounted on the tomb. Remedial methods to repair and reinforce tablets for reuse do exist and have been demonstrated in recent preservation work by the U. Penn team.

The issue of the poured-in-place concrete roofs and grade slabs is another instance of a decision that may have seemed logical given the information that had been provided to the Archdiocese on an individual tomb basis, but the impact on the tombs and on the site as a whole has been dramatic, as the practice has become widespread.

Over the past thirty years, concrete roofs and pads have been installed on many of the tombs, presumably to stop moisture penetration and, possibly, to aid against subsidence. As a result of this individual tomb work, architectural details (e.g. cornices) are being lost and the site is now being slowly covered in concrete in the name of tomb preservation. More research is needed, but it is likely that this practice is actually causing greater moisture retention by forcing more rising damp up into the soft brick of the individual tombs, or in the case of the roofs, entrapping existing water inside. Increased moisture will soften brick and mortar and if allowed to cycle through wet and dry states, will cause serious structural problems. This may take time to evidence because the tombs are also receiving hard, dense cement stuccoes, further locking in rising damp and concealing the growing structural failure problems. Poured concrete roofs are also significantly heavier and may lead to accelerated subsidence of the tomb.

It is time to reevaluate this practice. The historical character of the site was one of a grassy space with crushed shell walkways. As time has passed, the tombs have slowly subsided into the damp earth, some have acquired a slight tilt, but most have not. Using the principle of integration, a different solution must be found: a solution that offers a better balance to meet the immediate needs of tombs in distress, proves economical, and ensures the long-term vitality, continuity, and integrity of the entire site as a national historic treasure. Where does this concrete pouring stop, and what has been preserved? If these individual tomb maintenance practices continue at the current rate, in 30 to 50

years most of the site will be covered in concrete, an impermeable surface, and the same number will have new roofs. The very character of the site will have been irreparably altered, and the long-term condition possibly worsened.

St. Louis 1 Cemetery shares many of the characteristics of the historic city, implying a long established sense of order in its rambling paths and ancient structures. However, the order is one that has succumbed to centuries of small and large scale changes. Like any urban place, St. Louis 1 Cemetery continues to adapt to the demands placed upon it. As our recommendations are introduced, we recognize that any effort to stabilize and preserve the site for future generations will become a part of this continuum. These recommendations should be used to develop a site management plan that acknowledges rather than ignores, the historical character of the tombs and site.

4.2 Landscape Recommendations

After evaluating the existing site-wide landscape conditions, recommendations were developed that can be broken down over a ten-year time span. These recommendations address the immediate needs of the site, revitalize the landscape and continue to underscore the historic elements so pertinent to St. Louis 1 Cemetery. The work in each of these phases can be initiated over time as funds and volunteers are available.

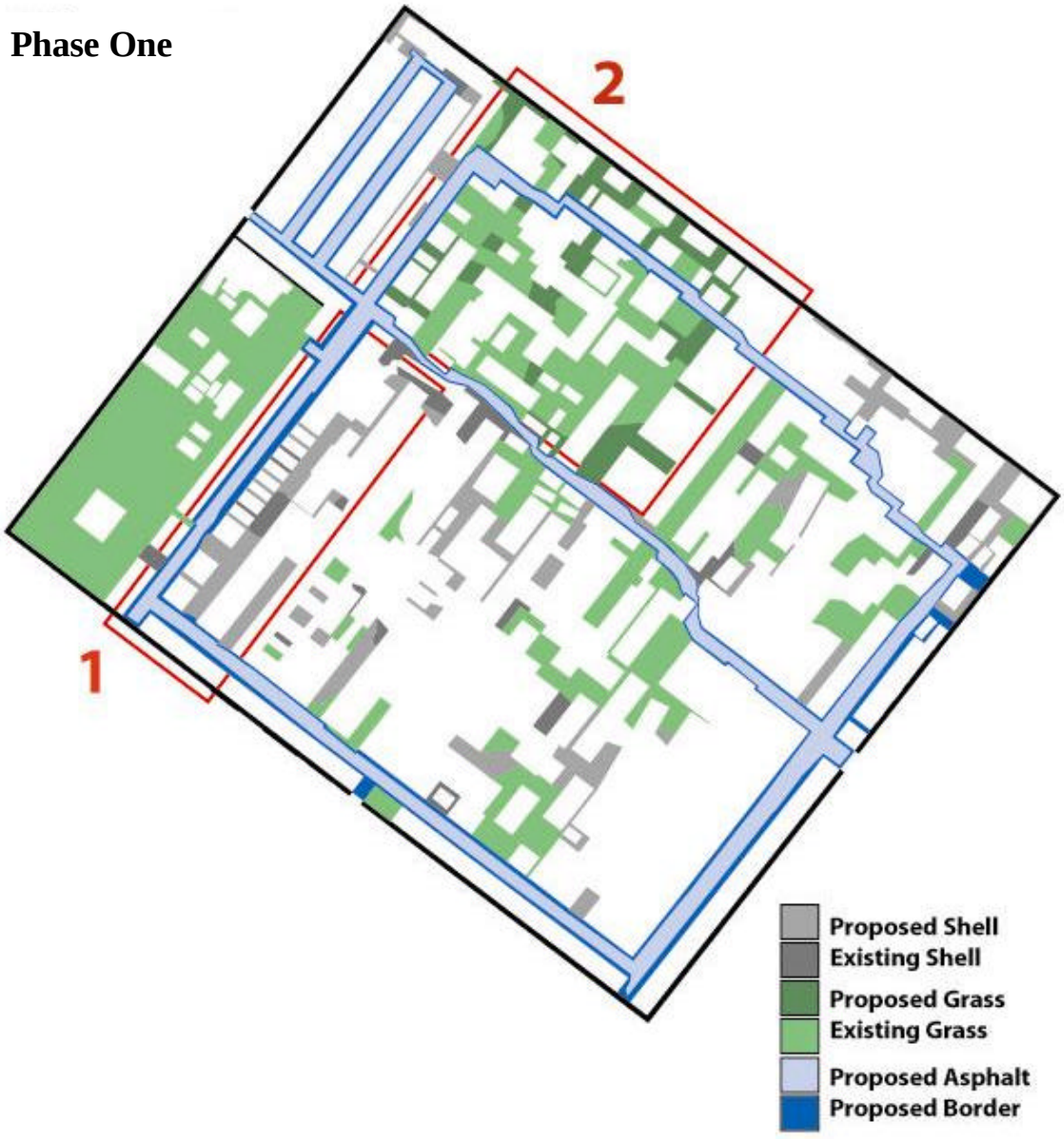
This holistic revitalization approach complements the same conservation techniques proposed for tombs, with sound design principles that immediately improve the existing drainage system, visitor circulation paths and paving material erosion. The recommended plant list is derived from our research of plant funerary symbology and historic plantings that once thrived on the site.

> *New Orleans has several peculiarities of its own,…. For instance, the cellars and graves are above ground. … There are walks leading to different parts of this singular cemetery, paved neatly with shells.*[1]

Historically, shell was the primary path material and was also the primary ground covering between tombs within the rows. We recommend that a shell path zone be created in the western corner (Section 1, Alley No. 9L) of the site and that all exposed soil paths and patches across the cemetery be converted back to a crushed shell surface.

[1] Lady Emmeline Stuart Wortley, *Travels in the United States etc. During 1848 and 1850* (New York: Harper & Brothers, Publishers, 1851), p. 126.

Phase One



A grass district in the northeast (Section 2, Alley No. 5, 6 and 7R and St. Louis Parallel 2) area of the cemetery is also recommended. In this district, the only ground surface material will be grass, including those areas now used as paths between the tomb rows. To better control and direct large groups of visitors, a new hard surface path should be created as the primary circulatory loop of the site. This path currently exists in asphalt along Alley No. 1L, 1R, 8, 9, and 10 R, Center, Conti and St. Louis Alleys. Vinca, Helix and Thyme ground cover edging should be planted to line the path. If possible, a new aggregated surface material similar in appearance to shell should be installed and the

increased use of historic and substitute paving materials, with increased permeability, will add efficient water absorption while maximizing the irrigation needs of the existing plants.

Phase Two

During Phase 2, the shell zone should be expanded to make up a greater percent of the ground surface material. Alley No. 7 and 8L and Basin Parallel No. 4L should be converted to shell. The grass district should expand to cover Alley No. 3, 4, 5 and 6L, 3 and 4 R and Conti Parallel No 1 and 2 and Basin Parallel No. 3L.

> *Round many of them (the tombs) are planted rose bushes and other flowering shrubs, some of which at this time were in full bearing and here and there were cedar and orange trees, which always retain their greenness.*[2]

A variety of evergreen and deciduous trees and shrub species are proposed to include *Quercus agrifolia, Magnolia grandiflora, Magnolia soulangiana, Lagerstroemia indica, Phoenix spp., Gardenia jasminoides, Rhodeodendron spp., Azaleas spp*., and various annuals indigenous to New Orleans. The overall ambient temperature experienced on site is greatly reduced with improved canopy coverage from large evergreen shade trees and ground cover vegetation and would greatly improve visitor conditions.

Phase 2 further recognizes that many ground surface materials have historically been utilized at St. Louis 1 Cemetery, including the more recent addition of concrete. Many of these path surfaces should eventually be replaced and, in the meantime, can be softened with a proposed ground cover edge of Memorial Rose species (*Rosa wichuraiana*).

More archival work is needed to fully develop recommendations for the restoration of the individual tombgardens. As in the case of full-scale domestic architecture, a range of garden features, such as planters, accompanies the various types of tomb buildings that have developed in the cemetery. Used for both visual and olfactory decoration of the tomb and cemetery as a whole, gardens played an important role in the design of the tomb, and specialized plant pallets encoded with the language of mourning were used as part of this design.

By the middle of the nineteenth century, the cemetery had become increasingly urban as the ground cover present in Latrobe's 1834 watercolor gave way to rapid development of the cemetery accompanying the epidemics of the mid to late nineteenth century. The loss of the cemetery's pastoral quality led to an increased allocation of the purchased tomb area to be used to endow the tomb with its own landscape setting, often distilled to the

[2] A. Oakey Hall, *The Manhattaner in New Orleans or, Phases of "Crescent City" Life*, Published for the Louisiana American Revolution Bicentennial Commission (Louisiana State University Press, 1851).

symbolic placement of a few plants, a shrub, or even plant cuttings attached to the tomb itself. The design of these garden spaces accompanying the tombs varied with the design of the tomb and with the precinct area surrounding the tomb. Gardens are present in the form of above-ground containers, below-ground containers, accompanying beds, and associated landscape features.

"Tombs, Old St. Louis Cemetery," Dec. 30, 1899, Harper's Weekly. Mechanical Reproduction of watercolor sketches by W. A. Rogers, (THNOC).

St. Louis 1 Cemetery, circa 1970s. Photograph by Betsy Swanson, (THNOC).

Early photographs of the cemetery show a wide scale presence of plantings, sometimes formally presented in beds, sometimes with a more informal relationship to specific tombs, sometimes with little or no relationship to any single tomb. Trees and shrubs were not uncommon in the cemetery, breaking the hard, urban quality of the cemetery with a combination of indigenous and exotic trees and shrubs. As future tomb restoration projects proceed, archival research should include a study of the historic plantings and family practices of adorning the tomb, so that these tomb gardens can be restored.

4.3 Tombscape Recovery

The tombscape is defined as a combination of related views, spatial configurations, material juxtapositions, and cultural associations among a group of tombs and their associated spaces. The tombscape is one of the defining features of the St. Louis 1 Cemetery. The tombscape is in many ways akin to the historic district, pulling from a

variety of sources to create a context that is both self-defined and often part of a greater context, in this case, a cultural landscape.

The memorial function of the cemetery's tombscape, however, gives it a context of a unique character beyond the historic district, reflecting an approach to design that, in addition to its practical functions, seeks to order the incomprehensible phenomenon of death. The reasoned application of classical decorative modes and orthogonal path planning has become disoriented in its dealings with death, and what results is the tombscape, a dynamic jumble of form, space, and context. The tombscapes in the St. Louis 1 Cemetery are varied according to their associated tombs, their views, and their placement within the cemetery.

One well-photographed tombscape area is the one located in front of the east façade of the Italian Society tomb along Conti Parallel No. 2. It is defined by the presence of the Italian Society Tomb façade and a perimeter of surrounding tombs that are over three tiers height, giving it a greater feeling of enclosure and spatial definition. The area takes on the quality of a formal plaza. The ground surface is paved, including several historic planting beds that have been filled with concrete.

The Conti Alley tombscape seen looking from the south to the northwest corner of the cemetery shows the plantings and immortelles that once decorated so many of the tombs in St. Louis 1 Cemetery. This viewscape is remarkably intact, although much of the ornamentation and ironwork has disappeared.

Old St. Louis Cemetery (LSM 5)
Source: LA State Museum Website
Date: ca: 1875

Italian Society Tomb
Source: Studio collage
Date: March 2001

No. 396 Old St. Louis Cemetery by Mugnier
Source: New Orleans Public Library Collection
Date: ca: 1875

Taken from the south corner of Conti Alley
Source: Joseph P. Mattera
Date: March 2001

The third tombscape example is a combination of Alleys 7-L and 8-L, where the large society and family tombs on the perimeter of the space frame the area creating a distinct volume of space, expansive by the cemetery's standards. There is a strong interplay of tomb scale, endowing the society tombs with a heightened feeling of mass and monumentality.

No. 398 Old St. Louis Cemetery by Mugnier
Source: New Orleans Public Library Collection
Date: ca: 1875

Taken from above the Marigny Tomb looking east
Source: Joseph P. Mattera
Date: March 2001

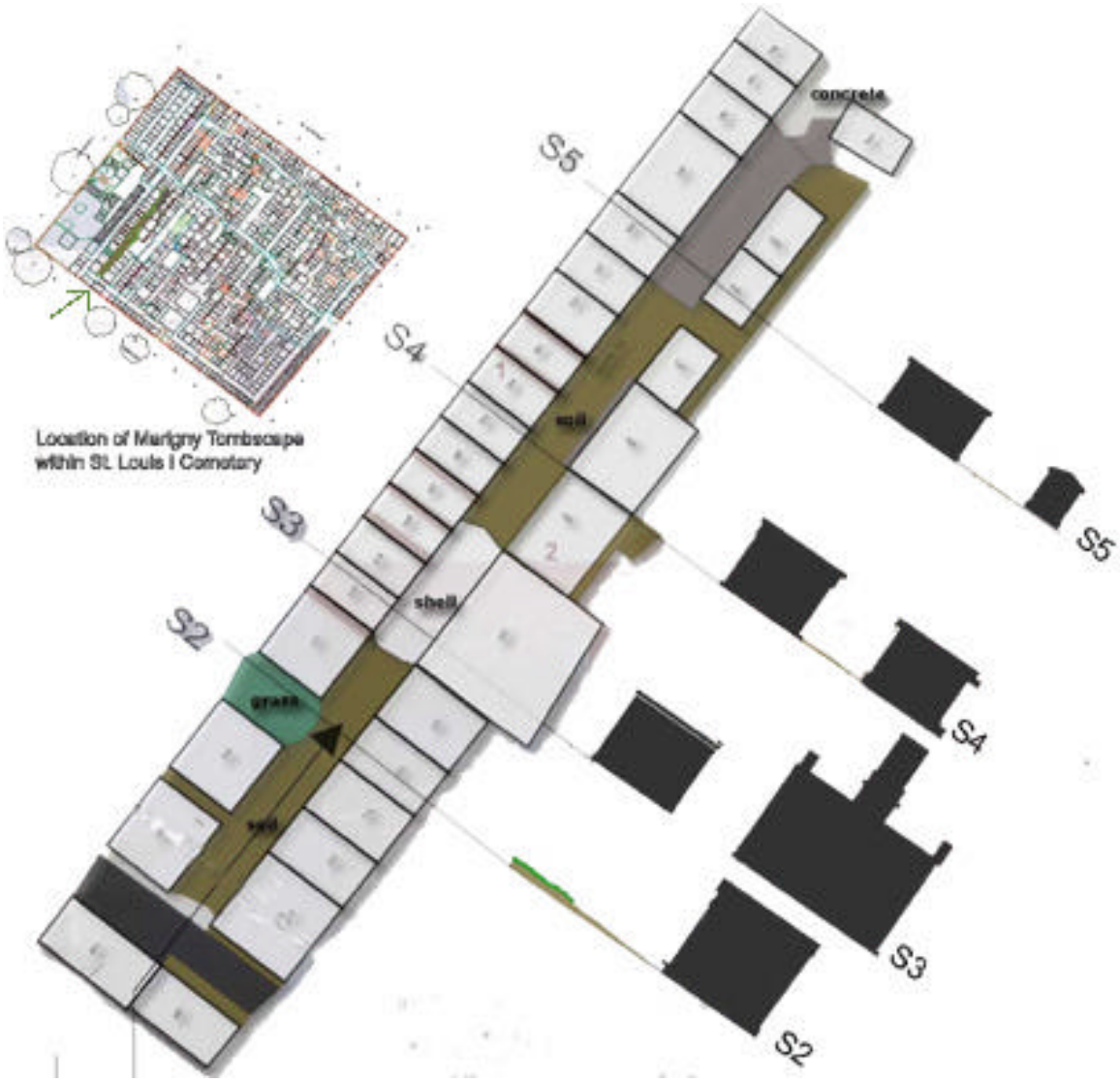
Alley Number 9-L is a section of the cemetery that illustrates a tombscape with more intimate proportions and a more traditional alley form. Capped on its end by the Marigny Tomb, Alley No. 9-L runs east/west and spans the distance between Conti Alley and Center Alley. Its diversity of tombs, in type, age and size gives it a richness characteristic of the cemetery in general, and illustrates the cumulative meaning of the tombs, which, when seen as a group, is greater than the significance of the tombs as separate entities. Some tombs are commonly seen as more culturally significant in the group, such as the de Marigny Tomb and the French Society Tomb, but the notion of the tombscape recognizes the phenomenological impact of the tombs together, whose

individual material, spatial, and cultural features are informed by and participate within the greater context of the group. This context extends beyond the group of tombs to include views and viewsheds that form the tombscape as well. The collage below shows a view of this alley looking southwest toward the de Marigny tomb.

Photo collage by studio.

Because of the high degree of integrity of its various components, this alley has been chosen to serve as a model for tombscape restoration. The tombscape restoration / maintenance process is designed to take place in three phases followed by regular cycles of monitoring. The process features the gradual restoration of tombscape elements, including tombs, their associated features, vegetation, path surface materials, viewshed elements, and other related site features.

The objectives outlined in each phase should be carried out within a one to two year time span to give adequate time for proper conservation and restoration treatments. Each phase of work should be inspected semi-annually to inventory the effectiveness of restoration efforts and monitor the condition of the other elements. Given the high visitation of the cemetery, the rigorous climatic conditions of the site, and the age and relative fragility of the historic resources, the regular inspection process should be used to revisit each element in the phasing strategy, and where appropriate, phasing strategies should be amended. For example, any tomb that is determined to be degrading so rapidly so as to be at risk of failure, or pose a hazard to the public, may have its repair cycle started earlier than originally outlined in this strategy.



To initially schedule the alley's complexity into phases of work, the GIS database was used to classify tombs according to their condition and integrity. Once Alley number 9-L was pulled from the master map of the cemetery, the conditions coded in the GIS map were compared with site notes and photographs to verify the accuracy of the survey and to look for conditions which might fall outside of the quantifiable factors described in the database. A final list of activities for each phase was compiled with changes to be made in the individual tombs, landscape elements and other tombscape components.

Phase 1

- Repair tombs with high tablet or ornament integrity and poor condition
- Repair or stabilize tombs that present a hazard to the public
- Repair tombs with high family involvement and support
- All repairs to be executed according to guidelines outlined in Section 4.4 of this report or in the future guidelines to be published in Phase 2 of this project
- Conduct a survey of materials in storage to identify detached articles and tablets
- Initiate research to determine the original location of these artifacts, original tomb materials and colors, inscriptions and tomb garden details
- Remove all invasive vegetation from tombs
- Regrade path and restore crushed shell to exposed soil and grass surfaces
- Restore tombgardens of repaired tombs
- Establish tree and shrub plantings where appropriate
- Initiate family outreach programs to identify family members for the inactive tombs in urgent need of restoration and to gain support for further restorations

Phase 2

- Repair tombs of low tablet integrity and poor condition
- Reattach articles identified in Phase 1
- Removal of inappropriate surface materials; including modern concrete paved precincts, cement patches and concrete roofs
- Remove asphalt and concrete path paving materials, regrade, restore crushed shell as the surface material – loose and/or as poured tabby
- Restore tombgardens of repaired tombs

Phase 3

- Repair tombs of moderate condition
- Replace missing closure tablets with historically appropriate materials
- Inscribe names of the interred as determined by archival research
- Restore missing tomb details according to existing documentation
- Restore tombgardens of repaired tombs

Existing conditions and the black asphalt path.

Proposed change to the tombscape as the shell path is laid and tombs and closure tablets begin to be restored.

4.4 Tomb and Marker Conservation Guidelines

During this preliminary phase of our assessment of St. Louis 1 Cemetery, we did not attempt to develop new conservation treatment guidelines. We instead tested and validated the set of guidelines that were published by the Louisiana Division of Historic Preservation and Save Our Cemeteries, Inc. in 1989 titled, "Cemetery Preservation: The Restoration of Above Ground Masonry Tombs." During Phase 2 of this project, these guidelines will be revised and expanded with further analyses of the data collected during Phase 1. The focused building technologies/materials research and recommendations on the Delassus, (Part of Tremé Wall Vaults Right) No. 1200, Fleitas, No. 529, McCall-Jones, No. 286, Plessy, No. 619,Thomas-Hazeur, No. 330 and the metalwork of the Bonabel, No. 395 tombs can be referenced in the additional research papers as noted in Appendix L.

The 1989 guidelines were in a technical brief prepared by Frank Matero, based on the study by Frank Matero, Shelley Sass, Glenn Boornazian, and Amy Galanos, "A Conservation Program for Above Ground Burials/Cemeteries in the State of Louisiana" (New York: Columbia University, Center for Preservation Research, 1987). The guide

was produced by Mary Louise Christovich and Alfred Lemmon of Save Our Cemeteries, Inc. Key sections of the guide have been updated and are reproduced below.[3]

> It is the function of any technical guidelines to provide basic information necessary to make better informed decisions. This guide is designed to provide basic technical information about the conservation of above-ground tombs. It is extremely important to remember that even the most well-intentioned preservation effort can be very harmful if incorrect techniques and materials are employed. As much irreparable damage has occurred in the name of repair, as through years of neglect. A simple list of do's and don'ts will help orient the novice to the field of tomb preservation.
>
> ***Basic Guidelines***
>
> ***DO*** inspect individual tombs on a regular basis for structural defects. It is important to remember that most deterioration is related to moisture penetration. Therefore, not only should structural defects be noted but also any conditions symptomatic of water penetration (i.e. plant growth, open joints, missing stucco). Building components that must be checked include the roof, stucco, brick masonry and pointing, joints and welds of metal elements, and enclosure tablet attachments.
>
> ***DO*** regularly check the tomb for vegetation appearing on the roof, gutters, downspouts, and other drainage facilities. Vegetation left unchecked can invade the masonry, causing eventual displacement and collapse.
>
> ***DO*** care for landscaping adjacent to the tombs. Caution must be taken with power equipment near masonry or iron work. Grass and ground cover should be cut with nylon filament trimmers only.

[3] Frank Matero, *Cemetery Preservation: The Restoration of Above Ground Masonry Tombs*, New Orleans, LA: Louisiana Division of Historic Preservation, Save Our Cemeteries, Inc., 1989.

DO NOT use herbicides as they can cause deterioration of masonry and corrosion of metals, in cases where contact might occur.

DO clean the monument by the gentlest means possible. Begin with clean water and a soft brush. If that does not succeed, then while it is saturated with water, clean it with a solution of household ammonia and water (one part ammonia to four parts water).

DO NOT use household bleach or abrasive techniques such as sandblasting.

DO NOT attempt to clean an item, such as a broken tablet, that might appear to be unstable.

DO NOT try to waterproof the monument; moisture will be trapped inside, resulting in masonry failure.

DO maintain the existing iron work keeping it clean and waxed or painted. Loose flaking paint and paint buildup should be removed for good adhesion of new paint and clarity of detail. Surfaces should be cleaned of dirt, debris, corrosion, and loose flaking paint with non-ferrous or stainless steel wire brushes and scrapers. For elaborate ornamental metalwork, where hand-cleaning might not be feasible, low pressure (under 40 psi) walnut shell aggregate cleaning has been determined to be safe and effective, provided adjacent masonry is protected. Cleaned surfaces should be coated as quickly as possible to prevent corrosion and poor surface bonding of the finish. Selected coatings should be those specifically designed for metals. Wrought iron work was originally waxed or oiled; cast iron was painted.

Many of the sculptured ornaments are made of marble. ***DO NOT*** try to paint, coat, or re-carve the details and inscriptions that have been lost to natural weathering.

The use of Portland cement is to be avoided in all cases as it is far too hard and dense and will trap moisture within the tomb masonry. Stucco and mortar repairs using natural cements or lime-cement blends are always preferable. ***NEVER*** remove original stucco work, leaving exposed brick. Stucco work is both protective and decorative and was often painted with breathable limewashes.

The facing of tombs with granite rubble and re-stuccoing with Portland cement completely obliterates the original appearance of the tombs and obscures the details. ***DO NOT*** undertake such intervention that creates a discordant appearance in the cemetery landscape.

DO develop a cyclical maintenance program for the monuments and grounds of above ground burial cemeteries. An annual examination of the entire site should be made, and a log book kept of all repairs, restorations, and overall conditions of tombs.

The repair of above ground tombs requires previous experience with historical materials and structures. Restoration of tablets and sculpture should be undertaken by skilled conservators.

Guidelines for Restoration of Masonry

All masonry work should be executed under optimum weather conditions to ensure the success of the repairs. No work should be executed or cured during weather below 40 degrees Fahrenheit. To prevent too-rapid drying in temperatures over 85 degrees Fahrenheit, particularly of thin finishes such as

stuccoes and washes, masonry work may require repeated misting and protection from the sun with damp canvas or plastic sheeting

All brick joints should be inspected for missing and deteriorated mortar. Defective joints should be raked, by hand, to 1" in depth or down to sound mortar. All dirt and loose debris should be removed before repointing. Masonry should be dampened and the joints repointed with a suitable mortar which matches the original mortar in color, texture, and vapor permeability. A suitable mortar mix should employ a lime putty, hydraulic lime, or lime and cement blend, the latter to enhance the set and cure of the mix in damp conditions. Two such recommended mixes which have been used with good results in Lafayette 1 and St. Louis 1 Cemeteries are as follows: 2 parts (by volume) hydrated masons lime (Type S), 1 part (by volume) Portland cement (grey or white), and 9 parts (by volume) masons sand or 1 part Riverton HHL (hydrated hydraulic lime) to 3 parts masons sand (by volume). Once the mortar has begun to set, it should be raked back to provide a key for the stucco.

All stucco should be sounded with an acrylic mallet to determine where it is detached. When tapped with the mallet, detached stucco produces a characteristic hollow sound. Remove detached stucco by hand with a chisel and mallet. Cut the edge of sound stucco at an angle from the exterior surface to the substrate, leading away from the opening to provide a dovetail shaped key for new stucco. Remove all loose dirt and debris from the masonry substrate with soft bristle brushes and dampen all surrounding stucco and masonry brickwork.

Always apply stucco patches to the level of the existing stucco. If stucco was scored to replicate ashlar block, allow stucco to set until thumbprint hard and strike a line in the same dimension and manner as the original. A recommended stucco mix is 2 parts (by volume) lime putty, 1 part (by

volume) white Portland cement, and 3 parts (by volume) fine masons' sand. Sound ornamental stucco should always be preserved. However, areas requiring replacement can be duplicated by recording the profile with a molding gauge and cutting a matching metal template, which is then used by a skilled mason to create the molded work.

Traditional limewashes are recommended as protective coatings for stuccoed tombs. Evidence of yellow, red, and grey colored and white limewashes has been found on site as well as in numerous archival documents. Individual tombs should be analyzed to determine their original colors and repainted to the historical color match. Stable lightfast alkalai-proof cement pigments should be used with the following recipe to recreate these colored washes. For other tombs a plain unpigmented whitewash is recommended.

Thoroughly mix hydrated lime (Type S) with water to a putty consistency and allow it to stand for at least 24 hours; two weeks is preferable. To increase adhesion of paint to the surface, a diluted acrylic latex emulsion bonding agent, can be added to the putty in the ratio by volume of approximately 1 part bonding agent to 5 parts water. This should be well mixed into the putty until it is the consistency of light cream. Stucco surfaces should be free of dirt, debris, oil, biological growth, and flaking paint; otherwise the limewash will not bond. Dampen the wall with water and then apply the limewash with traditional distemper or tampico fiber brushes, brushing it on in one direction. Due to the rapid drying, it should be applied in small areas to avoid drying at the overlap.

Recommendations for Marble Restoration

A fine grained uniformly white calcitic marble, possibly from Carrara, Italy, is used most frequently for closure tablets, tomb slabs, and sculpture. Several other marbles are also found in lesser quantities, including a medium-grained

slightly buff marble and a medium- to large-grained white veined grey marble which is used for thick tablets. Less frequently occurring in tomb platforms is a white marble with dark grey and green veins.

Marble, being crystalline, goes through a volume increase with each heating cycle, which may lead to permanent expansion and distortion. Eventual cracking and breaking of the stone often occurs in order to relieve this built-up stress. The marble tomb closure tablets are vulnerable to this problem. Their poor design and installation as large thin slabs insufficiently supported and restricted has greatly contributed to their structural deformation and breakage.

Guidelines for Loose and Fragmented Inscription Tablets and Sculpture

Frequently, due to many of the conditions outlined above, inscription tablets and various architectural elements become disassociated from their original location. In some cases, they are also fragmented into pieces. In such instances, they should be photographed where found, and a precise record kept which will identify all of the elements (see Appendix D). All of the objects should be marked (on their reverse side) with the location where they were found, using a black grease pencil (which can be removed later with acetone) or chalk. The fragments should be collected and stored in a fashion that will not permit them to become confused with each other. A copy of the record should be made and stored with the actual element, and the original copy placed with the governing body of the cemetery or preservation society. The fragments should be stored in a dry, cool, safe location that provides ready access to the fragments for restoration and reinstallation. Objects should be placed off of the ground to allow for air circulation and to avoid moisture damage.

Fragmented enclosure tablets and sculpture should be repaired before pieces become lost. For smaller fragments, a structural adhesive, such as a two part epoxy resin, is adequate. Here it is important that the adhesive used be appropriate to the climate. A polyamide epoxy resin, which provides adhesion and strength with a wider range of environmental tolerances, might be more reliable for general stone repairs in subtropical climates. In cases where fragments or elements require structural reinforcement, threaded nylon rod or stainless steel pins can be used in combination with adhesives.

For general adhesive repair, fragments should be cleaned as described for masonry and dried thoroughly. Adhesive repairs require completely dry, clean surfaces at the interface of the bonding. For surface preparation the contact edges should be swabbed with denatured alcohol followed by acetone to ensure clean, dry surfaces. All joints should be dry tested for fit before the resin is applied. Surface planes should be aligned with a straight edge to maintain original plane. Tests based on manufacturer's recommendations should be executed to determine the appropriate catalyst/resin ratio for a satisfactory working time dependent upon temperature and humidity. The adhesive should be mixed in quantities readily applied within the setting time. It should be applied as spot welds very thinly and evenly to both edges, leaving a margin towards the outer surfaces for the spread of the adhesive at contact. The surfaces should be joined immediately and held in position until the initial set has occurred (approximately 15 minutes). Any excess adhesive visible at the cracks should be mechanically removed in its gel state before it hardens as it will discolor and become disfiguring. On those stones where areas of loss exist along narrow breaks, a fill of 2 parts white Portland cement to 1 part hydrated lime should be applied. The fill may be colored to match the stone by the addition of small quantities of cement pigments. Larger losses of stone along breaks require some aggregate to control shrinkage, usually 3 parts aggregate to 1 part binder (lime and cement).

For most breaks it is necessary to provide reasonable alignment by working on a horizontal support. Improperly aligned joins are unsightly, growing more noticeable with age as the rough join attracts dirt. A sheet of 1/2" plywood may be placed on sawhorses to provide a suitable work table on site. For tablets which have become deformed, temporary support of the deformation configuration must be constructed to achieve joint alignment and reduce stress at the joint. Mason's shims of various sizes, foam padding, or small balls of aluminum foil are useful for this localized support. Where continued interment is not anticipated, fragile, deformed tablets can be permanently reinstalled in a full mortar bed of 1 part (by volume) white Portland cement to 2 parts (by volume) hydrated lime to 9 parts mason's sand.

Guidelines for the Cleaning of Above Ground Tombs

The decision to clean should be based on a genuine necessity, as all masonry cleaning techniques subject the stone to potential hazards. A monument which is darkened with soiling, metallic staining, and biological growth is not only disfigured but also is susceptible to masonry deterioration and, therefore, requires cleaning. A lightly soiled monument with legible details, however, does not require a major cleaning. All cleaning methods must be tested in a discreet location for each monument before full scale treatment begins. The gentlest method should be tested first and chosen, if acceptable, to avoid unnecessary damage.

Water washing is the gentlest, safest, and least expensive method for cleaning masonry. Most general surface soiling and some biological growth are easily removed with water. All open joints must be repaired first, to prevent penetration of large quantities of water into the masonry. The water should have a low metals content to avoid staining. Usually, potable water is adequate. However, analysis should be performed if any questions exist.

Water can be applied at low pressure (up to 250 psi) and may be supplemented by gentle scrubbing with nonmetallic soft bristle brushes.

Much black staining occurring on tomb marble and stucco is not atmospheric soiling but biological growth. This can be most effectively removed by applying a 1.5% solution of calcium hypochlorite as found in commercial-pool chlorine (1.5 parts dry to 100 parts water) mixed with an inert clay such as talc or kaolin as a poultice. Once dry this can be removed by brushing and the surfaces well-rinsed with a hose or pressure washer. Care should be taken as this material is a strong oxidizing agent and can be dangerous.

Since black gypsum crusts, resulting from the interaction of carbonate with atmospheric pollution, are water soluble, they may be removed with a slow water soak. A perforated garden hose should be set up horizontally parallel to the surface delivering water at regular city water pressure for 24 hours. Cleaning is done from the top to bottom in this technique. Again, it is most important that all joints and seams are watertight to prevent the introduction of water to the interior. Slight staining can sometimes develop on certain stones possessing iron impurities, which can react to form brown or yellow oxide stains. Tests should be done. Inappropriate chemical treatments can cause extensive and irreversible damage. Many products available for cleaning are highly acidic or alkaline and can cause etching of stone as well as introduce salts which manifest as damaging efflorescence after migrating to the surface and drying. In using chemical cleaning, it is also important to remember that damage to surrounding plant, animal, and adjacent materials should also be considered.

Abrasive cleaning involving any grit or aggregate applied under pressure must not be used on stucco, brick, or stone. The technique is too aggressive and can cause irreversible damage to historic fabric. It might actually lead to

accelerated weathering by pitting the surface, thus opening the masonry to increased moisture penetration, atmospheric reactivity, and subsequent deterioration. Basically, any method which removes stone should be avoided.

Final Remarks

In general, the replacement of historic fabric is to be avoided. When structural problems demand reconstruction, similar masonry materials should be used. In those instances where faulty design or construction details have led to structural problems, such as thin marble slab construction, design modifications should be built into the new work without altering the appearance. For instance, where severely deformed marble slabs must be replaced, a thicker slab should be substituted to avoid future deformation. Original tablets should be saved and reinstalled on the side or rear of the tomb when replacement is necessary.

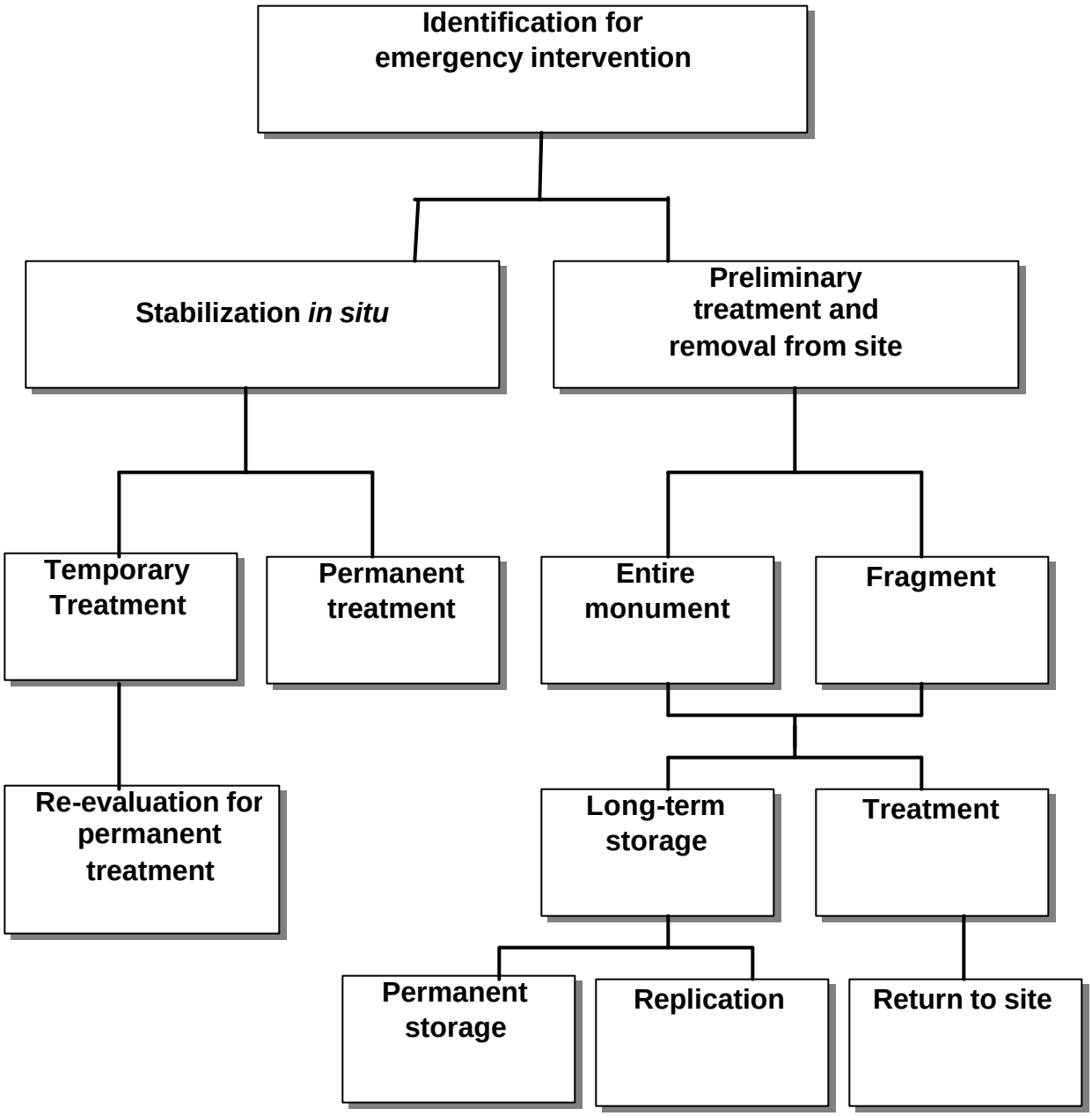
As stated previously, trained professionals should be employed for major restoration work. Such conservators should present to the tomb owners information on the condition; recommendations on cleaning, conservation and repair; and cost proposals for performing all work. They should also be willing to supply data on all products to be used. In addition, when they conduct the preliminary tests on the tomb to receive conservation treatment, they should furnish a report that includes information on environmental conditions (including temperature, relative humidity, wind conditions, and sun exposure); cleaning and conservation materials (including concentration, number of applications, method and order of applications); equipment, water and/or application pressures, and accessory materials. The procedure and the completed test areas will then serve as the standard by which all subsequent work is to be judged.

When entering into a contract with a conservator, owners should stipulate that the work be done under proper environmental conditions. Specifically, none of the work should be conducted at surface and air temperatures below 50 degrees Fahrenheit, or above 90 degrees Fahrenheit. Treatments are not to be done during rain or when there is a chance of rain within 24 hours after application. Finally, cleaning materials and conservation treatments should not be applied when winds are sufficient to carry airborne chemicals to unprotected surfaces. Make sure that the conservator protects the public as well as all surrounding landscape and lawn areas, non-masonry surfaces, and surfaces not designated for treatment or replacement, from contact with the cleaning materials and conservation treatments."

When documenting and evaluating a tomb for conservation treatment options, the decision tree diagram on the following page can be very helpful:

Tomb and Marker

Conservation Treatment Options



4.5 Metal Conservation Guidelines

In the full tomb survey described in Section 3.3.3, the basic information collected on the metalwork was to survey quantities, types, and distribution. Out of the 700 plus tombs, eight were chosen for a more thorough documentation of the metalwork in an effort to better understand the methods of manufacture, the materials used, condition, and the forces causing deterioration. A definition of specific guidelines for the treatment of the metalwork on the eight tombs follows their documentation and analysis of fabric and conditions. Only a representative sample of metalwork associated with three of the eight tombs will be covered in this section.

The principle guiding the recommendations for treatment following analysis of the findings is based on the overarching understanding that the essential character of the cemetery should be preserved, defined as including all the contributing features, both tangible and intangible, that have distinguished it over the years. These features are more broadly defined elsewhere in this report and include the metalwork in its physical manifestation, but also as a testament to the evolution of the craft, manufacturing technology, and as a medium of expression. Thus, all these aspects must be respected and a balanced approach taken between the concern for the conservation of the physical and that of the less tangible aesthetic dimensions of the fabric.

The aim of documentary research is to define the historical context of the times and conditions under which the metalwork was created, and to gain specific information, where possible, on who designed it, who made it, where the materials came from, and what influences were brought to bear on both style and manufacture. Because of limited time, this phase of the project relied mostly on secondary sources. However, future research will make full use of primary resources available in various repositories in New Orleans. Business directories should help identify shops and manufacturers' catalogs and period newspaper advertising, among other resources, should clarify the origins and types of the raw materials and product. Historic photographs, in particular, and drawings,

where they exist, should provide an idea of changes over time. The series of Sanborn fire insurance maps for this area of the city may reveal the presence and type of metalworking shops serving the cemeteries over time, just as there were many cemetery marble cutting and carving shops close by.

The full metalwork field survey form is included for reference in Appendix F. A separate form was filled out for the metalwork on each tomb. The first step with the survey was to identify all the different types of metalwork represented in the cemetery. These categories were used for the general as well as for the full survey of the eight tombs. Additional description is given along with references to photographs in the chapter on cemetery metalwork by Mary Louise Christovich in *New Orleans Architecture, Volume III: The Cemeteries.*[4] Some additional photos illustrate those items not covered in the documentation of the eight tombs (see Appendix G):

Finishes

The metalwork in the St. Louis 1 Cemetery has for the most part lost all the original finishes to the point that useful paint samples for determining first finishes and coating sequence are all but impossible to collect. The metalwork made mostly of wrought iron with decorative cast zinc elements, has resisted the corrosive environment of New Orleans remarkably well despite the loss of protection. While the rustic patina of the iron is a contributing element to the picturesque flavor of the site, nevertheless, it is evidence of a steady deterioration of the metal, which if not arrested, will eventually bring on the demise of the metalwork. The corrosion that is occurring is staining the masonry, including the marble in which it is set. But more importantly, it is seriously weakening assemblages, which will inevitably lead to structural failure. Hot applied wax coatings are needed to protect and enhance the wrought iron and cast zinc.

[4] Mary Louise Christovich, ed. *New Orleans Architecture, Vol III-The cemeteries*. Gretna: Pelican Publishing, 1974.

Masonry Anchoring and Foundations

The metalwork is dependent on the masonry for support and anchoring. Most of it is, in one way or another, impacted by the deterioration and settling of the tombs and the various combinations of stone and brick foundations supporting the metalwork. Any viable long-term treatment for the metalwork will necessarily involve corresponding work on the masonry anchoring and foundations. While the metalwork was surveyed separately from the masonry, the analysis of the condition and treatments proposed must be closely coordinated. The case studies presented clearly illustrate the importance of a holistic approach to the tombs in all their detail.

Environmental Factors of Deterioration

A review of existing data and further specific testing and analysis should provide insight into the environmental forces that are contributing to the deterioration of the metalwork. The sources and characterization of corrosive salts deposited on the metalwork may be a significant factor of deterioration. It was noted that those areas that were well rinsed by rain seemed to suffer less corrosion than areas such as the underside of top and bottom rails of metal enclosure panels. The relative humidity levels in New Orleans also have a direct bearing on the rates of corrosion of the metal and should also be understood before designing protection systems. The pressure of visitation can also be mitigated, such as with the judicious introduction of reinforcement of enclosures that will be leaned on.

Replacement Materials

Standard conservation practice dictates the maintenance of original fabric as a first priority. Secondly, where there is loss of fabric and when repairs, or replication is deemed necessary, the materials used should match the original material when at all possible. In addition to maintaining the overall integrity of an artifact, a matching of materials, more often than not, provides the most compatible solution to a repair or replication in terms of chemical, physical-mechanical, working and weathering

characteristics. This is certainly true of the metalwork. For example, real wrought iron should be used over the usual mild steel replacement for its look, workability and much greater resistance to corrosion.

Appropriate Technology

The replication of the original means of production is just as important as matching materials. Alternate means seldom provide the same final aspect, nor wear the same as the original methods of fabrication. The logic of original techniques and methods developed within a specific context was usually for good reason. This logic has an immediate effect on the appearance and performance of what is an interactive system of materials and workmanship.

Specific Recommendations: Condition and Historic Survey of Three Tombs

There are three types of metalwork based on materials and means of manufacture represented in the decorative metalwork in the New Orleans cemeteries:

- Forged Wrought Iron
- Transitional Fabricated Metalwork
- Cast Iron

The following three case studies are presented with the results of the survey to illustrate the different types of metalwork represented throughout the St. Louis 1 Cemetery.

Forged Wrought Iron: Bonabel Tomb, #395

The earliest metalworking technology originally brought by the French with the founding of New Orleans in 1718 by Jean Baptiste LeMoyne, Sieur de Bienville, was the hand forging of wrought iron. Forging, or the forming of heated wrought iron with hammer and anvil, was used to produce the earliest ironwork in the St. Louis 1 Cemetery mostly surviving in the form of simple crosses. It involved the change in the section of the

wrought iron bar stock and the use of other basic blacksmithing techniques such as hot splitting, swaging, and forge welding.

Date of Origin:	February 5, 1800
Resource Type:	Metal marker
Style:	Vernacular
Manufacture:	Hand forged
Materials:	Wrought iron
Assemblies:	Rivet
Decorative Elements:	Cross, incised lettering
Anchoring:	Probably set in Portland cement during the rehabilitation of the tomb when it was pargetted and painted white
Finishes:	The incised lettering is highlighted with white paint
Overall Condition:	Fair
Specific Deficiencies:	The base of the cross was probably previously seriously corroded
Past Interventions	
Type:	Set deep in the masonry rather than repaired, which shortened it, changing its original proportions
Methods:	Masonry rehabilitation
Fabric Analysis:	No samples taken
Condition Assessment:	The Portland cement stucco is showing cracks emanating from the base of the cross. The wrought iron is rusting in contact with the cement and trapped moisture. Oxide jacking may be contributing to the formation of the cracks. The cracks are now permitting greater water infiltration, keeping the base of the cross wet and accelerating corrosion. Oxide staining on the tomb surface follows the drip line of the cross.

Recommended Intervention - Re-anchoring, possibly in conjunction with the replacement of the existing stucco with a more compatible stucco for the historic masonry. The cross should be removed before it is irreparably damaged. An extension of wrought iron could be welded on, if necessary, to restore its original proportion, though this would provide vandals with more leverage to bend or break it. The cross should at least be reset with a reversible non-corrosive grout within a stainless steel sleeve set in the masonry. The base should then be sealed with a good quality flexible UV resistant sealant with a positive slope to shed water. The sealant and sleeve could be made less visible if the sealant were paintable and if the paint used on the tomb were compatible. If testing proves positive, a regularly maintained, microcrystalline wax

treatment, could protect the cross from further corrosion without altering its essential character. This would also prevent staining of the tomb and help keep the base from further rusting out. Given the small size and simple configuration of the cross, it should be practical to apply a regular coat of wax to control corrosion.

Priority: Urgent

Comments: This may be the earliest surviving metal artifact in the cemetery reflecting the most primitive of the metal working technologies represented in the cemetery. It is well executed, but the rough edges of the hot cut pedals of the fleur-de-lis were left unfinished, perhaps because a file, an expensive tool, was not available to the blacksmith. It is a valuable, rare expression of folk art and demands special attention.

Bonabel Tomb, No. 395

Single riveted connection with holes possibly punched square prior to hot riveting to help prevent pivoting.

The inscriptions were stamped into the metal hot. Erosion of the metal has removed some of the relief and argues for the application of a clear rust inhibitor to forestall further loss.

All photos by studio.

Transitional Fabricated Metalwork: Bergamini Tomb, #012

Wrought iron bar stock and cast iron production started in New Orleans by the 1820s and much was being imported from England and later from Sweden and other domestic sources as raw material and finished products. Some small decorative cast iron elements seem to have found their way into the designs of the early cemetery work. These were mostly supplanted in the 1850s with finer detailed and less expensive decorative zinc elements, cast separately or often directly on a wrought iron structure and then attached to a fabricated wrought iron frame. Zinc rosettes were also cast directly onto a fabric of wrought iron doubling as clamps holding the fabric together. This transitional period of expression in metal saw the slow demise of hand forging. Wrought iron bar stock was available in most any dimension and was increasingly being used "as-is" without change in section. The stock was given form with the use of jigs and all the parts put together or fabricated with traditional assemblages often mimicking those used in woodwork, such as the dovetail and mortise and tenon.

Date of Origin:	March 2, 1865
Resource Type:	Partial enclosure
Style:	Vernacular
Manufacture:	Hand forged, cast, fabricated
Materials:	Wrought iron, cast zinc, cast iron, lead
Assemblies:	Rivet - cross to gate, hinges, post and rail connections Forge weld - at gate stile and gatepost anchors Tapping & threading - spear points Mortise & tenon - at post and rail connections Dovetail - hinges Other - casting of zinc rosettes at flat bar intersections with a clamping effect
Decorative Elements:	Cross, railing, crest, scroll rosettes, finial, picket terminals, bases on corner posts, now missing
Anchoring:	Set in lead
Finishes:	Original paint is gone
Overall Condition:	Fair

Specific Deficiencies:	Bent element – cross, side panels from settling of tomb, Broken element - scroll, picket point, Missing element - picket point, Failed finish – general, Failed anchoring - corner post, Surface oxidation - general
Past Interventions	
Type:	None
Methods:	N/A
Fabric Analysis:	Zinc samples taken for metal I.D. confirmation

Recommended Intervention - Stabilization/Re-anchoring The tomb is settling at a faster rate than the front step/foundation for the metal enclosure and causing the side panels to rack. The panels are frozen in this racked position with corrosion and cannot be straightened out. Provide a means of absorbing settlement at the four anchors presently set in the tomb with one of the two following options to prevent further racking:

Option 1: (Minimum impact), cut out a ¾ inch tall void in the masonry above the top and bottom rail anchors on both sides. Fill the voids with flexible foam backer rod. Caulk around the anchor with a good quality flexible, paintable UV resistant sealant. As the tomb continues to sink, the expectation is that the backer rod will be able to compress as much as ½ inch and keep the tomb masonry from exerting a downward pressure on the rails, further racking them. At the present rate of 2 inches of differential settling in 136 yrs, this solution should last approximately 34 years before further adjustment is required.

Option 2: To prevent anchors from pulling out of the wall, a more intrusive solution is required with the setting in grout of four fixed anchor brackets in the tomb fitted with a threaded post. The top and bottom rails must be cut just short of the face of the masonry and then a wrought iron flat bar extension with a slot cut into it should be welded vertically to the rails from below. The anchor with threaded post should be set in the masonry at a height that would have the post fitting into the top of the slot. A wrought iron square nut should then be threaded onto the post and backed off just enough to allow free vertical movement. The nut should then be welded onto the post to prevent removal. A vertical slot with ¾ inch vertical play should allow approximately 51 years of settlement at the present rate of settlement before further adjustment is needed.

Re-assembly Straighten the left scroll of the cross with heat to prevent further cracking of the wrought iron, repair crack with oxy-acetylene welding using pure iron rod and re-rivet to the top rail of the gate with a wrought iron rivet.

Re-anchoring Repair the right corner of the marble step and set a stainless steel sleeve for the corner post in the rebuilt brick foundation for the marble step. Hold the stainless steel sleeve flush with the top level of the marble. Set the corner post in a reversible fine non-corrosive grout.

Re-finishing Apply a tested wax finish such as microcrystalline wax on pre-heated metal. Preheating chases off surface moisture and insures proper flow and penetration of the wax in all interstices of the metalwork.

Maintenance Check the progress of the differential settling and adjust the top and bottom rail anchors as needed. Regularly renew the wax finish.

Priority: Urgent

Comments: The metalwork on the Bergamini tomb is the best preserved of its type in the cemetery. All measures should be taken to stabilize it with improved anchoring and the cross should be properly re-attached to thwart further vandalism. The test applications of wax finishes should be closely monitored and the best performing protection applied to the whole work to prevent further corrosion. This metalwork could be used to interpret the later nineteenth century transitional fabricated metalwork in all its detail, including the introduction of decorative cast zinc elements as contrasted with cast iron and forged elements.

Bergamini Tomb No. 12

Side view showing racking of metalwork

Failed anchor for corner post with broken marble

Scroll with failed riveted connection

All photos by studio.

Cast Iron: Thomas-Hazeur Tomb, #330

Cast iron is a manufactured product involving the collaboration of a team of specialists, starting with designers and pattern makers, followed by foundry men, who execute the work by pouring molten iron into molds, the resulting castings being cleaned up by finishers. By the 1850s cast iron panels were taking the place of the fabricated work, first mounted in wrought iron frames, and then as the technology became more sophisticated in the 1870s and 80s, completely cast systems including posts and gate doors became very popular. Their intricate patterns would come to dominate the metalwork in the cemetery out-pricing the more labor-intensive traditional metalwork.

Date of Origin:	1853
Resource Type:	Complete enclosure
Style:	Gothic Revival
Manufacture:	Cast iron, fabrication
Materials:	Cast iron, wrought iron bar stock
Assemblies:	Bolt - the top cast iron cresting of the gate is fastened to the top rail of the gate with square headed bolts Tapping & Threading - the cast picket terminals have a threaded stub, that screws into the rail cap of the enclosure. The cast iron posts are probably installed on a threaded pin set into the marble curb with molten lead. Mortise & Tenon - the top and bottom rails in wrought iron stock bar carrying the cast iron panels are slid into cast-in mortises in the cast iron posts
Decorative Elements:	Crest - on the gate Running cast panels - overlapping sections three pickets wide are cast as one piece. The cast panel may be held in place by tenons or pins that fit into bottom rail and by screws through the top rail and into tapped holes in the top of the panels. Picket terminals - cast iron with threaded assemblage
Anchoring:	Set in lead
Finishes:	No finishes survive
Overall Condition:	Poor
Specific Deficiencies:	Bent element - bottom rail, rail cap Broken element - bottom rail and cast panels Failed assemblage - bottom rail connection with corner post, cap rail separating from top rail Missing element - some cast panels may be missing Failed finish - no surviving paint

	Failed anchoring - posts have had to be braced
	Surface oxidation - general
	Past Interventions
Type:	Stabilization: the enclosure was braced at several locations with steel rods driven into a crack between the poured concrete surfacing and the marble curb and bolted to the posts at the top. This could have been an original feature at the gateposts for extra support for the gate when open. The gate is now braced in this manner as a temporary fix attached with wire at the top.
Methods:	Bolted, wire repair
Fabric Analysis:	No samples taken

Recommended Intervention – Restoration Label all metalwork and remove for shop repairs. The corner posts may have to be cut off at their base since the threaded assembly will be frozen from corrosion. The marble curb will require resetting on a stable poured concrete foundation for proper alignment of the posts for re-installation. The concrete between the marble and the tomb should be removed and possibly replaced with a layer of landscape cloth (to prevent weed growth), topped with a good layer of white marble chips for drainage. Weep holes through mortar joints of the marble curb may be necessary for drainage of floodwaters collecting between the tomb and the curb. This could channel rainwater over the path to the nearest drain. As it is now, the concrete is channeling rain into the foundation of the tomb and has helped undermine the marble curb leading to the failure of the cast iron enclosure.

Replication A source for replacement cast panels should be researched, but chances are that the required design, in the appropriate dimension is no longer available from existing ornamental cast iron suppliers. Any missing cast panels would most likely have to be re-cast. A surviving original panel could be used as a pattern with means taken to correct for shrinkage. This might be accomplished with an application of a reversible coating to increase the dimensions of the cast panel proportionately in all directions to correct for a 1/8” per foot of shrinkage for cast iron.

Cleaning This should be done by blasting with an appropriate abrasive and pressure after testing to verify the effect on detail, prior to re-assembly, priming and painting.

Re-assembly Much of this can occur in the shop under controlled conditions. The cast panels can be re-installed with a screwed and pinned connection between the top and bottom wrought iron rails and the cap rail re-attached to the top rail. Assembly on site would include progressive setting of the cast iron posts and re-insertion of panel sections in mortises in the posts. The gateposts and mid span posts should receive bracing modeled after the existing bracing on the gate hinge side post. This will relieve the inevitable stresses that visitors will impose on the enclosure that would weaken the post anchors.

Re-anchoring The cast posts may originally have been screwed on to a threaded rod set into the marble with poured lead. This same detail could be reproduced with threaded stainless steel rod set in fine grout designed for this purpose since the traditional use of molten lead is restricted. Each brace will require its own poured concrete footing with a stainless steel sleeve to accept the brace with grout. This detail will permit easier adjustment of the brace during installation.

Re-finishing Removing the metalwork for repair and cleaning provides a perfect opportunity to properly shop prime and paint all components for effective protection before re-installation. Different systems exist that can provide good protection against corrosion. Primer and finish coats should be compatible and easily reversible, (epoxy type coatings must be avoided). Coatings should be readily available and should allow reapplication in the field with proper preparation. Coatings should not be applied so thick as to obscure the detail in the cast iron. A coal gray gloss finish would be appropriate in the absence of evidence for original color and gloss. The gloss will provide extra longevity to the protection of the metalwork. Weathering will attenuate the gloss quickly enough. During installation, any joints that will allow water penetration should be sealed with a top quality flexible, paintable sealant and all areas touched up with primer where the metal has been bared and finish coats applied to provide a uniform finish for the whole metal enclosure.

Maintenance A properly done restoration could reduce maintenance to periodic painting of the metalwork with the frequency determined by the performance of new coating and the wear from visitor contact. The gate should have a means to discourage visitors from opening it and putting stress on it. The gate hinges could be greased as needed.

Priority: Urgent

Comments: This is a fine example of early decorative cast iron in a Gothic Revival style. The settling of the marble curb in which the metal enclosure was set contributed, along with general corrosion, to the many mechanical failures present. The restoration will require close coordination with masonry foundation work to insure that all components fit properly. The restoration of the tomb would also be greatly facilitated by the removal of the metal enclosure and should be timed accordingly. This is a case where there are no half measures for treatment. The integrity of the cast iron enclosure requires a stable, accurately laid foundation or it will never achieve the stability it needs to hold together and perform its function in a sustainable manner. All loose parts of the enclosure ought to be gathered up immediately and stored in a safe place before they are stolen or harmed. Some stabilization measures could be taken to prevent further loss of integrity until its full restoration can be carried out.

THOMAS-HAZEUR TOMB # 330
Rear view showing failure of rail connections and missing panels caused by the settling of the marble foundation and corrosion

THOMAS-HAZEUR TOMB # 330
Intermediate post and panel section showing the separation of the cap rail from the top rail and the cast iron panel suspended from the top rail

Braced gate with cast iron crest and missing latch side post

Corner assembly of top rail post with putty in-fill for an extra cast-in mortise

All photos by studio.

4.6 Tourism Planning Recommendations

An aspect of New Orleans that has always been labeled a "must see for visitors" is the great variety of historic cemeteries that are scattered throughout, and beyond, the city. The tourism of cemeteries is not a modern phenomenon. Whether it is to view a place that varies from the norm, to visit the graves of important or famous persons, to experience the varied architectural or sculptural elements that dot a landscape or to experience solitude and stimulate reflection, cemeteries have long provided the tourist with a destination. The above ground cemeteries of New Orleans, with Saint Louis 1 being the first, were visited for all of the above reasons. Originally situated outside of the city limits, the cemetery was a curiosity as to the burial traditions associated with it, and the visual stimulation in which these traditions resulted. As it was built up, Saint Louis 1 came to resemble a miniature city, as opposed to the countrified rural landscapes common in cemeteries of the period.

Tourists are major stakeholders of St. Louis 1 Cemetery. Their historic presence was significant, and, today, their accounts provide us with our best views into the development of this rich cultural site. In the past they were a minority, as most who crossed the threshold were larger groups of family members visiting loved ones and caring for the site. Today, tourists are in the majority. Tours are scheduled daily, and from about 10:00 am until closing, the alleys can be quite crowded by the various tour groups. Their presence keeps the site active during daylight hours. One positive result of this activity has been a dramatic decrease in vandalism, drug transactions, and other crimes in the cemetery and surrounding neighborhood.

The tourist companies licensed to conduct tours at the site are also stakeholders. These companies, and the tour guides that they hire, have a great interest in the future of the site. The dramatic tours they develop, and the impossible tales that some of the guides spin, can only continue if the cultural resource they are describing exists in its current or similar form. Any drastic change to the condition and/or architecture of the site threatens them. Current management may mistakenly believe that they need to improve the

conditions of the cemetery by "restoring" everything to a white pristine state, since they now manage a very public (tourist) site. While it may not be obvious to the tourism companies yet, the rapid replacement of historic fabric by concrete, modern coatings, and granite tablets and concrete pavements will soon convert St. Louis 1 Cemetery to a site similar to countless others and one that does not evoke the same images and impressions that their tours represent. Tourists will begin to lose interest and business will be lost.

As written by the ICOMOS International Committee on Cultural Tourism,

> *Good management of cultural tourism is central to the mission of the conservation community …We preserve our heritage sites with an educational intent, to make sure that their value and significance are made accessible and intelligible to all. … It is now the heritage sites, and not communal living, that have the greatest, often the only impact on the tourist. The way that these neo-pilgrimage sites are preserved and presented has been instituted as the most direct medium though which a visitor can gain some degree of insight into local history, idiosyncrasy and intangible culture.*[5]

During this project, the direct impacts, benefits and threats of tourism on this cultural site were only given a cursory study. Tourism has always been, and always will be, a factor at St. Louis 1 Cemetery. "Tourism is an irreversible social, human, economic and cultural fact,"[6] and one that cannot be easily ignored in terms of the development of a feasible Conservation / Management Plan for this site as a whole. We recommend that a formal Tourism Management Plan be developed to support the overall plan.

Further research should be conducted on tourism activities at the site, and on how these activities can be coordinated and managed to respect and enhance the heritage of the site and host community. The transfer of funds from tourism visits to various non-profit groups, and the use of those funds, should be analyzed. The Tourism Management Plan should encourage programs that will facilitate the long-term preservation and survival of the site and ensure that tourists have worthwhile, satisfying and enjoyable experiences.

[5] ICOMOS. "Letter from the Executive Director," The ICOMOS International Committee on Cultural Tourism Newsletter, Special Edition, (November/December 1996), p. 3.
[6] ICOMOS, *International Cultural Tourism Charter: Managing Tourism at Places of Heritage Significance*, 8th Draft, Mexico, October 1999.

The plan should also ensure that the historic use of the site is respected and that current family visitation and burial practices are unhindered by any commercial tourism activity. The plan should contain some minimum "respect regulations" on the tour guides and tourists that use the cemetery.

The team to develop this plan should primarily be from the New Orleans community of preservation groups, conservation professionals, the Archdiocese and the tourism council. The development of this plan should be facilitated by individuals experienced with tourism at sites of historical significance. The ICOMOS Cultural Tourism Charter would be a good model to follow as a starting point. This charter was developed for sites upon which "heritage tourism" has an impact, and St. Louis 1 Cemetery is such a site. The objectives of this charter are:

- *To facilitate and encourage those involved with heritage conservation and management to make the significance of that heritage accessible to the host community and visitors.*
- *To facilitate and encourage the tourism industry to promote and manage tourism in ways that respect and enhance the heritage and living cultures of host communities.*
- *To facilitate and encourage a dialogue between conservation interests and the tourism industry about the importance and fragile nature of heritage places, collections and living cultures, including the need to achieve a sustainable future for them.*
- *To encourage those formulating plans and policies to develop detailed, measured goals and strategies relating to the presentation and interpretation of heritage places and cultural activities, in the context of their preservation.*[7]

The management of tourism is vital to the success of a plan that will attempt to conserve and manage the physical and cultural landscape associated with the cemetery. Those who interact with the site must be made aware of how their actions affect the site, and a Tourism Management Plan would disseminate this information.

[7] *Ibid.*

We also recommend that a short, colorful, non-academic form of the work of this studio be prepared for presentation to the various New Orleans stakeholders, including the Tourism Council and the Association of Tour Guides. We must remember that it is now those daily tours that define the site to thousands of people each month. The objective of the presentation would be to relay the needs of both the tourist and the cemetery, in order tokeep the site as a viable tour location well into the twenty-first century. Through this presentation, we would also hope to impart a subtle push for the replacement of damaging and/or fictional statements by tour guides with truthful facts that are just as exciting and colorful. Such a meeting and presentation would open a dialogue between the groups that interpret the site on a daily basis, and would establish a greater air of respect and understanding for the cultural site. Presentation of the work produced in the studio through the web site would also be a powerful tool for motivation and enlightenment.

The Tourism Survey pilot should be extended to a larger scale survey for a period of two weeks or more. Additionally, 1-2 questions that refer to the visitation to New Orleans cemeteries should be added to the general tourism survey that the New Orleans Tourism Council conducts on a yearly basis.

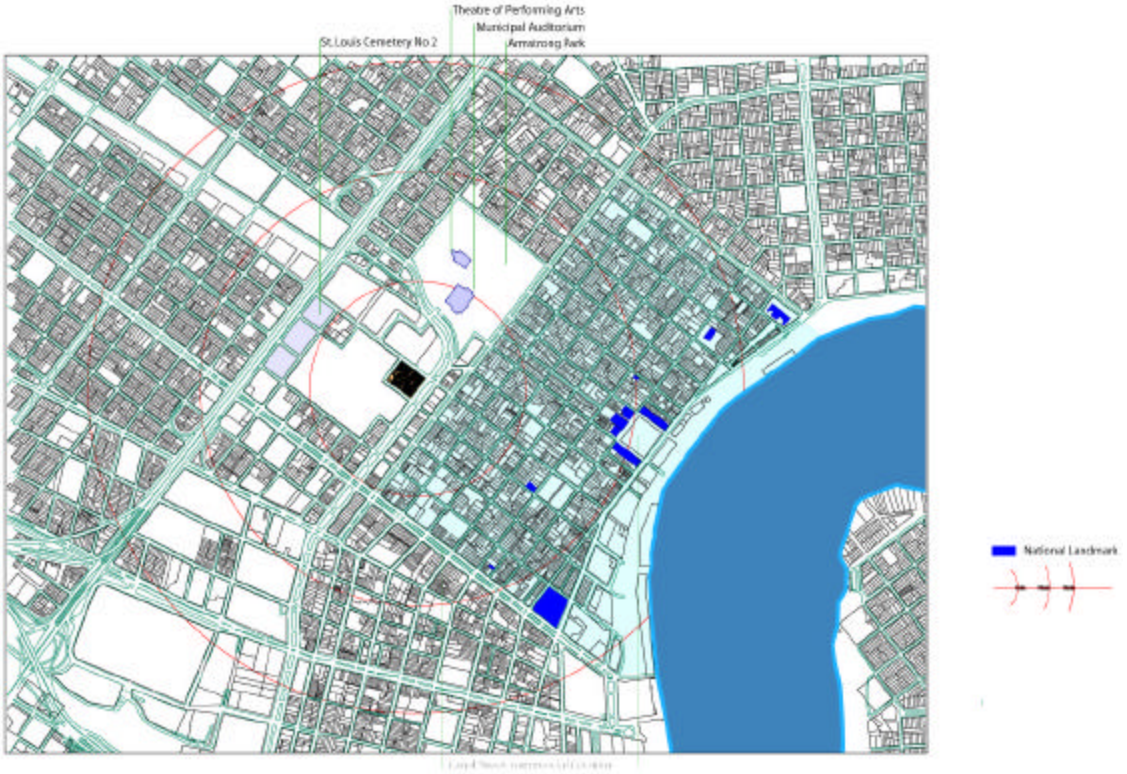
As an historic site on the Louisiana and National Registers of Historic Places, and as a "Save America's Treasures" site, the ability of the cemetery to interest and educate the public is an important factor in future funding potential. If managed properly, tourism can be a beneficial program for the preservation of St. Louis 1 Cemetery.

4.7 Surrounding Neighborhood Planning

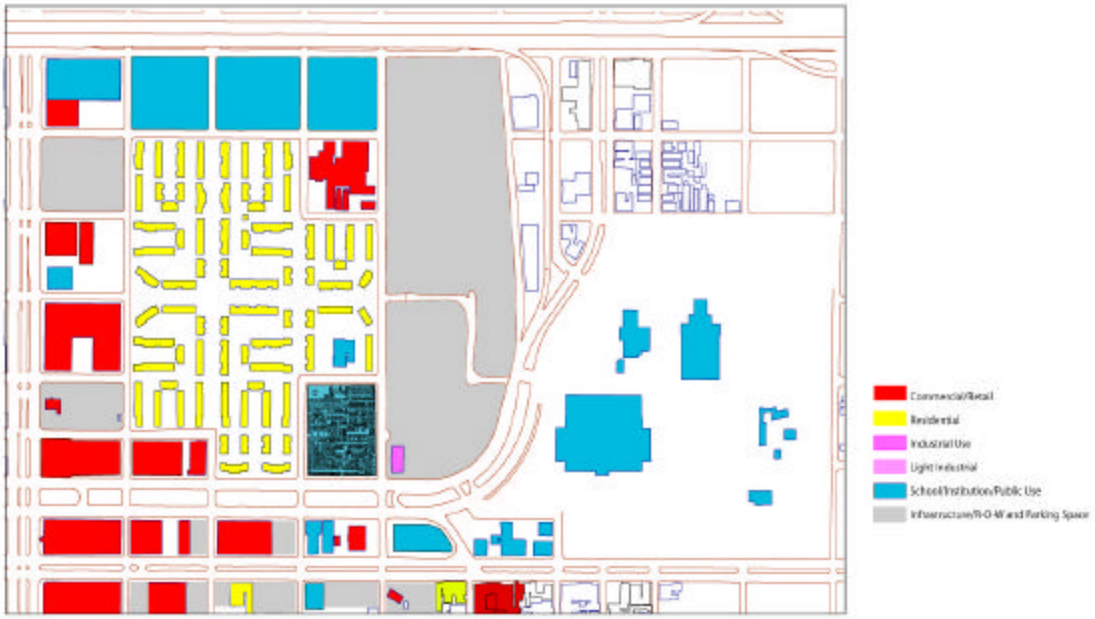
Historic preservation efforts focus not only on a single historic building or site but also include its surrounding area. The environment and historic site must co-exist, and do so harmoniously. Any change in this particular area must be certain to prevent the historic site from being isolated from its environmental context, and must allow continuity of the past into the future.

A study was made of historical maps, including the Sanborn fire insurance maps from 1896, 1908, 1940, 1951, 1994, and 2001, and the current planning maps and studies to analyze the policies, regulations, and plans which intervene in the adjacent historic district, Vieux Carré, and the urban conditions surrounding the study area for St. Louis 1 Cemetery. Based on this framework, several threats and opportunities illustrate our recommendations to improve the cemetery's surrounding area and condition.

The cemetery's surrounding area stretches between North Rampart Street and North Claiborne Street and between Lafitte Avenue and Canal Street. The neighborhood is centrally located near downtown New Orleans. The center of the neighborhood is within an easy fifteen minute walking distance of the Municipal Auditorium, the Theatre of Performing Arts, Louis Armstrong Park, Jackson Square, St. Louis 2 Cemetery and the Canal Street commercial corridor, as well as the national landmarks and historic buildings in the French Quarter. The neighborhood is also readily accessible by public transportation. There are RTA (Rapid Transit Authority) bus stops on Basin Street, and numerous RTA bus routes pass through the area. Finally, there is easy automotive access to the neighborhood via Interstate 10.

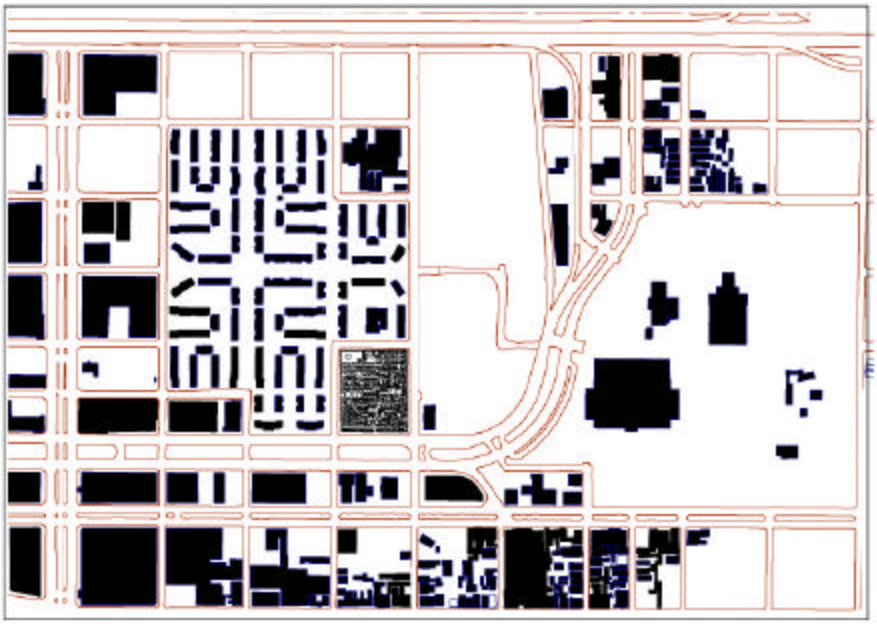


Accessibility
GIS Data from the New Orleans City Commission



Zoning
Map developed by studio with New Orleans City Commission Data

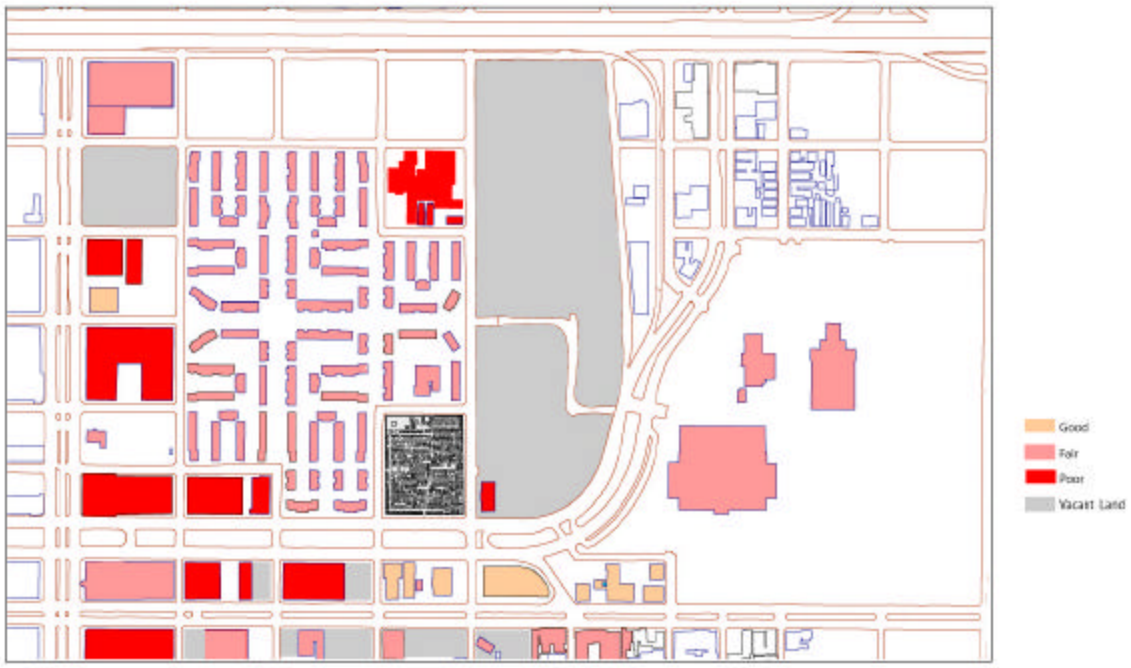
The majority of the neighborhood is residential. The west section of the area is a light industrial district with some vacant properties. The center of this area is zoned residential. A number of lots in the east and south are zoned commercial but are currently vacant or in blight condition.



Neighborhood Fabric
Map developed by studio with New Orleans City Commission Data

As evidenced by the figure above, the neighborhood is much finer grained to the south of North Rampart Street than it is to the north. Both Canal and North Rampart Streets are lined with larger buildings than those in the rest of the area. The fabric of connected buildings does not exist in this area.

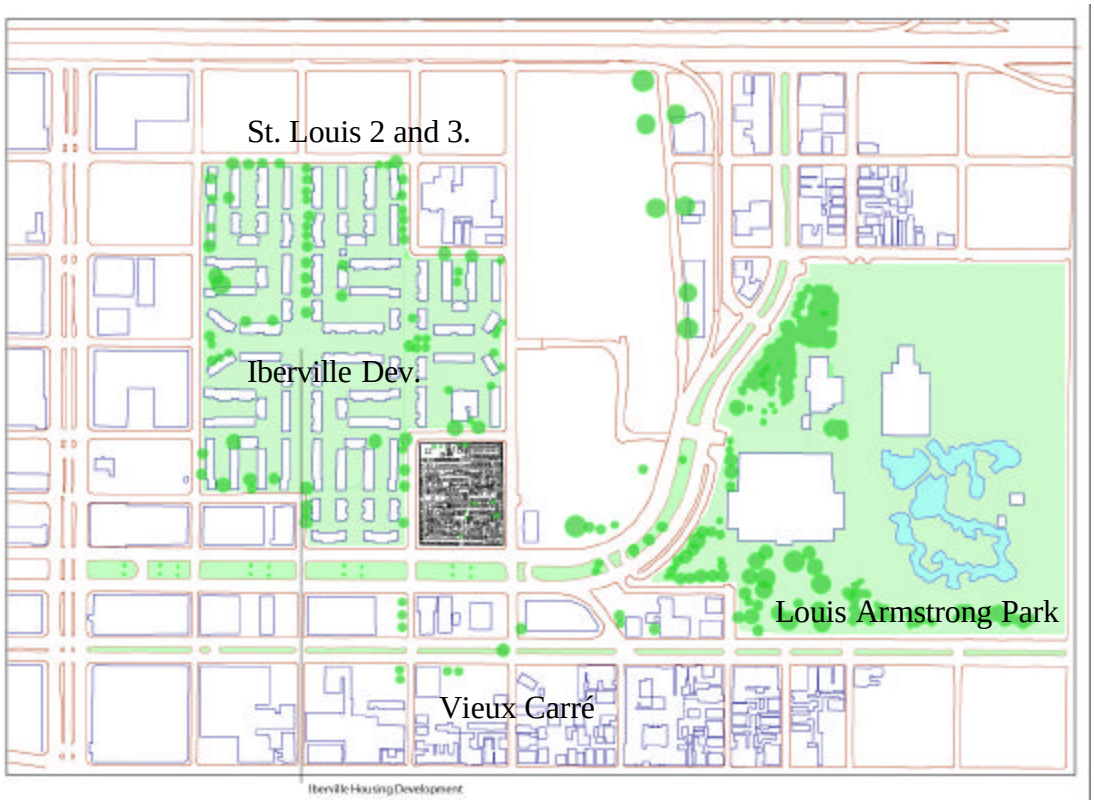
Our study of current conditions in the neighborhood reveals two main problem areas. The first extends along North Rampart and Basin Streets. Here, the problems lay chiefly in unrealized commercial and aesthetic potential. Though the entire area is within easy walking distance from the French Quarter, there are large gaps in the fabric of this neighborhood's southern section. The second problem is underutilized and vacant land along North Rampart, Basin and Canal Streets. Both problem areas include residential, industrial, and commercial zoned areas.



Unrealized potential, Underutilized land
Map developed by studio with New Orleans City Commission Data

The opportunities in this neighborhood also fall into two general categories. The first is the well-designed qualities of the Iberville Housing Development's outdoor space. The second opportunity lies in the area's potential to create successful institutional spaces along with commercial development. The French Quarter, in the south of the neighborhood, is an important international tourist attraction. St. Louis Cathedral is an architectural landmark, one of the defining symbols of the French Quarter, and a major tourist draw. The Municipal Auditorium and the Theatre of the Performing Arts house a significant number of cultural activities. St. Louis 2 Cemetery offers additional cultural experiences within this area already rich with artistic and cultural expression.

It has recently been announced that the National Park Service will take over and develop the Louis Armstrong Park to the east of the site. Although plans have not yet been developed, there should exist many good opportunities for synergies between the cemetery, the former Storyville neighborhood, and the park that will celebrate New Orleans as the home of jazz.



Opportunities
Map Developed by studio with New Orleans City Commission Data

We recommend that steps be taken to resolve five key issues. The first issue is to improve existing incompatible land use conditions. The second is to reinstate a feeling of safety in the area. The third is the area's isolation from the French Quarter. The fourth is the lack of organization between the tourist attractions and the green space system. The fifth is to reassert the area's identity and cultural character.

- Improve existing incompatible land use conditions by modernizing the zoning code to improve the unsuitable industrial land use adjacent to the historic heritage and residential district.

- Improve security of the neighborhood by converting currently vacant light industrial land use regions to residential to reduce the risk of industrial pollution that endangers historic heritage sites. This would encourage more residents to move back into this area and reduce the percentage of vacant land as well as improve security.

- Connect the neighborhood to the Vieux Carré. Inappropriate institutional use discourages the connection between St. Louis 1 Cemetery and its adjacent neighborhoods, including the Vieux Carré. It would facilitate the connection of the cemetery to the rest of the city to change this land usage. In addition, the beautification of the median on Basin Street would increase the site's attraction for tourists and citizens alike.

Map developed by studio with New Orleans City Commission Data

- Re-integrate tourist attractions and green space systems. Integrate the different tourist attractions and provide commercial activity to support residents. Develop outside performance places and an outdoor open market along St. Louis Street to connect to St. Louis Cemetery 2. Develop the adjacent abandoned Southern Railway building for cemetery/tourism related activities.

Simulation prepared by studio

- Rebuild a sense of local identity and cultural character. As a neighborhood known for its historic jazz sites, reintroducing traditional small-scale retail shops along the street could increase the opportunity for jazz performances and encourage neighborhood bars and groceries. Outdoor performance places could be linked from the Iberville Housing Development to Louis Armstrong Park.

CONCLUSIONS

5.0 CONCLUSION

In 1895, Grace King wrote of the Old St. Louis Cemetery (St. Louis 1 Cemetery):

> *It opens its gates only at the knock of an heir, so to speak; gives harbourage only to those who can claim a resting place by the side of an ancestor.*

Today, St. Louis 1 Cemetery is a busy, public space and a well-known New Orleans tourist attraction. An involved Archdiocesan and two non-profit groups actively engage in positive discussions concerning tomb care, upkeep, priorities for conservation, and the development of sustainable management plans. The first phase of the Dead Space Collaborative Studio has served to initiate dialogue among the many stakeholders and has provided valuable data and decision-making tools:

- Survey form and survey manual developed for use at St. Louis 1 Cemetery and to be a model for further cemetery surveys
- Comprehensive survey of all tombs and landscape elements
- Review of historical literature and maps
- Review and validation of published and available conservation techniques
- Historic Structure Reports prepared on five tombs
- Three Pilot Conservation projects begun with Archdiocese and local supplier involvement
- Web site developed, filled with entertaining and informative discussions and images for kids, residents, visitors, families, the preservation community, and researchers.
- Three *Preservation in Print* articles planned for July, August, and September 2001
- The information developed during Phase 1 will be showcased in New Orleans in early September at the Restoration and Rehabilitation Convention and in several

community forums for the preservation community, tourism companies, trades people, and residents.

Many areas of research were tackled during Phase 1 and a large amount of data were collected. Due to time constraints, this information has just begun to be mapped and analyzed. During the second phase of this project, the survey information will be expanded and comprehensive maps, guidelines, and conservation priorities will be developed. The outreach programs of presentations, training, and the website will continue with additional content as work on the pilot projects is completed.

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Appendix A

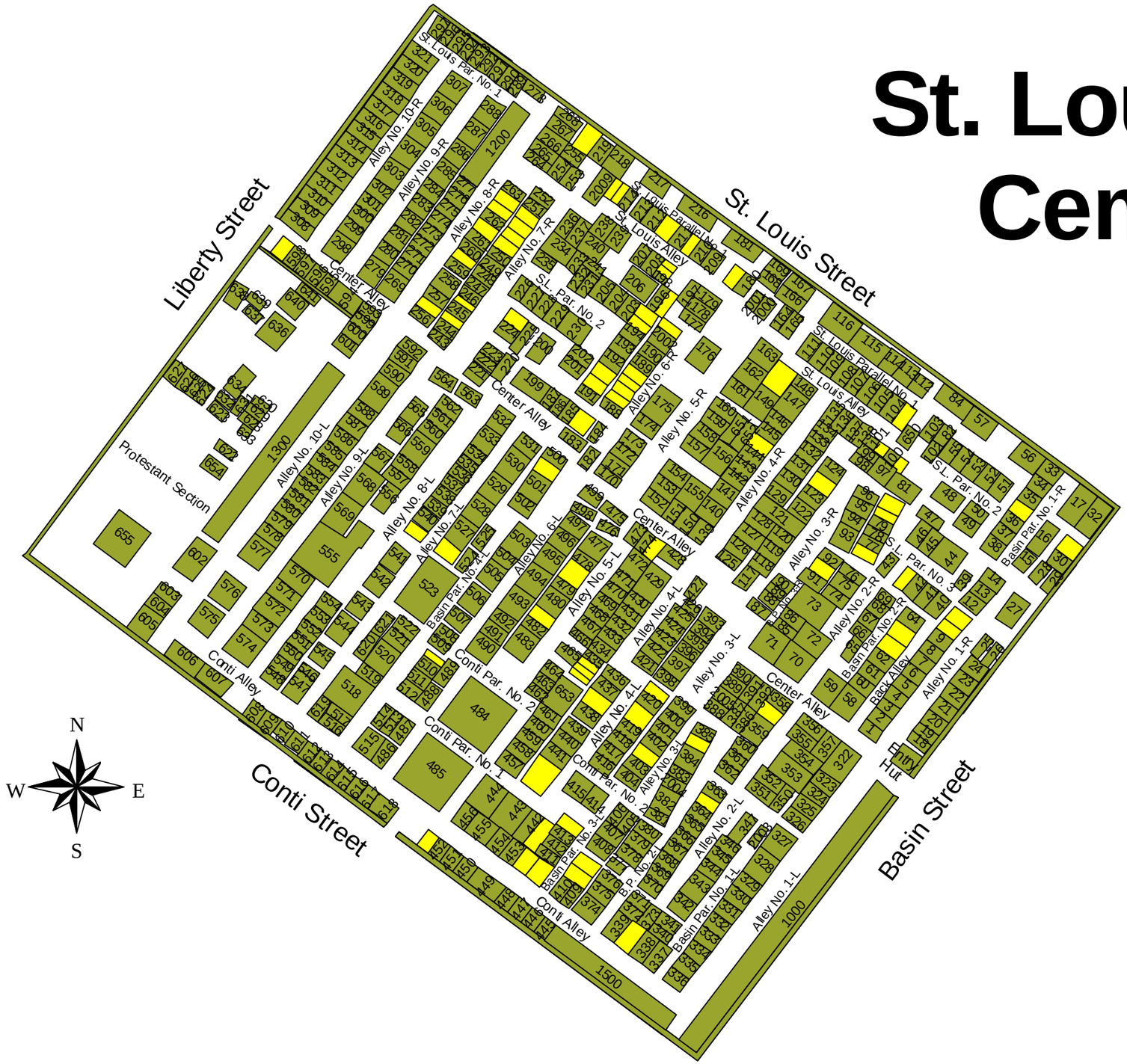
St. Louis 1 Cemetery Site Map

St. Louis 1 Cemetery

New Orleans, LA

Prepared by studio with map provided by the Archdiocese, aerial views and GIS data from the New Orleans City Commission, and data developed through the March 2001 survey.

St. Louis No. 1 Cemetery



Tomb Numbers of Interest:

12	Bergamini	U Penn Preservation Work Underway
13	Esteve	U Penn Preservation Work Underway
54	Trudeau	Carlos Trudeau, Surveyor General of Louisiana
81	Fortier	Colonel Michel Fortier
105	Lislet	Louis Moreau Lislet, Code of LA
108	Cenas	Blaize and Augustus Cenas
193	Musson	Focus Tomb
218	Barbarin Family	Famous New Orleans Jazz Family
224	Sullivan/Gayarre	Etienne Boré and Charles Gayarré
286	McCall-Jones	Focus Tomb
322	Varney Tomb	One of most photographed tombs on site
330	Thomas-Hazeur	Focus Tomb, Metalwork
347	Glapion	Possibly tomb of Marie Laveau
351	Perrault	U Penn Preservation Work Underway
366	Morphy	Paul Morphy – Famous chess player
395	Bonabel	Focus Tomb, Metalwork
476	Derbigny	Pierre Derbigny, Code of LA, Governor
484	Italian Society Tomb	
485	Portuguese Benevolent Society Tomb	
490	Portuguese Burial Society Tomb	
518	Spanish Society Tomb	
523	Orleans Battalion of Artillery	
529	Fleitas	Focus Tomb
553	Chinese Society	
555	French Society	
589	Celestine/Claiborne	2nd wife of Governor Claiborne
590	Gaines/Clark	Daniel Clark, Myra Gaines
606	deMarigny	Bernard deMarigny
619	Plessy	Homer Plessy, famous separate but equal case
640	Lewis	Eliza Lewis Claiborne, Gov. Claiborne's 1st wife
653	Society of St. Ann	
1000	Basin Street Wall Vaults	
1200	Treme Wall Vaults Right, Focus Tomb	
1300	Treme Wall Vaults Left	
1500	Conti Street Wall Vaults	
2003	Morial	Dutch Morial, Mayor of New Orleans

Appendix B

New Orleans Timeline

New Orleans Timeline

1682	LaSalle took possession of Louisiana in the name of the French King and the Christian Church
1718	City of New Orleans founded; first burials along the river bank
1720	First slaves brought to New Orleans
1721-22	City planned by Adrien DePauger and LeBlond de la Tour; plans show the location of a parish church in the position now occupied by St. Louis Cathedral
1722	Capital of the Louisiana colony moved to New Orleans
1724	The Black Code *(Code Noir)* was formulated, laying down the laws for Negroes and establishing Catholicism as the only legal religion
1725	First official cemetery, St. Peter's Cemetery, laid out bounded by Toulouse, Burgundy, St. Peter and North Rampart Streets beyond the occupied city; burials underground
1726	First brickyard established near site of future St. Louis 1 Cemetery in Tremé Faubourg region.
1727	Dedication of first church named for Saint Louis of France, St. Louis Cathedral; burials within church foundations
1729	Indian massacre of the French in Natchez; New Orleans fortified
1742	Brick wall erected around St. Peter's Cemetery; dedicated on All Saints Day, 1743
1760	New Orleans fortified
1762	France cedes Louisiana to Spain by secret treaty
1763	Treaty of Paris (French and Indian War) passed Louisiana into Spanish hands; Cabildo instituted as seat of government
1770	Small pox epidemic

1782	City floods
1784	Spanish restrict church (Cathedral) burial to citizens of distinction due to public health and overcrowding of church burials
1785	City floods
1787	Small pox epidemic
1788	Flood and major fire; 856 buildings, including Cathedral, burn and 4/5^{ths} of city destroyed; rebuilding of city begins under direction of Spanish architects
1788	Local physicians warn the Cabildo that the proximity of the cemetery to the city could cause another outbreak of pestilence; St. Louis 1 Cemetery planned outside of city ramparts, 300 square feet between the streets now known as Basin, Conti, Tremé, and St. Louis
1789	Royal Decree of August 14: "His majesty was pleased to approve construction of the new cemetery;" St. Louis 1 Cemetery founded
1789-1794	Rebuilding of Saint Louis Cathedral
1794	Major fire
1795	Carondelet Canal built; later leads to navigation road which destroyed original front section of St. Louis 1 Cemetery
1796	Flood and first time Yellow Fever was identified, although "fever" was recorded in many instances before 1796
1799	City floods, Yellow Fever outbreak
1800	Secret Treaty of San Ildefonso in October cedes Louisiana back to France; St. Peter Street Cemetery abandoned and divided into building lots
1801	Yellow Fever epidemic, Carondelet builds his canal to the east of St. Louis 1 Cemetery to drain the city
1803	France sells Louisiana to United States (Louisiana Purchase), population increases dramatically
1804	23rd prairial passed in France by Napolean

1812	1st steamboat comes downriver to New Orleans
1815	Battle of New Orleans; General Andrew Jackson defeats British forces
1816	City floods, Yellow Fever: 800 die, New Orleans population was 23,303
1817	Quarantine established; epidemic resulted in foundation of Board of Health due to belief that exhalations of the dead at funeral services and the transportation of the dead through the streets spread disease. 823 died in 1817
1819	Serious Yellow Fever epidemic: 3,000-6,000 die (out of a population of 46,000); Quarantine and Board of Health abolished
1821	Quarantine re-established; ordinance forbids public display of the deceased between July first and December
1822	Major Yellow Fever epidemic: 800-2000 die; paved streets begin; Tremé Street extended, removing rear Protestant section of St. Louis 1
1823	St. Louis 2 Cemetery founded
1824	Quarantine repealed
1826-27	Mortuary Chapel of St. Anthony constructed (now Our Lady of Guadelupe Church)
1827	Fines imposed for funerals held at St. Louis Cathedral
1831	Ponchartrain Railroad established
1832	Lafayette I Cemetery founded by the city; first cholera epidemic
1838	First Mardi Gras parade held
1840	Cypress Grove Cemetery founded
1841	Severe Yellow Fever epidemic: 1800 die
1842	Yellow Fever: 700 die
1847	Yellow Fever

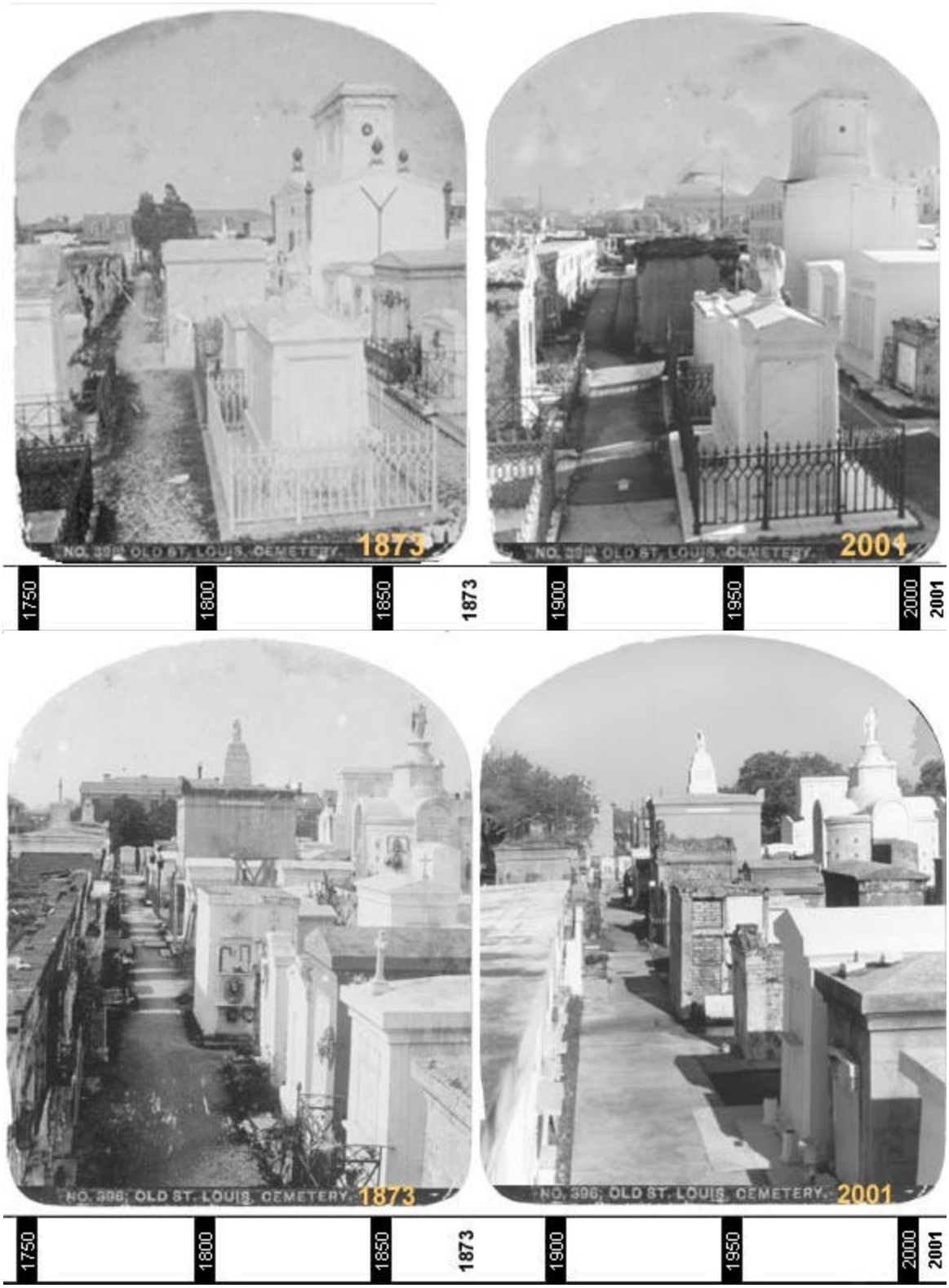
1849	Odd Fellows Cemetery founded
1850	Dowler writes *Researches upon the Necropolis of New Orleans*
1851	Advertisement: "bodies shipped and packed"
1852	Greenwood Cemetery founded
1853	7,849 deaths due to Yellow Fever: 3,907 were Irish and German immigrants, 18 native NO, others not classified.
1853	Farlane publishes *A Review of the Yellow Fever (of 1853)*
1854	St. Joseph I Cemetery founded; Dowler writes *Tableau of the Yellow Fever of 1853.*
1857	Prostitution legalized in New Orleans
1861-63	*Frank Leslie* articles on Lafayette I and All Saints' Day
1861-1865	Civil War
1865	Lafayette II Cemetery founded
1864	Louisiana Constitution amended to abolish slavery
1867	*Harper's Weekly* article on New Orleans's cemeteries
1871	Flood
1973	St. Joseph II Cemetery founded
1880	Lafcadio Hearn publishes "White sepulchers" in the *Item* (Sept 9)
1884	Lafcadio Hearn article on Cemeteries and Cremation
1894-96	*Old Cemeteries Falling into Decay* (Englehart guidebook)
1898	Storyville established as only legal red-light district in the United States; bound by 16 square blocks housing more than 2000 prostitutes
1905	Last of Yellow Fever epidemics
1917	Storyville closed by the Department of the Navy

1924	Grace King, New Orleans author and historian, founded the Society for the Preservation of Ancient Tombs.
1925	Local citizens complain about Lafayette I dereliction
1927-38	Carondelet Canal closed and filled in
1930s	Works Project Administration records inscriptions
1940	Storyville destroyed and low-income housing erected in its place
1947	Feature article on Lafayette I
1957	Girod Cemetery torn down
1965	Times Picayune editorial
1967-70	Mayor's Advisory Committee on Rehabilitation and Restoration of Lafayette I Cemetery formed
1969	"Easy Rider" filmed in St. Louis 1 Cemetery, rumored to be the time when the Charity statue heads were stolen
1974	Mary Louise Christovich, New Orleans author and historian, founds Save Our Cemeteries, Inc. (SOC)
1974	Friends of the Cabildo/LA State Museum publish a cemeteries volume of the *New Orleans Architecture series (Vol. III)*
1975	Class action suit filed by SOC, to stop the nine city-block wall vault demolition of the condemned wall vaults of St. Louis 2 Cemetery. After 8 years of sporadic litigation, Archbishop Hannan established a joint effort commission to work together on the historic cemetery
1981	SOC, with the help and support of The Historic New Orleans Collection (THNOC), surveyed and photographed nine cemeteries, including St. Louis 1 Cemetery
1983	SOC, program to collect, identify, tag, and store fragments begins
1986	Ann Rice, a New Orleans resident, begins to publish *The Vampire Chronicles*
1987	Center for Preservation (Columbia University) and SOC, Inc. undertake model conservation program for Lafayette 1 cemetery

1999	Ring of New Orleans antiques dealers arrested for widespread cemetery thefts through the late 1990s
2001	Graduate School of Fine Arts, University of Pennsylvania, Dead Space: Defining the New Orleans Creole Cemetery Studio. Tomb, marker, and landscape features survey of St. Louis 1 Cemetery

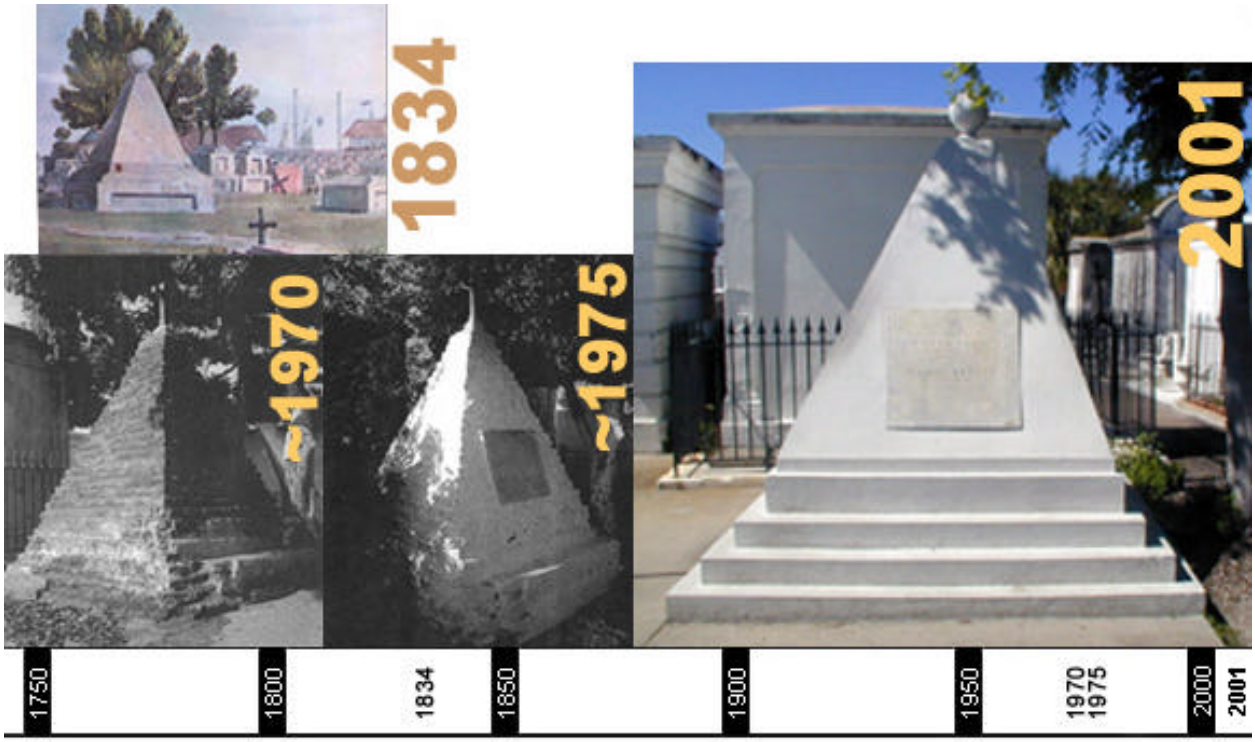
Appendix C

Historic and Modern View Comparisons



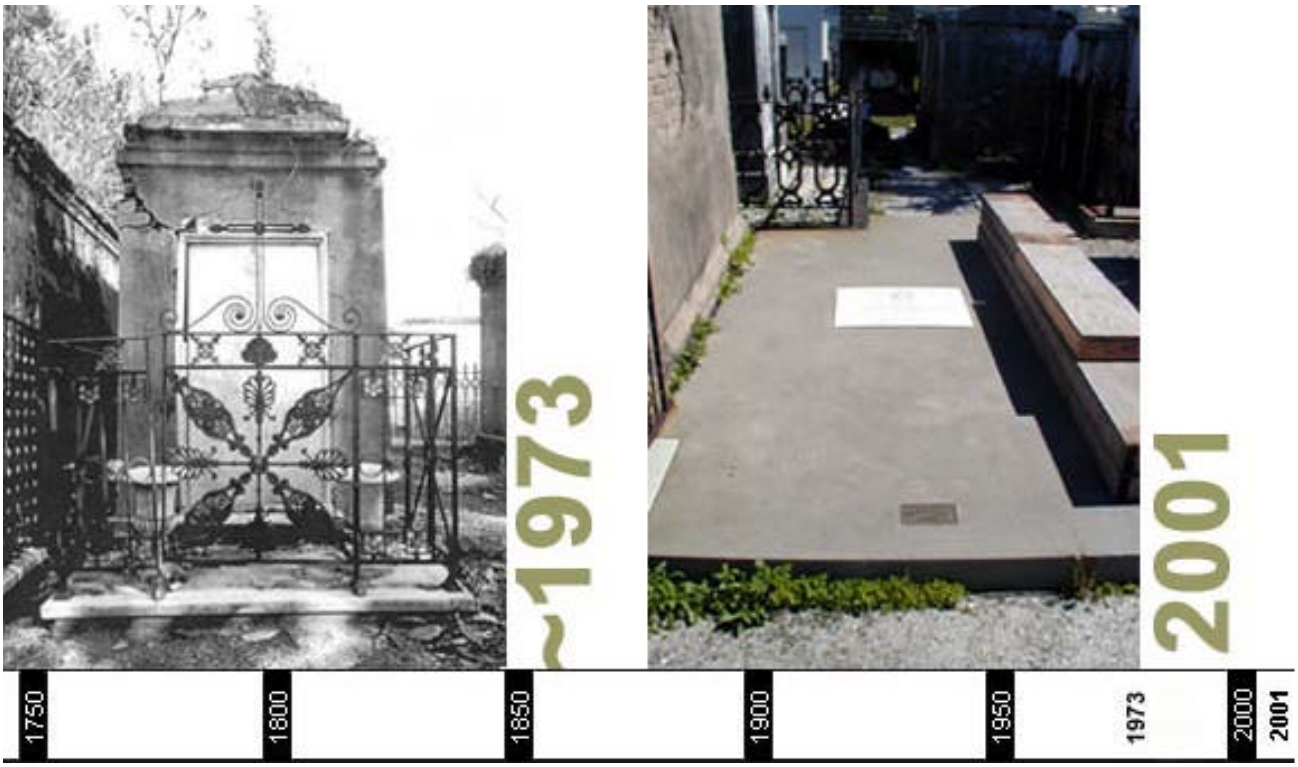
Views of the St. Louis 1 Cemetery looking east. Mugnier photographs are from the collection at the New Orleans Public Library. 2001 photographs are by Joseph P. Mattera.

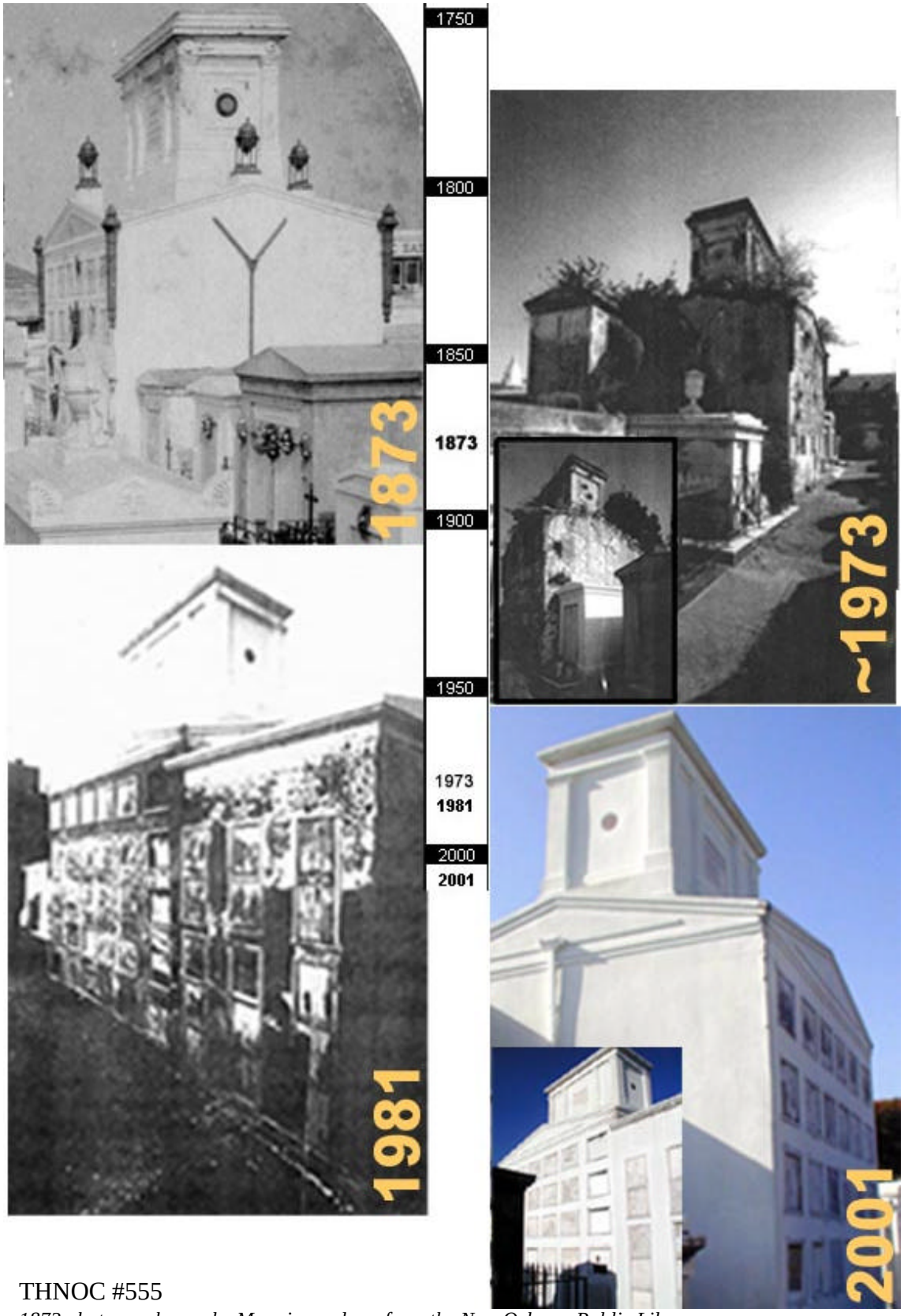
THNOC #322



Watercolor by John Latrobe, 1834, (The St. Louis Cemeteries of New Orleans).
1970 and 1975 photographs from THNOC. 2001 photograph by studio

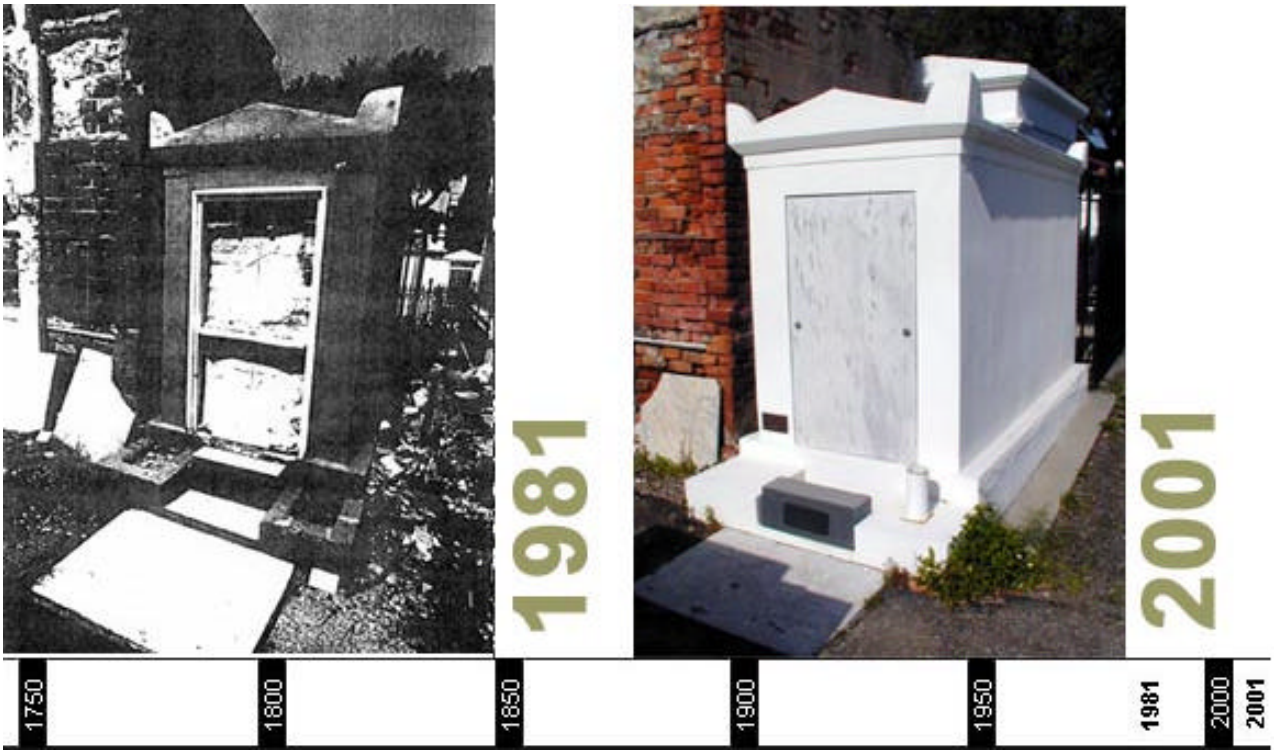
THNOC #157 *1973 photograph from THNOC. 2001 photograph by studio.*





THNOC #555

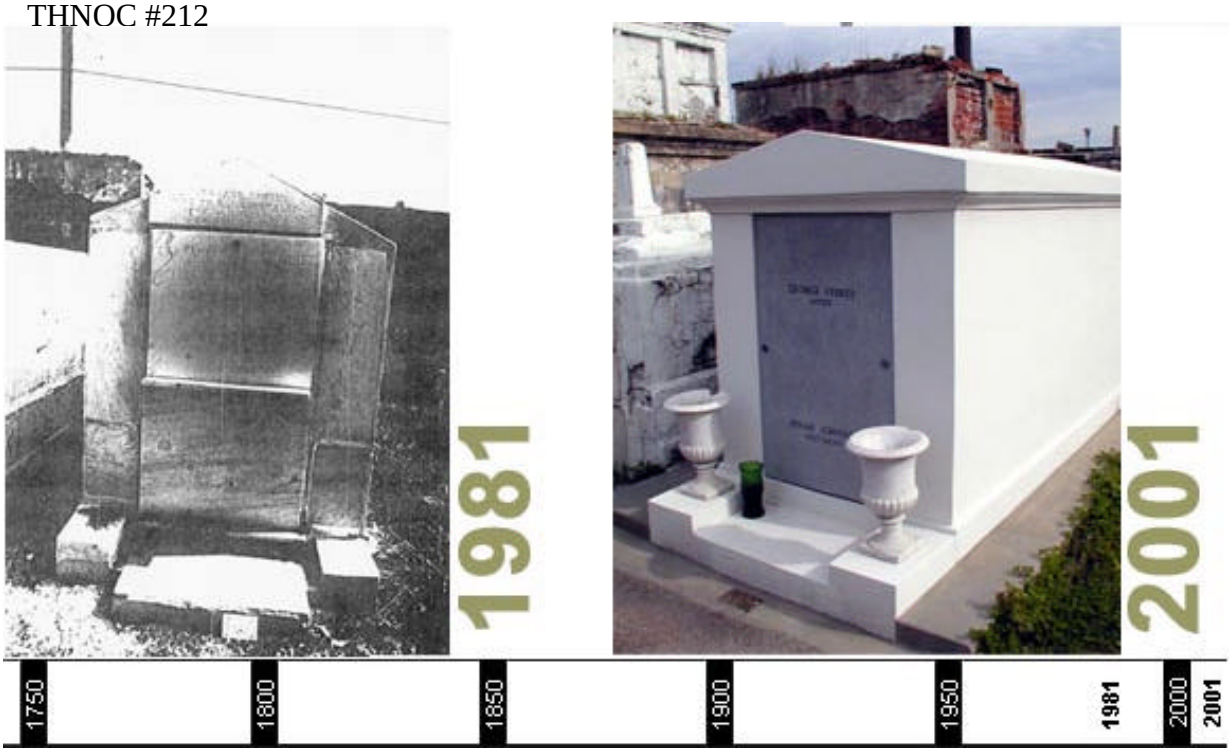
1873 photographs are by Mugnier and are from the New Orleans Public Library Collection. The 1973 and 1981 photographs are from THNOC. 2001 photographs and collage are from studio.



THNOC #276

1981 photographs are from THNOC. 2001 photographs are by studio.

THNOC #212



Appendix D

Tomb and Marker Survey

Fragment Inventory

TOMB AND MARKER SURVEY

Site: St. Louis 1 Cemetery			**Date Founded**: 1789
Street Address: Block bounded by Basin, St. Louis, Conti and Tremé Streets			
Parish: Orleans	**County**:	**City**: New Orleans	**State**: Louisiana--LA
UTM Coordinates: Zone: 15 Easting: 782 200 Northing: 331 7450			
Owner: Archdiocese of New Orleans, Roman Catholic Church			
Contact: Michael Boudreau			
Surveyor(s):			**Date**:
Weather: ❑ Cold ❑ Hot ❑ Dry ❑ Humid ❑ Sunny ❑ Rain/snow/fog ❑ Overcast ❑ Windy			

I. IDENTIFICATION

THNOC Number:	**Archdiocese Number**:	**GIN**:
Street/Alley Name:		
Tomb Name(s):		
First Burial Date:	**Last Burial Date**:	

II. ENVIRONMENT *(Check appropriate fields.)*

Orientation: ❑ N ❑ S ❑ E ❑ W ❑ NW ❑ NE ❑ SW ❑ SE ❑ Unknown	
Context: ❑ Isolated (3+ ft) ❑ Contiguous (0-3 ft)	
Precinct	**Ground**: ❑ Paved *(circle all that apply):* Shell Stone Brick Asphalt Concrete Other ❑ Unpaved *(circle all that apply):* Soil Vegetation Grass Other
	Enclosure: ❑ Curb ❑ Wall ❑ Fence ❑ Chain ❑ Other ❑ N/A
Proximity to Path: ❑ Adjacent (0-1 ft) ❑ Close (1-5 ft) ❑ Distant (5+ ft)	
Path Type: ❑ Stone ❑ Brick ❑ Concrete ❑ Asphalt ❑ Shell ❑ Soil ❑ Grass ❑ Other	
Proximity to Drain: ❑ Adjacent (0-5 ft) ❑ Close (5-10 ft) ❑ Distant (10+ ft)	
Grade Slope: ❑ Positive ❑ Negative ❑ Cross-slope ❑ None	
Alignment: ❑ Normal ❑ Sunken ❑ Tilted ❑ Fallen	
Furniture: ❑ Bench ❑ Sculpture ❑ Container/vase ❑ Plaque ❑ Immortelles ❑ None	

III. DESCRIPTION *(Check appropriate fields.)*

Tomb Type	❑ Wall Vault ❑ Pediment Tomb ❑ Mausoleum ❑ Tumulus ❑ Society Tomb ❑ Simple Tomb *(circle one):* Parapet Platform Sarcophagus Step
Marker Type	❑ Simple *(circle all that apply):* Headstone/footstone Stele Plaque Pyramid Other ❑ Compound *(circle all that apply):* Table Basal Pedestal Column Obelisk Other

State	❑ Standing ❑ Ruin ❑Vacant ❑Vacant Paved ❑ Other		
Representation: ❑ Society ❑ Family ❑ Individual ❑ Undeterminable			
Changes	❑ New ❑ Restored ❑ Paved with Remnant ❑ N/A		
Number of Tiers: ❑ N/A		**Number of Bays:** ❑ N/A	
Roof: ❑ Step ❑ Gable ❑ Barrel-vault ❑ Cross-vault ❑ Hip ❑ Flat ❑ None ❑ Other ❑ Undeterminable			
Base: ❑ Yes ❑ No	**Pedestal:** ❑ Yes ❑ No	**Shelf:** ❑ Yes ❑ No	**Threshold:** ❑ Yes ❑ No
Ornament: ❑ Sculpture ❑ Urn ❑ Cross ❑ Plaque ❑ Relief panels ❑ Incised panels ❑ None ❑Other			
Hardware: ❑ Candle holder ❑ Attachment for immortelles ❑ None ❑ Other			
Perpetual Care Marker: ❑ Yes ❑ No		**Interment Status:** ❑ Active ❑ Inactive ❑Abandoned	
Number of Closure Tablet(s):		**Closure Tablets**: of Missing	
Closure Tablet(s) Attachment(s): ❑ Mortar ❑ Pin ❑ Both ❑ Not Attached ❑ Indiscernible			
Number of Associated Tablet(s):			
Associated Tablet(s) Attachment(s): ❑ Mortar ❑ Pin ❑ Both ❑ Not Attached ❑ N/A ❑ Indiscernible			
Tablet Surround: ❑ Yes ❑ No		**Corner Stone:** ❑ Yes ❑ No	
Designer/Builder:			

IV. MATERIALS TABLE *(Check appropriate fields.)*

	Primary Structure	**Roof**	**Pediment**	**Ornament**	**Base**	**Enclosure**	**Closure Tablet(s)**	**Associated Tablet(s)**	**Surface Finish**
Sandstone									
Limestone									
Marble									
Slate									
Granite									
Concrete									
Cast Stone									
Brick									
Metal	*If metal, see Metals Section (VII).*								
Stucco									
Modern Coating									
Lime wash									
Cement wash									
Other									

V. CONDITION – MASONRY (*Check appropriate fields.)*

	Primary Structure	Roof	Base	Ornament(s)	Tablet System	Surface Finish
Collapse						
Loss						
Disaggregation						
Erosion						
Cracking						
Surface Deposits						
Bio-growth						
Vegetation						
Graffiti						
Fragmentation	#	#	#	#	#	#
Bowing						
Alterations						
Other						

Circle the appropriate number.

	Primary Structure	Roof	Ornament(s)	Tablet System
Overall Condition 0=poor; 3=good	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Overall Integrity 0=low; 3=high	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

VI. LANDSCAPE *(Check appropriate fields.)*

Planting Design Type: ❑ Container planting ❑ Bed planting ❑ Coping/raised bed ❑ Specimen planting ❑ N/A

Planting Materials: ❑ Grass ❑ Ground cover ❑ Herbaceous ❑ Shrub ❑ Deciduous tree ❑ Non-deciduous tree ❑ Moss ❑ None ❑ N/A

Planting Species

A._____ Condition (0=dead; 3=healthy):____ **Height:___ Width:___**
Proximity to tomb: ❑ 0-3ft ❑ 3-10ft ❑ 10+ft

B._____ Condition (0-3):____ **Height:___ Width:___**
Proximity to tomb: ❑ 0-3ft ❑ 3-10ft ❑ 10+ft

C._____ Condition (0-3):____ **Height:___ Width:___**
Proximity to tomb: ❑ 0-3ft ❑ 3-10ft ❑ 10+ft

Invasive Vegetation
Plant type: ❑ Grass ❑ Herbaceous ❑ Shrub ❑ Tree ❑ Microbiotic ❑ Vine ❑N/A
Location: ❑ Roof ❑ Walls ❑ Precinct ❑ Ornament
Damage (0=significant; 3=minimal): **pH reading:**

VII. METALS *(Write in the appropriate rating.)*

	Tomb	Enclosure		Door	Ornament	Sculpture	Accessories	Plaque	Anchors	
		Comp	Part						Tomb	Tablet
Condition Poor = 0 Good = 3										

VIII. INSCRIPTION(S)

IX. GENERAL COMMENTS *(Provide additional comments/observations below.)*

FRAGMENT INVENTORY

Fragment number:		**PNTHNOC**:
Fragment origin (*check those that apply):* ? Tablet system ? Ornament ? Primary structure ? Roof ? Uncertain		
Specify origin:		
If origin is a tablet, note its original position:	**Tier**—*Check one:* ? 1 (bottom) ? 2 (2nd from bottom) ? 3 (etc.) ? 4 ? 5 ? Uncertain ? N/A	
	Bay—*Check one:* ? 1 (left) ? 2 (2nd from left) ? 3 (etc.) ? 4 ? 5 ? Uncertain ? N/A	
Cause of break, if discernible:		
Date of break, if known:		**Condition of fragment***:* ? Good ? Fair ? Poor
Dimension of fragment – ht. x wd. x d. (cm):		
Description:		
Storage location:		
Name of fragment surveyor:		**Date recorded**:

FRAGMENT INVENTORY MANUAL

Fragment number

Definition: A unique number that identifies each fragment associated with a specific tomb/marker.

Method: Begin numbering pieces with "1". Create a new record for each subsequent fragment.

PNTHNOC

Definition: A unique identifying number for every tomb/marker within the site, based on The Historic New Orleans Collection numbering system and revised by U. Penn.

Method: Known or closest proximity tomb/marker. Each PNTHNOC may have numerous fragment numbers associated with it.

Fragment origin

Definition: The tomb/marker element to which the fragment belongs.

Method: Check those that apply:

1. **Tablet system**: The combination of the closure tablet(s), associated tablet(s), tablet surround, shelf, and cornerstone.
2. **Ornament**: Every detail that is deliberately exploited or added to embellish, including sculpture, urns, crosses, commemorative plaques, relief and incised panels.
3. **Primary structure**: The fundamental structural form of the tomb/marker.
4. **Roof**: The top covering of a structure supported by the walls.
5. **Uncertain**: The origin of the fragment is indiscernible.

Specify origin
Definition: Further clarification of the origin of the fragment.
Method: Limit the text to 100 characters.

Tablet's original position
Defintion: If the origin is undoubtedly a tablet and one can ascertain which tablet the fragment originally belonged to, specify its position on the tomb/marker.
Method: Check one:

1. **Tier**: The vertical position on the tablet on the tomb. Consider "1" the bottom-most tier and count up as the tiers rise.
2. **Bay**: The horizontal alignment of the tablet on the tomb. Consider "1" the left-most bay and count up as the bays proceed to the right.
3. **Uncertain**: The position of the tablet fragment is indiscernible.
4. **N/A**: The origin is other than a tablet.

Cause of break, if discernible
Definition: The known or attributed cause of damage.
Method: If discernible, note the cause. Limit the response to 100 characters.

Date of break, if known
Definition: The date the fragmentation occurred.
Method: If known, note the date when the fragmentation occurred. If that is unknown, list the date when the fragments were first noticed. Limit the response to 100 characters.

Condition of fragment
Definition: The state of the fragment.
Method: Check those that apply.

1. **Good**
2. **Fair**
3. **Poor**

Dimension of fragment (cm)
Definition: The height, width and depth of the fragment.
Method: Note the dimensions in centimeters.

Description
Definition: All distinguishing original inscriptions, carvings, etc..
Method: Note each letter (in the given language) visible on the fragment. Limit the response to 100 characters.

Storage location
Definition: The place where the fragment is stored.
Method: Note the location as specifically as possible, yet limit the response to 100 characters.

Name of fragment surveyor
Definition: The surveyor's name.
Method: Note the first initial and the last name (ex.: H. O'Donnel).

Date recorded
Definition: The day, month, and year when the fragment is recorded.
Method: Note the day, month and year as follows: "3/13/01" (March 13, 2001).

Appendix E

Tomb and Marker Survey Manual

TOMB AND MARKER SURVEY MANUAL

Site
Definition: The official name of the burial ground or cemetery being surveyed.
Method: As recorded in official documents. The full name, no abbreviations.

Date Founded
Definition: The date when the site was established.
Method: Month, day, year (Ex.: mm-dd-yyyy; 03-03-1784).

Street Address
Definition: The address or site location.
Method: The full address, no abbreviations.

Parish
Definition: The name of the parish in which the cemetery is located. "County" may be substituted for "Parish" in other locations.
Method: The full name of the parish, no abbreviations.

County
Definition: The name of the county the cemetery is located if it is not run by a "Parish."
Method: The full name of the county, no abbreviations.

City
Definition: The name of the city in which the cemetery lies.
Method: The full name of the city, no abbreviations.

State
Definition: The name of the state in which the cemetery lies.
Method: The full name of the state and the two-letter postal code abbreviation. Ex.: Louisiana—LA.

UTM Coordinates
Definition: 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).
Method: Indicate the centermost coordinate within the cemetery boundary (Zone, Easting, Northing).

Owner
Definition: The name of the individual, organization, or polity that holds the deed to the cemetery's ground
Method: Full name, no abbreviations.

Contact
Definition: The name, address, phone number, and/or e-mail address of the person designated as the main contact for the site.

Method: Full name, address (abbreviate only the state name), phone number (xxx-yyy-yyyy), and email address (aaa@bbb.ccc).

Surveyor(s)
Definition: The first and last name of the person(s) filling out the survey.
Method: First initial, then last name. If more than one, separate names with a comma. (Eg.: L. Brown, F. Gonzalez).

Date
Definition: The date when the field survey form is completed.
Method: Month, day, year (mm-dd-yyyy; 03-13-2001).

Weather
Method: Check all that apply, eg. as reported in local newspaper.
Definition:

1. Cold
2. Hot
3. Dry
4. Humid
5. Sunny
6. Rain/snow/fog
7. Overcast
8. Windy

I. IDENTIFICATION

THNOC Number
Definition: The Historic New Orleans Collection survey number assigned in 1981. A unique identifier particular to each plot/tomb/marker.
Method: As per the survey.

Archdiocese Number
Definition: A unique identifier assigned by the Archdiocese to each plot/tomb/marker.
Method: As provided by the Archdiocese.

GIN
Definition: Grid Identification Number.
Method: The alpha-numerical coordinate defining location.

Street/Alley Name
Definition: The name of the path on which the tomb/marker is located within the site.
Method: Full name as per existing site map. Abbreviate only "Street" or "Alley," not the proper name.

Tomb Name(s)

Definition: The name of the family or society that constructed or occupies a given tomb. The Family Tomb Name refers to the first family surname that is most often represented on the tablet(s).

Method: Family or society name as it appears on the tomb, usually on the pediment or closure tablets (eg. Perrault family, IOOF). Where possible, list all surnames. In the absence of distinguishing names, leave blank.

First Burial Date

Definition: The date of the earliest interment, whether found on the current closure tablet or an earlier associated tablet.

Method: Month, day, year (mm-dd-yyyy; 03-12-1875). If none found or illegible, leave blank.

Last Burial Date

Definition: The date of the latest (most recent) interment.

Method: Month, day, year (mm-dd-yyyy; 03-05-1871). If none found or illegible, leave blank.

II. ENVIRONMENT

Orientation

Definition: The compass direction that the front of the structure faces.

Method: Check one that applies: N, S, E, W, NW, NE, SW, SE, unknown.

1. Tomb: The front of the tomb is defined as the main entry through which the body enters and/or the location of the inscription tablet. Where the tablet is horizontal, the front is located at the foot of the tomb.
2. Marker: The front is defined as that side of the marker with inscription, special architectural treatment, or other emphasis.

Context

Definition: The proximity to other tombs or markers.

Method: Measure the shortest distance between the primary structures, ignoring curbs and walls. Check one that applies:

1. **Isolated**: An isolated tomb/marker that has no tomb/marker within three feet of it.
2. **Contiguous**: A tomb/marker that is adjacent to one or more tombs/markers at a distance of at least three feet.

1. Isolated

2. Contiguous

Photographs by studio.

Precinct

Definition: The ground immediately surrounding the tomb/marker and the closure that defines the plot.

Method: Within each subcategory (Ground, Enclosure) check and circle those that apply.

1. **Ground**
    a. **Paved**: Ground covered with a firm level surface of shell, stone, brick, asphalt, or concrete.
    b. **Unpaved**: Ground surface consists of soil, vegetation, or grass.
2. **Enclosure**—A built feature that either encloses or defines the tomb/marker precinct.
    a. **Curb**: A low edging that surrounds the precinct. A curb is 6 inches high or less.
    b. **Wall**: A high (greater than six inches) masonry structure that surrounds the precinct.
    c. **Fence**: A metalwork barrier that surrounds the precinct.
    d. **Chain**: A chain and post barrier that surrounds the precinct.

Proximity to Path

Definition: The shortest distance between the tomb/marker and the nearest path (that is *outside* the enclosure).

Method: Estimate distance. Check one that applies:

1. **Adjacent**: Less than one foot.
2. **Close**: Greater than one foot, less than five feet.
3. **Distant**: Greater than five feet.

Path Type

Definition: The material of which the path is composed.

Method: Check those that apply:

1. Stone
2. Brick
3. Concrete
4. Asphalt
5. Shell
6. Soil
7. Grass

Proximity to Drain

Definition: The shortest distance between the tomb/marker and the nearest subsurface drain.

Method: Estimate distance. Check one that applies:

1. **Adjacent**: Less than five feet.
2. **Close**: Greater than five feet, less than ten feet.
3. **Distant**: Greater than ten feet.

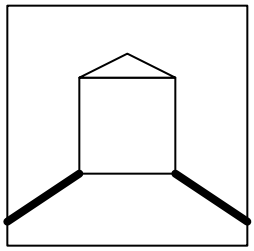
Grade Slope

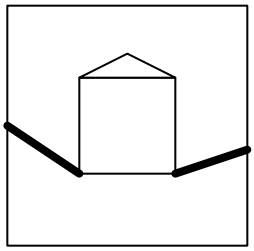
Definition: The direction(s) that the ground approaches the tomb/marker.

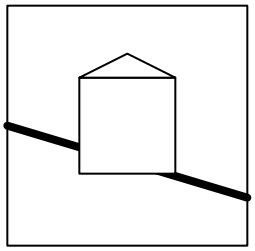
Method: Check one that applies:

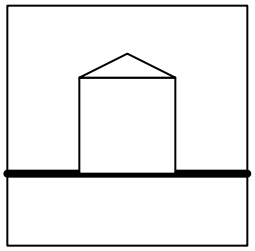
1. **Positive**: The tomb/marker is at the top of a rise.

2. **Negative**: The tomb/marker is at the bottom of a rise.
3. **Cross-slope**: The tomb/marker intersects a slope.
4. **None**: The tomb/marker sits on flat ground.


1. Positive

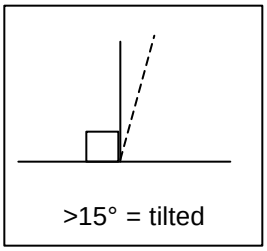

2. Negative


3. Cross-slope


4. None

Alignment

Definition: The position of any part or all of the tomb/marker in relation to its immediate surrounding ground.



Method: Check those that apply:

1. **Normal**: As originally constructed, assured to be plumb.
2. **Sunken**: Below ground due to settlement or grade change.
3. **Tilted**: Structure positioned off-center from its original position/alignment. Greater than 15° from normal.
4. **Fallen**: Collapsed—partial or full.

Furniture

Definition: Objects related to but not permanently attached to the tomb/marker.

Method: Check those that apply:

1. **Bench**
2. **Sculpture**: Three-dimensional objects, eg., figurals, urn, cross, tree trunks.
3. **Container/vase**: Stone, concrete, metal, plastic.
4. **Plaque**: Commemorative, unattached tablets, medallions.
5. **Immortelles**: Temporary ephemeral offerings.

III. DESCRIPTION

Type

Definition: Typology is the study of types or the systematic classification of form based on distinguishing traits or characteristics. All members of a type must possess the essential components that define that type and are based on formal not functional characteristics.

Method: Decide whether the mortuary structure is a **tomb** or **marker**. Within the appropriate category (tomb or marker) check the appropriate choice:

1. **Tomb:** Any mortuary structure associated with or containing one or more burial vault (see photographs, below).
    a. **Wall Vault**: Multiple tiers of individual burial vaults, usually of brick vault construction, combined to form an isolated block or arranged as perimeter enclosure walls.

b. **Pediment Tomb**: A multiple vault tomb whose height is greater than its width or length and top is surmounted by a pediment. (Pediment: the flat, triangular or curved gable end of the roof surmounting the end walls.)
c. **Mausoleum**: A tomb with accessible interior space, often containing wall or subterranean vaults and a chapel (a small area intended primarily for private prayer, contemplation) accessed by a door.
d. **Tumulus**: A tomb or mausoleum surmounted by banked earth.
e. **Society Tomb**: A large multi-vault tomb in a complex architectural form with any roof or façade type not belonging to any other specific type.
f. **Simple Tomb**: A tomb that contains single or multiple burial vaults within solid walls, whose length is greater than its width or height. Subtypes include:
    i. **Parapet tomb**: A simple tomb possessing a raised front or parapet (a low wall surmounting the structure's exterior walls or at a roof's perimeter).
    ii. **Platform tomb**: A simple tomb whose length is greater than its width or height and whose base is solid or open (on piers or columns).
    iii. **Sarcophagus tomb**: A simple tomb resembling a sarcophagus typically with canted sides and usually on a raised base.
    iv. **Step tomb**: A simple tomb possessing a stepped or corbelled top.

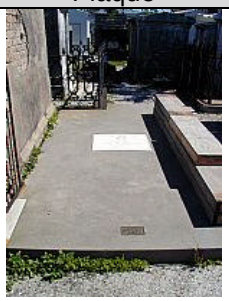
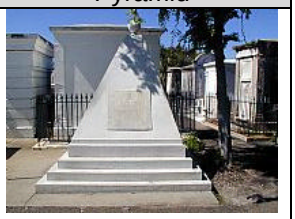
Wall Vault	Pediment Tomb	Mausoleum	Tumulus
			 *
SIMPLE TOMB			
Parapet	Platform	Sarcophagus	Step
			

All photographs, except for the Tumulus, feature St. Louis 1 Cemetery tombs and are by the studio.
** Tumulus photo: New Orleans Architecture Vol. 3: The Cemeteries. Gretna, LA: Pelican, 1997, p. 40.*

2. **Marker:** Any non-tomb mortuary structure which does not accommodate an interment and whose form is often sculptural.
    a. **Simple**: A single element marker.

i. **Headstone/footstone**: An associated pair of upright slabs, usually of different height embedded in the ground or in a separate stone base which defines the grave and are inscribed.
ii. **Stele**: A carved or inscribed stone slab or pillar used for commemorative purposes, taller and thinner than a headstone. Base not required.
iii. **Plaque**: Non-freestanding plain or ornamental tablet affixed to a wall or structure, but not a tomb/marker.
iv. **Pyramid**: A freestanding architectural form with four adjacent triangular walls that meet at a common apex and rest on a square base.
v. **Other**: Any single architectural or sculptural form.

b. **Compound**: A multiple element marker.
i. **Table**: A horizontal tablet supported by the individual uprights, often in the form of a table.
ii. **Basal**: A horizontal tablet supported by a low solid wall base. (Resembles a platform tomb but does not house a casket or coffin within the walls.)
iii. **Pedestal**: Any combination of column, obelisk, urn, or sculpture surmounting a pedestal or pedestal-base.
1. **Column**: A full or truncated single pillar standing alone as a monument.
2. **Obelisk**: A monumental, four-sided stone shaft, usually monolithic and tapering to a pyramidal tip.
3. **Other**: Any Architectural or sculptural combination.

SIMPLE			
Headstone/footstone	Stele	Plaque	Pyramid
 *p 44*	 7' tall; *p 132*		
COMPOUND			
Table	Basal	Pedestal: Column	Pedestal: Obelisk
		 *p 40*	 *p 40*

Plaque, Pyramid, Table, and Basal photographs feature St. Louis 1 Cemetery markers and are by the studio. All others: New Orleans Architecture Vol. 3: The Cemeteries. Gretna, LA: Pelican, 1997.

State

Definition: The present mode or condition of the tomb/marker.

Method: Check one that applies.

1. **Standing**: A tomb/marker maintains its structural form and support.
2. **Ruin**: A tomb/marker destroyed through collapse or demolition.
3. **Vacant**: An unmodified empty plot with no or minimal structure, remnants, footprints or marker indicative of the existence of a former structure.
4. **Vacant Paved**: An empty plot paved over with or without miscellaneous elements embedded.
5. **Other**: When the tomb cannot be adequately classified by any of the above terms. In this case, the tomb should be photographed and sketched for future classification.

Representation

Definition: The person or group interred or commemorated.

Method: Check one that applies:

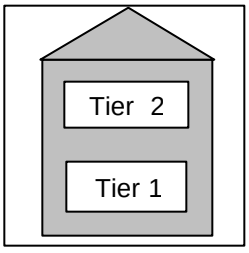
1. **Society**: Contains interments of members of a communal organization.
2. **Family**: Contains two or more interments from the same or realted family.
3. **Individual**: Contains only one interment, or is within a wall vault.
4. **Undeterminable**: If interment representation is not clear.

Changes

Definition: Any tomb or marker that has undergone intentional changes. It is either **new**, **restored**, or has been **paved with remnants**. This category is in addition to the typlology characteristics it exhibits.

Method: Check one that applies:

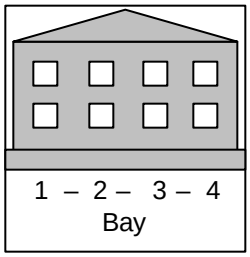
1. **New**: Any tomb/marker that has not previously been surveyed or accounted for. Through examination of its elements and the structure as a whole it can be reasonably inferred that the structure is new construction.
2. **Restored**: Any tomb/marker that has been significantly altered for the purpose of repairing and remedying material failure.
3. **Paved with remnant**: Any tomb/marker that has been reduced to a paved space and a plaque, metalwork piece, closure tablet, or other such remnant from the original form.
4. **N/A**: No changes are detectible.



Number of Tiers

Definition: The number of vertical units (vault spaces) in a tomb. Tiers only apply to the horizontal Wall Vaults and Pediment Tombs.

Method: Write in the appropriate number.



Number of Bays

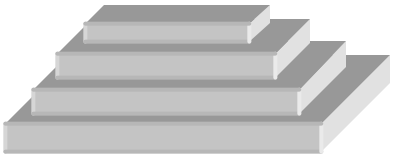
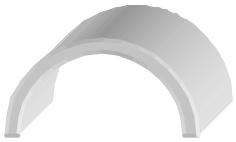
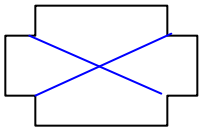
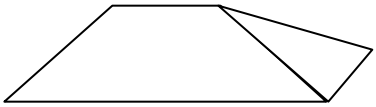
Definition: The number of horizontal units (vault spaces) in a tomb. Bays only apply to the vertical divisions of Wall Vaults and Pediment Tombs.

Method: Write in the appropriate number.

Roof

Definition: The top covering of a structure supported by the walls.

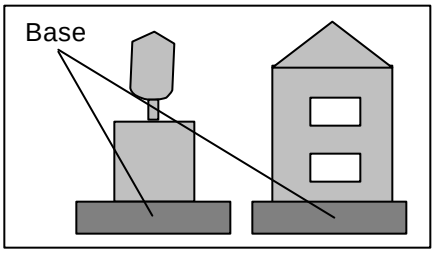
Method: Check one that applies, or check "Undeterminable" if the tomb is too tall to determine its roof type, or check "Other" if the type of roof cannot be classified as below.

Step	Gable	Barrel-vault
		
Cross-vault	**Hip**	**Flat**
		

Base

Definition: The lowest visible element of a tomb/ marker that is distinct from the foundation or footing.

Method: Check "yes" or "no" according to whether one exists.



Pedestal

Definition: A support for a column, statue, urn or sarcophagus consisting of a base, dado, or die, and a cornice, surbase, or cap. Taller than a base.

Method: Check "yes" or "no" according to whether one exists.

Shelf

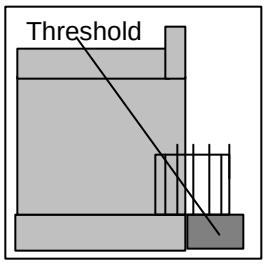
Definition: A masonry slab projecting from the tomb or marker intended for the placement of offerings.

Method: Check "yes" or "no" according to whether one exists.

Threshold

Definition: An element, usually a step, at the front of a tomb, alone or supporting ironwork.

Method: Check "yes" or "no" according to whether one exists.



Ornament

Definition: Any embellishment that is integral to the structure of the tomb/marker.

Method: Check those that apply:

1. **Sculpture**: Any masonry ornament other than an urn or cross or incised or relief panel, usually figural.

2. **Urn**: A cylindrical container with a foot, open or closed, plain or draped.
3. **Cross**: Any variation.
4. **Plaque**: Thin flat cast metal applied to or otherwise associated with the tomb.
5. **Relief panels**: Decorative carved relief above a background plane.
6. **Incised panels**: Decorative carved incision below a background plane.

Hardware
Definition: An item attached to the structure intended to hold or support appurtenances.
Method: Check those that apply:

1. **Candle**: votive holder.
2. **Attachments for immortelles**: Hardware for the attachment of garlands, swags, or wreaths.

Perpetual Care Marker
Definition: An identifying marker denoting that a fee has been paid for its general maintenance.
Method: Check "yes" or "no" according to whether one exists.

Interment Status
Definition: The current state as defined below.
Method: Check one that applies:

1. **Active**: A body has been interred in the past five years.
2. **Inactive**: No bodies have been interred in over five years, but the vault space is still usable because it is sealed.
3. **Abandoned**: The tomb/marker is open, vacant, or derelict.

Number of Closure Tablet(s)
Definition: The count of tablets that are either pinned, mortared, or resting in front of open vault spaces. Society tombs, some family tombs, and wall vaults will have more than one closure tablet.
Method: Write in the number. If all tablets are missing, write "0" and proceed to the next field.

Closure Tablets: ___ of ___ Missing
Definition: The ratio of present closure tablets to total vault spaces.
Method: In the first blank enter the number of vault spaces without closure tablets. In the second space enter the total number of vault spaces.
Eg.: If there are three total vault spaces and only two closure tablets, record as follows: Closure Tablets: 1 of 3 Missing.

Closure Tablet(s) Attachment(s)
Definition: How the closure tablet is attached to the tomb.
Method: Check those that apply:

1. **Mortar**
2. **Pin**: Check this field only if pin(s) is present.
3. **Both**
4. **Not Attached**
5. **Indiscernible**

Number of Associated Tablet(s)

Definition: Tablets that formerly served as vault closures, but either due to loss of its attachment system or because a new closure tablet resumed the function of closing off the vault opening, these tablets no longer serve their original purpose.

Method: Write in the number. If none exist, write "0".

Associated Tablet(s) Attachment(s)

Definition: How the associated tablet is attached to the tomb.

Method: Check those that apply:

1. **Mortar**
2. **Pin**: Check this field only if pin(s) is present.
3. **Both**
4. **Not Attached**
5. **Indiscernible**

Tablet Surround

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

Method: Check "yes" or "no" according to whether one exists.

Corner Stone

Definition: Masonry elements on the front façade of the tomb that have been used to inscribe names that would not fit on the closure tablets. These members usually look like engaged pilasters and are usually vertical.

Method: Check "yes" or "no" according to whether one exists.

Designer/Builder

Definition: Original artist/architect or builder of tomb or marker.

Method: Identification or evidenced by signature or archival information.

IV. MATERIALS TABLE

Method: Using check marks, indicate on the table the material of each component of the tomb/marker. When necessary, more than one material may be checked for a component. If the tomb/marker does not have a certain component, leave the column blank. If a component of the tomb/marker is metal, refer to the Metals Section.

Definition of components:

1. **Primary Structure**: The principle body/component of the tomb/marker.
2. **Roof**: The top covering of the tomb/marker.
3. **Pediment**: The end of a roof; flat raised, triangular, segmental.
4. **Ornament**: Every detail that is deliberately exploited or added to embellish including sculpture, urns, crosses, commemorative plaques, relief or incised panels.

5. **Base**: The lowest visible part of a tomb/marker that supports the superstructure and is distinct from the foundation or footing by being visible rather than buried.
6. **Enclosure**: A curb, wall, fence, or chain that defines the precinct boundary of the tomb/marker precinct.
7. **Closure Tablet(s)**: A tablet that is *currently located at the entrance to a vault* and is typically marked, or was once marked, with names of the interred. Wall vaults and society tombs, for example, may have more than one closure tablet. Closure tablets may or may not be attached to the tomb.
8. **Associated Tablet(s)**: A tablet that *was once used to mark the entrance of a vault, but no longer acts as a closure tablet*. An associated tablet is also marked, or was once marked, with names of the interred. Associated tablets are typically located along the side of a tomb and may or may not be attached to the tomb.
9. **Surface Finish**: Stucco and/or paints applied to masonry or metal substrates.

Definition of materials:

1. **Sandstone**: A sedimentary rock composed largely of consolidated sand grains, mainly quartz. Usually ranging in color from reddish brown to brown to tan.
2. **Limestone**: A sedimentary rock consisting mainly of calcium carbonate often containing fossil remains. One obvious difference between limestone and sandstone is that limestone may contain traces of sea animals (such as shells or corals) while sandstone will not. May be cream, tan, or dark grey.
3. **Marble**: A metamorphic rock, white or variously colored and sometimes streaked or mottled; can take a high polish. Usually white and crystalline.
4. **Slate**: A dark, fine-grained metamorphic rock that cleaves naturally into thin, smooth-surfaced layers.
5. **Granite**: A hard igneous crystalline rock, consisting of small, yet visible, amounts of other minerals. Variegated, grey, red.
6. **Concrete**: A hard, compact building material of cement, sand, gravel and water. Most often gray, white, or colored.
7. **Cast Stone**: Concrete or other material molded to look like stone or patterned units.
8. **Brick**: A solid masonry unit of clay or shale, molded into a rectangular shape while plastic and burnt in a kiln. New Orleans bricks may be red or tan.
9. **Metal**: Include wrought and cast iron, cast zinc and lead, bronze, brass.
10. **Stucco**: A composite of lime, cement, and sand used for surface decorative work and moldings.
11. **Modern Coating**: Non lime-wash paints—usually oil or emulsion paints.
12. **Lime Wash**: A thin exterior coating composed of calcium or magnesium carbonate and water. Naturally white, but may be tinted. Friable.
13. **Cement Wash**: A thin exterior coating derived from cement; harder and more durable than lime.

V. CONDITION—MASONRY

Condition Table

Method: Using check marks, indicate on the table the condition of each component of the tomb/marker. When necessary, more than one condition may be checked for a

component. If the tomb/marker does not have a certain component, leave the column blank.

Definition of components:

1. **Primary Structure** : The fundamental structural form of the tomb/marker.
2. **Roof**: The top covering of the tomb/marker.
3. **Base**: The base is the lowest visible part of a tomb/marker that is distinct from the foundation or footing by being visible rather than buried.
4. **Ornament(s)**: Every detail that is deliberately exploited or added to embellish, including sculpture, urns, crosses, commemorative plaques, relief and incised panels.
5. **Tablet System**: The combination of the Closure Tablet(s), Associated Tablet(s), Tablet Surround, and Cornerstone.
6. **Surface Finish**: Stucco and paint skin.

Definition of conditions:

1. **Collapse**: Completely or partially fallen or displaced elements of structure.
2. **Loss**: Absence of original fabric based on total original extent.
3. **Disaggregation**: Broken or crumbled parts.
4. **Erosion**: Surface loss of material/profile/detail due to weathering.
5. **Cracking** : Linear discontinuities or fractures of variable length or orientation.
6. **Surface Deposits**: Harmful surface accretions such as guano, soot, salt efflorescence and soiling.
7. **Bio-growth**: The presence of micro flora (algae, fungi, and/or lichen) on the surface, usually black or green in appearance.
8. **Vegetation**: Presence of macro plant forms or the roots thereof.
9. **Graffiti**: Intentionally inscribed or applied marking on the tomb/marker.
10. **Fragmentation**: Fragments that have broken off from the structure (the number of fragments should be recorded in space provided).
11. **Bowing**: The deformation of stone caused by temperature differential or overloading the compressive strength of the structure.
12. **Alterations** : Intentional modification to the original fabric.

Overall Condition

Definition: The overall state of structural, decorative, and finish repair or disrepair. Degree of nature, character, and quality of structure.

Method: Circle the appropriate rating:

- **"0" / Significant or Total Deterioration**: Catastrophic structural failure.
- **"1" / Poor Condition**: Significant threat of structure failure and/or the total loss of decorative features and finishes.
- **"2" / Moderate Condition**: Stable structural condition. Significant, or terminally progressive loss of decorative features and finishes.
- **"3" / Good Condition**: Stable structural condition. Decorative features and finishes largely intact.

Overall Integrity

Definition: The degree of authenticity in the remaining form and material of existing structure. Unimpaired or uncorrupted original craftsmanship. The condition of

not being marred or violated by modern or inappropriate materials or interventions.

Method: Circle the appropriate rating:

- **"0" / Total Loss of Integrity**: 25% or less of original materials remain or the overwhelming presence of inappropriate replacement materials and/or alterations.
- **"1" / Low Integrity**: 26%-50% of original materials remain or the significant presence of inappropriate replacement materials and/or alterations.
- **"2" / Moderate Integrity**: 51%-75% of original materials remain or the obvious but tolerable presence of replacement materials and/or alterations.
- **"3" / High Integrity**: 76% or more of original materials remain or the absence of or minimal presence of inappropriate replacement materials and/or alterations.

*** Inappropriate replacement materials:** Replacement with materials not in keeping with their historic or traditional use and appearance to tomb/marker/landscapes. (Does not include traditional maintenance regimens.)

**** Inappropriate alterations:** Changes not in keeping with original construction or material of tomb/marker/landscape.

*****Assumes that it is not inappropriate to have modern replacements *in kind.***

VI. LANDSCAPE

Planting Design Type

Definition: The method in which the vegetation has been planted in relation to the tomb and the surrounding landscape.

Method: Check one that applies:

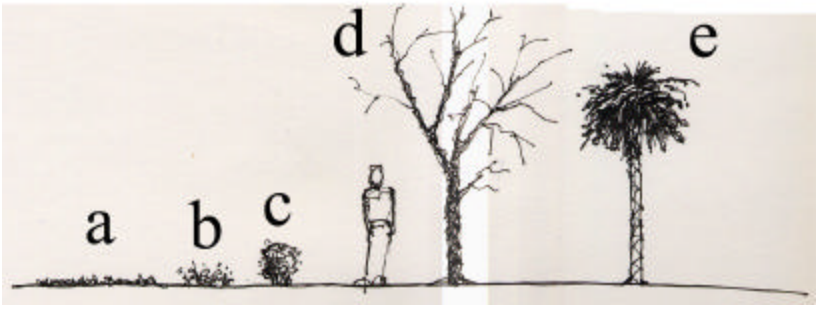
a. **Container planting**: Vegetation that is contained in an urn, pot, or other self-contained soil structure.
b. **Bed planting**: Vegetation which is planted in specifically allocated areas of soil separate from surrounding ground surface with a depth of 8 inches or less.
c. **Coping/raised bed**: A raised planting bed with a depth of over 8 inches, often contained with a retaining wall.
d. **Specimen planting**: A specimen plant, often a tree or shrub planted alone. The same specimen plant may be associated with multiple tombs.

a.  b.  c.  d. 

Photographs by studio.

Planting Materials
Definition: The type of vegetative materials used in planting.
Method: Check the one that applies.

a. **Grass**
b. **Ground cover**: Creeping vine or other low-spreading ground-covering plant.
c. **Herbaceous**: Plants generally under 30", including ferns, annuals, and perennials.
d. **Shrub**: "Woody" plants over 24".
e. **Deciduous tree**: A tree that 'sheds' its leaves in winter months.
f. **Non-deciduous tree**: A tree with foliage year-round, including evergreens and palm trees.
g. **Moss**



Sketch by studio.

Planting Species
Definition: Identifiable species used in planting.
Method: For each identifiable species, list botanical name of plant on line provided and indicate general condition of health for each species listed. Provide an estimated height and width of the plant. Provide an approximate distance from the plant to the closest point of the nearest tomb/marker.

- **"0" / Dead**.
- **"1" / Poor health of plant(s)**: Foliage missing or damaged, discoloration, stem/trunk structure shows signs of disease or distress, mechanical or environmental damage evident.
- **"2" / Fair health of plant(s)**: Plant health appears stable, minimal appearance of mechanical or environmental damage, foliage appears adequate and of reasonable health.
- **"3" / Excellent health of plant(s)**: Plant(s) seems well maintained and appears to thrive in its location, foliage lush, environmental and mechanical damage absent.

Invasive Vegetation
Definition: Identifiable vegetation which damages tomb and/or precinct features.
Method: Check the location(s) which applies:

- **Plant type**: Grass, herbaceous, shrub, tree, microbiotic, and/or vine.
- **Location**: Roof, walls, precinct, ornament.
- **Damage**: Indicate the level of damage caused by problem vegetation.

- **"1"/ Significant damage**: damage caused by problem vegetation has led to structural instability, loss of important historic features.
- **"2" / Moderate damage**: some indication of material damage to individual features or slight damage to tomb structure.
- **"3" / Minimal damage**: superficial damage or discoloration, no appearance of significant structural or material damage.

VII. METALS

Condition Table

Definition: The overall state of repair or disrepair of the metal elements. Degree of nature, character, and quality.

Method: See below for definitions of elements. If one exists, write in the appropriate rating:

- **"0" / Significant or Total Deterioration or Total Loss**.
- **"1" / Poor Condition**: Less than 70% of parts are present or metal is very deteriorated, possibly unsalvageable.
- **"2" / Fair Condition**: 70% or more of parts are present and in stable, repairable condition.
- **"3" / Good Condition**: 90% or more of parts are present and in stable, repairable, or better condition.

Tomb

Definition: The tomb itself is entirely constructed of cast elements, including roof and wall.

Method: Write in the appropriate rating.

Enclosure

Definition:

1. **Complete:** Metal railing with gate enclosing the tomb on all sides and controlling access.
2. **Partial:** Metal railing and gate extending out from the front of the tomb in a "U" shape with a gate for access.

Method: Write in the appropriate rating.

Door

Definition: The access door(s) on a society or individual tomb, in cast iron, cast bronze, sheet metal fabrication or a combination of these.

Method: Write in the appropriate rating.

Ornament

Definition: Decorative metal elements applied or incorporated in a masonry tomb, such as cast iron finials, crestings or downspouts.

Method: Write in the appropriate rating.

Sculpture
Definition: Cast sculpture in relief or in the round.
Method: Write in the appropriate rating.

Accessories
Definition: Metal elements independent of the tombs such as cast iron urns, wheel guards, or cast benches.
Method: Write in the appropriate rating. Specify in "Comments" field.

Plaque
Definition: Thin flat cast metal applied to or otherwise associated with the tomb. Includes metal markers.
Method: Write in the appropriate rating.

Anchors
Definition:

1. **Tomb:** Metal element serving to reinforce the masonry structure, such as a wrought iron staple or tie.
2. **Tablet:** Bolt or screw holding the tomb tablets in place.

Method: Write in the appropriate rating.

VIII. INSCRIPTIONS

Inscriptions
Definition: The recordation on closure and associated tablets of those who have been interred within the vault spaces or in case of mortuary markers those who have been buried.
Method: The inscription(s) should be recorded in the language they have been written in within the space provided.

IX. GENERAL COMMENTS

General Comments
Definition: Record comments regarding any condition or element not otherwise accounted for within the survey. This is also the space to record if a photo has been taken of the tomb or to sketch the tomb.
Method: Write concise and clear comments in recognized terminology for cemetery architecture.

Appendix F

Metalwork Survey

METALWORK SURVEY

Site: **ST. LOUIS CEMETERY**

Date: ____/____/ 200___.

Weather: _____

Tomb No.: _____

Tomb Name(s): _____

_____

_____

_____

_____

_____

_____

Date of Origin: _____

Designer: _____

Fabricator: _____

Historic Photos:_____

_____

Hist. Docs: _____

_____

_____

_____

_____

_____

_____

_____

___

METAL RESOURCE TYPE

Tomb Ornament: ____
Complete Enclosure: ____
Partial Enclosure: ____
Metal Tomb Construction: ____
Accessory; e.g., Bench: ____
Sculpture: ____
Metal Marker/Plaque: ____
Metal Anchor: ____
Tablet Anchoring: ____
None: ____
Other: _____

DESCRIPTION

Style

Vernacular: ____
Classical, (Greek, Roman):____
Second Empire: ____
Gothic Revival: ____
Exotic Revival, (Egypt.): ____
Picturesque, (A. J. Davis) :____
Other: _____

Manufacture

Forged: ____
Cast: ____
Fabricated: ____
Other: _____

Materials

Wrought Iron: ____
Cast Iron: ____
Bronze: ____
Brass: ____
Copper: ____
Lead: ____
Zinc: ____
Tin: ____
Other: _____

Assemblies

Forge weld: ____
Rivet: ____
Wedge: ____
Bolt: ____
Screw: ____
Tapping & Threading ____
Half Lap: ____
Mortise & Tenon: ____
Dovetail ____
Brazing: ____
Welding: ____
Collars: ____
Other: _____

Decorative Elements

Cross: ____
Railing: ____
Crest: ____
Door: ____
Scroll: ____
Symbolic Elements: ____
Rosettes: ____
Sheet Metal: ____
Molding: ____
Finial: ____
Frieze: ____
Running Panels: ____
Plain Round Pickets: ____
Picket Terminals: ____
Post Base: ____
Spacers: ____
Other: _____

_____

Anchoring

Set in Lead: ____
Set with mortar: ____
Bolted: ____
Other: _____

_____

Finishes

Paint: ____
Oil/Wax: ____
Polychromy: ____
Plating: ____

Galvanizing: ____
Gilding: ____
None: ____
Other:
_____
_____
_____

CONDITION ASSESSMENT

Overall Condition

1. Poor: ____
2. Fair: ____
3. Good: ____

Specific Deficiencies

Bent Element: ____
Cracked Element: ____
Broken Element: ____
Failed Assemblage: ____
Missing Element: ____
Failed Finish: ____
Failed Anchoring: ____
Surface Oxidation: ____
Galvanic Corrosion: ____
None: ____
Other: _____

PAST INTERVENTIONS

Type

Restoration: ____
Stabilization: ____
Replication: ____
Rehabilitation: ____
Cleaning: ____
Painting: ____
None: ____
Other:_____

Method

Arc/Gas Welding: ____
Brazing: ____
Bolted/Screwed: ____
Wire Repair: ____
Putty: ____
Parts Replaced: ____
Applied Patch/Sistering: ____
Dutchmen: ____
Blasting with Abrasives: ____
Stripping, Brushing: ____
None: ____
Other: _____
_____
_____
_____
_____

RECOMMENDED INTERVENTION

Type

Restoration: ____
Stabilization ____
Replication: ____
Reconstruction: ____
Cleaning: ____
Re-assembly: ____
Re-anchoring: ____
Re-finishing, (low tech.): ____
Painting: ____
Maintenance: ____
None: ____
Other: _____

Priority

1.Urgent: ____
2. Within 2 years: ____
3. Within 3 years: ____

Appendix G

Metalwork Photographs

Metalwork Photographs

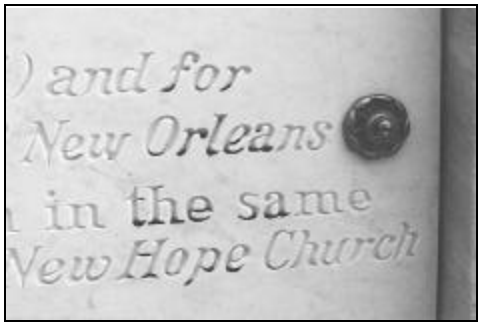
Metal Resource Types

Accessory – Lead vase mounted on marble base

Metal marker / Plaque – Cast iron tomb enclosure

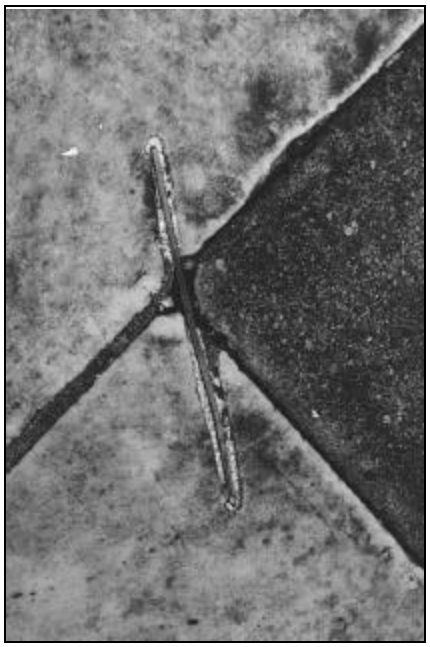
Tablet Anchoring
Single brass bolt at top

Anchor detail with adjustable threaded eye

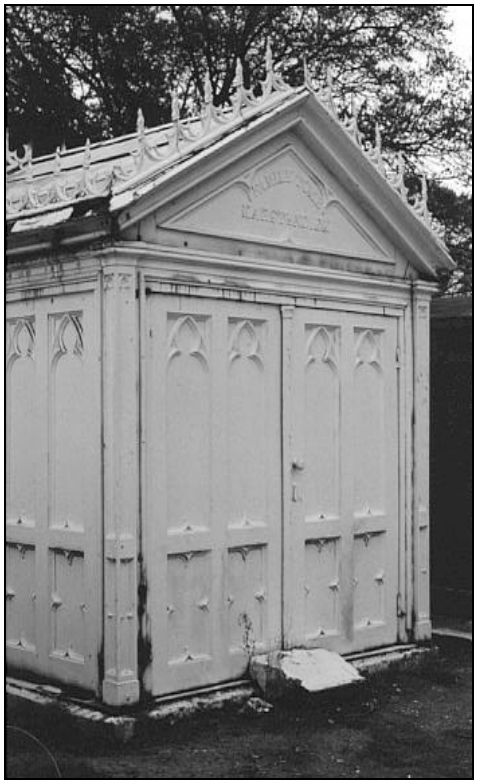


Tablet anchoring with cast zinc rosette

All photos by studio.



Metal anchoring for masonry - wrought iron staple



Metal tomb construction, cast iron walls and roof

Photos by studio.

Appendix H

Visitor Survey

SAINT LOUIS CEMETERY #1
VISITOR SURVEY

DEAD SPACE: DEFINING THE NEW ORLEANS CREOLE CEMETERY
Graduate School of Fine Arts - University of Pennsylvania

Where are you from?

Local to area
State of Louisiana
Out of state (American)
Out of state (International)

What is your main interest in the site?

Architecture
History
Family related
Other

How many times, if any, have you visited the Saint Louis Cemetery #1?

Never Once 2 - 5 5 +

What type of tours & events brought you to Saint Louis Cemetery #1?

Ghost tour
Voodoo tour
History tour
Tour of famous residents
All Saint's Day
Family related event
Fundraising event
Just visited on my own
Other _____

What is your overall impression of the site? Check all that apply.

Well-kept
Visually attractive
Charming
Decaying
In need of repair
Unappealing
Depressing
Other _____

What (or Who) stands out when you think of this cemetery? Why?

1. _____
2. _____
3. _____

In your opinion, would visitation to the cemetery be affected if the tombs were all changed to look "like new?" Yes No

Do you think that the introduction of a tourist center would benefit this cemetery? Yes No

Why / why not? _____

Would you be interested in an All Saint's Day volunteer work tour that would include conservation activities related to tomb repair and historical upkeep (such as All Saint's Day whitewashing of the tombs)? Yes No

Have you visited the other historic cemeteries within the city? Yes No

In other areas of the country / world? Yes No

How would you rate the value of Saint Louis #1 as it relates to:

Local history	**1** (low)	**2**	**3** (high)
American history	**1**	**2**	**3**
Culture / tradition	**1**	**2**	**3**
Architecture	**1**	**2**	**3**
Education	**1**	**2**	**3**
Tourism	**1**	**2**	**3**
Other historic cemeteries	**1**	**2**	**3**

Please list other sites of interest within the city of New Orleans.

_____
_____
_____

Do you have any additional information, feelings or concerns relating to the Saint Louis #1 Cemetery?

_____
_____
_____
_____
_____

Religious Background:_____ Age:_____

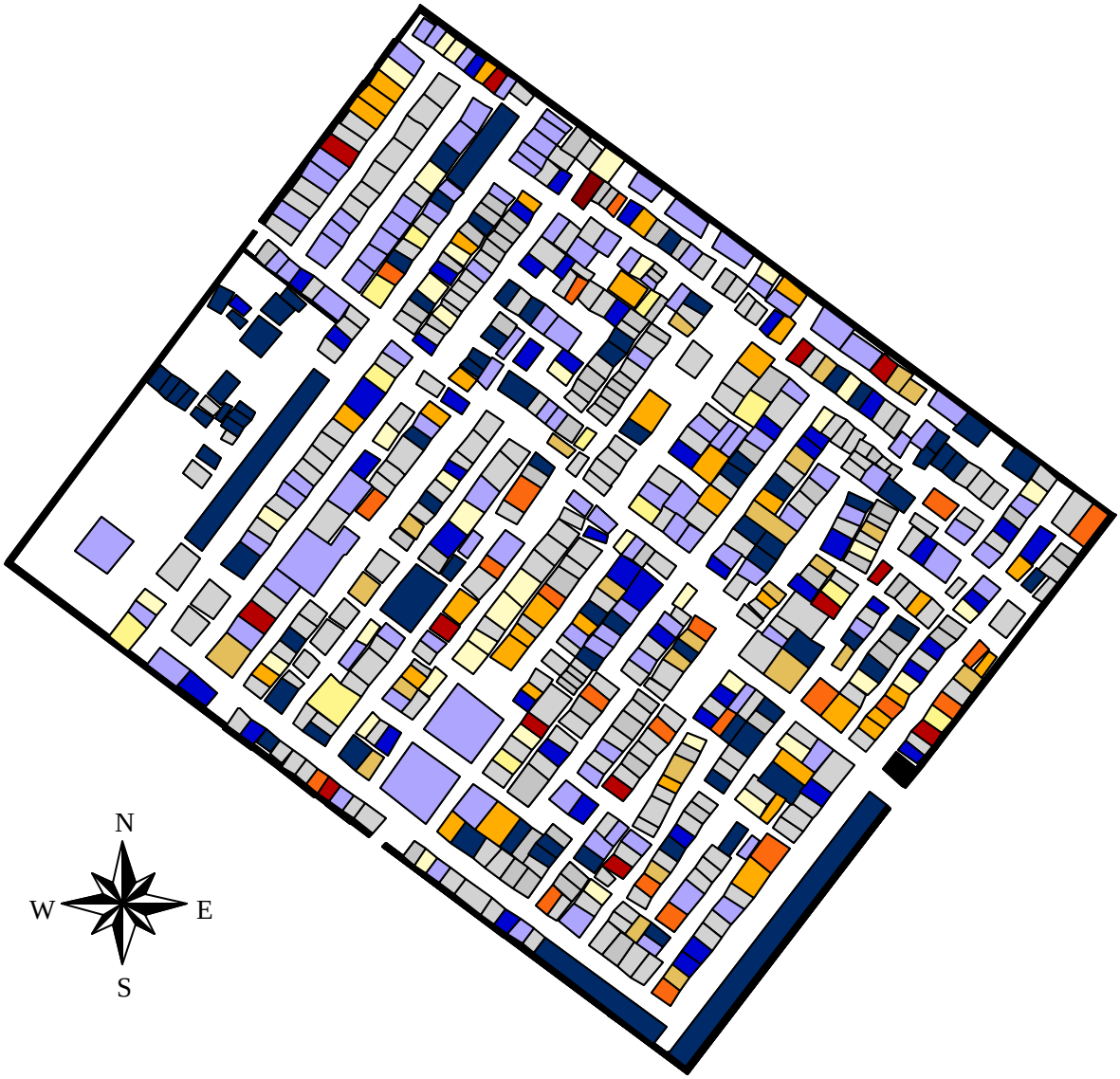
Thank you very much for your time and input.

Appendix I

Preliminary Analysis of Data

Maps

Chronology - Visible First Dates



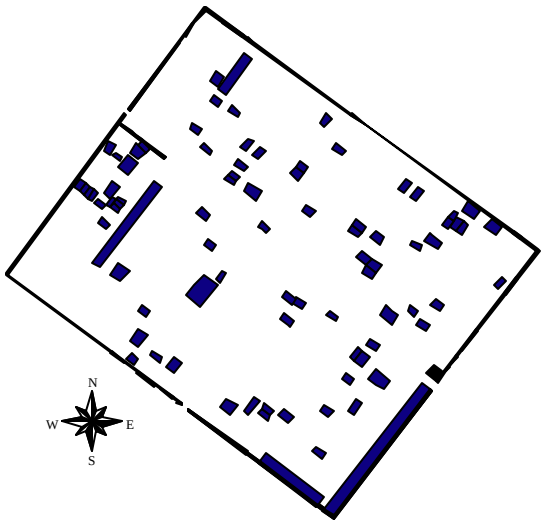
- 1981 - 2001
- 1961 - 1980
- 1941 - 1960
- 1921 - 1940
- 1901 - 1920
- 1881 - 1900
- 1861 - 1880
- 1841 - 1860
- 1821 - 1840
- Thru 1820
- Empty Spaces
- Tombs with No Dates

Chronology - Distribution of First Dates Visible

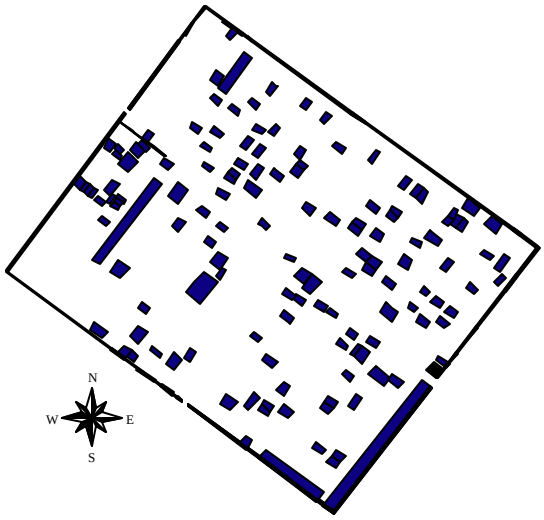
It is hoped that an analysis of immigration and burial patterns can be made from a study of the inscriptions on the tombs. The first and last dates visible on tombs were captured using information from both the 1981 and 2001 surveys, as well as from documentary research. It is disappointing that with so many closure tablets missing, or illegible, many of the tombs did not yield a full history. During Phase 2, we will investigate the card file of the WPA survey from the 1930s, the inscription database kept by Save Our Cemeteries, Inc. and the fragment collection in storage in hopes that more information can be added to the current data.

Site Development as per Visible First Dates

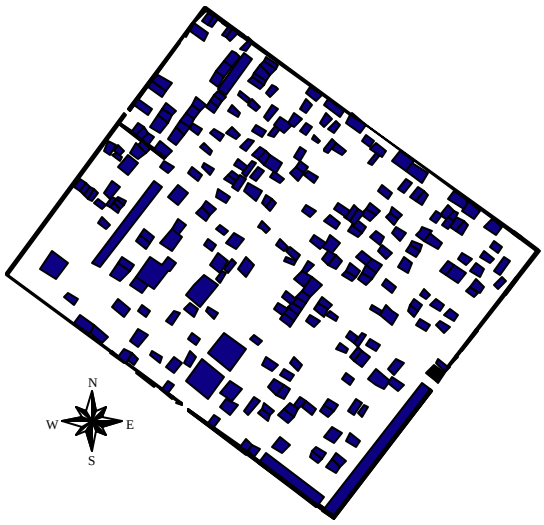
The following maps show in silhouette form ***all*** tombs that have visible dates before each time period.



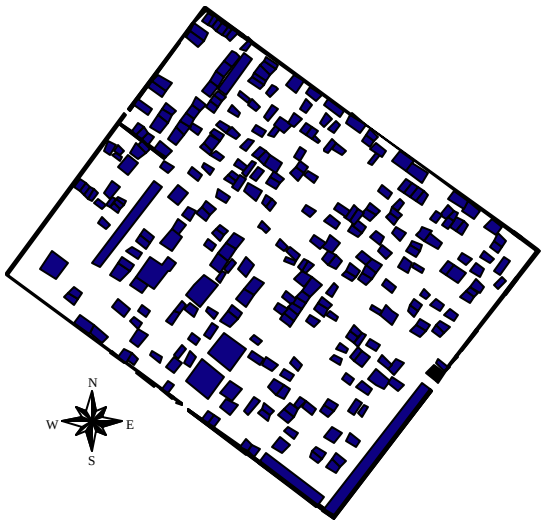
Visible First Dates Through 1820



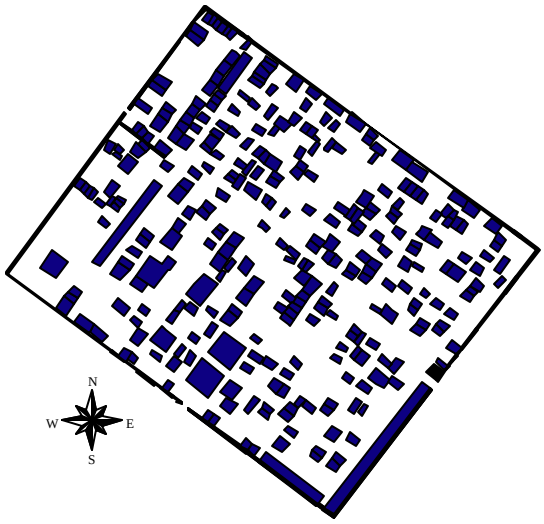
Visible First Dates Through 1840



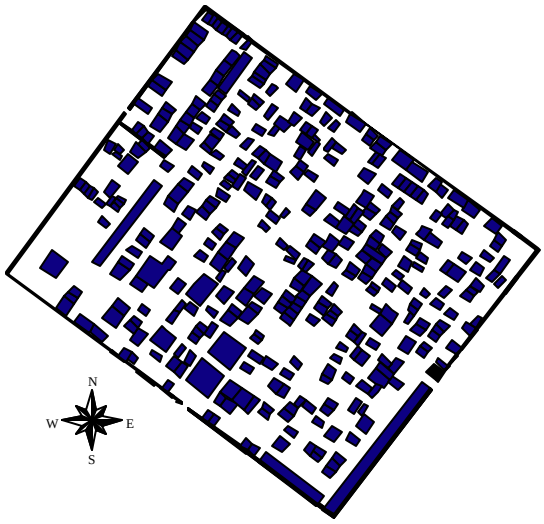
Visible First Dates Through 1860



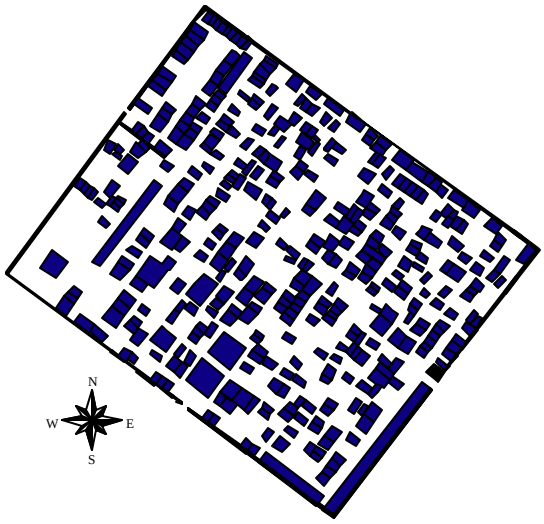
Visible First Dates Through 1880



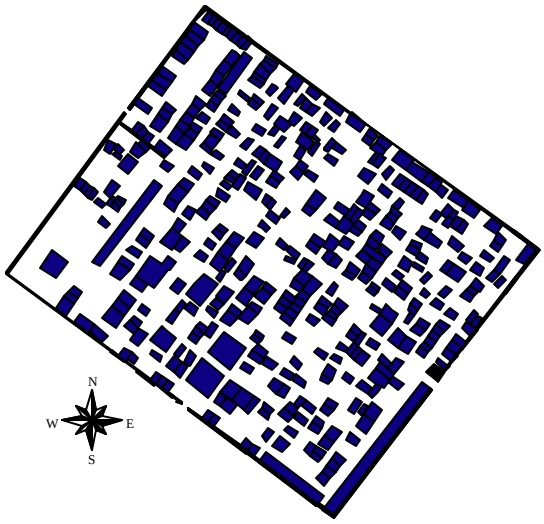
Visible First Dates Through 1900



Visible First Dates Through 1940



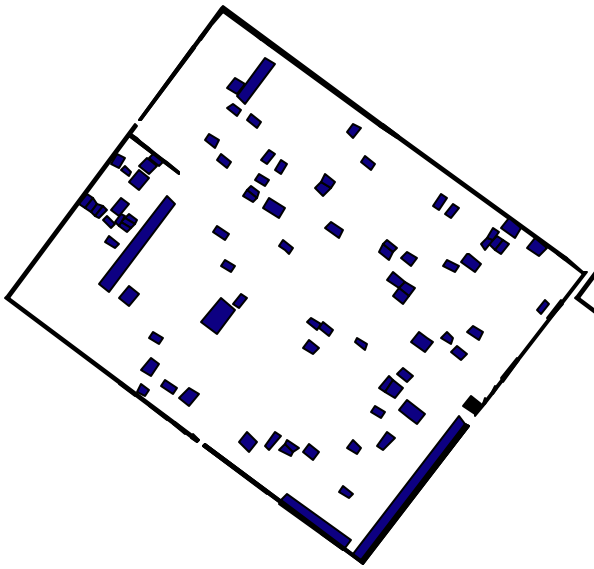
Visible First Dates Through 1980



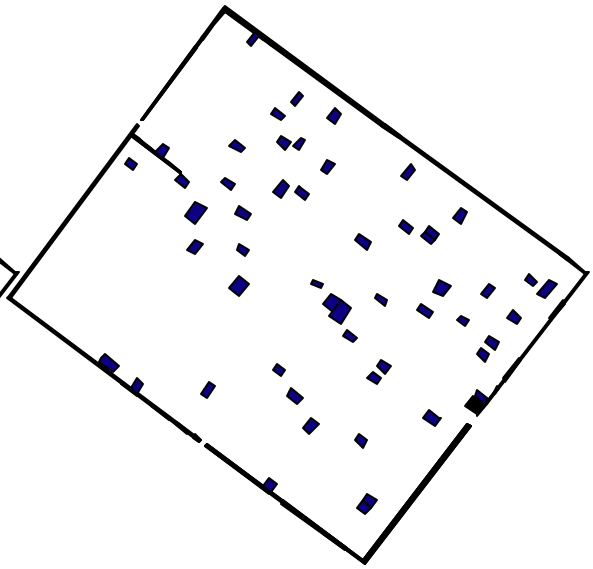
Visible First Dates Through 2001

Chronology –Building Activity, Visible First Dates

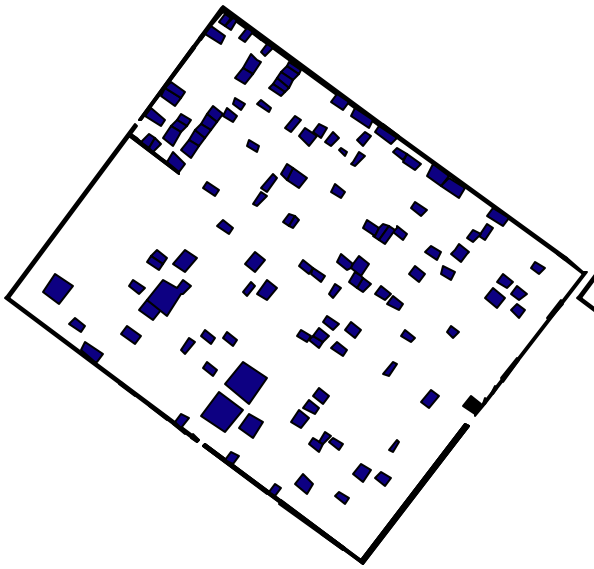
The following maps show the tombs that have visible dates within each time period. Since this set of data is based on the first date visible, or known, for each tomb, these maps give a false impression about burial activity during each of the time periods. There are also known interments of older remains in newer tombs. Further research to capture all death dates for each tomb would better reveal burial activity and would probably correlate well with the known dates of Yellow Fever years.



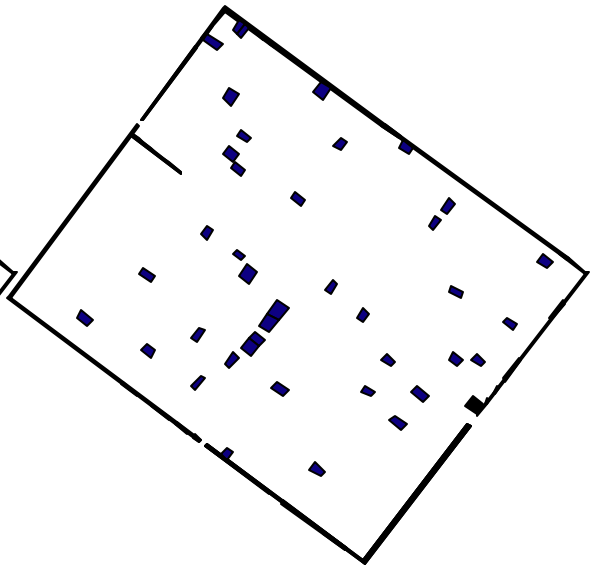
Visible First Dates Through 1820



Visible First Dates 1821 to 1840

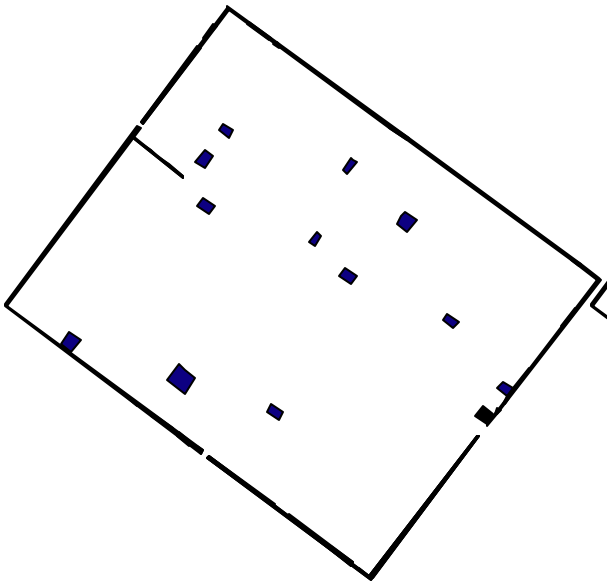


Visible First Dates 1841 to 1860

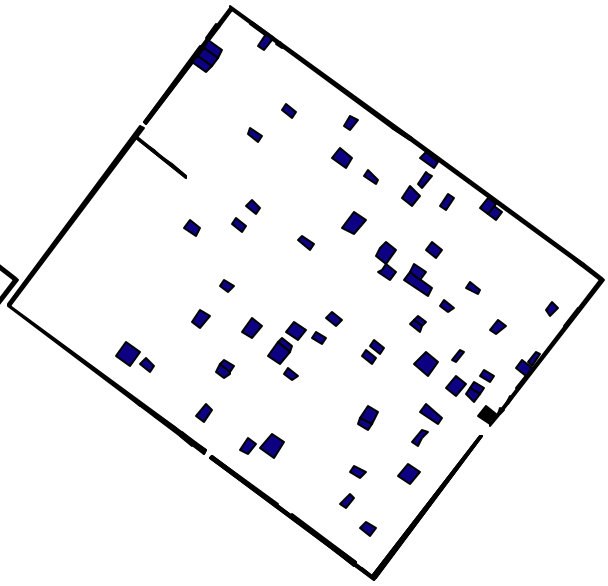


Visible First Dates 1861 to 1880

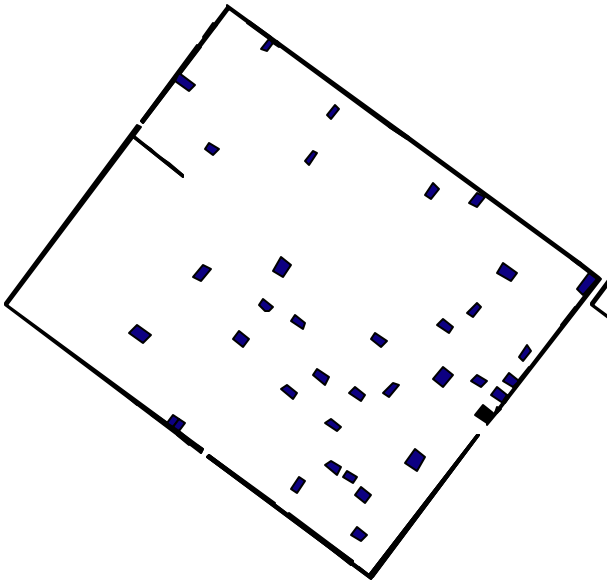
Chronology –Building Activity, Visible First Dates



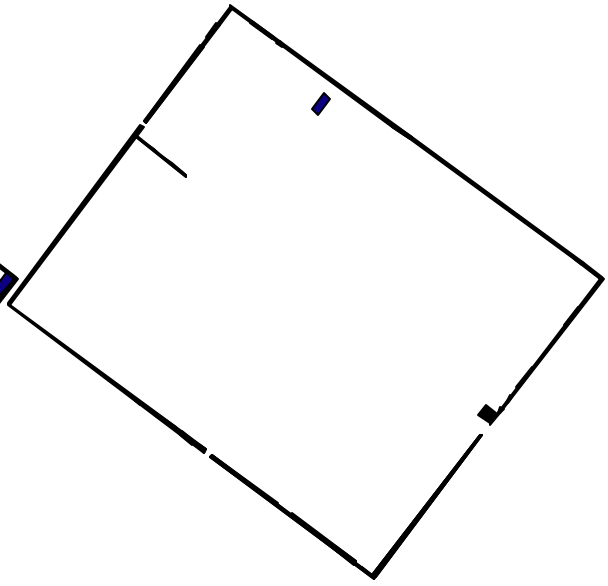
Visible First Dates 1881 to 1900



Visible First Dates 1901 to 1940



Visible First Dates 1941 to 1980



Visible First Dates 1981 to 2001

The fact that there is only one tomb with a first date in the period of 1981 through 2001 does not mean that there is no burial activity. Our surveyors noted recent burials in many of the older tombs and there are several new tombs that have been built and are still waiting for the arrival (death) of the owners. In the 'last date' analysis seen later in this section, there are many tombs actively used since 1970.

Tomb Status

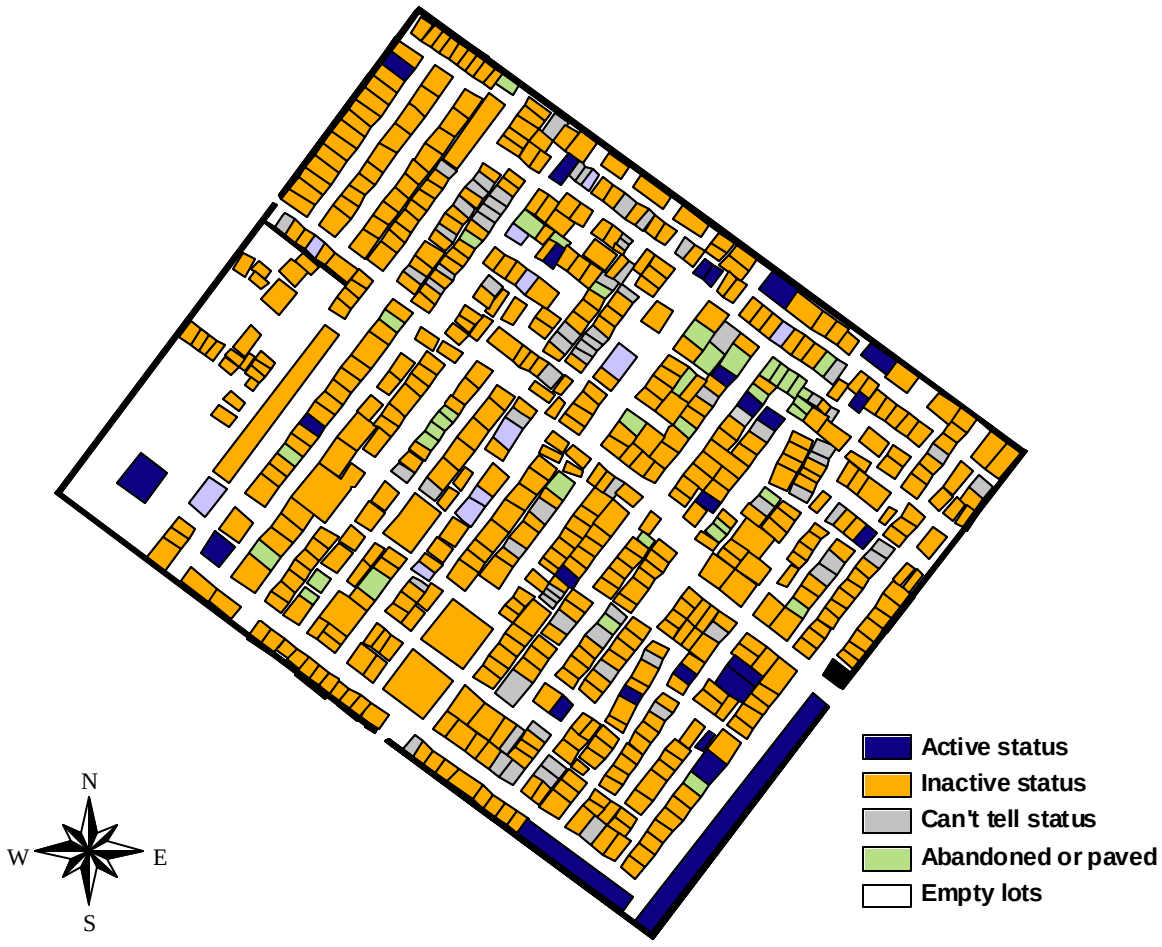
The survey definitions were as follows:

Inactive - No bodies have been interred in over five years, but the vault space is still usable because it is sealed.

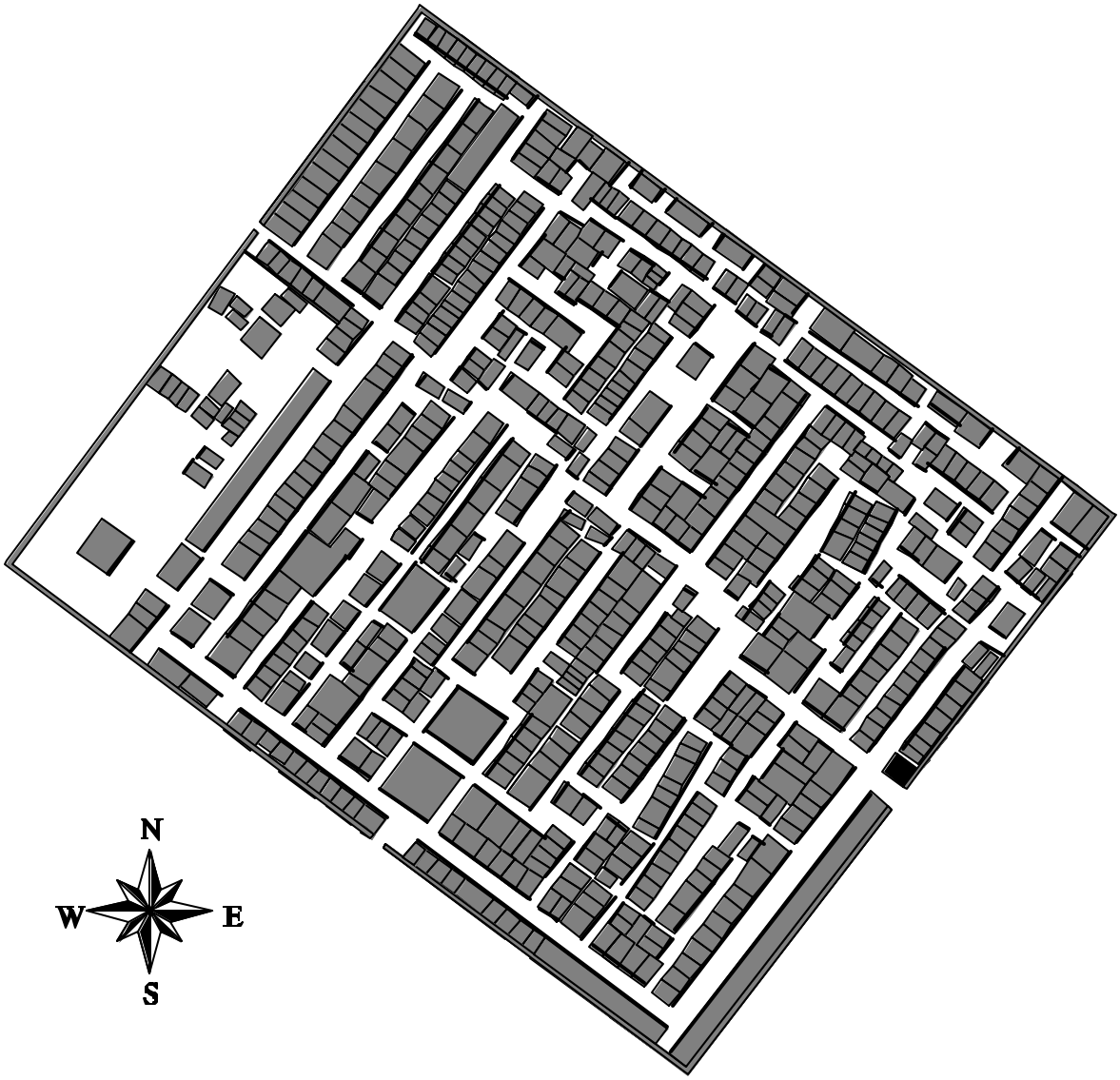
Active - A body has been interred in the past five years.

Can't Tell – If the choice between active and inactive is not obvious.

Abandoned - The tomb/marker is open, vacant, or derelict. Also individual tomb lots that were not empty, but had been paved over with only the plaque remaining to mark the original interred.



Tomb Orientation



In the map above, the frontal orientation is marked with a black bar. The paths and tomb lots are actually much less orderly than they appear on this map. Tombs of varying sizes fill each lot and precincts can extend well into the path with paved bases, fences of metalwork, vases, planters and urns. In most cases, however, the tomb orientation is as expected and the tombs in a row face consistently the same direction into the same pathways, as would a neighborhood of residences.

Tomb Typology

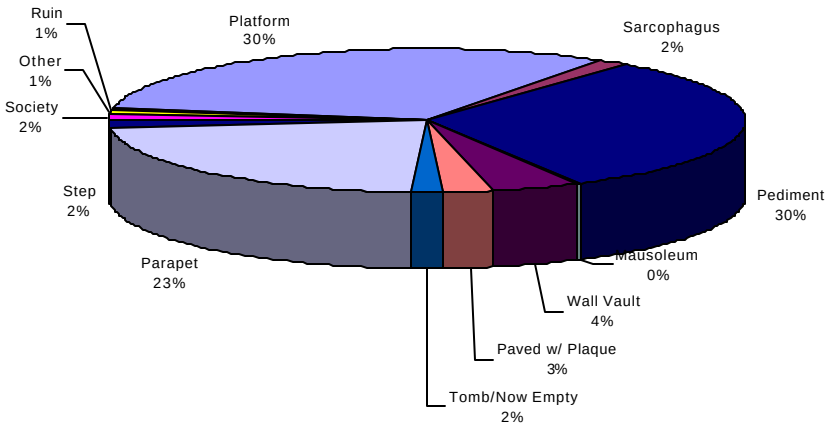
- Wall Vaults
- Step Tombs
- Platform Tombs
- Pediment Tombs
- Parapet Tombs
- Sarcophagus Tombs
- Lg. Society Tombs
- Mausoleum
- Markers
- Other
- Empty, Ruin, or Paved

Tomb Typology by First Date

Based on early views, such as John Latrobe's 1834 watercolor and from various travel accounts from the early 1800s, the first burials at St. Louis 1 Cemetery were often on or underground. The Latrobe watercolor shows shallow step tombs with iron crosses, platform tombs, the Varney Marker and wall vaults. In the early 1800s, the surface and underground burials begin to give way to the platform, pediment and parapet tombs as the primary choice for family tombs. Wall vaults were also introduced at this time.

The most prevalent tombs in the cemetery are the Platform and Pediment Tombs, at 30% each. The Parapet Tombs, a variation of the Platform tomb, are also numerous at 23%. The large, unique Society Tombs have a small share, but the size, number of burial vaults and architectural significance of the tombs has always made them very noteworthy.

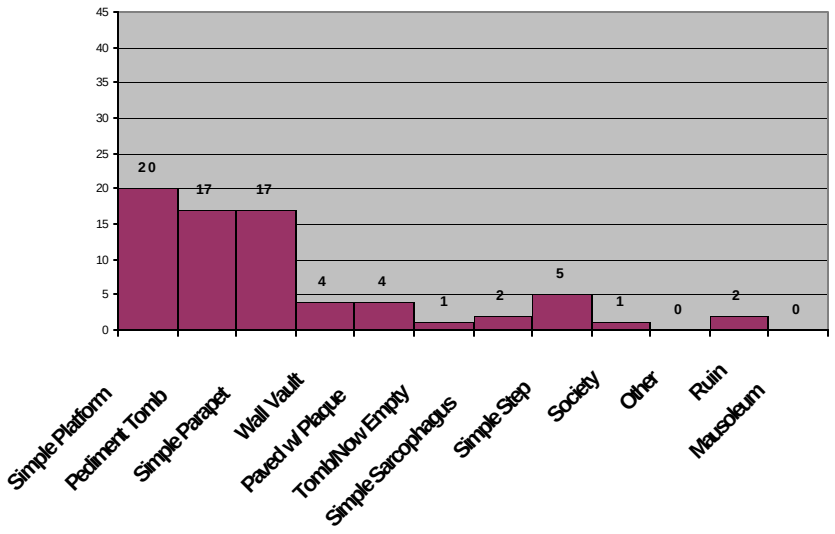
The pie chart below is an analysis of all the surveyed tombs by type. The following bar charts show only those tombs that have a 'First Date' and suggest the occurrence and popularity of tomb types over time.



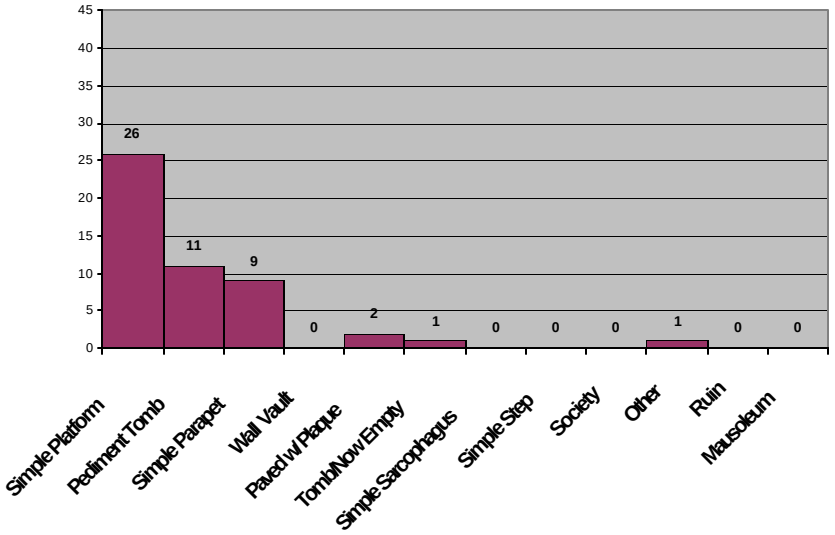
Tomb Typology by First Date

The charts that follow show the number of tombs/type with a visible first date in the period.

Based on First Dates
Through 1820

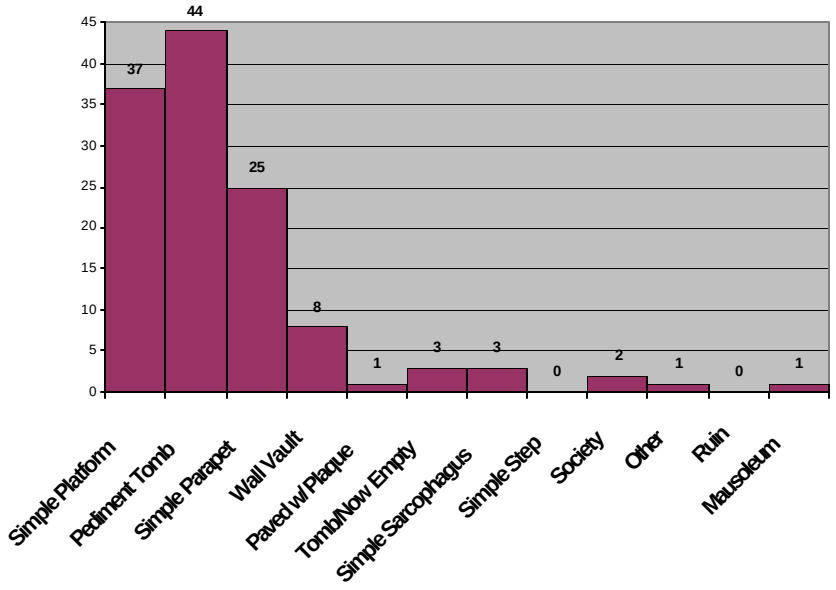


Based on First Dates
1821 through 1840

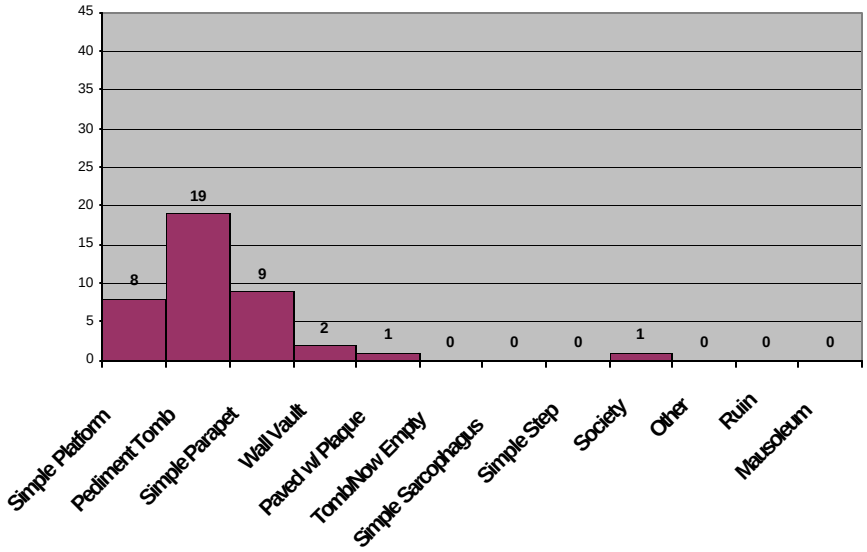


Tomb Typology by First Date

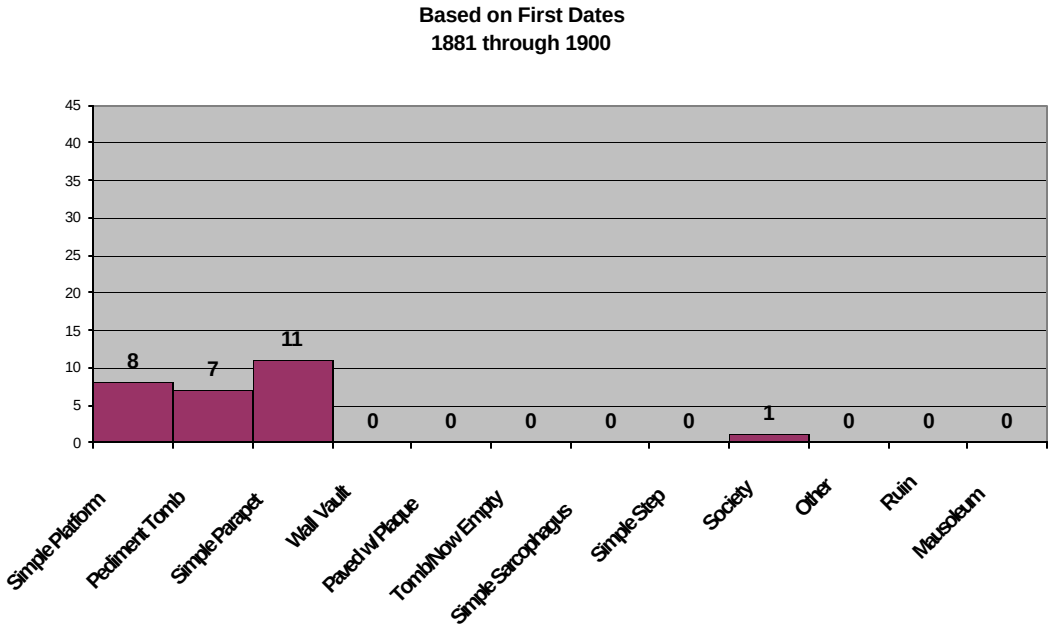
Based on First Dates
1841 through 1860



Based on First Dates
1861 through 1880



Tomb Typology by First Date

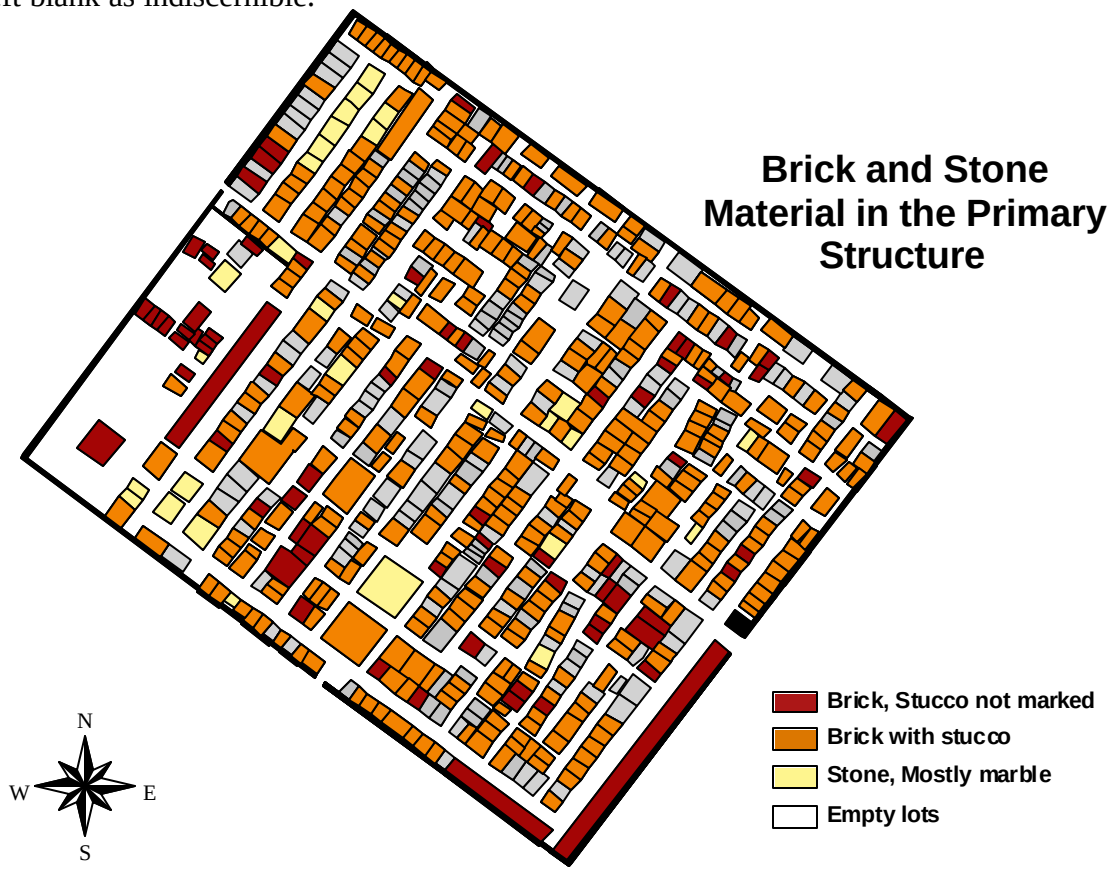


Tomb Materials – Primary Structure

The overwhelming majority of tombs are built of brick, with slate interior shelves, marble closure tablets and covered in stucco. Unlike the later above ground cemeteries in other parts of New Orleans, St. Louis 1 Cemetery has very few stone and stone veneer tombs. Those marked here as stone are probably faced with stone over a brick structure.

Most of the red brick only tombs below had stucco at one time. The high number in this category is due to the fact that the stucco may no longer be evident, or the surface finish has been changed to concrete. Some brick tombs in the Protestant section were never stuccoed as per Anglo tradition.

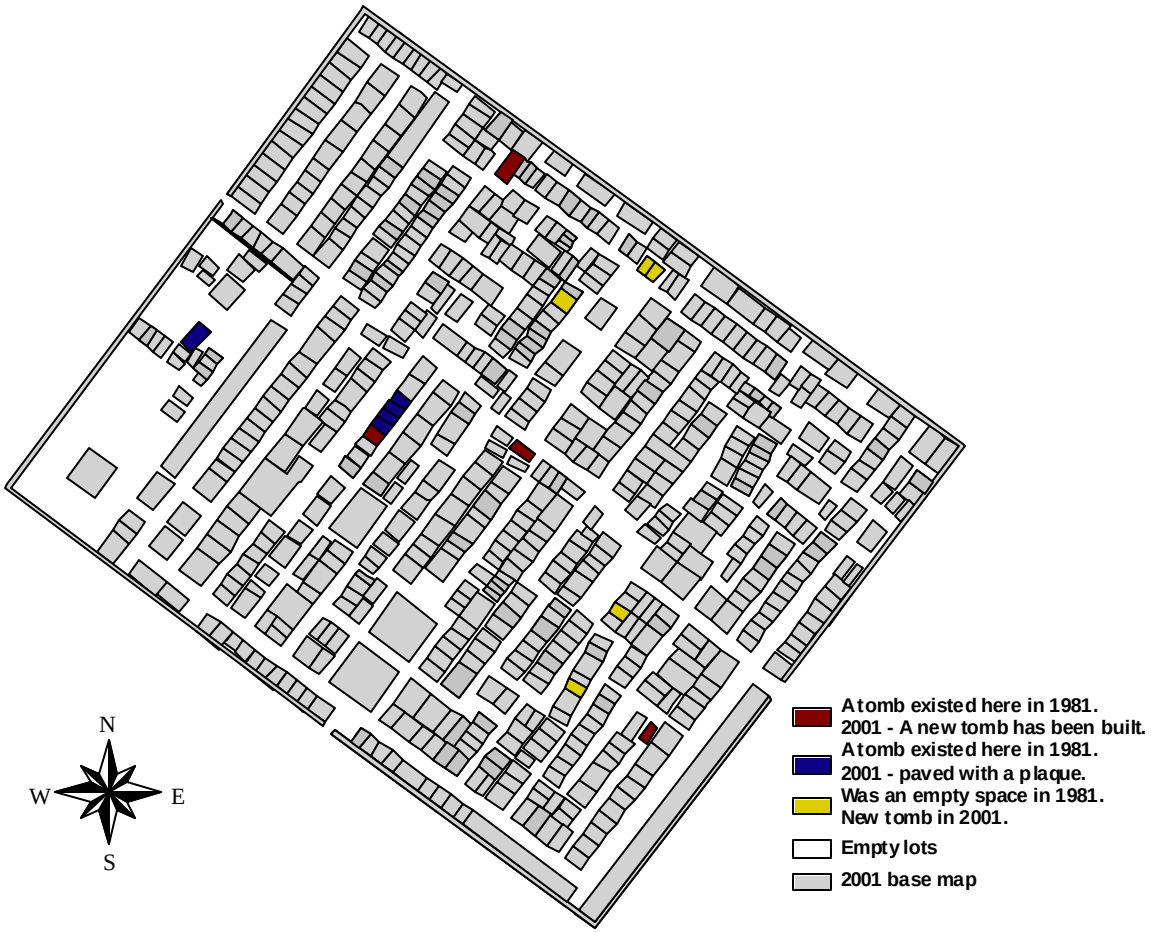
Those tombs not highlighted below were surveyed as concrete, other or the material was left blank as indiscernible.



2001 Survey – Tomb Changes from the 1981 Survey

Based on the 1981 survey and the hand-drawn map made available, a new map was created for the surveyors, and sections of the cemetery were assigned, based on the tomb numbers expected to be on site. Generally, the tombs that existed in 1981 still exist in 2001, although some have been repaired, restored or cemented over. The map below shows those tomb numbers where complete changes have occurred.

During the next survey in Phase 2, a more complete survey of the changes that have occurred to tombs is planned and major repairs, restorations, material changes and structural changes will be documented.

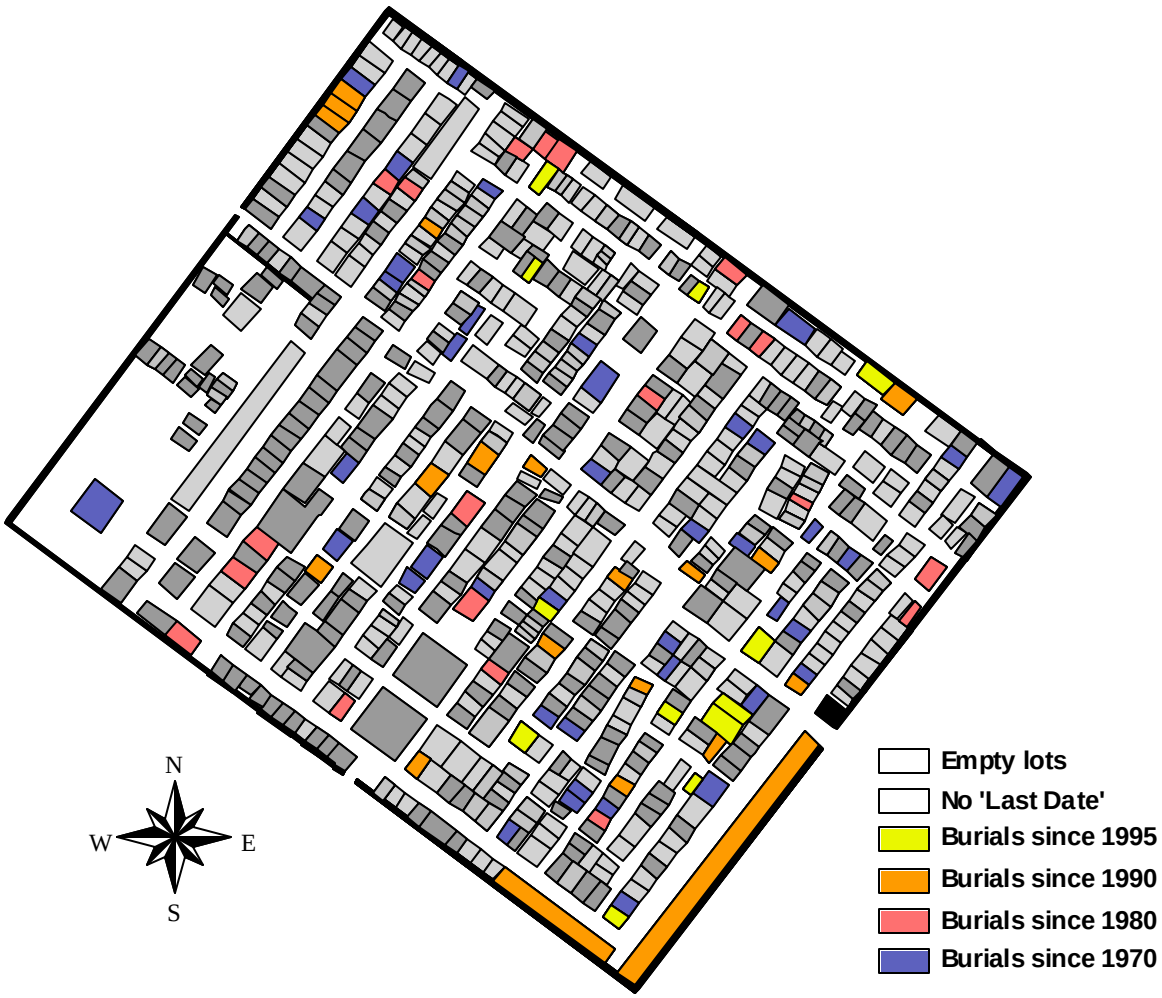


Perpetual Care

In the 1981 survey, only 5 tombs were marked as being in the Perpetual Care program. The 2001 survey shows an increase to 58. In this program, the owners of the tomb pay $2,600 for a 2 vault tomb with receiving vault underneath. The funds are invested by the Archdiocese. The Perpetual Care fund grows in value so that tomb repairs and restorations can be funded from the earnings as needed. The Perpetual Care program started in 1940.

Analysis of Last Dates

St. Louis 1 Cemetery is an important cultural and historical resource. However, its primary function as a cemetery has not changed, and interments still continue. The map below shows an analysis of the 'Last Dates' that were visible on the tombs surveyed. There is a need, as expressed for the 'First Date' analysis, to conduct further documentary research to gain better data on 'Last Dates'.



Integrity of Primary Structure and Roof

The survey manual defines integrity as follows:

> The degree of authenticity in the remaining form and material of existing structure. Unimpaired or uncorrupted original craftsmanship. The condition of not being marred or violated by modern or inappropriate materials or interventions.

- "0" / Total Loss of Integrity: 25% or less of original materials remain or the overwhelming presence of inappropriate replacement materials and/or alterations.
- "1" / Low Integrity: 26%-50% of original materials remain or the significant presence of inappropriate replacement materials and/or alterations.
- "2" / Moderate Integrity: 51%-75% of original materials remain or the obvious but tolerable presence of replacement materials and/or alterations.
- "3" / High Integrity: 76% or more of original materials remain or the absence of or minimal presence of inappropriate replacement materials and/or alterations.

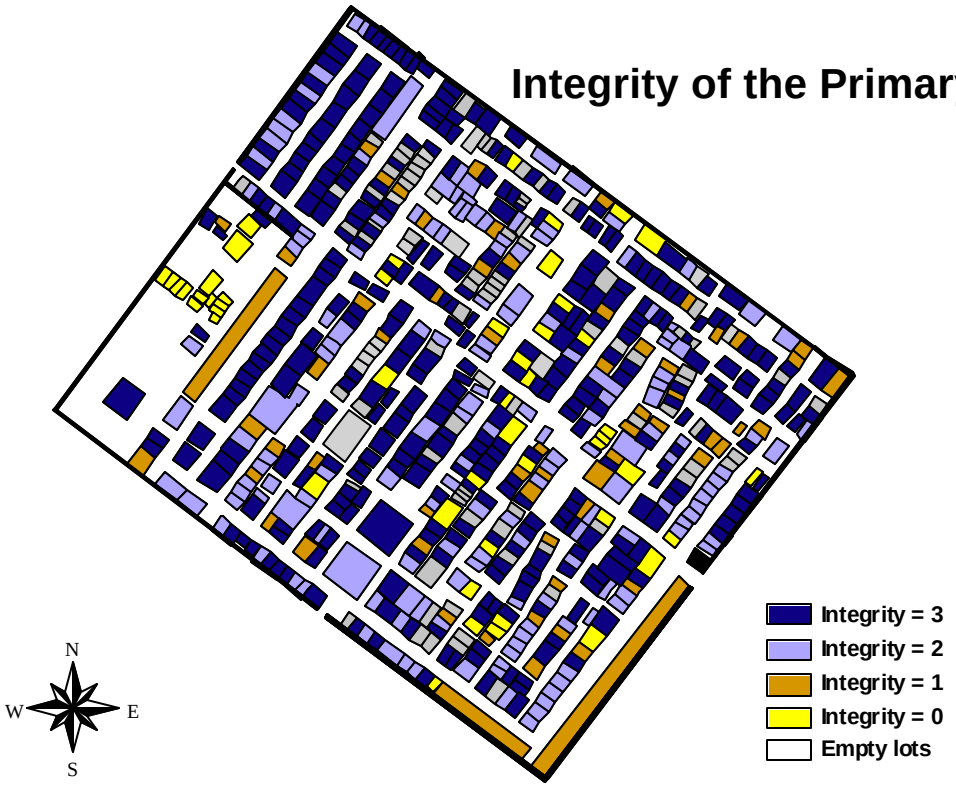
  *** Inappropriate replacement materials:** Replacement with materials not in keeping with their historic or traditional use and appearance to tomb/marker/landscapes. (Does not include traditional maintenance regimens.)

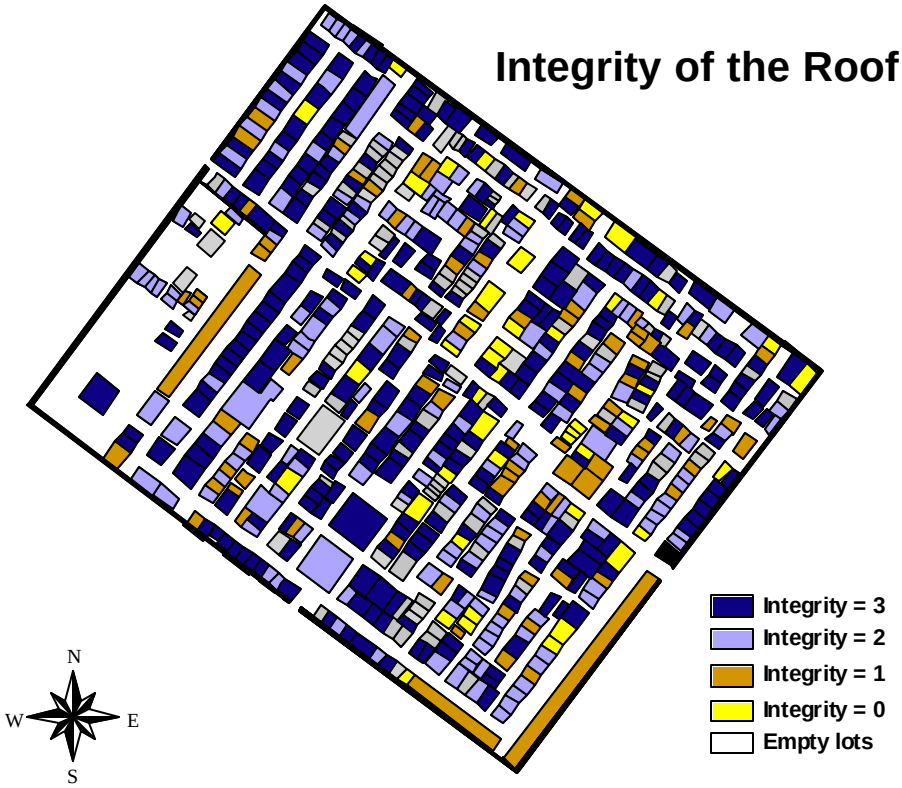
  **** Inappropriate alterations:** Changes not in keeping with original construction or material of tomb/marker/landscape.

  *****Assumes that it is not inappropriate to have modern replacements *in kind.*** Also, a completely new tomb should not be rated low in integrity just because it has not used historic materials.

The survey data analysis team has found that there were several inconsistencies in how the surveyors applied the above definitions, particularly in how unsympathetic restorations were rated. These assessments could not be reliably checked using the photo inventory in Appendix K. Field checks of the existing data will be made in October 2001 during Phase 2 of the project. The charts on the following pages reflect the March 2001 data. The grayed out tombs were tombs with no data.

Integrity of Primary Structure and Roof





Condition of Primary Structure and Roof

The survey manual defines condition as follows:

The overall state of structural, decorative, and finish repair or disrepair. Degree of nature, character, and quality of structure.

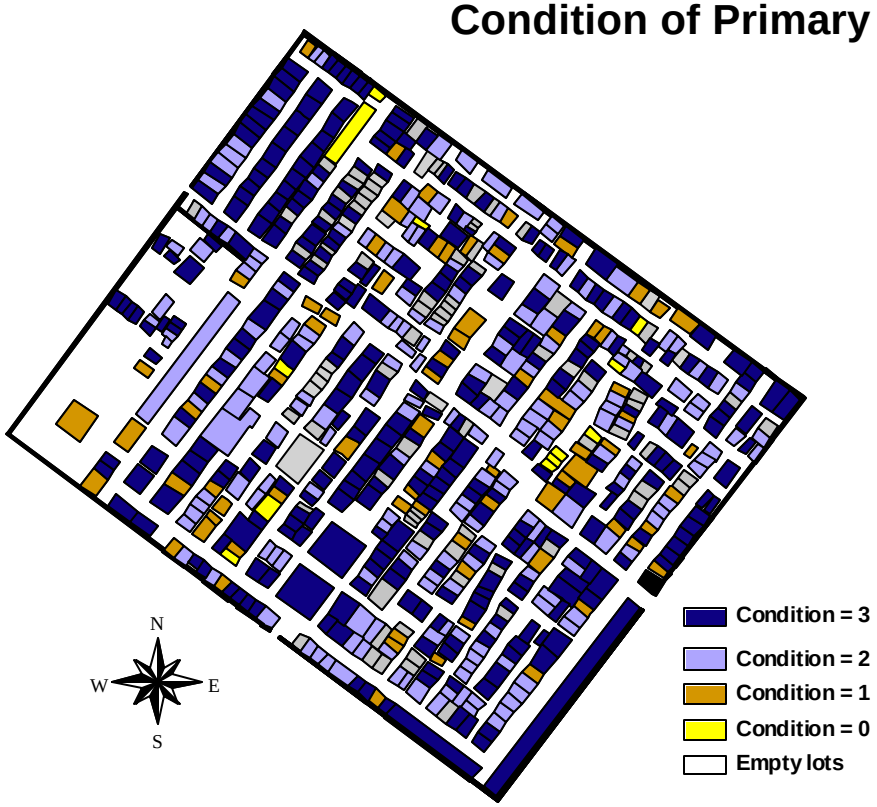
- "0" / Significant or Total Deterioration: Catastrophic structural failure.
- "1" / Poor Condition: Significant threat of structure failure and/or the total loss of decorative features and finishes.
- "2" / Moderate Condition: Stable structural condition. Significant, or terminally progressive loss of decorative features and finishes.
- "3" / Good Condition: Stable structural condition. Decorative features and finishes largely intact.

From the maps on the following page, one can see that the condition of the roofs is in more serious condition than the primary structures. This situation should be investigated in an urgent timeframe. Once a roof no longer protects the structure, the deterioration of the total tomb rapidly advances.

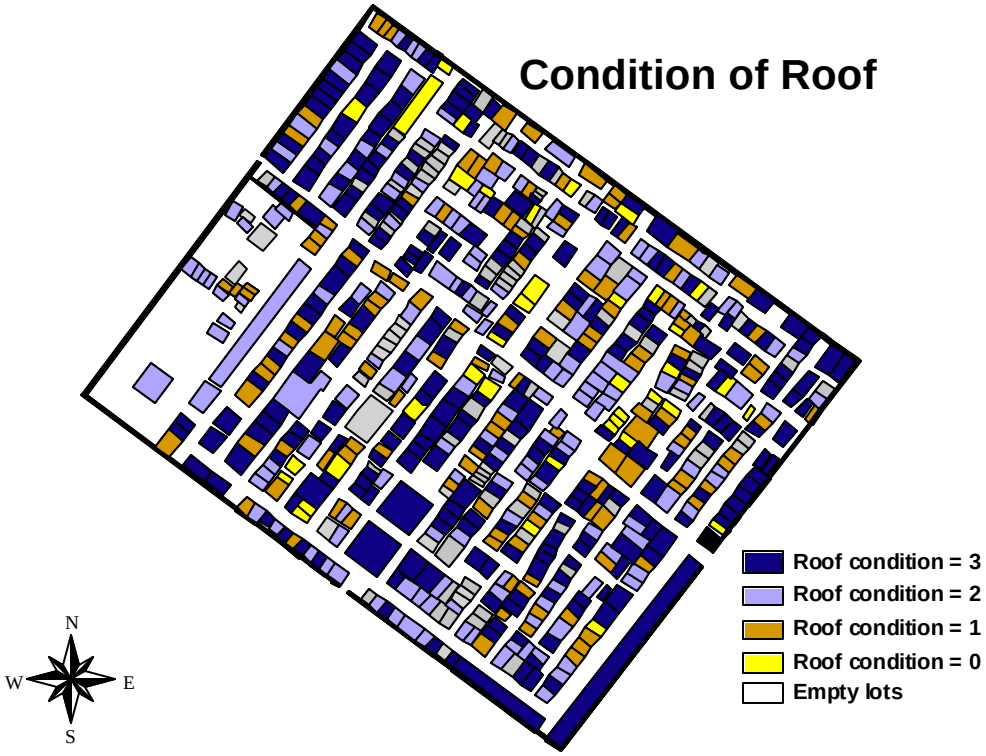
The charts on the following pages reflect the March, 2001 data. The grayed out tombs were tombs with no data.

Condition of Primary Structure and Roof

Condition of Primary Structure



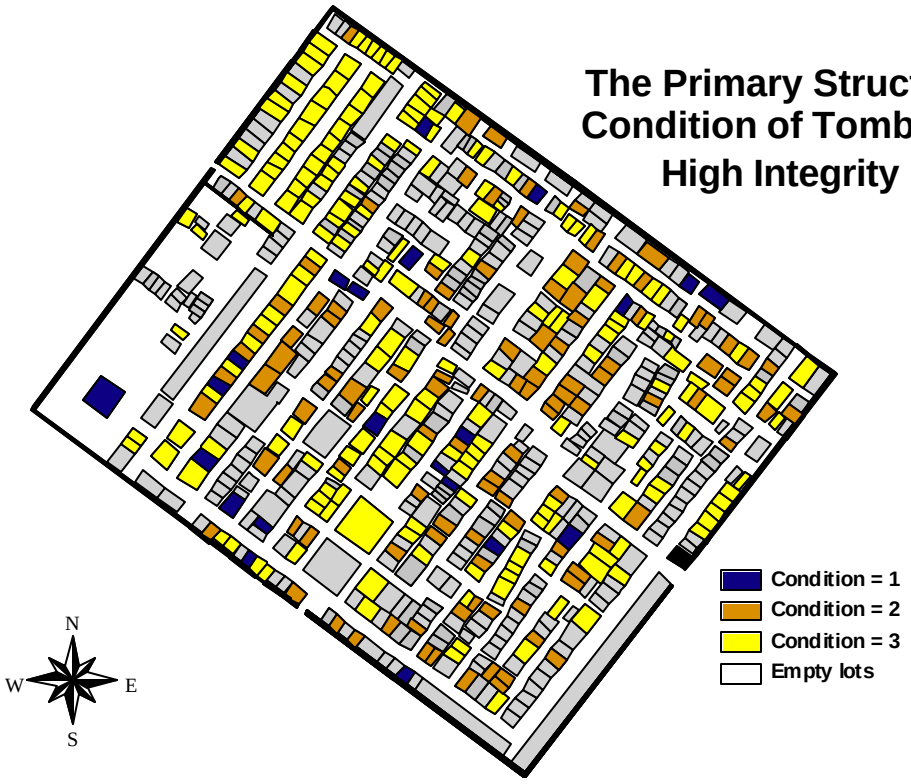
Condition of Roof



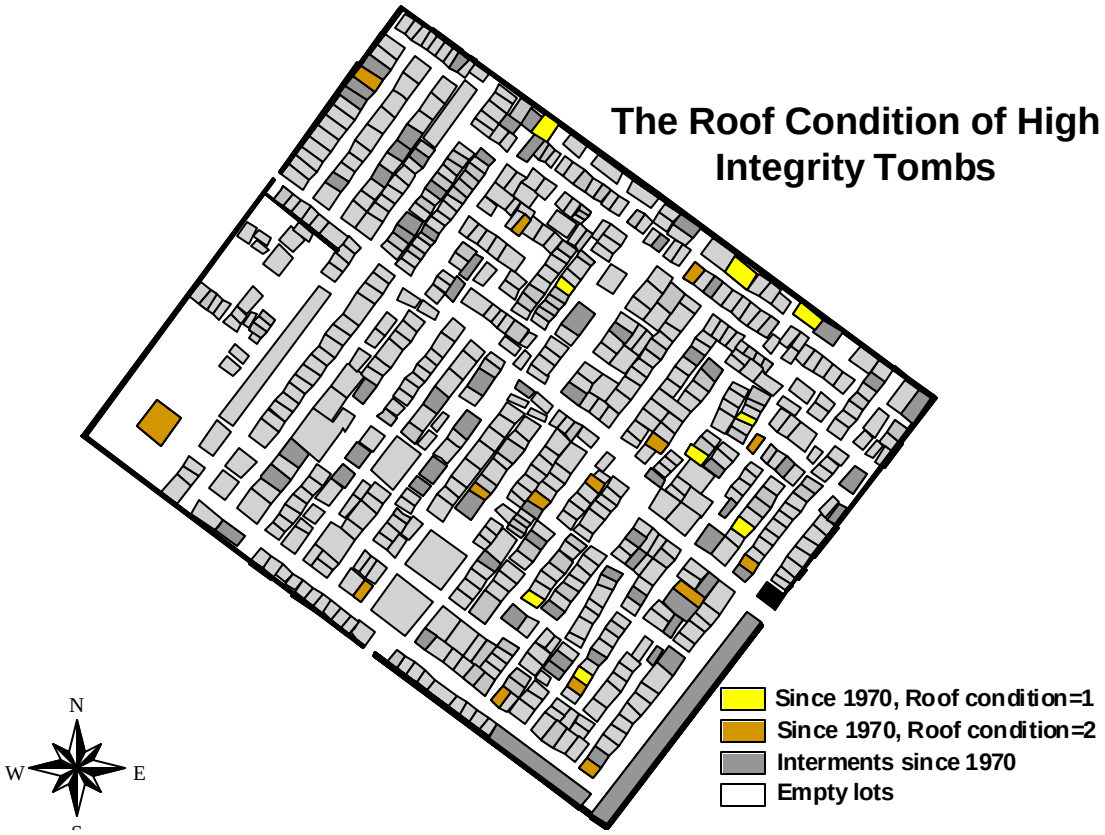
Using the Survey Data

The survey data and maps are still preliminary and will be more reliable after field verification in Phase 2. However, with the current database reports and GIS maps, this set of data can be used to prioritize conservation work and local educational efforts.

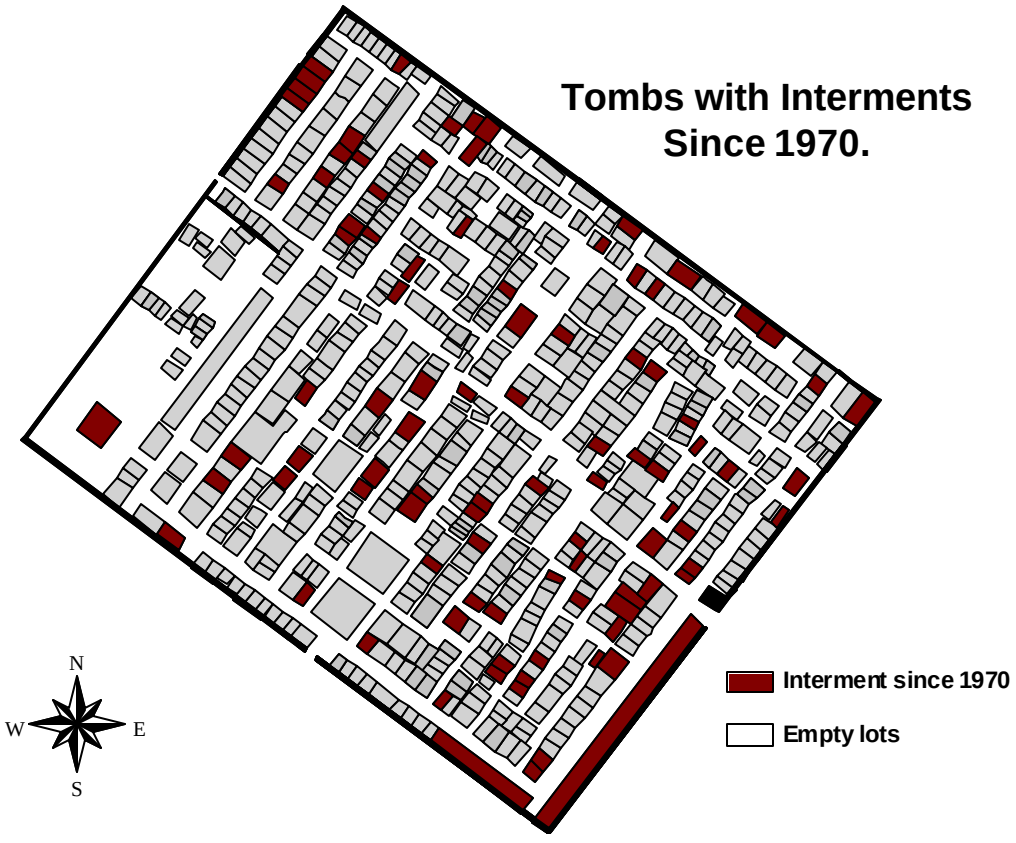
The map below highlights those tombs whose integrity is the highest based on the March, 2001 data. When this group is split into current conditions, we can develop different strategies to address the good (3), medium (2) and poor (1) condition tombs. According to these data, there are not too many high integrity, poor condition tombs. It might be best to channel available preservation funds to, at a minimum, stabilize these tombs before they become destroyed. Additionally, the good integrity, high condition tombs require less effort to protect. These tombs might make several good educational projects for local volunteers and school children. A few weekends of "field work" could clean up and make a large difference to this group of tombs.

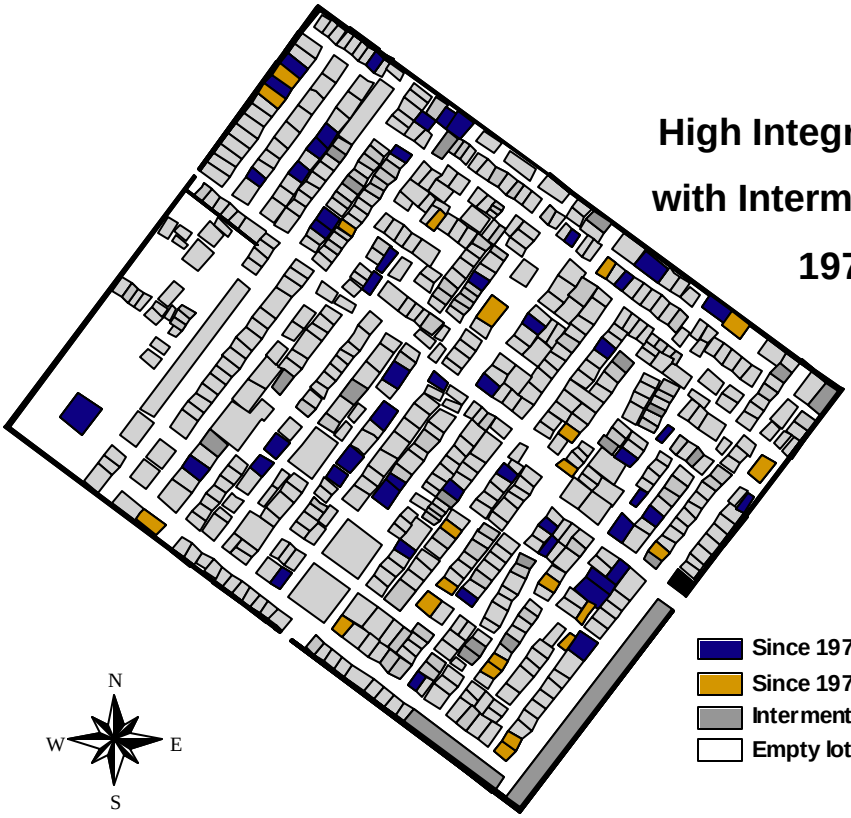


In another example of survey data use, one can analyze the location of the poor condition roofs on tombs of high integrity. These roofs need urgent attention before the total structure becomes compromised. Funds should go first to address those tombs with the dark blue or 0 condition roofs.

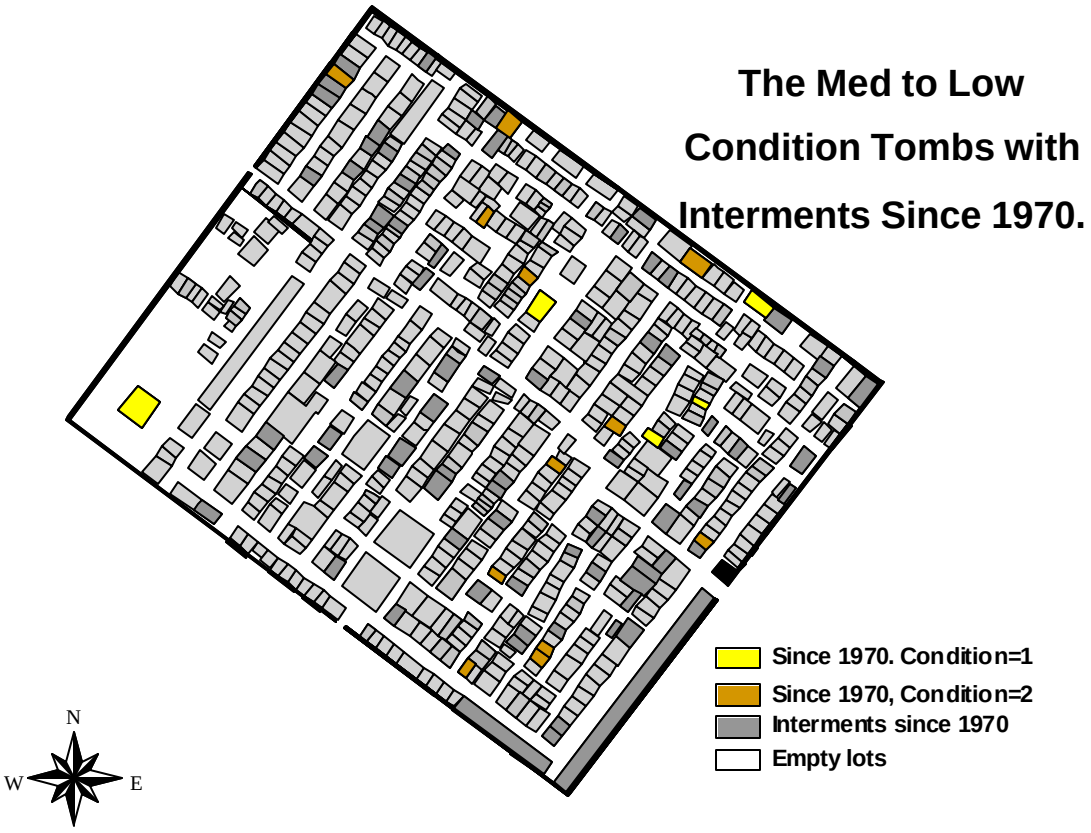


The database reports found in Appendix J provide information to supplement information shown on this last map. Tombs that have recent interments are most likely to involve caring family members who can be reached by Save Our Cemeteries, Inc. to discuss restoration options. These people are also the most likely to start restoration projects on their own without realizing that there are many resources that can help them restore their tombs sympathetically and to levels of high integrity, while still meeting the current day economic needs and codes. This is a group of people that should be a priority target for education and outreach.

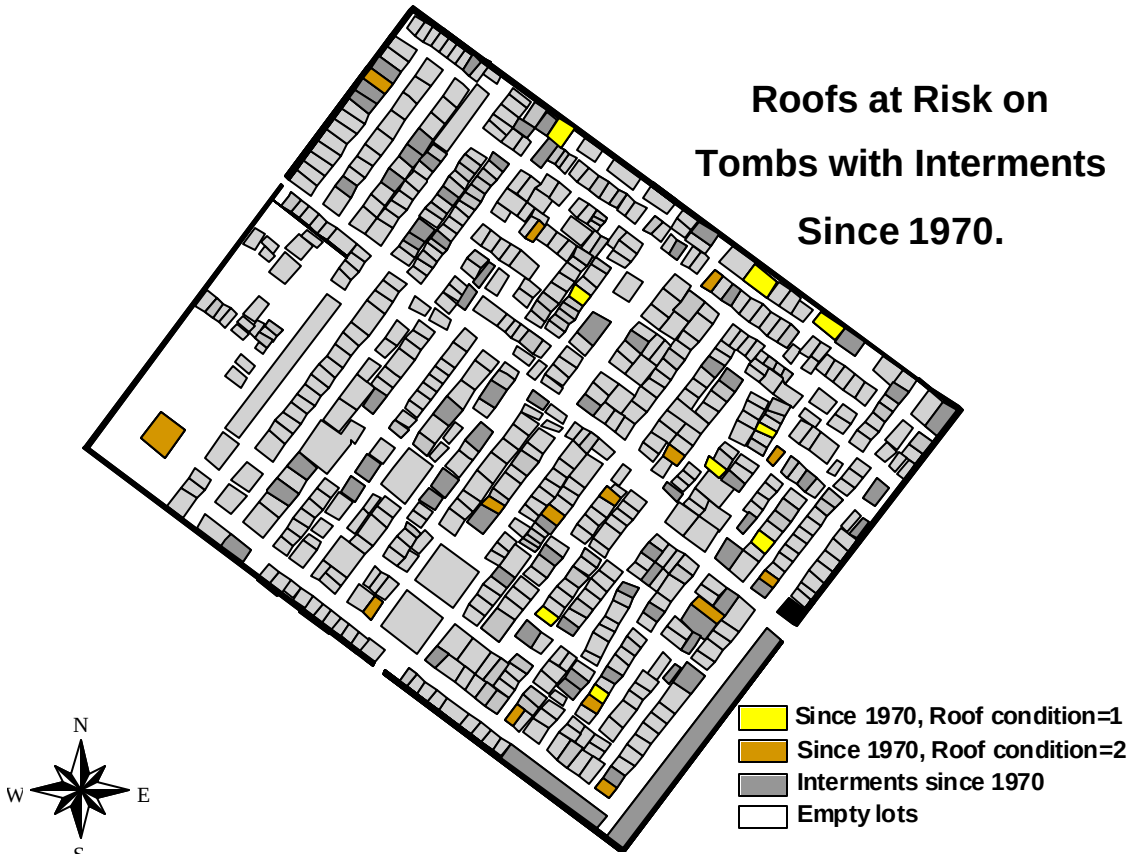




High Integrity Tombs with Interments Since 1970.



The Med to Low Condition Tombs with Interments Since 1970.


Roofs at Risk on
Tombs with Interments
Since 1970.
N
W
E
S
Since 1970, Roof condition=1
Since 1970, Roof condition=2
Interments since 1970
Empty lots

Appendix J

Preliminary Analysis of Data

Conditions

Appendix K

Photo Inventory of Individual

Tombs and Markers


st11_0000_2001_...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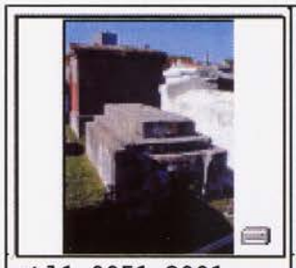
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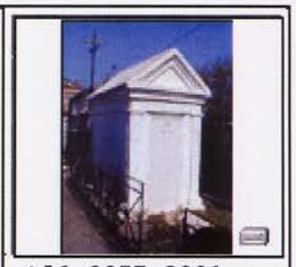
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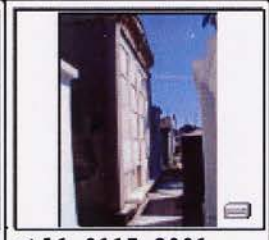
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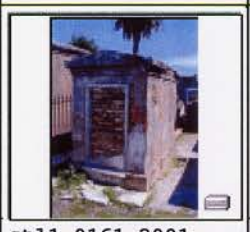
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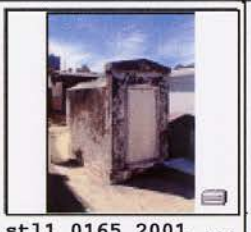
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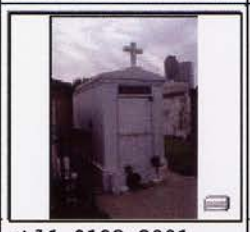
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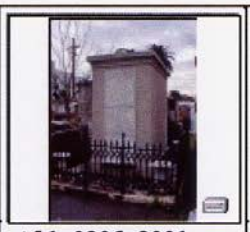
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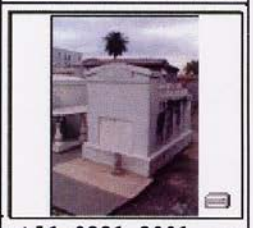
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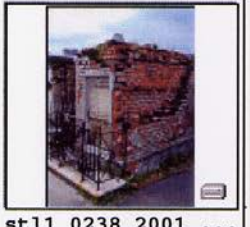
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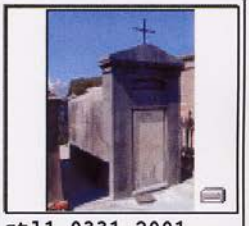
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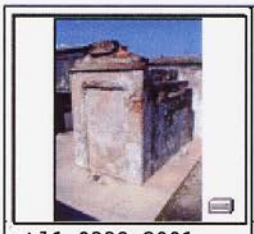
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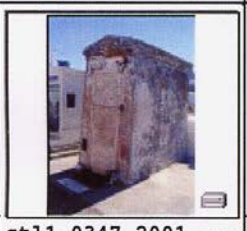
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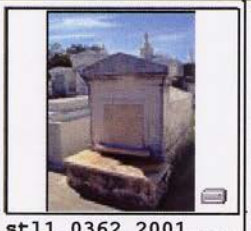
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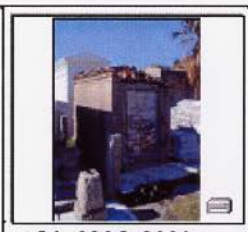
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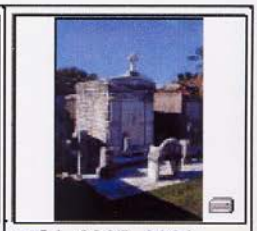
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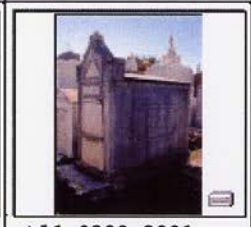
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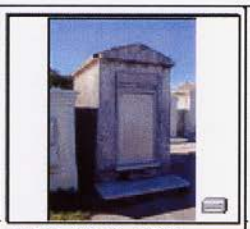
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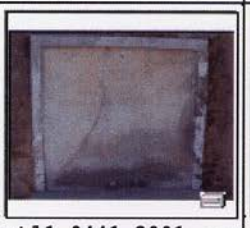
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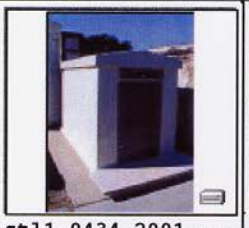
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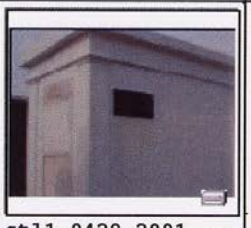
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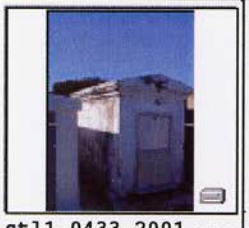
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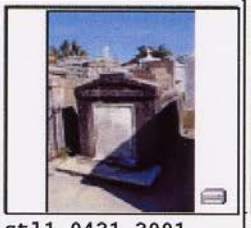
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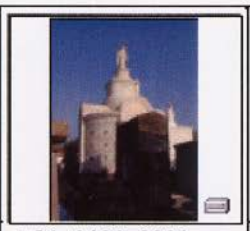
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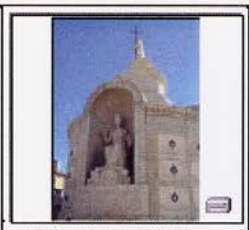
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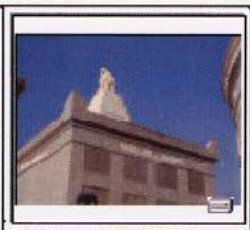
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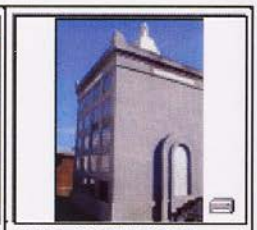
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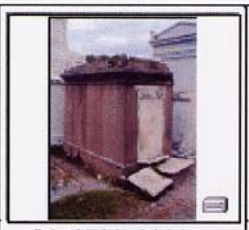
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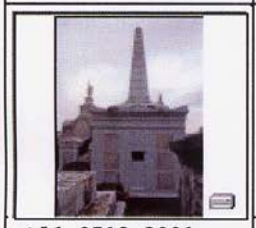
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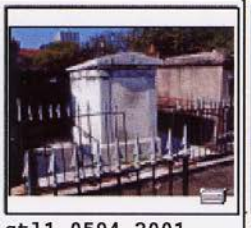
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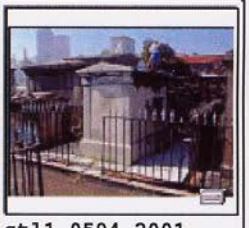
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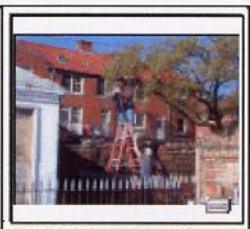
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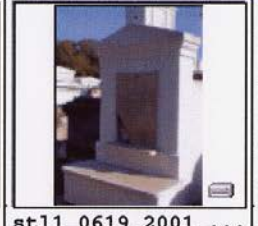
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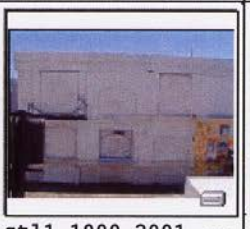
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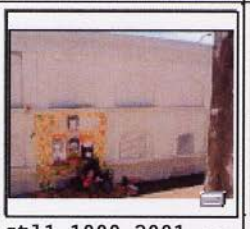
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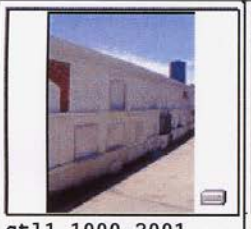
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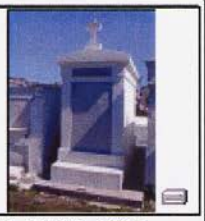
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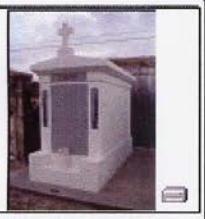
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Appendix L

Additional Resources

Additional Resources

The following research papers were prepared by students during the GSFA Collaborative Studio, Dead Space. These and other resources will be placed on the web site, noladeadspace.org, during Summer, 2001.

Focus Tombs – Historic Structure Reports

- Delassus, (Part of Treme Wall Vaults Right) Tomb No. 1200
- Musson, Tomb No. 193
- Fleitas, Tomb No. 529
- McCall-Jones, Tomb No. 286
- Plessy, Tomb No. 619
- Thomas-Hazeur, Tomb No. 330

New Orleans Cemetery History and Technology of Metalwork
Tourism – A Conservation Tool for St. Louis 1 Cemetery
GIS Analysis of Biodeterioration of Historic Resources: A Case Study of St. Louis 1 Cemetery, New Orleans

Our survey results, with photographs from the photo inventory and the GIS base maps, will also be available on the web site for researchers. The web site is operational and contains many of the projects that students completed during this studio. Additional design work is underway on the web site, and a more public version of the site will be available by early September.

The full contents of this report, the database with survey results and photographs, as well as the GIS base maps, are included on a CD as part of this report.