George Rogers Clark National Historical Park

Cultural Landscape Report/
Environmental Assessment
January 2008

George Rogers Clark Memorial and Mall Area, 2005

THE JAEGER COMPANY

RATIO

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Vincennes, Indiana

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Landscape Architecture • Historic Preservation
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Scope of the Report

The intent of this combined *Cultural Landscape Report* (CLR) and *Environmental Assessment* (EA) is to guide treatment and use of the above-ground resources associated with the historic area at George Rogers Clark National Historical Park (GERO). A thorough investigation and evaluation of the cultural landscape has been conducted using National Park Service (NPS) and National Register of Historic Places guidelines. "A CLR evaluates the history and integrity of the landscape and guides management and treatment decisions about a landscape's physical attributes, biotic systems, and use when that use contributes to historical significance."[1] Because the CLR and EA are being produced concurrently, this combined report has an altered framework from the typical versions of either stand alone report. However, all required elements are included herein. The report will serve as a guide for future development, improvements, and management of the cultural landscape resources at GERO. This *Cultural Landscape Report and Environmental Assessment* has been prepared by The Jaeger Company, a consulting firm that specializes in environmental assessment, landscape architecture, planning and historic preservation and RATIO Architects, Inc. to fulfill a contract with the Midwest Regional Office of the National Park Service.

Methodology (Applicable Regulatory Requirements)

The CLR portions of this report were prepared according to NPS standards outlined in *A Guide to Cultural Landscape Reports (Contents, Process, and Techniques)*1998 and *The Secretary of Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*. The CLR/EA was prepared in accordance with federal regulations (40 CFR 1500-1508) implementing the *National Environmental Policy Act of 1969* (NEPA), regulations of the *Council on Environmental Quality* (40 CFR 1508.9), *NPS Director's Order 12: Conservation Planning, Environmental Impact Analysis, and Decision-Making*, and the *National Historic Preservation Act of 1966* (as amended). Other applicable regulatory requirements include *National Park Service Organic Act*[2], and the *Archeological Resources Protection Act of 1979.*

The consultants divided the work for this project into the following phases: (1) Inventory and Analysis including historic research and review of background data; (2) Draft Report Development at 75% and 95%; and (3) Final Report Submittal. A field inventory, assessing landscape features and existing conditions of the site, was conducted by The

[1] Robert R. Page, et al, *A Guide to Cultural Landscape Reports: Contents, Process, and Techniques*, Washington, DC: US Department of the Interior: NPS, 1998), 3.

[2] According to the National Park Service http://www.nps.gov/legacy/organic-act.htm, "This title is not an official short title but merely a popular name used for the convenience of the reader. The Act has no official short title. The National Park Service Organic Act (16 U.S.C. l 2 3, and 4), as set forth herein, consists of the Act of Aug. 25 1916 (39 Stat. 535) and amendments thereto. The National Park Service Organic Act (16 U.S.C. l 2 3, and 4), as set forth herein, consists of the Act of Aug. 25 1916 (39 Stat. 535) and amendments thereto."

Jaeger Company in June and August 2005. Background data was obtained from the National Park Service (NPS) Midwest Regional Office as well as other public and private repositories including many sources from Vincennes, Indiana, the project site's location. Members of current GERO staff and other knowledgeable local citizens were interviewed for details of the development and evolution of the park site, especially the changes taking place since the transfer of the site to the National Park Service in 1966. A 1995 CLR completed for GERO by Christina P. Jones, a landscape architecture student from Ball State University, was made available by the National Park Service as part of the research materials for this report. This document provided a comprehensive study of the cultural landscape at GERO. Since that time, NPS has developed formal guidelines for the production of CLRs; therefore, this document serves as an update to the 1995 record. In addition to providing a critical, scholarly review of past efforts at writing the history of the area, Jones' research in primary sources was extensive. Therefore, it was stated in the consultant's scope of work that "intensive original research and writing related to the site's history will not be required…work on the history section will include review of existing documentation and synthesis/summary of previous CLR work." The 1995 CLR has been used as the basis for the site history in this report, although additional information and source material is clearly noted in the text.

The *Environmental Assessment* (EA) analyzes the impacts on the human and natural environment from three treatment alternatives, including the no action alternative and two treatment alternatives. The EA portion of the project is being coordinated by The Jaeger Company, RATIO Architects, Inc. and staff from GERO who also reviewed and assisted in preparing portions of the EA.

This document fulfills federal CLR and EA requirements in an integrated format approved by the National Park Service's Midwest Regional Office. The purpose of combining the two reports is to increase the value of the overall documentation by integrating the information gathered and analyzed through the process of writing both a CLR and an EA. This combined approach also has value through combining costs associated with producing and printing both reports. Additional advantages to the integrated report format is that the predictions of impacts on park resources inform and direct the development of landscape recommendations and the ability of the park to implement those recommendations immediately.

This report has been organized in the following manner:

Part I: Site History, Existing Conditions, Analysis and Evaluation

Chapter 1 – Introduction (Purpose and Need)

This chapter clearly defines the purpose and need for the CLR/EA, documents the scope of the report, project area, description of properties involved, methodology(ies) used and summary of findings. The introduction also identifies all Architecture/Engineering (A/E) staff associated with project services under this delivery order.

Chapter 2 – History Summary
This chapter is a summary based on the 1995 CLR, illustrated by historic photographs, maps and drawings and a Site Evolution Plan. This chapter describes the physical evolution of the site and identifies major periods of development. Documentation includes secondary sources and relevant information gained during the oral interviews.

Chapter 3 – Affected Environment with Existing Conditions
This chapter describes and illustrates the existing conditions of the landscape features associated with the site. Additional topics that need to be addressed to fulfill NEPA requirements are also described in this chapter.

Chapter 4 – Landscape Evaluation and Analysis
This chapter defines a statement of significance and period(s) of significance for the cultural landscape. The narrative evaluates the historic integrity of the character-defining features associated with the cultural landscape and determines which features on the site contribute to the periods of significance. The implications of improvements to specific contributing elements are discussed in this chapter.

Part II: Treatment

Chapter 5 – Landscape Treatment
Three alternative landscape treatment plans are described at a schematic level of detail. This chapter provides a range of schematic alternatives and develops a preferred treatment recommendation in detail. Recommendations are in keeping with applicable laws and NPS policies, guidelines, and standards.

Chapter 6 – Environmental Consequences (Impacts from Treatment)
This chapter provides a description and an analytic evaluation of the potential effects or impacts of each of the alternatives on the resources described in the affected environment section (Chapter Three). The impact analysis complies with the following: Council on Environmental Quality (CEQ) regulations, an inclusion of methodology for analyzing each impact topic, assessment of the impacts in relation to the action alternatives developed herein and any alternatives developed during public scoping, and the inclusion of a description of the alternatives considered but dismissed.

Chapter 7 – Recommended Treatment (Preferred Alternative)
The recommended treatment is more fully described in this chapter.

Chapter 8– Costs Estimates and Implementation Guidelines
This chapter includes a narrative containing general recommendations for phasing and implementing the preferred treatment including cost estimates.

Chapter 9 – Consultation/Coordination
The final chapter includes any remaining items required for NEPA compliance and provides an administrative record for the project. This chapter also describes the process of public scoping/involvement and coordination with local, state, and federal agencies. This chapter also outlines the process of public scoping for the project.

Purpose and Need

Background

The purpose of the investigation undertaken in this combined *Cultural Landscape Report and Environmental Assessment* (CLR/EA) is to guide treatment of the cultural landscape features of the George Rogers Clark National Historical Park (also referred to herein as the Memorial Grounds. Throughout this document other terms involving the word "Memorial" are used to describe the following: (1) Memorial Building, to describe the Memorial structure; and (2) Memorial Terrace, to describe the raised plaza zone around the Memorial Building). Many of the prominent features are listed in the nomination as contributing resources to the National Register (NR) District (originally listed on the NR on October 15, 1966 with a nomination form accepted in 1976). The analysis and evaluation conducted as part of this CLR/EA recognizes that a 1986 National Register nomination, an update of the earlier nomination, should be revised to reflect current conditions, changes to the landscape since the last update, and the potential for an expanded boundary. The National Register nomination is also lacking a needed evaluation of the period architectural styles found at the Memorial.

Since the initial development of the site as a memorial in the 1930s, a series of incremental changes have affected the landscape. Changes have included repairs and replacement of cultural landscape features as well as the addition of new supporting park facilities. After the July 23, 1966 transfer of GERO from the state to the federal government, alterations and expansion of the park boundary influenced the look of the site. Several changes implemented in this expansion adversely impacted the designed landscape. Also, some features from the original plan for the park were never implemented. The current and future use of the site will require changes to the existing conditions.

The staff of GERO is in need of a detailed plan identifying and recommending treatment for cultural landscape elements that are significant and contribute to the cultural landscape and for some elements that are non-contributing. GERO also requires guidance on how to implement these changes and how to best manage the significant cultural resources located within the park boundary.

Purpose and Need for the Project

The purpose of the CLR/EA for projects at GERO is to:

- Make specific recommendations for treatment of cultural landscape features at the park:
    - Guide replacement of contemporary and overly matured historic plant palette, including trees, shrubs, and planting beds.
    - Provide guidance for choosing appropriate paving materials for the Memorial Terrace and sidewalks throughout the park.
    - Provide recommendations for demolition of railroad tracks along the western perimeter of the park and the rehabilitation of the remaining

railroad prism. This includes pedestrian connections between the Memorial Grounds and paved trail along the river.
    - Provide recommendations for managing/maintaining the area at the north end of the park, which functions as a central gathering space for Vincennes residents.
    - Provide guidance for the management of historic views within and from the Memorial Grounds.
- Provide a connection to a Riverwalk proposed by the City of Vincennes.
- Protect cultural landscape resources from potential damage that may occur during construction of two line-item construction projects proposed for funding for the park: Rehabilitation of the Memorial Terrace and Rehabilitation/Repair of the Floodwall
    - Determine impacts of the Floodwall replacement project on the cultural landscape.
    - Provide guidance for staging construction during Memorial Terrace rehabilitation and Floodwall replacement.
    - Provide planting recommendations for area immediately surrounding the Memorial Building; shrubs around this structure will be damaged/ destroyed during construction.

Need for the Project

The need for the two line-item construction projects (Memorial Terrace and Floodwall) arose as a result of damage to these site elements over time. Stop gap efforts have been implemented since initial construction of the Memorial Building and the Floodwall to prevent structural degradation of these items. However, more permanent solutions are now required to prevent critical damage to the structures. The Memorial Terrace leaks into the basement of the structure causing potential harm to the substructure and mechanical equipment housed in this level. The Floodwall is in a state of deterioration indicated by crumbling portions of concrete and erosion of an adjacent walkway. While this structure is not an officially designated flood control device, it provides protection for the Memorial Building and Memorial Grounds from the Wabash River during times of high water. The Floodwall is a contributing feature to the cultural landscape.

The need for recommendations included in the CLR arose as a result of the continued decline of many of the site features over time. Much of the vegetation originally implemented at the site has declined or died and park management has been operating without formal guidance for the repair, rehabilitation, or replacement of cultural landscape features on the site.

Park Purpose/Significance and Description of the Site

The 1933 Memorial Building and surrounding grounds (25.49 acres) were designated George Rogers Clark National Historical Park by Congress in 1966. President Lyndon B. Johnson signed the measure into law during a ceremony at the Memorial on July 23, 1966. The purpose of the park is to honor the actions of Lt. Col. George Rogers Clark and his frontiersmen who captured Fort Sackville (believed to be located on this site) from

British Lt. Governor Henry Hamilton and his soldiers. The march of Clark's men from Kaskaskia, Illinois on the Mississippi River in mid-winter and the subsequent victory over the British remains one of the greatest feats of the American Revolution and contributed to the establishment of the Northwest Territory. None of the site features present during this period exist at GERO today. Instead, these actions are memorialized and commemorated through the existing cultural landscape features.

Congress established the George Rogers Clark Sesquicentennial Commission (GRCSC) "for the purpose of designing and constructing at or near the site of Fort Sackville… a permanent memorial, commemorating the winning of the Old Northwest and the achievements of George Rogers Clark and his associates."[3] The GRCSC instituted a competition for a design of this Memorial Building and chose F.C. Hirons as its designer. Implementation of his design and the accompanying site and landscape plan by William E. Parsons commenced in 1931 with the razing of several structures present on the Memorial site.

GERO was first listed on the National Register in 1966 when the park became part of the NPS. Cultural landscape resources associated with the Memorial Grounds were initially listed in the National Register of Historic Places under a nomination that was accepted by the Keeper of the National Register in 1976 (nomination form completed in 1975) with an updated nomination completed by NPS in 1985. Contributing resources include the Memorial Building, the Floodwall, the Lincoln Memorial Bridge Approach and Terraces, and a variety of historical markers, memorials, and statues scattered throughout the site. Walkways and vegetation also contribute to the significance of the cultural landscape. These items are described in Chapter III.

Location

GERO is located in the southwest corner of Indiana in Knox County, within the city limits of Vincennes (pop. 18,105) (see Figure 1.1 and Figure 1.2). The site rests along the southeast bank of the Wabash River, the state line between Illinois and Indiana. Vincennes contains a number of historic and historical sites including Grouseland, the home of the first Indiana Territorial Governor and later President of the United States William Henry Harrison, as well as the Indiana Territory State Historic Site which includes buildings dating from the area's territorial period. The park's location along the Wabash River contributes to its scenic quality. The park is located along the Lincoln Heritage Trail which marks the passage of Abraham Lincoln and his family from Kentucky through Indiana to Illinois.[4] Significant features adjacent to the GERO property include the Lincoln Memorial Bridge, Saint Francis Xavier Catholic Church and its

[3] *Indiana History Bulletin*, Vol. 5, No. 3, pp. 47-48, in Edwin C. Bearss, *George Rogers Clark Memorial Historic Structures Report Historical Data*, (Washington, DC: US Department of the Interior, NPS, 1970), 20.

[4] The Lincoln Heritage Trail is a multi-state endeavor. Approximately fifty years after Abraham Lincoln's death, the Illinois State Historical Library initiated a plan to mark Lincoln's route of travel from Kentucky through Indiana to Illinois. In 1963, the 1,000-mile trail opened with 3,000 markers along the way. Accessed via web at http://dnr.state.il.us/lands/landmgt/PARKS/R3/Lincoln.htm, November 8, 2005.

associated cemetery, library, and grounds, and the Lincoln Trails Monument directly across the Wabash River from the site.

Vehicular access via Lower Second Street connects the site to a number of state routes. Pedestrian access is provided by a network of walkways connecting the site to downtown Vincennes and the Lincoln Memorial Bridge.

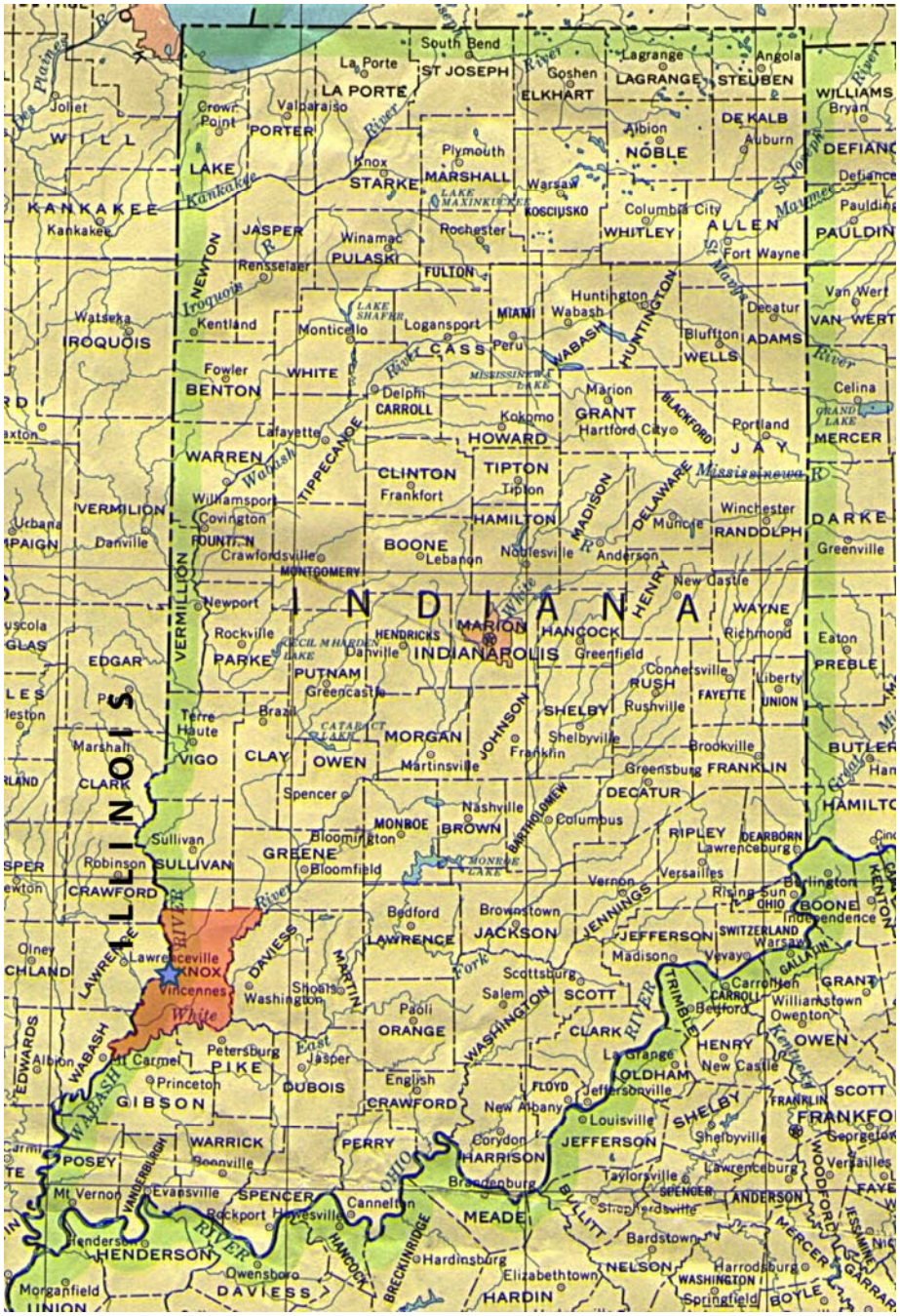

Figure 1.1: Regional Location map showing Knox County (red) and Vincennes (blue star), adapted from U.S. Geological Survey Map of Indiana, 1:2,500,000 Series, 1972 with limited update 1990.

Figure 1.2: Location map showing Vincennes, Indiana and the location of George Rogers Clark National Historical Park. Adapted from Google Maps (www.google.com)

Relation to Other Planning Projects

A *General Management Plan* (GMP) for GERO was prepared in 1967. This plan identifies three major issues for improvement: (1) the condition of the Memorial; (2) exterior and grounds lighting; and (3) visitor use. A *Historic Structures Report* (HSR) for the Memorial was prepared in 1977. This report summarizes the sequence of construction and development of the Memorial Building and Memorial Grounds at GERO. Other planning documents include a *Resource Management Plan* (RMP) and *EA* completed in 1981. These documents address needed repairs to the Memorial Building and the condition of the Floodwall and riverbank erosion. The Wabash River Heritage Corridor Commission is currently studying the GERO site as well as other sites in the area. This commission was established by the Indiana General Assembly to promote the Wabash River Heritage Corridor which includes 475 miles of the Wabash River, 25 miles of the Little River, and up to 10 miles of portage between the Wabash and Maumee drainage basins. The Corridor Commission, together with the Indiana Department of Natural Resources and the National Park Service, works with citizens of the Corridor to promote conservation and recreational development efforts. Under a contract with NPS, Ball State University completed a *Boundary Modification Study* for GERO in December 1997. The report evaluates the possibility of adding land between GERO and Vincennes University to the park. The conclusion of this report was that the land was not historically significant enough to be added to GERO under the current enabling legislation. These documents and studies, along with research conducted as part of this CLR/EA, have helped to guide the development of treatment alternatives and the analysis of their potential impacts. The needed repairs to the Memorial Terrace and Floodwall have resulted in two line-item construction projects listed in the NPS Project Management Information System (PMIS). The impact of these projects will be evaluated in this report.

The Vincennes/Knox County Convention and Visitors Bureau have developed a plan for implementing a Riverwalk along the Wabash River. This plan has subsequently been approved by the Indiana Department of Transportation (INDOT). This project, the Vincennes Riverwalk Bicycle and Pedestrian Walkway System Phase One, encompasses a route starting at GERO and ends upstream at Kimmel Park. The goal of the Riverwalk is to develop recreational resources in Vincennes and link historic sites along a continuous bicycle/pedestrian route. Preliminary construction plans for the Riverwalk have been developed by the INDOT and have been reviewed for this project.

Issues and Concerns

GERO includes the historic Memorial Building and Grounds developed during the 1920s-1930s or Memorial Era. The Beaux Arts character of the design layout and the north-south axis extending from downtown Vincennes to the Memorial Building have dictated the location of modern improvements and upgrades to the site. In the late 1960s-1970s, the Visitor Center was constructed and supporting services were installed, several portions of the cultural landscape were disturbed and historic vegetation was removed. Historic views have been altered over time with the deterioration or removal of historic plantings and addition and subsequent growth of nonhistoric plant material. As a result, historic views have not been sufficiently maintained over the years. Degradation of natural resources on the site, such as the riverbank where Tri-Lock® Erosion Control System has been installed to slow erosion, will also be addressed in this report.

Over time much of the original fabric of the Memorial Grounds has degraded. Walkways have been replaced as necessary when concrete deteriorated. The Wabash River Floodwall is in a state of deterioration and needs to be repaired or replaced in-kind to prevent complete structural failure. The Memorial Terrace has had a history of leaking into the structure's basement causing degradation to the structure itself. The surface of the Terrace has been paved over and replaced several times since construction of the Memorial Building. Funding has been planned for repairs to the Memorial Terrace and Floodwall. Any construction in these areas will require proper staging and the removal/damage of any historic plant materials will have to be mitigated. The North and South Terraces of the Lincoln Memorial Bridge Approach show signs of damage caused by seepage which has been degrading iron reinforcing rods in the structures. Iron rust stains are evident on the facades of both terraces.

The railroad spur running along the western perimeter of the park have been a safety concern for the park since its inception. The removal of these tracks would help fulfill the original design intent for the Memorial. Pedestrian connections and universal access across this area of the park is essential to tie into the proposed Vincennes Riverwalk running parallel to the Wabash River. Connections to this new pedestrian system need to be compatible with the cultural landscape.

The north end of the park also known as Patrick Henry Square currently functions as a public assembly area. Proper management and maintenance of this area is essential to the integrity of the cultural landscape, but function of the space should also be considered for the economic success of nearby merchants and for city functions.

Impact Topics Selected for Analysis

Impact topics are the resources of concern that could be affected by the range of alternatives. Discussion of these topics ensures that alternatives receive a thorough and fair analysis. As a means of evaluation, impact topics included in this document were analyzed in more detail to compare the environmental consequences of the No-Action Alternative and the two Action Alternatives. Topics include: Cultural Resources, Archeological Resources, Visitor Use and Experience, Lightscape Management, and Utilities. The list of impact topics being considered in this EA are provided below.

Cultural Resources

Historic Resources

There are historic structures, buildings, and museum collections within the George Rogers Clark National Historical Park project area. The entire site is currently listed in the National Register of Historic Places.

Cultural Landscapes

"A cultural landscape is defined as 'a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values.' There are four general types of cultural landscapes, not mutually exclusive: historic sites, historic designed landscapes, historic vernacular landscapes, and ethnographic landscapes."[5] George Rogers Clark National Historical Park is a historic designed landscape and a historic site. A historic designed landscape is "a landscape that was consciously designed or laid out by a landscape architect, master gardener, architect, or horticulturist according to design principles, or an amateur gardener working in a recognized style or tradition."[6] A historic site is a landscape significant for its association with a historic event, activity, or person."[7] A CLR for the site was completed in 1995. A revision of this document is being conducted concurrently with this CLR/EA. Impacts to cultural landscape characteristics including land use, circulation, topography, vegetation, spatial organization and vistas/views must be considered in the evaluation.

Archeological Resources

Archaeological resources may be vulnerable to digging or any ground disturbing activity, and the park site has a potential for rich history of historic activities due to its strategic location on high ground adjacent to the major transportation corridor of the Wabash River.

According to the NPS Midwest Archeological Center, in *An Overview and Assessment of George Rogers Clark National Historical Park*,

> [p]artly as a result of recommendations made by National Park Service Historian Edwin Bearss, archeological testing was undertaken in the early

[5] Charles A. Birnbaum, "*Preservation Brief 36: Protecting Cultural Landscapes (Planning, Treatment, and Management of Historic Landscapes)*", Washington, DC: US Department of the Interior, NPS, 1994), 1.
[6] *Ibid*., 2.
[7] *Ibid*.

> 1970s. Staff from the Glenn A. Black Laboratory of Archaeology at Indiana University directed these excavations. This testing found a few features that could date from the period of greatest historical interest, but overall the results were disappointing. It appears that much of the area of Fort Sackville has been severely impacted by ca. 1900 commercial development and by the construction of the Clark Memorial. Few indications of prehistoric use of land within the park have been found. A new effort to locate physical remains of Fort Sackville or Post Vincennes is not recommended.[8]

Many of the archeological findings related to the 1970s research included remnants of buildings, support structures, and roads constructed on the site prior to the Memorial. Evidence of pre-Memorial construction on the site included foundations, road traces, and building materials such as brick.[9]

Because the Floodwall and Memorial Terrace will be replaced in their original location, and because the entire monument area was disturbed by the addition of 10 to 15 feet of fill on the site during the initial construction of the monument in the 1930s as part of a flood protection levee, it has been determined that an archeological survey of the area south of Vigo Street is not warranted. There have been no known archeological investigations conducted in the area north of Vigo Street. To date, research has not revealed a need for archeological investigations in this zone.

Construction zones would be kept to the minimum size necessary through fencing around the project site. If construction activities discover previously unknown archaeological resources, all work immediately on and adjacent to the site would stop until an NPS archaeologist could identify and document the resources and until the Indiana SHPO and NPS could develop an appropriate mitigation strategy.

Visitor Use and Experience

Visitors to GERO seek a variety of experiences, from learning about the political history of our nation to enjoying the monumental architecture and scenic location of the historic park. The Visitor Center includes exhibits and a documentary-style film through which the significance of the site is conveyed, but the primary resources of the park are the Memorial Grounds and the Memorial Building. GERO is open year round and enjoys its busiest tourist season in the months of April and May. The visitation total for FY 2003 was 123,658. Informal visitation to the site includes recreational users including walkers, picnickers and student groups visiting the river. Maintaining and improving the quality of the visitor experience at any NPS site is very important. Therefore, the alternatives were assessed to determine their effect on visitor use and experience. The methodology used

[8] Robert K. Nickel, *An Archeological Overview and Assessment of George Rogers Clark National Historical Park (Midwest Archeological Center Technical Report No. 83),* (Lincoln, Nebraska: US Department of the Interior, NPS, Midwest Archeological Center, 2002), i.
[9] Willard Cockerham, interview by Daniel Holder, 5 December 1993, Vincennes, IN.

for assessing impacts to visitor use and experience is based on how the cultural resources are interpreted and incorporated into the overall visitor experience.

Lightscape Management
There has been comment from local officials that there should be increased lighting at the park site, such as additional flood lighting on the Memorial Building at night. The park has concerns about making it appear as though the park site is welcoming after-hours visitors which may increase vandalism or incident reports or produce increased issues regarding safety. The spill-over effects of additional lighting may negatively impact neighboring residential areas. Any alternatives involving nighttime lighting in the Memorial area must consider the effects of light pollution. The physical intrusion of any lighting into the cultural landscape may have negative impacts on the views within the park. Before any changes are made to the lightscape of the park, a full study should be conducted to assess such impacts.

Utilities
Action alternatives at GERO are not planned to have any permanent effect on current utilities on the site. Construction activities may have a temporary effect on the provision of utilities at the site, but these potential impacts will be mitigated by careful planning on site. Permanent damage to utilities is possible if care is not taken during the construction process to protect older utility locations. The southeast side of the Memorial Building houses a large number of underground utilities including sanitary sewer, telephone, water, and storm drains. Heavy equipment or materials used in or stored during construction on the site should be routed around these utilities to less vulnerable areas. Access to utilities housed underneath the Memorial Building will need to be maintained throughout any construction activities. Historic irrigation lines and sprinkler heads exist throughout the site and would need to be located and protected during any construction activities.[10]

Impact Topics Eliminated from Further Consideration

NPS guidance recognizes that not all of the candidate impact topics warrant a detailed evaluation. Based on site-specific conditions, several of the impact topics were dismissed from further consideration, including those whose impacts, based on preliminary analysis, were projected to be no greater than negligible for all of the alternatives. Impact topics eliminated from further discussion in this report include: Museum Collections, Floodplains and Wetlands, Wildlife and Threatened and Endangered Species, Solid Wastes, Socioeconomic Resources, Surface Water Quality, Prime and Unique Farmlands, Regional Air Quality, Environmental Justice, Indian Trust Lands, Ethnographic Resources, and Soundscape Management. The list of impact topics not warranting detailed evaluation in this EA follows below.

Museum Collections
None of the buildings and landscape features at GERO are considered part of the Park's museum collections. The buildings and landscape features will need to be protected

[10] According to GERO staff, approximately 85% of the historic irrigation system is intact.

during any construction efforts. Since there are no museum collections present on the site, this topic has been dismissed.

Floodplains and Wetlands
None of the alternatives would occur within or affect a floodplain or wetland. There are no wetlands regulated under the provisions of Section 404 of the Clean Water Act, or areas designated as wetlands using the classification system of Cowardin *et al*. (1979), within the areas of potential effect. The US Army Corps of Engineers does not consider the floodwall on the site to be part of the flood control system for Vincennes. The existing shoreline at GERO will not be altered in the proposed rehabilitation of the Floodwall. For these reasons this topic has been dismissed.

Wildlife and Threatened and Endangered Species
Cultural landscape treatments may affect wildlife in not only the site but also the surrounding area during the construction phase of the proposed landscape treatments due to noise from construction equipment and potential disturbance from construction activities affecting wildlife movement. Concurrence has been obtained from the US Fish and Wildlife Service that no endangered species are known to be present on the site.

Solid Wastes
Action alternatives may result in the removal or addition of paving materials in the vicinity of the bus parking lot or walkways that may result in the increase of the waste stream to the regional landfill. Any construction activity at GERO would result in waste flow to a local solid waste landfill and would need to be disposed of properly.

Socioeconomic Resources
GERO plays a notable role in the social and economic life of the greater Vincennes area, providing tourism opportunities for visitors from a local, regional and national area. The park provides employment for eleven full time park rangers on site, including four maintenance positions. The construction for any proposed landscape treatment would result in the presence of perhaps ten to fifteen contractor employees working on the site, which might affect the accessibility of all areas of the historic site. However, the effect of leaving the site in its current condition could ultimately result in fewer tourists to Vincennes if the structural soundness and safety of the historic site was deemed unacceptable and visually unappealing. Reduced accessibility to the historic site could negatively affect the economic health of the surrounding community. However, the short term economic impacts of construction would result in negligible effects on the socioeconomic resources of the region; therefore, this impact topic was dismissed from further consideration.

Surface Water Quality
NPS policies require protection of water quality consistent with the Clean Water Act. Human activities can influence water quality through wastewater discharges, runoff from roads and other paved areas and erosion. Changes in the type of vegetative cover could impact water quality in the area. Any construction efforts on the site would require erosion and sediment control measures to be implemented during land disturbing

activities. There are no proposals to change the amount of impervious surface on the site; therefore this topic has been dismissed.

Prime and Unique Farmlands
In August 1980, the Council on Environmental Quality (CEQ) directed that federal agencies must assess the effect of their actions on farmland soils classified by the U.S. Department of Agriculture's Conservation Service (NRCS) as prime or unique. Prime farmland has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops. Unique agricultural land is land other than prime farmland that is used for production of specific high-value food and fiber crops. Both categories require that the land is available for farming uses. Lands within George Rogers Clark National Historical Park are not available for farming and, therefore, do not meet the definitions.

Regional Air Quality
There would only be temporary, inconsequential impacts on air quality during any rehabilitation or replacement of the facilities at GERO because best management practices would be used to minimize fugitive dust and emissions from construction equipment. In the long term, air quality would not be degraded because there would not be any appreciable change in emissions sources, nor would there be a change in the airshed classification, therefore this topic has been dismissed.

Environmental Justice
According to the Environmental Protection Agency, environmental justice is the fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies. Executive Order 12898, "General Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing the disproportionately high and/or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities.

None of the alternatives would have health or environmental effects on minorities or low-income populations or communities as defined in the Council on Environmental Quality's "Environmental Justice: Guidance Under the National Environmental Policy Act" (CEQ 1998). Therefore, environmental justice was dismissed as an impact topic.

Indian Trust Lands
Indian trust assets are owned by Native Americans but held in trust by the United States. Requirements are included in the Secretary of the Interior's Secretarial Order No. 3206, "American Indian Tribal Rites, Federal–Tribal Trust Responsibilities, and the Endangered Species Act," and Secretarial Order No. 3175, "Departmental

Responsibilities for Indian Trust Resources." Because no Indian trust assets occur within George Rogers Clark National Historical Park, this impact topic was dismissed from further consideration.

Ethnographic Resources
Ethnographic resources are cultural and natural features of traditional significance to contemporary peoples and communities. According to the Midwest Regional Cultural Anthropologist, there are no tribes affiliated with GERO[11]; therefore consultation is not necessary and this impact topic is dismissed from further consideration.

Soundscape Management
Changes in sound in the vicinity of the George Rogers Clark National Historical Park due to proposed alternatives are not an issue at the site, although construction activity may temporarily affect visitor experiences. Because the nature of this sound issue would be temporary in nature, if at all, this impact issue was dismissed from further consideration.

[11] Note: The Project Manager (Marla McEnaney) contacted (by phone) Dr. Michael Evans, Chief of the MWRO Ethnography Division in November 2005 to discuss whether any ethnographic issues needed to be addressed by the EA.

Chapter 2: Site History

This chapter presents a chronological history of the cultural landscape at George Rogers Clark National Historical Park, identifying each of the major periods of development and describing the evolution of the physical landscape. The discussion of each phase includes a narrative of the major events during the period. Per the scope and contract for this project, the narrative portion herein relies heavily on the primary resource research conducted for the 1995 *Cultural Landscape Report for George Rogers Clark National Historical Park* by Christina P. Jones. The timeline summaries included in the report are the synthesis of significant dates gleaned from both the Jones CLR and the *George Rogers Clark Memorial Historic Structures Report* (HSR) by Edwin C. Bearss. Additional research revealing pertinent information has been referenced herein as full text and footnoted appropriately. *Illustrations A-F* contain historical data with an overlay of the existing park boundary to illustrate the evolution of the site. *Illustration J* is a composite graphic illustrating the different periods of site development. The periods of significance for the site are the Military Era (1779-1815) and the Memorial Era (1929 – 1936). For the purpose of this report, the history of the site has been organized into the following periods:

- Pre-History of the Site
- 1732-1790: Chronology of Early Recorded History of the Site
- 1800-1924: Chronology of Early Site Events
- 1925-1939: Chronology of George Rogers Clark Sesquicentennial Commission Years
- 1940-1960: Chronology of Indiana Department of Conservation Years
- 1966-Present: Chronology of National Park Service Years

Pre-History of the Site

The land around Vincennes, Indiana lies in the southernmost reaches of the part of the Great Lakes region affected by glaciation prior to human occupation. The Illinois glacier covered much of the physiographic region now known as the Wabash Lowland. According to Indiana scholars John C. Barnhart and Dorothy L. Riker, “the lowland has a general plain-like structure with stream valleys filled with silt and glacial deposits. It contains the best lands in the southern part of the state and is underlain with valuable coal deposits.”[1]

James H. Kellar provides a general overview of archaeological history in Indiana with broad categories and approximate dates of major cultural eras in Indiana, including the following:

[1] John D. Barnhart and Dorothy L. Riker, *Indiana to 1816: The Colonial Period* (Indianapolis: Indiana Historical Society, 1971), 3.

Paleoindian	prior to 8000 BC
Archaic	8000 BC to 1000 BC
Woodland	1000 BC to AE 900
Mississippian	AD 900 to AD 1600[2]

While no evidence of Paleoindian culture has been discovered near the George Rogers Clark National Historical Park, some of the earliest indications of human occupation in areas of southwest Indiana in the area near Vincennes include numerous mussel shell middens indicative of Archaic period traditions.[3]

Settlement patterns in southwest Indiana likely represented a hunting and gathering subsistence type culture for thousands of years with cultural traditions becoming more diverse by the period ranging from 4000 to 1500 B.C.[4] Cultural expansion included an increased manufacture of tools and pottery plus increased territorial stability.[5]

According to Nickel, "pottery is a consistent element of Woodland Tradition habitation sites." [6] Early cultures which developed near Vincennes are classified as Woodland Cultures of Algonquian association; these American Indian tribes are typically associated with the cultivation of domesticated plants, particularly corn, beans, and squashes. Intensive agricultural practices were supplemented by hunting, fishing, and the collection of wild plant foods.[7]

While there are archeological indications of some Mississippian cultures in Southwest Indiana, studies indicated that these villages were concentrated and small. Late Woodland sites classified as Yankeetown have been located in the immediate area of Vincennes and down the Wabash River valley to its confluence with the Ohio River. Apparently the "Yankeetown" culture has been interpreted as both Late Woodland and "emergent" Mississippian by various archeologists;" the disagreement seems to focus on the different settlement patterns of the cultures. Another study located some sites along the Wabash River and the Embarrass River in Illinois that were subsequently named the "Vincennes Culture", but none apparently were located in the vicinity of the George Rogers Clark memorial in Vincennes.[8]

By the 1720s French traders dominated the Great Lakes area with forts and trading posts established along the waterways and trade routes throughout the region. A struggle between the British and French for dominance over trade in the area ensued. British and

[2] James H. Kellar, *An Introduction to the Prehistory of Indiana.* Second Edition (Indianapolis: Indiana Historical Society, 1983), 24-25.
[3] Nickel, 22.
[4] Don Dragoo, "Some Aspects of Eastern North American Prehistory: A Review, 1975," *American Antiquity 41* (1976): 11.
[5] Dragoo, "Aspects of North American Prehistory," 3-27.
[6] Helen Hornbeck Tanner, Ed. *Atlas of Great Lakes Indian History* (Norman, OK: University of Okalahoma Press, 1987), 26.
[7] Tanner, 18.
[8] Nickel, 4.

French trade methods with American Indians differed. "The British issued licenses to traders who went to villages and there set up trading posts. The official French traders ran combined fort and trading posts to which the Indians brought furs."[9] A fort at Vincennes was established on land occupied by the Piankashaw tribe during this period. The Piankashaw were "Miami who had established a village at the confluence of the Vermilion and Wabash rivers in the 1720s, a village they occupied for decades. In the 1730s, with the arrival of Sieur de Vincennes, many had migrated to the area near the site of Vincennes. With a few interruptions, the Piankashaw were a permanent presence in the French Town and its environs."[10] The Piankashaw hunted in the region and traded with the French at Vincennes. According to *The Atlas of Great Lakes Indian History*, the Piankashaw tribe dominated the area of the Wabash Lowlands by 1768 with the Wea, Kickapoo, Mascouten and Miami tribes residing to the north and the Illinois tribes to the west.

1732-1790: Chronology of Early Recorded History of the Site

A summary of the early chronology of the GERO site is outlined below. During this period, Vincennes became established as a strategic trading location for the French. Subsequent struggle for control of this area by French, British and American interests eventually led to the expansion of the United States into the Northwest Territory. A 1792 Plat of Vincennes is represented in *Illustration A.*

1732 Francois-Marie Bissot, Sieur de Vincennes, a frontiersman, is appointed by Governor de Vaudreuil of New France (encompassing Eastern Canada) to go live among the American Indians of the Upper Wabash to help establish a French presence there. Bissot establishes the fur trading post which became known as "Vincennes" after its founder. The site was close to many American Indian tribes and had topographical features which were perceived as conducive to settlement.

1742 The Piankashaw grant over one million and one half acres of land around Vincennes to the French.[11]

> "Where the Buffalo Trace intersected the Wabash River, on the high bank, two distinct but harmonious cultures had peacefully co-existed for nearly fifty years, and with some prosperity, particularly during the long and beneficent tenure of Louis St. Ange. These were the Piankashaw village and the French community, and both survived with very little notice until the Peace of Paris in 1763 and the Treaty of Paris in 1783. Then followed the formation of the Northwest Territory in 1787."[12]

[9] Tanner, 39.
[10] Andrew R. L. Cayton, *Frontier Indiana*, (Bloomington, IN: Indiana University Press, 1996): 52.
[11] Cayton, 46.
[12] John Francis McDermott, "French Settlers and Settlements in the Illinois Country in the 18th Century," *The French , the Indians, and George Rogers Clark in the Illinois Country: Proceedings of an Indiana American Revolution Bicentennial Symposium*, (Vincennes, IN: Vincennes University, May 14 and 15, 1976), 3.

APPROXIMATE LOCATION OF CURRENT PARK BOUNDARY

Note: Map has orientation differing from other graphics.

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GEORGE ROGERS CLARK NATIONAL HISTORICAL PARK

VINCENNES, INDIANA

VINCENNES
PLAT MAP 1792

ILLUSTRATION
A

0 200

1752 George Rogers Clark[13] is born in Virginia.

1763 Treaty of Paris formally ends French and Indian War with British victory over France; however, French civilians continue to occupy the interior of the country. The British use Indians to carry out attacks on French settlers. St. Ange, commandant at Vincennes, reports "'he had called together the Piankashaw…and that they had accepted the calumet of peace.'"[14] St. Ange remarks on progress in establishing the post as a major center of trade and leads "in the rebuilding of the fort erected by [the Sieur de] Vincennes, and despite the opposition of the French government in Louisiana, which wanted to move the post to the north of the Wabash, he persisted in trying to attract both Indians and French settlers to the settlement."[15]

1764 St. Ange transfers authority of Vincennes to Monsieur Drouet de Richerville with responsibilities to "'maintain good feelings among the Indians to prevent disorder so long as [he was] in charge.'"[16]

1767 British officials order a census of the French settlements. The census reveals that there were "some 232 men, women, and children living permanently at Vincennes." The census also included a count of 168 "Strangers" assumed by many scholars to have been mostly servants or fur traders.[17]

1777 Edward Abbott, Lieutenant Governor and Superintendent of Indian Affairs for the Ohio Country, reaches Vincennes. Abbott has a stockade built around the two story house he was using for his quarters. This new fort is believed to be the structure named Fort Sackville.

1778 Kaskaskia, Cahokia, and Vincennes are captured by George Rogers Clark who represents American interests.

July 4th – Clark appoints Captain Leonard Helm to be the commandant of the fort.

December 17 – Fort is re-taken by the British.

1779 In February, Clark sets out to re-take Vincennes; surrender to his troops occurs on February 25th.

[13] George Rogers Clark (b. 19 November 1752) was a surveyor for the Ohio Company to Kentucky in the mid-1770s. He went on to submit a plan to Governor Patrick Henry of Virginia a plan for an offensive on Indian raids against American settlements which he believed were instigated by British Generals. His subsequent military career was important in the establishment and preservation of the American Northwest Territory.
[14] Dorothy Libby, "An Anthropological Report on the Piankashaw Indians, Docket 99," 6 October 2000, <www.gbl.indiana.edu/archives/dockett_00/99_5a.html> (15 August 2005).
[15] Cayton :46.
[16] Cayton, 47.
[17] Cayton, 50.

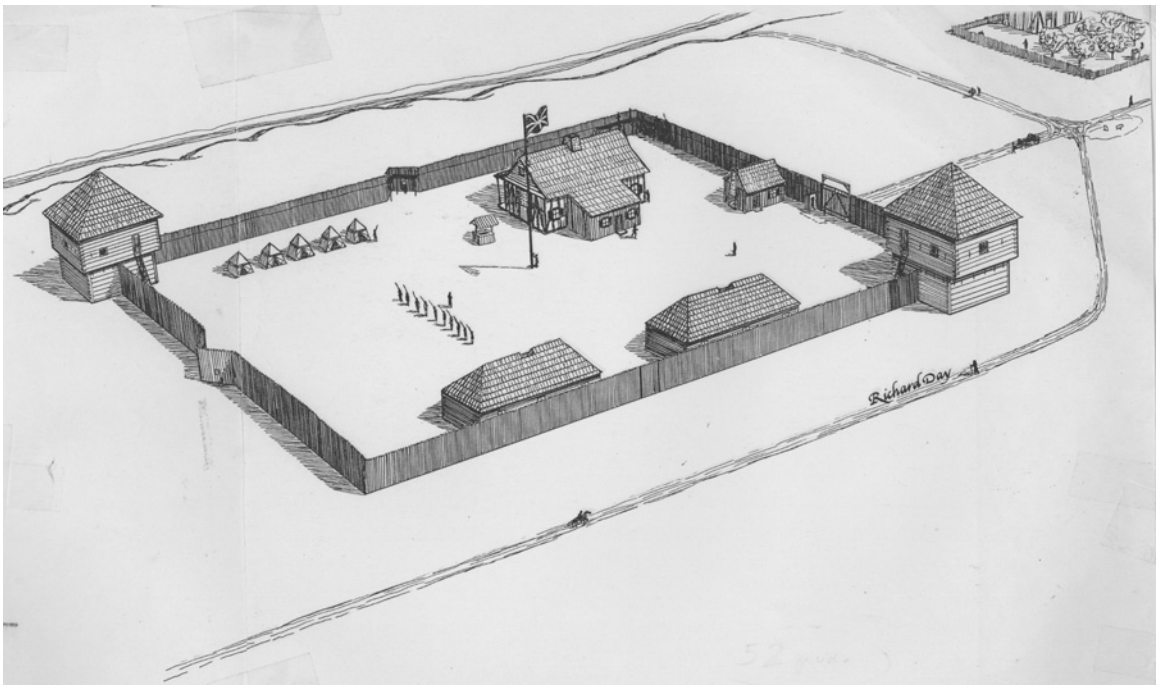

Figure 2.1: Interpretive drawing of Fort Sackville, Courtesy of Richard Day, personal collection.

1786 A church is constructed near the present location of St. Francis Xavier Cathedral adjacent to the GERO site. This church is constructed of upright hewn timbers and is approximately twenty-two feet long with a small bell tower.[18]

1787 Congress establishes the "Territory Northwest of the River Ohio" comprising of Ohio, Indiana, Illinois, Michigan, Wisconsin, and Eastern Minnesota.

1790 Report to General George Washington from Winthrop Sargent[19] states about Vincennes, "'in addition, sir, to the ancient possessions of the people of Vincennes, under French and British concessions here is about one hundred fifty acres of land constituting a part of the village, and extending a mile up the Wabash river, in front of their improved claims, which was granted by Mr. St. Ange to some of the Piankeshaw Indians, allotted into small divisions for their wigwams, and by them occupied and improved, until the year 1786, when the last of them moved off; selling individually as they took themselves away, their several parts and proportions.'"[20]

[18] Richard Day, "History of the Old Cathedral, Basilica of St. Francis Xavier," undated, <http://www.spiritofvincennes.org/rendezvous/cathedral/history_cathedral.htm> (24 April 2006).
[19] Winthrop Sargent (b. 1753) was an American soldier and Governor of the Northwest Territory from 1798-1801. Before becoming governor of the territory, sergeant was a surveyor and secretary in the region. He also served as adjunct general of the Territory from 1794-1795.
[20] McDermott, 3.

1800-1924: Chronology of Early Site Events

A summary of the GERO site after its inclusion into the United States and before the development of the site as a Memorial to George Rogers Clark is outlined below. By the 1850s, the city had become home to a river port and rail crossroad. By 1920, the town's population reached approximately 17,000 people.[21] *Illustrations B and C* show plat maps from 1816 and 1880 in the area of the present-day GERO site.

1800 Act of Congress establishes Vincennes as the capital of the Indiana Territory.

1803 The army garrison in the town is moved three miles north. The site overlooks the Wabash and provides a good view of the Wabash. This fort is known as Fort Knox II. The former fort site (Fort Sackville) is divided into plats and is developed as an industrial and residential site.

1803-1924 Development within the current park boundary includes several structures including a log cabin, frame structure, grain elevator, gas works, a railroad spur and several industrial type buildings.

1813 The territorial capital is transferred to Corydon, Indiana.

1826 Construction of the Cathedral of St. Francis Xavier adjacent to the present location of the GERO site commences. Plans for the church are copied from the Cathedral at Bardstown, Kentucky. The structure is 60 feet wide by 115 feet long.[22]

1841 A Greek Revival style rectory is constructed adjacent to the St. Francis Xavier Cathedral.[23]

1850s The population of Vincennes is nearly 4,000 people and the town has become a small industrial port and transportation hub.

1880 The population of Vincennes has reached 8,000 people.

1880s Approximate time of construction of the levee on the Illinois side of the Wabash River across from the present-day GERO site.

1905 A small marker is erected on the present site by the Daughters of the Revolution (DR). This stone with a bronze plaque marks the presumed location of Fort Sackville.

[21] Richard Day and William Hopper, *Images of America: Vincennes*, (Chicago, IL: Arcadia Publishing, 1998), 8.
[22] Richard Day, "History of the Old Cathedral."
[23] *Ibid.*

APPROXIMATE LOCATION OF CURRENT PARK BOUNDARY

Note: Map has orientation differing from other graphics.

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GEORGE ROGERS CLARK NATIONAL HISTORICAL PARK

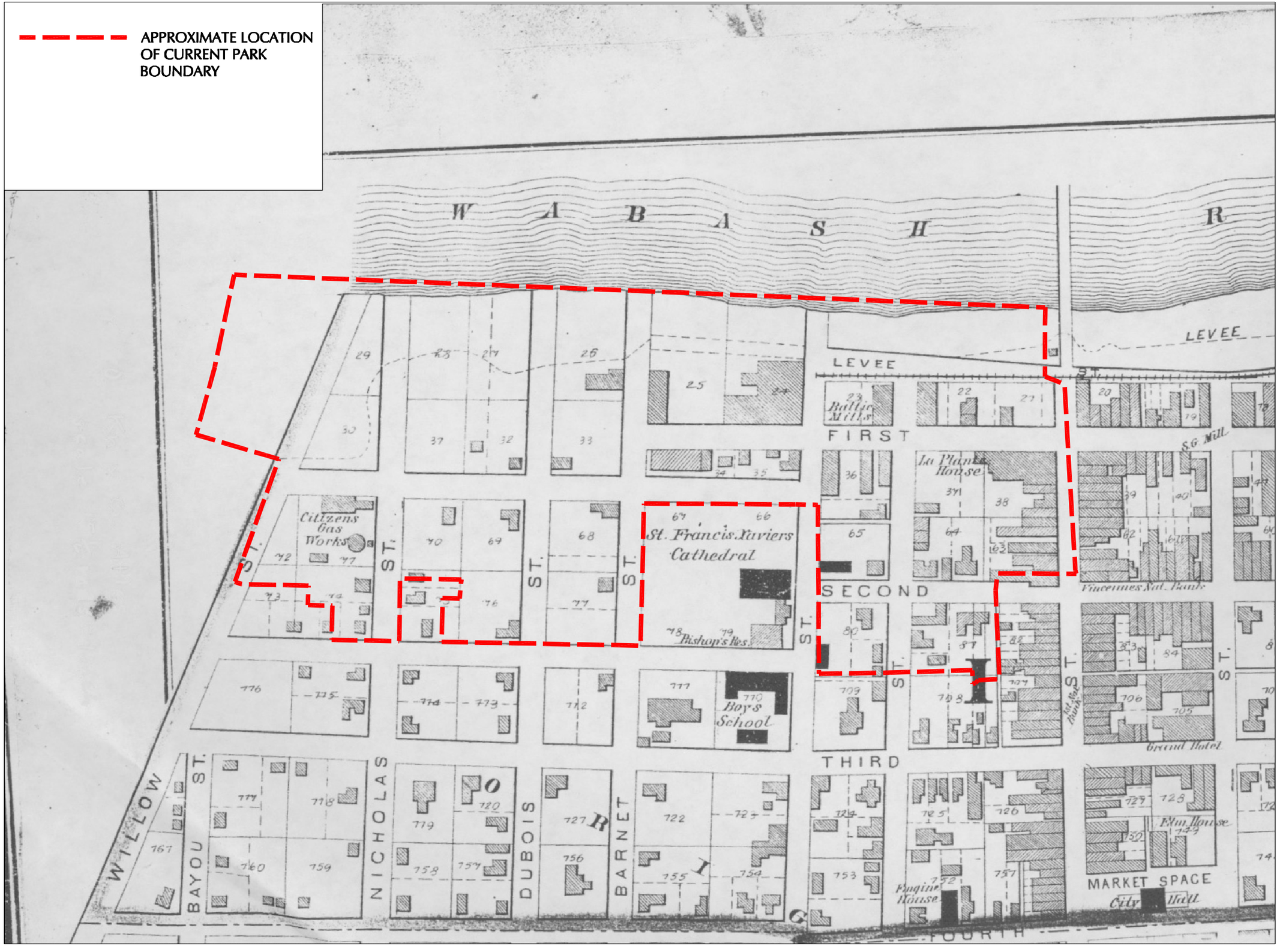
VINCENNES, INDIANA

VINCENNES PLAT MAP 1816

ILLUSTRATION B

0 200

APPROXIMATE LOCATION OF CURRENT PARK BOUNDARY



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GEORGE ROGERS CLARK NATIONAL HISTORICAL PARK

VINCENNES, INDIANA

VINCENNES
PLAT MAP
1880

ILLUSTRATION
C

0 200

Figure 2.2: Photo of Bonner Cotton Mill, formerly located at GERO site, 1821, Courtesy of Richard Day, personal collection.

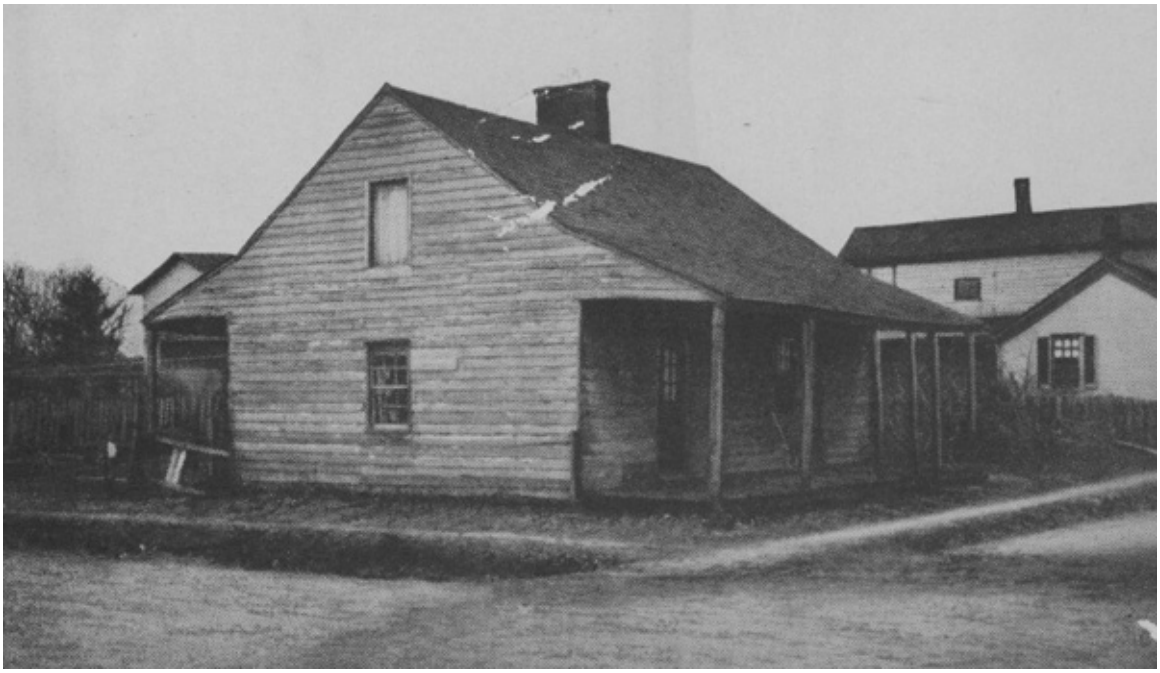

Figure 2.3: Wood frame house typical of those formerly located on the GERO site prior to Memorial construction, Courtesy of Richard Day, personal collection.

1925-1939: Chronology of George Rogers Clark Sesquicentennial Commission Years

A summary of the GERO site during its development is outlined below. During this period, a commission was established to find an appropriate way to commemorate the heroic efforts of George Rogers Clark at Fort Sackville. A competition for a Memorial Building design ensued and the Memorial Building and Memorial Grounds were implemented. *Illustrations D, E, F, G, H,* and *I* represent this time period.

1925 Movements begin for creating a George Rogers Clark Memorial. D. Frank Culbertson is the leader of the movement.

1926 January – The Indiana Historical Society appoints a committee to formulate and initiate plans for a Memorial to commemorate the 150th anniversary of Clark's capture of Fort Sackville.

1927 The state of Indiana creates the George Rogers Clark Memorial Commission (GRCMC).

H. Van Buren Magonigle gives a presentation to the GRCMC regarding the ease of removal/relocation of the railroad track present on the site. (Magonigle had been asked by the GRCMC to be general designer along with Frederick Law Olmsted, Jr., who was not able to participate.)

Magonigle's preliminary proposal is adopted by the GRCMC and he is instructed to make the necessary studies of the Memorial for presentation to the Joint Committee of the Library of Congress.

1928 January 28 – The first large tract of land is acquired for the Memorial site.

May 3 – President Coolidge signs into law the public resolution establishing a national commission and appropriating funding for the Memorial project.

1929 March 19 – Plans for the Lincoln Memorial Bridge are approved.

April 18 – The GRCMC appoints William E. Parsons of Bennett, Parsons& Frost as Architectural Advisor in the competition for the design of the Memorial Building. At the request of the GRCMC, Parsons presents his vision for the Memorial Building and Memorial Grounds. Parsons estimates the work for the site exclusive of the Memorial Building to total $450,000.[24]

June 20 – At a meeting of the GRCMC, Parsons outlines guidelines for a competition for the Memorial design. Mandatory elements include a proposed location for the Memorial Building within the site boundaries which was to be

[24] Edwin C. Bearss, *George Rogers Clark Memorial Historic Structures Report Historical Data*, (Washington, DC: US Department of the Interior, NPS, 1970), 54-55.

APPROXIMATE LOCATION OF CURRENT PARK BOUNDARY

WABASH RIVER

PROPOSED BRIDGE

WABASH RIVER BRIDGE

ILLINOIS

D & O. S.W.R.R. BELT SWITCH

WHARF

WHARF

WHARF

LEVEE STREET

LEVEE STREET

BLOCKHOUSE SUBDIVISION

14 15 16 17 18 19 20 21

25 John S. Bierhaus 24

27

John & Helen Bierhaus

26

State of Indiana

23

Baltic Mills Company a Corporation

22

John & Helen Bierhaus

Louis Linkin

Harry J. Jordan

21

Orval C. Meyer Melvin J. Meyer

McKenny Farms Pearlff Company

20

32

33

State of Indiana

FIRST STREET

13 12 11 10 9 8 7 6 5 4 3 2 1

State of Indiana

FIRST STREET

POSEY STREET

ARNETT STREET

CHURCH STREET

VIGO STREET

MAIN STREET

Margaret & Charles Kohn

69

J.E. Chamberlon

Clarence H. Snyder

John A. Teising

76

Martha J. Love Estate

Sophie Bey

C. Henry Brocksmith

68

Bert King et ux

Orley C. Ayers

Emma Rector

Maud Emison Brevoort

Cora I. Sandifer

Christopher Offensmeyer

Frank H. Hoffman et ux

Charles Teising

Ida O. Beigenorth

Margaret E. Smith

77

Mabel E. Kennedy

Raymond Doll

Fred Bathauck

P. Shiek

67

66

Right Reverend Joseph Chartrand

Roman Catholic Bishop of Indianapolis

78

79

Right Reverend Joseph Chartrand

Roman Catholic Bishop

State of Indiana

66

Rosa E. O'Neal

Right Reverend Joseph Chartrand

65

Roman Catholic Bishop of Indianapolis

Right Reverend Joseph Chartrand Roman Catholic Bishop of Indianapolis.

Susan Page

80

Clifford C. Gosnell Jr.

George E. Alsop

37

Brewer Auto Electric Co.

Joseph T. Griggs

64

William L. Ewing

Doris & Stella Ritterskamp

John V. Farwell Company

38

Horace M. Thuis

J.B. La Plante Estate

Stella M. & Doris Ritterskamp

R.E. Porcell Estate

Scott 63 Emison

J.B. La Plante

J.T. McJimsey

39

62

SECOND STREET

C.O. Fulwider Neva Fulwider

Maria Dajeau

81

Joseph Calahan et ux

H. Cyboull

Mary Hugh Emison

Barbara Hartigan

Joseph T. Griggs

Frances M. Hartz

R.M. Glass

82

McKenney Farms Realty

Seleman Grimbel Hrs.

John T. Oliphant

First National Bank

John H. Miller

83

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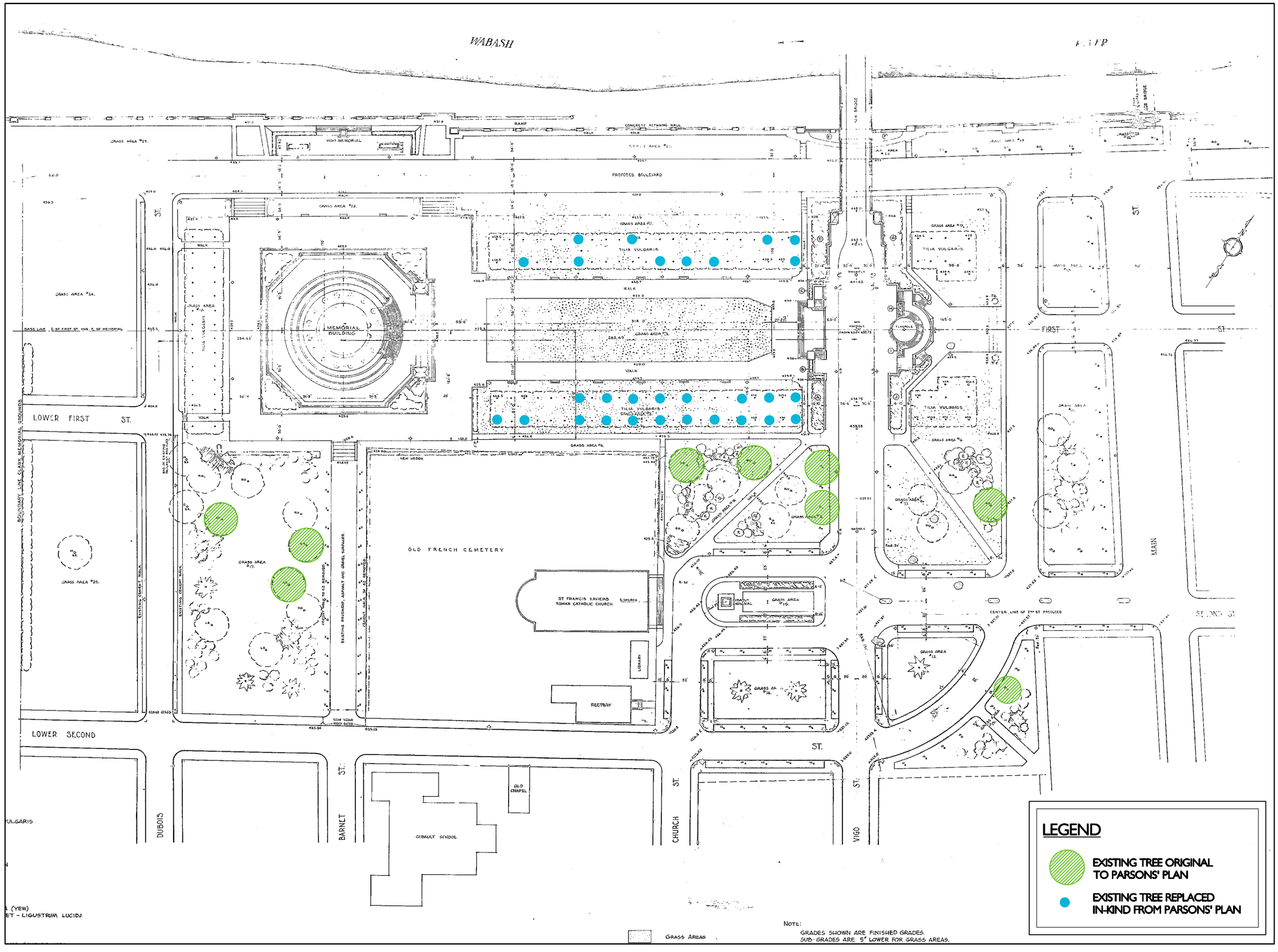
PLAT OF MEMORIAL SITE 1929

ILLUSTRATION D

N

0 100



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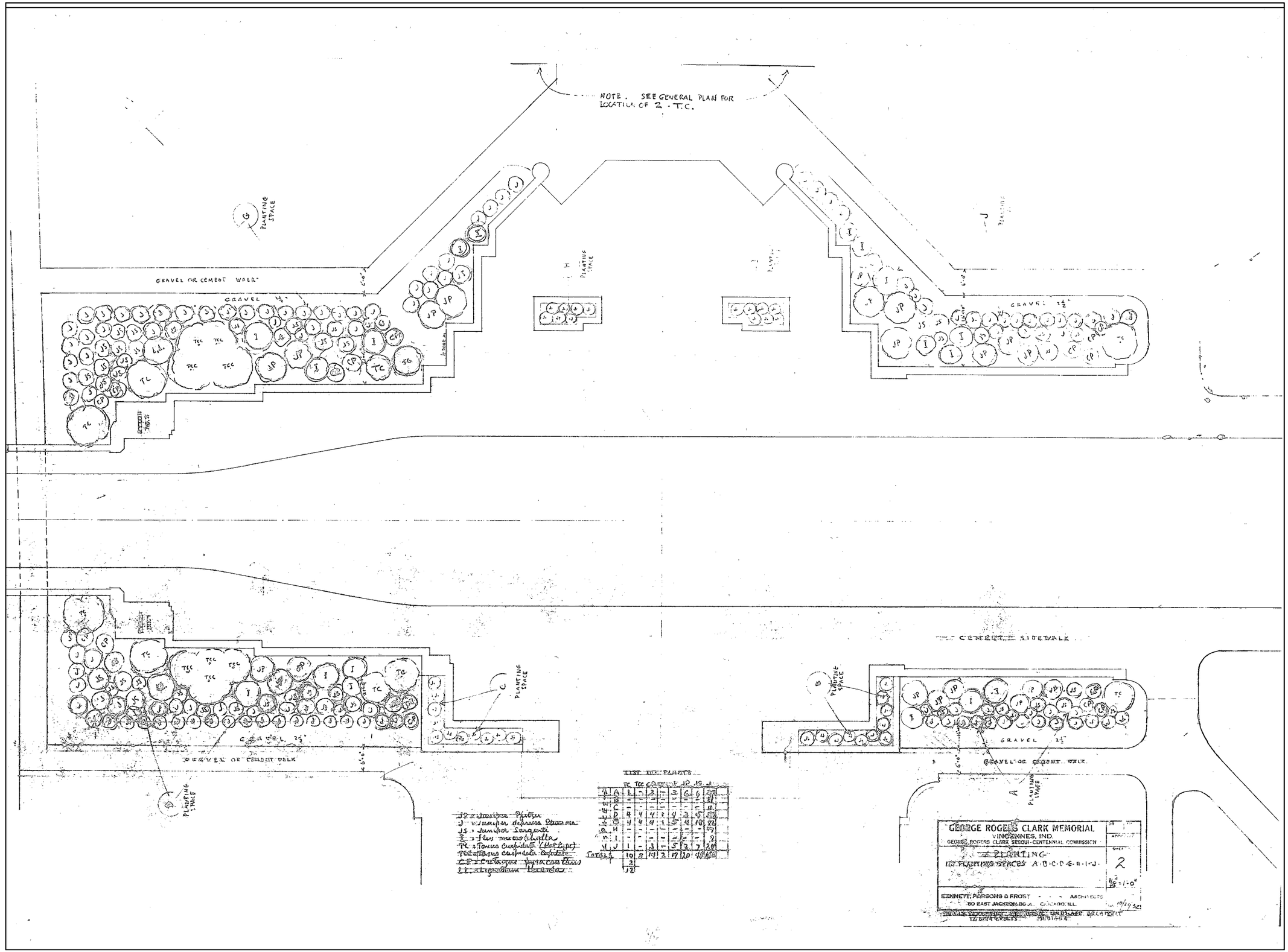
ANNOTATED PARSONS PLAN 1932

ILLUSTRATION E

0 100



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VINCENNES, INDIANA

PARSONS DETAILED PLANTING PLAN

ILLUSTRATION F

WABASH RIVER

NOTES

GRADES SHOWN ARE FINISHED GRADES.
SUB-GRADES ARE - 5" LOWER FOR GRASS AREAS.
9" LOWER FOR WALKS.
12 LOWER FOR ROADWAYS.
15 LOWER FOR SHRUBBERY.

SIDEWALK WIDTHS ARE INCLUSIVE OF CURBS.

PLANTING SPACES | GRASS AREAS | IN STREETS-NEW FOUNDATIONS AND STREET PAVING.

EXISTING STORM WATER SEWER.
NEW STORM WATER SEWER.
EX-M.H. EXISTING MANHOLES.
N-M.H. NEW MANHOLES.
N-C.B. NEW CATCH BASINS. (ALL LATERALS TO BE 12" TILE).
NEW LAMP STANDARD LOCATIONS.

STREET PAVING NOTES

ASPHALT AND BRICKS SHALL BE REMOVED FROM EXISTING WORK, AND CONCRETE BUILT UP TO THE EXTENT NECESSARY TO FORM PROPER CROWNS AND INTERSECTIONS AT ALL STREET INTERSECTIONS AND ALONG RUNS WHERE CROWN POSITION CHANGES DUE TO NEW CURB LOCATIONS. OLD BRICK SHALL BE REPLACED IN MAIN STREET AND NEW ASPHALT PLACED ELSEWHERE.
REMOVE OLD CURBS AND GUTTERS AND PAVING UNDER ISLAND IN SECOND STREET.

SECTION THRU MAIN STREET

70' NEW STREET WIDTH
35 NEW ASPHALT PAVEMENT
NEW CURB
OLD CURB TO BE REMOVED
35 EXISTING BRICK PAVEMENT
OLD CURB TO REMAIN
50' NEW STREET WIDTH

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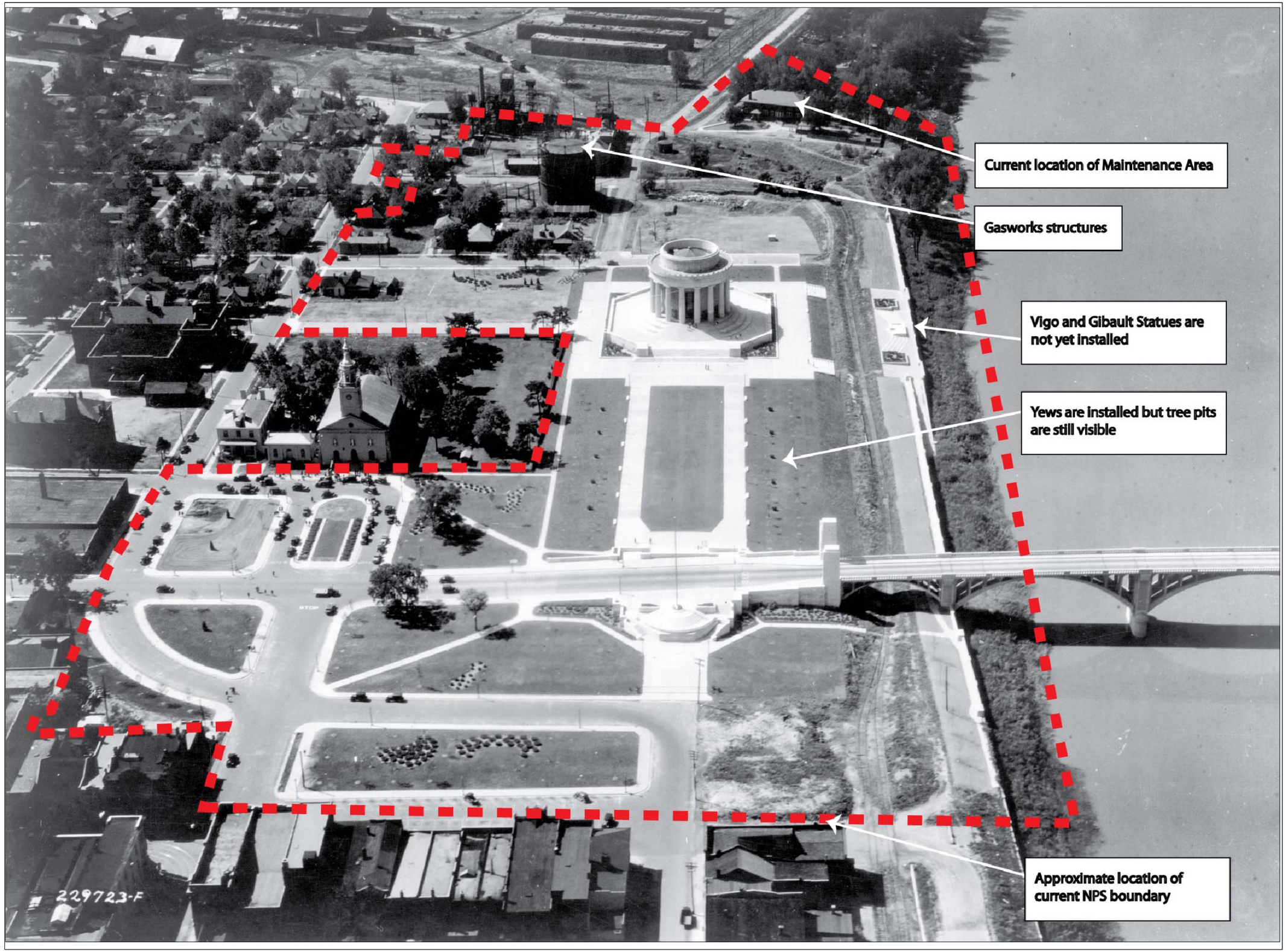
VINCENNES, INDIANA

PARSONS REVISED SITE PLAN

ILLUSTRATION G

0 100



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VINCENNES, INDIANA

C. 1934
BIRD'S EYE VIEW OF SITE

ILLUSTRATION
H

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GEORGE ROGERS CLARK NATIONAL HISTORICAL PARK

VINCENNES, INDIANA

1937
AERIAL

ILLUSTRATION
I

0 200

"'located within the rectangle bounded by the boulevard along the river, Dubois Street, the church property and a line drawn from the rear of the church of Saint Francis Xavier to the river.'"[25]

Plat Map complete in this year reveals the following structures present in the Memorial site: three-story structure with a basement, log cabin, several basement structures, one-story structure, concrete cistern, retaining wall, two gas tanks, and concrete footing for a grain elevator.

1930 Construction of the Lincoln Memorial Bridge commences.

January 18 – Plans for the Floodwall are approved by the GRCMC.

The Ferry Landing Plaque is installed as part of the Floodwall construction to commemorate the site where Abraham Lincoln crossed the Wabash River to Illinois in 1830.

February 3 – Jury of Award convenes in Vincennes to review the site and compare competition submittals.

February 14 – Winning design is announced by the Jury of Award. F.C. Hirons & Mellor, Architects of New York City are declared the winner. Hirons' design is a raised circular granite structure surrounded by a colonnade of sixteen granite Doric columns. A central rotunda of the building would hold a statue of Clark. "One of the most praised features of the memorial were the miniature forts with cannon at the four diagonals, representing Forts Sackville, Kaskaskia, Harrod, and Cahokia. The interior of the structure would be enriched by murals depicting scenes from the winning of the Old Northwest…Memorial features were to be incorporated into the Indiana approach to the bridge."[26]

October – T.J. Edwards of Vincennes employed to supervise the clearing of the grounds.

December 24 – River wall construction is approved.

1931 Spring – Most of the land needed for the Memorial has been acquired.

April – The contract for removal of the Bierhaus Company Warehouse (a massive three-story brick building with a basement) is awarded.
September 1 – The ground is broken for construction of the Memorial Building; the W.R. Heath Company is awarded the contract for construction.

[25] *Ibid*., 55.
[26] *Ibid*., 58.

November – Workmen raze the Emison Hardware building at the intersection of Second and Main Streets (The building dated to the 1820s and was one of the oldest business houses in Vincennes.)

1932 Lincoln Memorial Bridge construction is complete.

May 17 – Parsons and the executive committee meet and eliminate the proposed reflecting pool between the Memorial Building and the bridge approach from the plan. Reasons for this deletion are "(a) with the memorial overlooking the Wabash there was no need for an artificial body of water to enhance the beauty of the grounds; and (b) the space between the memorial and bridge was so restricted that it would give the pool a cramped appearance."[27] Further decisions made by the committee and Parsons at this time are that there would be a double street to replace South Street with a sufficient width for two way traffic and a "flower court" in the center. "There would be a 'graceful curve' where the street intersected U.S. 50, making it possible for traffic to flow through the east side of the Memorial Grounds. At the same time, the proposed Memorial boulevard would attract motorists desiring to drive along the river side of the Memorial Grounds to Willow Street, with a left turn at 2nd [sic] to Main, and west on Main to the boulevard. Such a drive would enable a visitor to get a 'full view of the memorial and the park.'"[28]

Fall – Workmen raze brick structures housing the Overland Garage and Vincennes Auto Parts to make way for the 100 foot wide street to extend from Main Street to the Cathedral.

1933 July – Workmen demolish the Hartigan Building located on the alley between Main and Vigo Streets (the land will be used for the curve of Second Street.) Main Street was widened between First and Second Streets to form a border driveway for the Memorial Grounds. Barnett Street was closed within the site boundary and converted to a walkway. Dubois Street is extended toward the river in anticipation of the future Boulevard in the area currently occupied by the train tracks.

September 3 – The Lincoln Memorial Bridge is dedicated. The date marks the sesquicentennial of the signing of the Treaty of Paris, marking the end of the Revolutionary War and confirming the US possession of the Old Northwest Territory. The George Rogers Clark Memorial Building is completed.

[27] *Ibid*., 101.
[28] *Ibid*., 102.

Figure 2.4: Spring 1932 view of construction of GERO from Lincoln Memorial Bridge, Courtesy of Richard Day, personal collection.

Figure 2.5: May 19, 1932 view of construction of the Memorial Building from Illinois Side of the Wabash River, Courtesy of Richard Day, personal collection.

October – Walkways on the Memorial Grounds have been completed and concrete base around the plaza has been poured.

Hubert Hunsucker, landscape contractor for the grounds, and his employees begin to install junipers and Japanese yews around the Memorial Building and on the west side of the Bridge Approach.

1934 The implementation of the original hardscape layout plan by Parsons and landscape plan by Donald B. Johnston for the Memorial Grounds commences including a tree-lined allee which delineates the Memorial Ground boundaries with a single row of oaks or maples (except for the riverfront). (This plan developed jointly by Parsons and Johnston will from hereon be referred to as the "Parsons Plan").

Included in installation of the landscape is an inventive irrigation system which had been used at the Century of Progress Exposition at the Chicago World's Fair known as the Muellermist system. "The system to be installed at the park

consisted of a maze of pipes of many sizes to bring water from a 12-foot gravel pocket well. This well, capable of pumping 600 gallons of water per minute, was located about 400 feet west of the Memorial Building. It was controlled automatically by the custodian from the basement of the memorial."[29] Construction of this system includes over 1000 spray heads supplied by copper piping with brass fittings. During installation contractors discover human remains approximately four feet below ground level. Local historians evaluate the bones and date them to the eighteenth century.

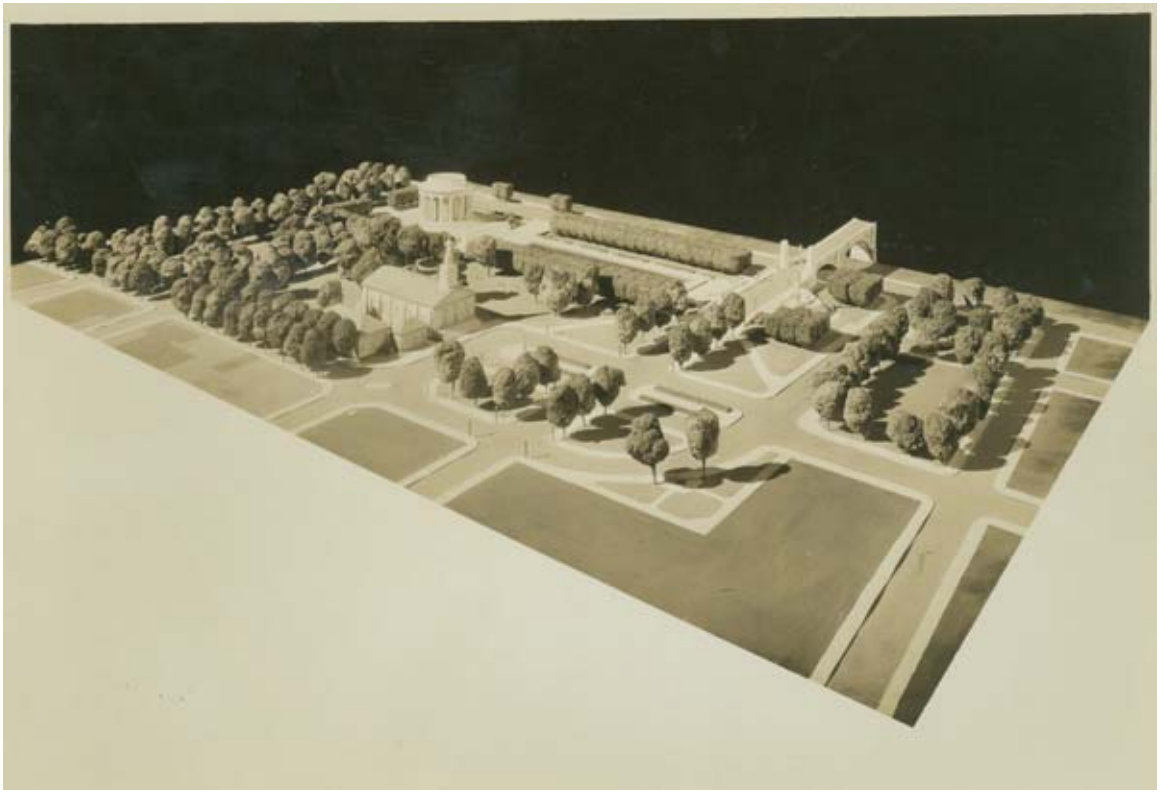


Figure 2.6: Undated view of model of original landscape plan by Parsons, Courtesy of Richard Day, personal collection.

[29] *Ibid*., 106.

Figure 2.7: c. 1934 view of Memorial Building with newly installed Linden allèe as specified by Parsons Plan, Courtesy of Richard Day, personal collection.

Figure 2. 8: c. 1934 view of plantings implemented per original Parsons plan, Courtesy of Old Cathedral Library and Museum, Saint Francis Xavier Church.

April – Terrace of the George Rogers Clark Memorial shows first signs of leaking. At this time, "steps were taken to protect the mechanical and electrical equipment from seepage." A number of joints in the terrace are removed and recaulked.[30]

July – Terrace and stylobate caulking is repaired.[31]

August – Leaks appear in Memorial Terrace. Leaks are now apparent in the custodian's office and electrical equipment room.[32]

September – George S. Schugman is given a contract for the installation of 61 lamps positioned on bronze standards throughout the grounds. The lights were to be 2,500 lumens each and controlled by an astronomical dial with motor operated time switches.

Fall – The landscape plan is significantly altered because of the death of numerous trees. The allée is changed from two double rows of pleached linden trees to two lawn panels with specimen yews for visual orientation.

Implementation of walkways – concrete for walkways has a four inch slump to improve strength. Concrete is poured at an eight inch depth with exposed aggregate. Aggregate in front of the St. Francis Xavier Cathedral is larger than typical. The rest of the walkways have a ¾ gravel aggregate in the mix. Exposed aggregate is achieved by wire brushing concrete sets slightly. All concrete is mixed on the job and leveled with a straight edge.[33]

1935 Mid-January – Shugman completes the lighting project for the Memorial Grounds.

March – Leaks are still apparent in the Memorial Terrace in the boiler, meter, and electrical equipment rooms.[34]

April – Memorial Terrace repairs include recaulking of open joints.

November – A WPA workforce is brought in to remove gas pipes from land acquired from the Central States Gas Company.

[30] RATIO Architects, Inc. and Arsee Engineers, Inc. *Repair Memorial Terrace, George Rogers Clark National Historical Park, NPS Task Order Number T200005A016,* (Vincennes, IN: US Department of the Interior, NPS, 15 February, 2005), 2.
[31] *Ibid*.
[32] *Ibid*.
[33] Victor Mullins, "Oral History Project," interview by Dennis J. Latta and Rob Holden, 6 February 1981.
[34] RATIO, *Terrace*, 2.

1936 A statue of Father Pierre Gibault[35] is installed in front of Saint Francis Xavier Catholic Church.

A statue of Francis Vigo[36] is installed on the riverfront of the Memorial Grounds on axis with the Memorial Building.

The Charles Gratiot[37] Monument is placed on the site by the Huguenot Societies of the Old Northwest Territory.

May 14 – The Fort Sackville Memorial stone (originally set on the site in 1905) is re-set in a shrubbery plot at the northeast corner of the structure.

June – A published report states that the leaks from the terrace into the basement of the Memorial are as bad as ever.[38]

June 14 – The George Rogers Clark Memorial is dedicated by President Franklin D. Roosevelt.

1937 The Gas Plant is demolished. The area that the Gas Plan occupied is landscaped utilizing WPA worker labor.

The War Memorial located on the northwest side of the GERO site, is installed. Sponsors of the memorial include: American War Mothers, Vincennes Chapter, American Legion Post No. 73, American Legion Auxiliary, Unit No. 73, and the City of Vincennes.

1939 The Federal Commission for the GRC Memorial is dissolved. The State GRC Commission takes over until the approval of legislation by the federal government to manage the Memorial Building and Grounds. Parsons passes away.

April – An investigation finds 4-foot stalactites in the basement of the Memorial Building as a result of the Terrace leaking.[39]

July-September – A local architectural firm studies the leakage into the basement and determines that if money were no object, the waterproof membrane beneath the terrace should be replaced. An alterative is presented to seal all joints of the

[35] Father Pierre Gibault, b. 1737, was a missionary priest sent to the Illinois country in the mid-1700s. Gibault was critical in convincing the citizens of Vincennes to shift their allegiance from the French to the American interests.
[36] Francis Vigo, b. 1747, was a fur trader who provided supplies and information to General Clark's forces which was critical to the success of the American cause against the British in the area.
[37] Charles Gratiot, b. 1752, was a fur trader who aided General Clark's forces during the siege at Vincennes.
[38] *Ibid*., 3.
[39] *Ibid*.

Memorial Terrace and coat the entire surface with a colorless waterproof material. Neither alternative is undertaken.[40]

1939-1940 Interim period during which no money is allocated for the maintenance of the Memorial Building or the Memorial Grounds. Public outcry calls the site "Indiana's most neglected shrine."

1940-1960: Chronology of Indiana Department of Conservation Years

A summary of the GERO site during its ownership by the Indiana Department of Conservation is outlined below. During this period, repairs were made on several of the site features and a variety of individual memorials and plaques are placed throughout the site.

1940 Ownership of the Memorial Building and Grounds is passed from the State GRC Commission to the State of Indiana Department of Conservation.

An earthen levee is installed on the south side of the property to control flooding from the Wabash River. The levee parallels the Wabash River and is approximately two hundred feet from the riverbank.

1941 September-December – An investigation by McGuire & Shook, an Indianapolis architectural firm, blames leakage of Memorial Terrace on imperfections in the waterproof membrane. It is proposed that an attempt be made to seal the terrace. This is done by routing all cracks in the surface and filling them and all joints with molten asphalt. To the remainder of the surface, a clear waterproof sealer is applied.[41]

1942 January – Water penetration continues through Memorial Terrace.[42]

1943 Caulking repairs are performed on the terrace surface.[43]

1945 A fire occurs at the bridge approach. Landscaping in this area is destroyed and replaced soon thereafter.

1946 Sixteen lights are installed at the top of the rotunda of the Memorial Building. Each unit consists of four 300-watt lamps over a ribbed glass cover and bulb.

1947 A purchase of additional land on the bank of the Wabash for the Memorial Grounds.

[40] *Ibid*.
[41] *Ibid*.
[42] *Ibid*.
[43] *Ibid*.

1952 June- Two layers of muslin, Jennite J-16 and Carbo-Tread are applied to the Memorial Terrace surface in an attempt to stop leakage. The exposed aggregate surface is now covered with black asphalt. This treatment slows but does not stop leakage into the basement.[44]

1953 The Vincennes Chapter of the American War Mothers relocate the Gold Star War Memorial to the southwest corner of First and Main Streets because of a plan for extending the river wall.

Figure 2.9: View of Memorial in 1953, Courtesy of Richard Day, personal collection.

1954 October – The Daughters of the American Revolution erect a Clark Headquarters historical marker plaque at the northwest corner of First and Main Streets.

1957 The curve of privet hedge on the northeast edge of the property is altered to screen views of an adjoining private property.

1958 July – A combination of latex rubber, glass fabric, Jennite J-16, and Dex-O-Tex is used to cover the terrace surface. The result is a temporary stop to leakage into the basement level from the Memorial Terrace.[45]

1965 November – Leaks from the Memorial Terrace again appear in the basement.[46]

[44] *Ibid*.
[45] *Ibid*.
[46] *Ibid*.

1966-Present: National Park Service Years

1966 July 23 – The Memorial Building and Memorial Grounds become property of the National Park Service. President Lyndon B. Johnson signs into law the measure establishing George Rogers Clark National Historical Park. A parking lot is installed on the south side of the property and some plantings are reinstalled.

October 15 – GERO is listed on the National Register of Historic Places under the passage of the National Historic Preservation Act.

1967 July 1 – The National Park Service begins management of the 24.3 acre site.

1970-71 Under the direction of Curtis H. Tomak, an attempt is made by Glenn A. Black Laboratory of Archaeology at Indiana University to locate the site of Fort Sackville.

1971 Museum specialists from Harpers Ferry inspect and clean murals in the Memorial Building.

1972-1973 Blacktop material and original concrete is removed from Memorial Terrace and replaced with new concrete. Dex-O-Tex membrane is applied to top surface of new concrete terrace.[47]

1973 February – New lights are installed in the Memorial Building rotunda above the skylight. Outside lights on the Memorial Building are renovated and florescent lights are installed in the basement area.

1974 A large area of the City of Vincennes is nominated to the National Register of Historic Places as a district. The boundaries of the district are the Wabash River, College Street from the Wabash southeast to Eleventh Street, Eleventh Street southwest to Willow Street (SR 441), and Willow Street northeast to the Wabash River.

February – Preliminary plans for the Visitor Center are presented to the National Park Service. The building is sited on the ridge directly behind the Memorial Building.

1975 A National Register nomination form is written for George Rogers Clark National Historical Park. Additional plantings are planned as part of site improvements prior to the US Bicentennial.

The location of the Visitor Center is debated based on a possible adverse aesthetic effect on the Memorial Building. A new location is proposed at the axis of Dubois Street with access to parking further south via Nicholas Street.

[47] *Ibid*.

1976 US Bicentennial precipitates a beautification effort on the Memorial Grounds. Improvements include construction of the new Visitor Center and parking lot. Included in the plans for these new facilities were planting plans for the entire Memorial Grounds. Plantings for the Memorial Grounds include: columnar yews at the base of the Memorial Building, maples, redbuds, sweet gum, hawthorn, oak, tulip popular, and white pines. The shrub beds on either side of Vigo Street are also rehabilitated and the shrubs at the base of the Gibault Statue.

The Illinois Bicentennial Commission, Illinois State Historical Society, and the Indiana Historical Society erect the Vincennes in the American Revolution Marker on the site.

Delta Theta Tau Sorority, Epsilon Psi Chapter and Alumni Association erects the Name of Vincennes Marker on the site.

July 4 – The new Visitor Center is opened on the southeast side of the park. This includes an expansion of the parking lot. Many trees, shrubs, and groundcovers are installed on the site.

July 11 – The National Register Nomination for GERO is approved.

1979 Tract 01-103 (consisting of 0.2 acres) is acquired by quit title.

1979-1980 A new well is installed on the site closer to Main Street.

1980 Spring – New application of Dex-O-Tex is applied to the Memorial Terrace.[48]

1982 Bridge approaches repointed adjacent to Vigo Street.

1983 Tract 01-102 (consisting of 1.17 acres) is acquired from the City of Vincennes.

Hand rail is installed in the middle of the Memorial Building steps as an effort toward complying with universal access.

1986 The National Register of Historic Places nomination form is revised by the National Park Service. The revision includes a description of property acquired since the initial nomination submittal. Photographs of the Memorial Building and Memorial Grounds as well as a property map are included in the nomination revision.

Vents are installed in the Memorial Terrace in hopes of venting the Dex-O-Tex membrane.[49]

[48] *Ibid*.
[49] *Ibid*.

1988 Tract 01-104 (consisting of 0.68 acres) is donated by the Catholic Church to the site. This tract becomes part of the present day Maintenance Area.

1989 The large yew plantings in the Mall area were removed with backhoes. Current maintenance staff members cite multiple reasons for the removal including the desire to increase visibility from the Bridge Approach to the Memorial (and vice versa) plus safety concerns resulting from illicit nighttime activities periodically occurring within or behind shrubbery that acts as a cover.[50]

National Park Service implements new plantings including 48 Greenspire linden (*Tilia cordata 'Greenspire'*) trees along the allèe portion of the Mall.

An engineering study completed by Patrick Engineering Company is conducted to assess the rate of bank erosion and structural integrity of the Wabash River Floodwall. The following conditions are noted: the Floodwall is spalled in many areas with numerous cracks; the expansion joints are deteriorated in many places; the top of the wall and coping are in poor condition in many places; a thin stucco veneer is severely cracking; standing water results along the sidewalk and the sidewalk has settled. Recommendations for repair to the Floodwall and adjacent sidewalk are made. Erosion protection measures are undertaken but repairs are not made to the wall.[51]

August – USS Vincennes Memorial, located in the greenspace north of Vigo Street, is dedicated.

1990 May – Repairs to Dex-O-Tex covering parts of the front terrace are completed. A block bond is tried in certain sections of the Terrace.[52]

June – Maintenance crew removes Dex-O-Tex covering from the southeast corner of the Memorial Terrace. The covering is deteriorated and breaking into small pieces. Crew removes, sands, recaulks, and seals the area. The concrete under the covering is in excellent condition.[53]

September – Northwest corner of the Memorial Terrace is repaired.[54]

Asbestos abatement project is undertaken in the Memorial Building basement and attic.

[50] Mullins, n.p.
[51] RATIO Architects, Inc. and Arsee Engineers, Inc., *Schematic Design Draft Report PMIS No. 8354, Rehabilitate and Repair Historic Wabash River Floodwall, George Rogers Clark National Historical Park, NPS Task Order Number: T200005A026*, (Vincennes, IN: US Department of the Interior, NPS, 23 May 2005).
[52] RATIO, *Terrace*, 3.
[53] *Ibid.*
[54] *Ibid.*

1991-98 Remainder of Dex-O-Tex membrane is removed from the terrace and parapet wall surfaces.[55]

1992 June – The Maintenance Building is opened (built on Tract 01-104).

1995 Construction Technology Laboratories, Inc. along with consultants from Law Engineering, Inc. and Harry Weese Associates conduct an assessment of the Memorial Terrace and provide analysis and discussion of repair recommendations for the structure.

1996-1967 In one of the greenspaces junipers and one pine tree are removed and the area is resodded. New irrigation is installed in the area.

Junipers are removed in the triangular greenspace area at Patrick Henry Drive.

New irrigation heads are installed, with original copper piping for the system remaining underground.[56]

1998 Construction Technology Laboratories, Inc. and Harry Weese Associates issue *Project Manual: Clark Memorial Terrace Rehabilitation, George Rogers Clark National Historical Park* to guide repairs at the Memorial Terrace.

2002 Bahr Vermeer Haecker Architects prepares *Repair Memorial Terrace: George Rogers Clark National Historical Park* for the National Park Service.

2005 RATIO Architects, Inc. and Arsee Engineers, Inc. prepare *Repair Memorial Terrace: George Rogers Clark National Historical Park* and *Schematic Design Draft Report PMIS No. 8354: Rehabilitate and Repair Historic Wabash River Floodwall, George Rogers Clark National Historical Park.*

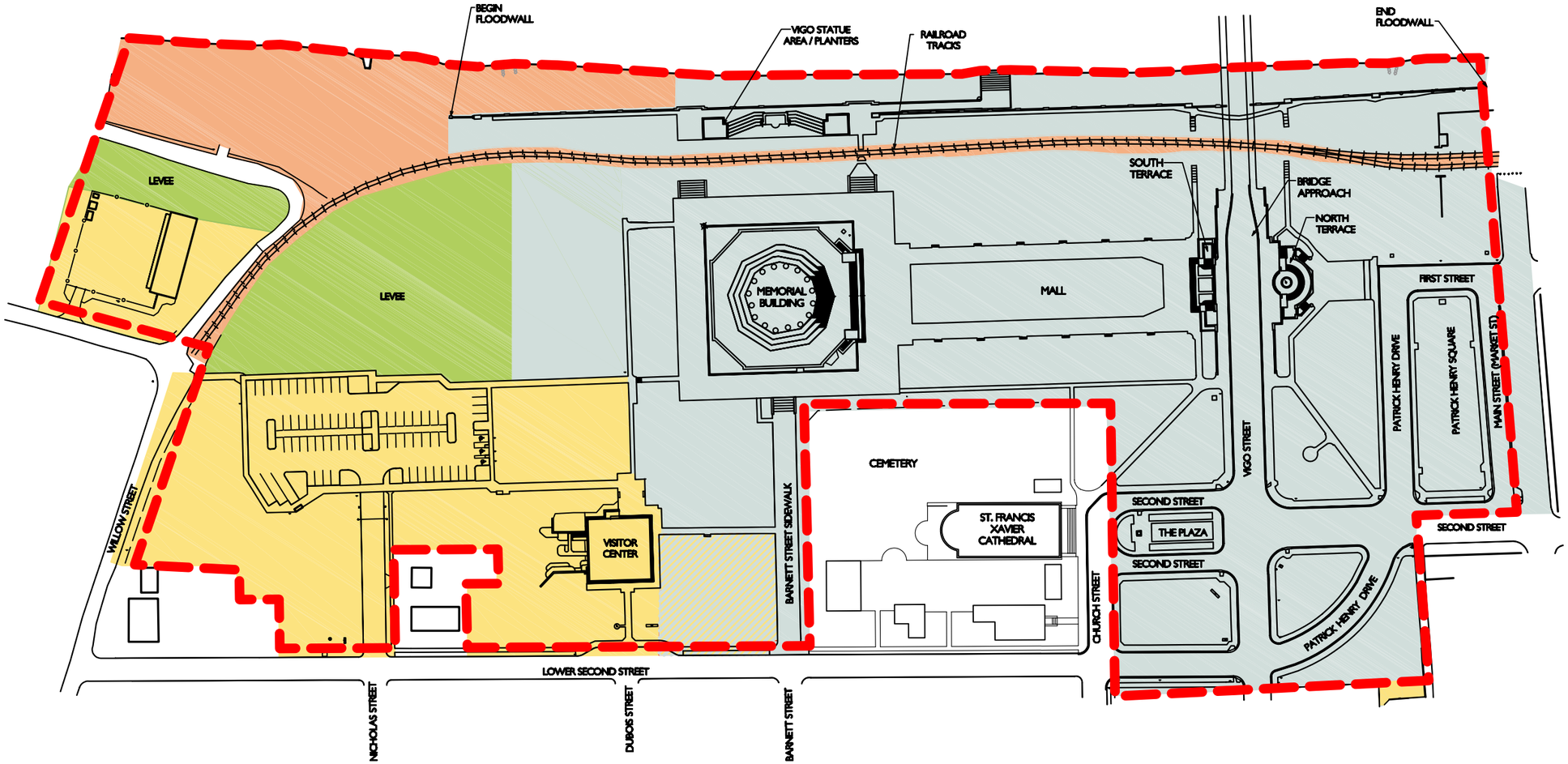
Site Evolution

Illustration J: Site Evolution summarizes the changes to the site over its history. The following periods of development are illustrated on the graphic: Pre-Memorial Era; George Rogers Clark Sesquicentennial Commission Era (1925-1939); Indiana Department of Conservation Era (1940-1960); and National Park Service Era (1966-present).

[55] *Ibid.*
[56] Mullins, n.p.

PERIODS OF DEVELOPMENT

- PRE-MEMORIAL ERA
- GEORGE ROGERS CLARK SESQUICENTENNIAL COMMISSION ERA (1925-1939)
- INDIANA DEPARTMENT OF CONSERVATION ERA (1940-1960)
- NATIONAL PARK SERVICE ERA (1966-present)
- GRCSC ERA UPDATED DURING NPS ERA



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GEORGE ROGERS CLARK NATIONAL HISTORICAL PARK

VINCENNES, INDIANA

SITE EVOLUTION

ILLUSTRATION J

0 150

Chapter 3: Existing Conditions/Affected Environment

This chapter describes the existing conditions and the impact topics that could be affected by the treatment alternatives. The information in this chapter provides an update to the site conditions as defined in Part III of the 1995 *CLR* and verifies contributing landscape features. This chapter provides the foundation for the analysis of potential impacts, which is presented in Chapter VII. Naturally occurring and human-influenced changes to the GERO site have resulted in a landscape somewhat altered from the appearance during the period of significance[1]. Current conditions have been influenced by both naturally-occurring physiographic forces and management practices implemented by the State of Indiana and the National Park Service.

Cultural Resources

Cultural Landscape Methodology

A topographic survey of the GERO property was conducted in the spring of 2005 to record the locations of the structures, vegetation, and cultural landscape features within the park boundary. Concurrently, the consultants performed a visual survey to record the existing conditions of these features. A scaled version of the topographic survey is included in this report as the base data for *Illustrations L, M, and O.* Existing conditions information in this section is broken into two subsections: environmental setting and cultural landscape characteristics. Environmental setting includes topography, hydrology, soils, and bedrock geology. An assessment of cultural landscape characteristics relevant to the integrity of the site is provided including spatial organization, vegetation, land use, buildings and structures, small-scale features, circulation, and views and vistas. Condition evaluations are based on the following criteria as outlined in the *Cultural Landscapes Inventory Professional Procedures Guide*[2]:

> **Good:** indicates the feature shows no clear evidence of major negative disturbance and deterioration by natural and/or human forces. The feature's cultural and natural values are as well preserved as can be expected under given environmental conditions.
>
> **Fair:** indicates the feature shows clear evidence of minor disturbances and deterioration by natural and/or human forces.
>
> **Poor:** indicates the feature shows clear evidence of major disturbance and rapid deterioration by natural and/or human forces.

[1] According to *National Register Bulletin #39: Researching a Historic Property,* "Period of significance refers to the span of time during which significant events and activities occurred. Events and associations with historic properties are finite; most properties have a clearly definable period of significance." <http://www.cr.nps.gov/nr/publications/bulletins/nrb39/nrb39_II.htm> (10 November 2005).
[2] Page, 68.

Environmental Setting

Topography and Hydrology

GERO is located on the Middle Wabash-Busseron Watershed. "The watershed includes a transition zone between the beech-maple forests of the eastern United States and the prairie and oak-hickory forests of the west. The area is underlain by Pennsylvania limestone, sandstone, shale and coal…the soils are generally moderately deep to very deep, poorly drained to well drained, and silty or loamy subsoils." [3] The site itself is bordered on one side by the Wabash River. According to sources for the Illinois Department of Natural Resources, the Wabash is the second largest tributary of the Ohio River and forms approximately 200 miles of the southern border between Illinois and Indiana.[4]

Topographic features on the site include the eastern and western banks of the river which at the time of survey had a water level of approximately 400 feet above sea level. The monument and bridge abutments act as constructed high points at the site. The entire site rests within the 500-year flood boundary as defined by the Federal Emergency Management Agency. The zone is noted on the Flood Insurance Rate Map with the disclaimer "This area protected from the one percent annual chance (100 year) flood by levee, dike or other structures subject to possible failure or overtopping during larger floods." Flood maps show the levee running the entire length of the site; however, this is an inaccurate representation. A floodwall (discussed below) acts as flood control for approximately one thousand linear feet of the site. Areas outside of the levee and floodwall location are noted as Zone A10 defined by the map's legend as, "areas of 100-year flood; base flood elevations and flood hazard factors determined."[5]

Because of the proximity of the site to the Wabash River, the City of Vincennes has constructed flood controls along the banks of the waterway. Structures built on the GERO site to control flood waters include the Floodwall[6] and the Brevoort Levee which extends from behind the Memorial Building along the river and along the river north of the city. The top of the levee reaches an elevation of 428' on the southernmost portion of the site.

Erosion control measures have been installed along the riverbank. A Tri-Lock system of interlocking concrete blocks has been installed along the river edge along much of the park boundary. This system is interspersed with areas of rip rap (see Figure 3.1). GERO has a goal of extending the Tri-Lock from boundary to boundary along the Wabash River

[3] Suloway, Liane et al, *Inventory of Resource Rich Areas in Illinois: An Evaluation of Ecological Resources*, (Indianapolis, IN: Center for Wildlife Ecology, State of Illinois, 1996), <http://www.inhs.uiuc.edu/cwe/rra/site24.html> (8 August 2005).
[4] *Ibid.*
[5] Federal Emergency Management Agency, "FIRM, Flood Insurance Rate Map, City of Vincennes, Indiana, Knox County, Community-Panel Number 180120 0005 C," 18 December 1984.
[6] The Floodwall does prevent rising floodwaters from encroaching on the historic Memorial Grounds. However, the Army Corps of Engineers no longer considers the wall as part of the official flood control system.

and a PMIS[7] project has been created for this project in order to obtain funding and approval for these efforts. Since natural vegetation does not extend to the riverbank and erosion control measures are necessary, the condition of the riverbank is fair.

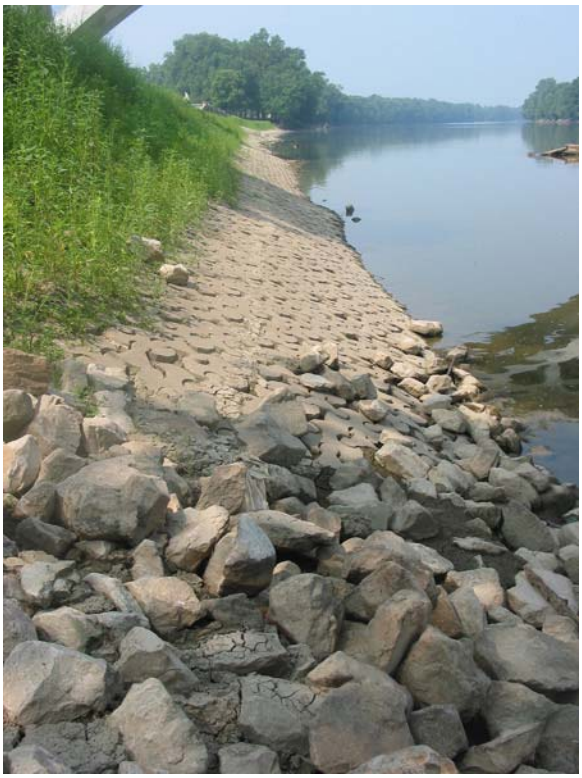


Figure 3.1: Tri-Lock and rip rap line the river edge within the park boundary, Photo by The Jaeger Company, 2005.

Soils and Bedrock Geology

Knox County is underlain by geology formed during the late Paleozoic Era (Pennsylvanian Age). The geology in this area is dominated by siltstone and shale interspersed with formations of limestone and coal beds.[8] The soils in areas of the county adjacent to the Wabash River are influenced by prehistoric glacial activity thus many areas contain high quantities of alluvial deposits. Naturally occurring soils in the area are typically acidic silt loams subject to frequent flooding.[9] Much of the Memorial Grounds area is built on fill imported during construction, thus may not comply with soil conditions which may have naturally occurred in this area. The origin of the fill brought into the site for construction is not known and may have included soils from areas with

[7] The NPS Project Management Information System (PMIS) is a database for all facility maintenance projects for which NPS has identified a current need. PMIS contains detailed cost estimates related to condition assessments; these can include a range of formalized cost assessment to professional judgment estimates.

[8] Raymond C. Gutschick, "Bedrock Geology," *Natural Features of Indiana*, Ed. Alton A. Lindsey (Indianapolis, IN.: Indiana Academy of Sciences, 1966), 1-3.

[9] Allen F. Schneider, "Physiography," *Natural Features of Indiana*, Alton A. Lindsey, Ed. (Indianapolis, IN: Indiana Academy of Sciences, 1966), 48.

little alluvial influence. These fill materials may have included site demolition wastes (such as bricks and broken concrete) associated with buildings, roads, and sidewalks located on the GERO site.

Cultural Landscape Characteristics

The condition of cultural resources is included in this section utilizing the criteria of good, fair, or poor outlined above.

Spatial Organization

The spatial organization on the site is largely dictated by the original Beaux Arts design implemented with the construction of the Memorial Building and surrounding grounds.[10] The elements are arranged in a linear fashion along an axis which runs from southeast to northwest. The following is a brief description of the spaces on the site moving along this axis. This terminology will be used throughout the Existing Conditions descriptions. (See Figure 3. 2, George Rogers Clark National Historical Park).

- Maintenance Area – Refers to the area containing the Maintenance Building, Sheds and Parking Area.
- Levee – Refers to the raised earthen mounds both west of the Maintenance Compound and directly behind the Memorial Building.
- Visitor Center Parking Area – Refers to the automobile and bus parking lot occupying the western portion of the site and the entry road to this lot also known as Nicholas Street.
- Visitor Center Area – Refers to the Visitor Center itself plus the supporting landscape and plazas that surround the building.
- Barnett Street Sidewalk – The main axial approach to the Memorial Building from Lower Second Street.
- Memorial Building – Refers to the Memorial itself plus the Memorial Terrace structure and basement levels below as well as the supporting sidewalks adjacent to the Memorial Building.
- Mall – The main axis between the Memorial Building and the Bridge Approach.
- Lincoln Memorial Bridge Approach – Refers to the supporting structure of the Lincoln Memorial Bridge, the North and South Plazas and the Pylons on the bridge itself.
- Saint Francis Xavier Cathedral – Refers to the church and supporting buildings and landscape plus the Old French Cemetery (in depth study of this area was not part of the CLR scope because the church property is not part of the NPS boundary.) Some graves from the Old French Cemetery may exist below the Mall. These locations have not been identified.
- Plaza – Refers to the median in Second Street running from Vigo Street to Church Street near Saint Francis Xavier Cathedral.

[10] Beaux Art landscapes exhibit the classically oriented style popularized by the Ecole des Beaux Arts in Paris. An explanation of the general characteristics of the Beaux Arts style can be found in Chapter 4: Analysis and Evaluation.

- Various Greenspaces – Refers to the lawn areas, some containing trees and/or shrubs, formed by the intersections of various city streets, sidewalks within the site, and various site features (*see Illustration K*).
- Wabash River Floodwall (Floodwall) – Refers to the flood control device paralleling the river within the NPS boundary.
- Pearl City – Refers to the squatter residential area south of the GERO site.

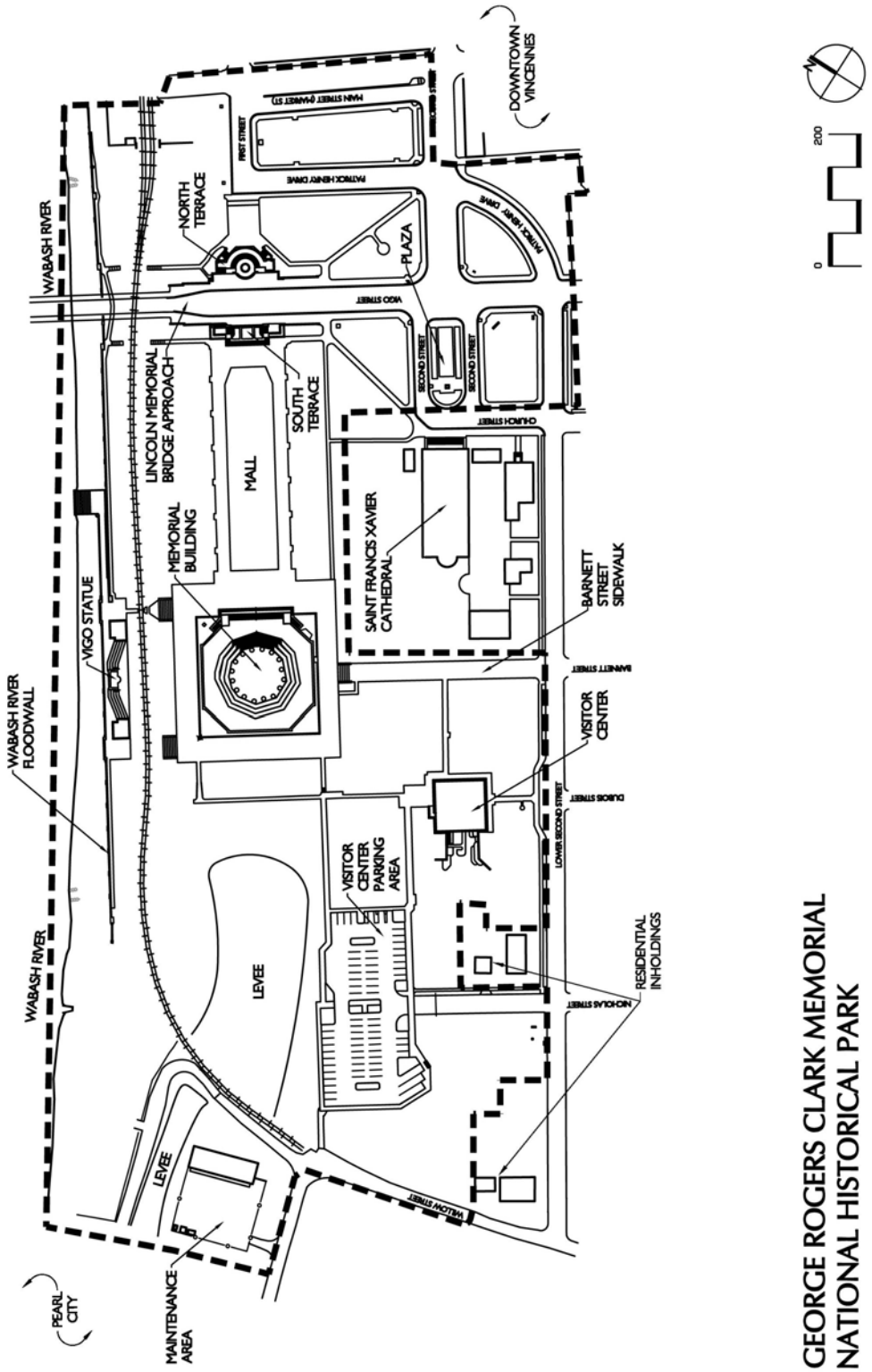


Figure 3. 2: George Rogers Clark National Historical Park.

Vegetation

As stated in the 1995 CLR by Christina Jones, "the setting of the Memorial on the banks of the Wabash River is an important element of the design…the offsite vegetation that contributes to the design is the wooded, undeveloped riverbank of the Wabash River located on the Illinois side of the river. The property is owned by the State of Illinois and the NPS has encouraged the Illinois Department of Conservation to maintain this location as a natural area."[11]

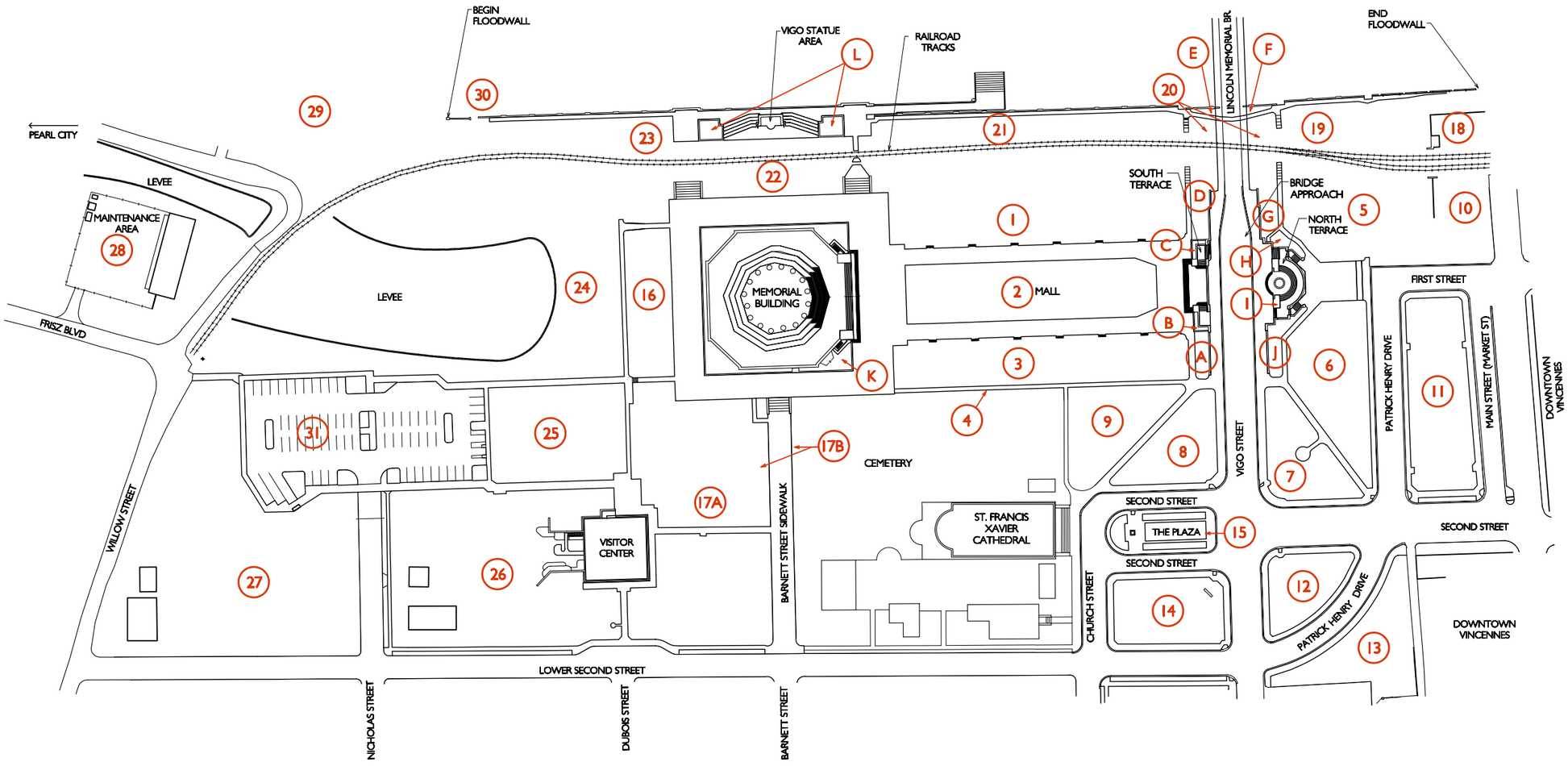
Vegetation on the site is dominated by formal plantings installed during various periods of development at the Memorial Grounds. Historic photos indicate that the majority of plantings specified in the original Parsons plan (*Illustration E*) were implemented on the site. As a result of the large amounts of poor quality fill utilized for site construction, very little of the original vegetation (pre-1934) exists today at GERO.[12] According to the 1995 CLR, "the original contract limits for the site show six existing trees that were to remain on the site". However, it is not believed that any of these trees survive on the site today. The original landscape implementation from the spring of 1934 had few surviving trees and it is unclear if the few plants remaining on the site today from this period date to the spring 1934 planting or the fall 1934 revision of the plan. Specific plants dating from the Memorial Era period of significance are listed individually below. The current condition of vegetation present on the site is included in this description. *Illustration K* shows different vegetation areas on the site. Within the historic boundary of the park, these numbers correspond to "Grass Area" numbers utilized on the Parsons plan to delineate different planting areas. Where numbers or letters did not exist on the Parsons plan, additional numbers and letters were added. Less than ten percent of the vegetation installed during the 1930s landscape improvements remains on the site.

Lawn Areas and Planting Beds

Areas 1, 2, and 3: Mall Area

The double rows of little leaf linden trees flanking each side of the Mall were installed by NPS staff with concurrence from the Midwest office in 1989 (totaling forty-eight trees). At the time of the survey, five lindens were missing on the southeast side of the Mall and fourteen lindens were missing on the northeast side of the Mall. The remaining trees in this area are in fair condition (see Figure 3.3). Many of the trees are leaning and have exposed roots. The ground layer below these trees is lawn; however, it is in poor condition in shady areas where the tree canopy is dense (see Figure 3. 4). The lawn panel in the middle of the Mall is in good condition likely due to more sun exposure in this area.

[11] Christina Petlichkoff Jones, "The Cultural Landscape Report for George Rogers Clark National Historical Park", M.L.A. thesis, Ball State University, 1995, 130.
[12] *Ibid*., 163.



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119 Washington Street, Gainesville, GA 30501
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GEORGE ROGERS CLARK NATIONAL HISTORICAL PARK

VINCENNES, INDIANA

LANDSCAPE AREAS

ILLUSTRATION K

0 150

Figure 3.3: View of linden allée (right side of photo) and sweet gums (left side of photo), Photo by The Jaeger Company, 2005.

Figure 3. 4: Lawn beneath linden trees is in poor condition, Photo by The Jaeger Company, 2005.

Area 4: Northwest Cemetery Border

There is a row of sweet gum (*Liquidambar styraciflua*) trees lining the southeast side of the sidewalk running parallel to the Old French Cemetery (see Figure 3.5). These trees range in caliper size from fifteen inches to thirty inches. Twelve sweet gum were specified in the second version of Parsons' plan. Nine of these trees remain on the site and the condition of these trees is fair. However, the fruit of these trees causes a safety concern on the adjacent sidewalk. GERO staff members are concerned that visitors will slip on the fallen fruit from the trees. Additionally, GERO staff members complain that

the branches on these trees are weak and often break and fall to the ground. The ground layer below these trees is lawn. The lawn in this area is in fair condition due to the amount of shade cast by the trees.

Figure 3.5: Row of sweet gum trees along cemetery border, right side of photo, Photo by The Jaeger Company, 2005.

There is a row of yews (*Taxus spp*.) planted along the property border with Saint Francis Xavier Church, behind the row of sweet gum trees. These shrubs are in good condition.

Area 5: Northwest Bridge Approach

This area is defined by the northwest portion of the bridge approach (excluding the planter areas), the railroad spur tracks, the concrete train prism wall, the wide sidewalk approaching the North Terrace, and a portion of First Street. The area consists of open lawn with no tree or shrub plantings. The lawn in this area is in fair condition and is a mix of weeds and lawn species.

Area 6: Northeast Bridge Approach

This area is defined by the wide sidewalk approaching the North Terrace, Patrick Henry Drive, and a pathway leading from the corner of Patrick Henry Drive and Second Street to the North Terrace. The area is mostly lawn with one large red oak (*Quercus rubra*). This fifty-two inch specimen tree resides on Patrick Henry Drive near the intersection with Second Street. This tree appears to be an original planting. This tree shows some signs of stress, but is in overall good condition. The lawn in this area is in good condition.

Area 7: Northeast corner of Vigo St. and Second St.

This triangular shaped area is bounded by the diagonal sidewalk leading from the corner of Patrick Henry Drive and Second Street, Second Street, and Vigo Street. This area is primarily lawn which is in good condition. A small red maple (*Acer rubrum*) resides near Second Street. This tree is in good condition. One sugar maple (*Acer saccharum*) exists near the southeast corner of the north Bridge Approach. This tree is in good condition.

Area 8: Northwest corner of Vigo St. and Second St.
This area is defined by Vigo Street, a narrow sidewalk which runs parallel to the Mall (southeast of Mall area), and a diagonal sidewalk running from the South Terrace to the front of St. Francis Xavier Church. As identified in the 1995 CLR, of the fifty-eight sugar maples (*Acer saccharum*) specified for planting in Parsons' plan, only two remain on the approach to St. Francis Xavier Church along Second Street. Both trees appear to be in fair condition. One of the trees has been identified as a safety hazard by park management. There is also a large sweet gum (18" caliper) and a small red maple (2" caliper) in this area. Both trees are in good condition. The lawn in this area is in good condition with the exception of a small area where a tree was recently removed and lawn has not reestablished.

Area 9: Southeast of Mall Area
This area is bounded by the St. Francis Xavier Church property, the diagonal sidewalk which runs from the north corner of the church to the South Terrace and the sidewalk paralleling the Mall (southeast of Mall area). One fifty-four inch caliper and one sixty inch caliper northern red oak trees reside on the north corner of the church property. These trees are in fair to good condition and appear to be original plantings. There are four sweet gum trees in this area. All are in good condition; however, two of the trees contain some deadwood. The lawn in this area is in fair condition as shade in this quadrant is heavy.

Area 10: Northwest of First St.
This area is in the northeast corner of the site bounded by the railroad spur, the concrete wall of the railroad prism, First Street, and the brick extension of Main Street. There are three 24" caliper eastern white pines (*Pinus strobus*) in the area adjacent to the railroad tracks and one 18" caliper eastern white pine closer to First Street. All of these pines are in good condition. The lawn in this area is in good condition.

Area 11: Patrick Henry Square
This area is bounded by Patrick Henry Drive, First Street, Main Street and Second Street. This square contains a number of hardwood trees with a lawn understory. The lawn is in good condition. The trees in this area include one 2" caliper red maple in good condition, one 18" white pine in good condition, one multi-trunk redbud (*Cercis canadensis*) in good condition, three 36" caliper sweet gums in good condition, and one 36" northern red oak in good condition.

Area 12: Triangle bounded by Vigo St., Patrick Henry Dr., and Second St.
One 36" caliper sugar maple dating from (or replaced in-kind) the Memorial Era period of significance resides in this quadrant. This tree is in fair condition. A 32" caliper sweet gum also exists in this area. This tree is in fair condition. Evergreens in this area include one Douglas fir (*Pseudotsuga menziesii*) and two eastern white pines. The fir tree is in good condition. One of the pines is in fair condition due to a severe lean. The other pine is in good condition.

Area 13: Southeast property corner

This area is at the southeast corner of the property and is bordered by Patrick Henry Drive, Vigo Street, and a narrow driveway leading to the adjacent property. Hedges of yews (approximately four feet high) line the edge of the driveway and the southeastern property boundary. This hedge is in good condition; however, at the time of investigation, pruning was needed. Trees in this area include four sugar maples. These trees range in size from 11" diameter to 25" diameter. All are in fair condition showing signs of potential disease (leaf spots) with the larger specimens containing several dead limbs. The lawn in this area is in good condition.

Area 14: Square bounded by Vigo St, Second St., Church St., and Patrick Henry Dr.

This square is largely open with two large trees and an understory of lawn in good condition. The trees include a 36" diameter sugar maple and a 15" diameter Douglas fir. Both trees are in good condition.

Area 15: The Plaza

The Plaza is largely open lawn with small areas of shrub plantings (see Figure 3.6). The lawn in this area is in good condition. The shrub planting consists of a mass of junipers (*Juniperus pfitzeriana*). The junipers are in good condition. The shrub area reflects a revision to the original Parsons' plan for this area. The shrub area behind the Father Gibault Statue was added in his revised plan but was not present in the original rendition. It is not clear why these shrubs were added. Lawn currently occupies the two small beds on the outer perimeter of the Plaza. Both the original Parsons plan and his revised plan depict shrub plantings in this area.

Figure 3.6: Open lawn and shrub plantings in the Plaza area, Photo by The Jaeger Company, 2005.

Area 16: Area directly behind (southwest of) the Memorial Building
The quadrant of lawn directly southwest of the Memorial Building is in good condition. There are no trees or shrubs in this area.

Area 17A: Area bounded by Barnett Street Sidewalk, Visitor Center, Memorial Building, and Lower Second St.
Several linden trees on the Memorial Grounds likely date from the initial 1930's planting of trees. Two American linden trees (*Tilia americana*) reside in the lawn panel northeast of the Visitor Center. These are believed to be from the initial landscape installation of Parsons' plan at GERO. These lindens appear to be in good condition. Additional plantings in this area include one large red oak, four hawthorns (*Crataegus phaenopyrum)* and two crabapple trees. The condition of these trees is good with the exception of the crabapples which appear to be declining slightly. Just south of this area and adjacent to the east corner of the Visitor Center are two bald cypress (*Taxodium distichum*) and a large tulip poplar (*Liriodendron tulipifera*) that were installed when the Visitor Center was constructed. A small maple has recently been planted midway between Lower Second Street and the north-south sidewalk running between the Barnett Sidewalk and the Visitor Center. The condition of these trees is good. There is a 340 square foot bed of Pfitzer junipers in the lawn area near the north corner of the Visitor Center. The condition of these junipers is good.

Area 17B: Barnett Street Sidewalk Plantings
A major sidewalk to the Memorial is the extension of Barnett Street into the site. Due to the location of the Visitor Center, this sidewalk serves as a major access route for visitors to the Memorial Building. Although the original planting scheme shows crabapples (*Malus spp*.) lining the sidewalk, redbuds now line this route. There are sixteen redbuds in this area. The condition of these trees is poor as many have lost branches or have died and not been replaced (see Figure 3.7). The ground plane under these trees is lawn which is in good condition. There is a hedge of evergreen shrubs along the north side of the sidewalk along the Old French Cemetery border. These yews are in good condition.

Figure 3.7: Redbud allée along Barnett Street Sidewalk, Photo by The Jaeger Company, 2005.

Area 18: Northeast end of Floodwall
This area is bounded by the concrete wall of the railroad prism, the railroad tracks and the northeastern property border. There is one 12" diameter northern red oak centered in this area. This oak is in good condition.

Area 19: Floodwall area northeast of the Lincoln Memorial Bridge
Several other large specimen trees exist on the site. Two large northern red oaks reside on the north side of the bridge between the Floodwall and the railroad spur. These trees are in fair to good condition and appear to be original plantings. The ground plane under these trees is lawn which is in good condition.

Area 20: Area underneath Lincoln Memorial Bridge
The area directly underneath the Lincoln Memorial Bridge consists of lawn with no trees or shrubs. This lawn is in good condition.

Area 21: Middle section of Floodwall
The area adjacent to the middle section of the Floodwall consists of a slope covered in lawn. The lawn is in good condition except in areas of severe slope. There are no trees or shrubs in this area.

Area 22: Area between Vigo Statue and Memorial Building
The area between the Vigo Statue and the Memorial Building consists of a slope covered in lawn. The lawn is in good condition except in areas of severe slope. There are no trees or shrubs in this area.

Area 23: Southwest section of Floodwall
The area adjacent to the southwest section of the Floodwall consists of a slope covered in lawn. The lawn is in good condition in this area. There are no trees or shrubs in this zone.

Area 24: Levee area
The area directly behind (southwest of) the Memorial Building contains a large open lawn area with a concentration of plantings close to the sidewalk. This group of trees contains the three large lindens (*Tilia vulgaris*) as well as eight crabapples, four northern red oaks, and a magnolia (*Magnolia grandifolia*). The trees in this area are in good condition (see Figure 3.8). The linden trees in this area likely date from the initial 1930's planting of trees. These are believed to be from the initial landscape installation of Parsons' plan at GERO. These lindens appear to be in good condition. The crabapples in this area range in condition from fair to poor due to a scab condition. The red oaks and magnolia are in good condition.

Figure 3.8: Group of children sitting under trees behind Memorial Building, Photo by The Jaeger Company, 2005.

Area 25: Area between Memorial Building and Visitor Center parking lot
The area just northwest of the Visitor Center adjacent to the parking lot contains a large number of trees, including several hardwoods ranging from ten to twenty inches in caliper, all likely date from the Visitor Center construction in 1976. Included in this group of trees are the following: two northern red oaks ranging in diameter from 12" to 17", both of these trees are in good condition; four English walnuts (*Juglans regia*) ranging in diameter from 9" to 12", these trees are in good condition; one 14" diameter tulip poplar (*Lirodendron tulipifera*), this tree is in good condition; two sugar maples ranging in diameter from 14" to 17", these trees are in good condition; one 41" diameter sycamore (*Platanus occidentalis*), this tree is in good condition; one 8" diameter dogwood (*Cornus florida*), this tree is in good condition; one 7" diameter hawthorn (*Craetagus spp*.), this tree is in fair condition due to the presence of some deadwood and

leaf wilt; one 15" red maple, this tree is in fair condition; two 12" silver maples (*Acer saccharinum*), these trees are in good condition; and one 12" sugar maple, this tree is in good condition. The sycamore is probably the only tree in this area dating from the Memorial Era period of significance. The trees in this area are under-planted with lawn, and the grassed area is in generally good condition.

Area 26: Visitor Center courtyard and adjacent areas

The areas southwest of the visitor center are characterized by lawns dotted with ornamental trees, pines, and large hardwoods. Many of these trees were planted when the Visitor Center was constructed. Some plantings are associated with the two privately owned inholdings in this area. Included in these plantings is a large American elm near Lower Second Street and a thirty-six inch caliper hackberry (*Celtis occidentalis*) on axis with the Visitor Center.

Plantings in the lower courtyard of the Visitor Center are dominated by shrubs and flowering trees shaded by the pines lining the retaining wall above (see Figure 3.9). Included in these plantings are Cornelian cherry dogwood (*Cornus mas*), smoketree (*Cotinus coggygria*), St. Johnswort (*Hypericum frondosum*), viburnum (*Viburnum carlesii*), and barberry (*Berberis thunbergii*). These shrubs and small trees are in good condition; however they require many maintenance hours annually for trimming. The lawn in the courtyard area is in fair condition with some vigorous areas interspersed with sections of that have "browned out" due to either high foot traffic or wet conditions.

The area southwest of the Visitor Center courtyard is a shaded lawn area with large evergreen and deciduous trees. The lawn is patchy in areas of dense shade and is therefore in fair condition. The large trees in this area include ten white pines of various sizes (ranging in diameter from 10" to 18"). These pines are in good condition. Hardwoods in this area include a dogwood in good condition, two tulip poplars (19" and 24" diameter) in good condition, two large hackberries (20" and 29" diameter) in good condition, two 5" diameter hackberries in good condition, and five crabapples (ranging in diameter from 10" to 15") in good condition.

The area between the central sidewalk leading into the Visitor Center from Lower Second Street and the park property line southwest of this sidewalk contains more open lawn with medium to large sized hardwood trees. There are four sugar maples in this area ranging in size from 14" to 17" in diameter. These trees are in good condition. There is a large (42" diameter) American elm (*Ulmus americana*) near the south corner of the Visitor Center. Despite its age and size, this tree is in good condition. Smaller trees in this are include a 6" hawthorn in good condition, a 15" white pine in good condition, and a 10" Crimson King Maple (*Acer platanoides "Crimson K*ing") in good condition.

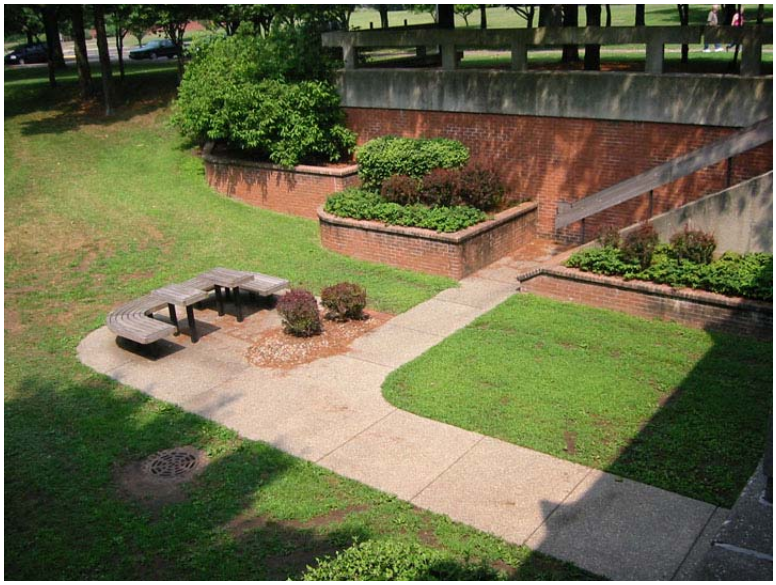

Figure 3.9: View of Visitor Center courtyard from above, Photo by The Jaeger Company, 2005.

Area 27: Area southeast of Visitor Center parking lot

This area contains mostly open lawn with medium to large hardwood trees. The lawn is in good condition. The hardwoods in this are include one 17" diameter silver maple in good condition, one 2" diameter silver maple in good condition, two red maples (18" diameter and 20" diameter) in good condition, one 18" sycamore in good constion, and one 5" red maple in good condition. Street trees along Willow Street include two large white oaks (*Quercus alba*) which are 28" and 32" diameter. These trees are in good condition.

Area 28: Maintenance Area

Plantings around the Maintenance Building include hackberry, redbud, and cottonwood, dogwood (*Cornus florida*), and sweet gum. These trees are in good condition. Two of the large cottonwood trees were present when the building was installed (see Figure 3.10). Shrubs around the Maintenance Area include viburnum, spirea (*Spiraca ripponica "Snowmound"*), barberry, and Chinese juniper. These shrubs are well maintained and are in good condition. The lawn in this area is in good condition.

Figure 3.10: Plantings Adjacent to the Maintenance Shed Area, Photo by The Jaeger Company, 2005.

Area 29: Riverbank area west of Maintenance Area

Trees outside the original boundary of the Memorial Grounds include a grouping of mixed sized trees adjacent to Willow Street between the Wabash River and the road. These trees include a picturesque grove of fifteen cottonwoods (*Populus deltoids*) ranging in size from twenty-nine to fifty-four inches in caliper. Interspersed among these cottonwoods are various sized maples (approximately twenty total), hackberries (three total), American elms (two total), black walnut (*Juglans nigra*) (two total), and locusts (*Gleditsia triancanthos*) (two total) (see Figure 3.11). These trees are in good condition. The ground layer below the trees is lawn and mixed weeds.

Figure 3.11: Group of trees near river on northwest side of the site, Photo by The Jaeger Company, 2005.

Area 30: Riverbank below Floodwall

Herbaceous vegetation along the riverbank is a mixture of native and non-native species including sheep sorrel (*Rumex spp*.), mustard family plants (*Brassicaceae*), dodder (*Cuscuta gronovii*), and other common wet-mesic perennials. This vegetation is likely a result of seeding associated with erosion control efforts (see Figure 3.12).

Figure 3.12: Riverbank vegetation, Photo by The Jaeger Company, 2005.

Area 31: Parking Lot Plantings

The plantings in the Visitor Center parking lot are primarily flowering and shade trees planted in mulched islands. The central islands of the parking lot include five Bradford pear trees which are in fair condition due to stress and trunk split. The perimeter islands are mostly planted with more hearty hardwood species including three red oaks in good condition. There is one Bradford pear (*Pyrus calleryana*) at the perimeter of the parking lot near the entry drive. This tree is in fair condition due to stress. The remainder of the perimeter planting islands contain crabapples ranging in size from 7" to 12" diameter. These trees are in fair condition due to the presence of scab.

Planters

Areas A, B, C and D: South Terrace Planters

As with the Memorial Building base plantings, the plant installations at the base of the North and South Terraces of the Lincoln Memorial Bridge Approach were originally planned to be more diverse. "The original plantings were a mass of pyracantha [*Pyracantha coccinea*], juniper and small-leaf holly [*Ilex cornuta*]."[13] The existing plantings include masses of junipers and large (six foot height) clipped yews. These plantings are in good condition.

[13] *Ibid*., 210.

Figure 3.13: Junipers in planters on the South Terrace of the Bridge Approach, Photo by The Jaeger Company, 2005.

Areas E & F: Beds between Floodwall and arching sidewalk, under Bridge
This area adjacent to the Floodwall currently contains grass. It is not clear whether shrubs were ever installed in this area according the Parsons plan. The lawn in this area is in fair condition due to the amount of shade directly under the bridge.

Area G, H, I, and J: North Terrace Planters
These planters do not contain the diversity in evergreen plant material envisioned on the original planting plan for the site. The two small planters located on the upper portion of the North Terrace contain junipers (Juniperus horizontalis "plumosa"). These shrubs are in good condition and are maintained at a two to two and one-half foot height. The shrubs in the lower planter areas contain yews and junipers (Juniperus chinensis "pfitzeriana"). These shrubs are in good condition.

Area K: Memorial Building
According to the 1995 CLR, "the foundation plantings at the base of the Memorial were originally planted with a mass of pyracantha (tree-form), pyramidal and spreading yew, and three species of juniper (*Juniperus spp*.) in each corner." Junipers were to line the narrow planting beds connecting these corners.[14] Existing plantings in this area consist of yews which are massed together and heavily maintained with clipping (see Figure 3.14). The yews are typically two and one-half to three feet tall. These yews are in fair condition due to some damaged specimens and overcrowding.

[14] *Ibid*., 211.

Figure 3.14: Yews at the base of the Memorial Building, Photo by The Jaeger Company, 2005.

Area L: Vigo Statue

Yews also occupy the base of the Vigo Statue (originally planted with Pfitzer junipers.) The area adjacent to the steps leading down to the Vigo Statue is lawn. These planters reflect a revision in the original Parsons' layout for this area. It is not clear why the configuration of this area changed from the original Parsons' plan, but these changes are reflected on his revised plan for the site (*Illustration G*). Smaller rectangular planters were exchanged for the larger square planters present on the site today. The yews in all of these areas are in fair condition due to some damaged specimens.

Land Use

The following is a verbal description of the property boundaries of GERO:

Beginning at the northwest corner of the site the property line follows the shoreline of the Wabash River for approximately 1650 linear feet. The property line then turns southeast following the curb line along the extension of Main Street (brick paved area). The line continues southeast through the middle of Main Street and turns southwest along the middle of Second Street. At the intersection with Patrick Henry Drive, the property line makes a ninety degree turn southeast and follows an alleyway for approximately 202 feet. The property line then makes a ninety degree turn for 383 feet to the intersection of Church Street and Lower Second Street. The property line makes a ninety degree turn northwest and follows the curb line of the two green spaces in this area (including The Plaza) to the northernmost property corner of St. Francis Xavier Catholic Church. The property line then follows the church property line southwest for approximately 374 feet and then makes a ninety degree turn just northeast of the Barnett Street Sidewalk. The property line parallels the sidewalk to the intersection with Lower Second Street where it parallels the street to the first inholding property west of the Visitor Center. The property line jogs around this inholding and returns to paralleling Lower Second Street adjacent to

the Nicholas Street entrance to the Visitor Center parking lot. The property line follows Lower Second Street until it reaches the second inholding property. The line jogs around this property until it intersects with Willow Street. The property line parallels Willow Street to Frisz Boulevard where it takes a ninety degree turn to the west. The property line moves west past the Maintenance Building and support yard and turns north past the Maintenance Area fence until it intersects with the shoreline of the Wabash River.

The two inholding properties adjacent to the park boundary are not part of the park proper, but they have been evaluated briefly herein. GERO would require Congressional action to add these parcels to the park at the point the owners of these parcels are ever willing to donate them to NPS.

The existing land use of the site is as planned in the original scheme for the Memorial. The Memorial Grounds create a dramatic entrance to (or exit from) the city of Vincennes across the Lincoln Memorial Bridge. The site acts as a gathering spot for members of the community and ties into the historic downtown area of Vincennes. There are several public gathering areas within the Memorial site, including the greenspaces around Main Street and the public gathering areas at the base of the Bridge Approach. Today, the Mall itself serves as a field for public gatherings during the Fourth of July celebrations in downtown Vincennes. Once per year, the large grassy area behind the Memorial Building serves to host participants from the Spirit of Vincennes Rendezvous. Camping activities are conducted in this area and include a "Military Camp" hosting 400-500 18th century living history enthusiasts on the grounds of GERO. For more information on these activities, please see spiritofvincennes.org.

Residential uses that are adjacent to the property include homes along the southeast side of Lower Second Street. Residents of these neighborhoods were observed using the park as an extension of their neighborhood; many residents walk through the park in the evening. Another adjacent residential cluster is Pearl City where many of the descendants of mussel industry workers reside.

Commercial use is adjacent to the north side of the site with the public greenspaces serving as "town green" areas for downtown Vincennes.

Buildings and Structures

Many of the buildings, structures, and small-scale features of the site are Listed Classified Structures (LCS). The LCS is a computerized inventory of all historic and prehistoric structures, in which the NPS has, or plans to acquire, any legal interest. These structures must have historical, architectural or engineering significance. These items are identified in this report with an IDLCS number. The locations of structures at GERO are illustrated on *Illustrations L-1 and L-2*.

- *George Rogers Clark Memorial (IDLCS 00434)*

  The Memorial Building remains the most prominent feature on the site today. The structure is circular with a sixteen column colonnade with an "inscribed entablature and ornate cornice." The structure has a "masonry parapet with granite veneer and

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GEORGE ROGERS CLARK NATIONAL HISTORICAL PARK

VINCENNES, INDIANA

EXISTING CONDITIONS: SMALL SCALE FEATURES & STRUCTURES

ILLUSTRATION L-1

0 100

MATCHLINE-SEE SHEET 1

VIGO STATUE AREA / PLANTERS

VIGO STATUE

RAILROAD TRACKS

RIVER STEPS & RAMP

FLOODWALL

NATIVE AMERICAN PYLONS

END FLOODWALL

FT. SACKVILLE SITE MEMORIAL

STREET LAMP

SOUTH TERRACE

BRIDGE APPROACH

NORTH TERRACE

GRATIOT MONUMENT

VINCENNES IN THE AMERICAN REVOLUTION MARKER

HEADQUARTERS SITE MARKER

MEMORIAL BUILDING

MALL

FIRST STREET

WAR MONUMENT

LINCOLN MEMORIAL BRIDGE FLAGPOLE

PATRICK HENRY DRIVE

PATRICK HENRY SQUARE

MAIN STREET (MARKET ST)

GRANITE BENCHES

CEMETERY

GIBAULT STATUE

VIGO STREET

SECOND STREET

ST. FRANCIS XAVIER CATHEDRAL

THE PLAZA

USS VINCENNES MEMORIAL

SECOND STREET

SECOND STREET

CHURCH STREET

PATRICK HENRY DRIVE

BARNETT STREET SIDEWALK

VISITOR CENTER

D STREET

DUBOIS STREET

BARNETT STREET

"WELCOME TO VINCENNES" SIGN

"GRC PARKING" SIGN

MALL

THE PLAZA

SOUTH TERRACE

NORTH TERRACE

BRIDGE APPROACH

GRC MEMORIAL & BASE

VIGO STATUE, STEPS & PLANTERS

GRANITE BENCH LOCATIONS

HISTORIC STREET LAMP LOCATIONS

TREE LOCATIONS

0 100

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GEORGE ROGERS CLARK NATIONAL HISTORICAL PARK

VINCENNES, INDIANA

EXISTING CONDITIONS: SMALL SCALE FEATURES & STRUCTURES

ILLUSTRATION L-2

cap stones and a three-step granite stylobate."[15] The Memorial Building is about eighty feet high and approximately 180 feet across at the base. Steps on the north face of the structure lead from an octagonal terrace to the Memorial Building entrance (see Figure 3.15). A handrail runs down the middle of the flight of stairs. The Memorial Building contains an etched skylight, seven original murals, and a bronze statue of George Rogers Clark.

The following are descriptions and observations of the existing Memorial Building excerpted from Edwin C. Bearss' 1970 *Historic Structures Report*:

> The circular part of the memorial rested on a circular reinforced concrete footing 88-1/2 feet in diameter, 20 feet 3 inches wide, and 42 inches thick. Thir[t]y-three steps led from grade to the entrance of the structure. The heighth [sic] of the building was 82 feet.
>
> There was a circular room surrounded by a circular colonnade of 16 columns, then by three granite terraces, and a wide pebble terrace outlined by an octagonal wall which in turn was surrounded by a curb wall forming a square. The wall measured 730 lineal feet in length.
>
> Two circles of concrete piers of 16 each supported the circular building and colonnade. These piers rested on the circular footing. Each pier…of the outer circle supported the weight of a granite column and the portion of the building above a column. The inner circle of piers…supported the high circular wall of the building. An octagonal pier was under the center of the building and supported the main floor.
>
> There were 16 granite Doric columns…39 feet in height…around the structure. Indiana limestone formed the interior ceiling, cornice, frieze, and pilasters. The massive stone ceiling was hung from a reinforced concrete dome which also supported the entire structure above the ceiling.
>
> The exterior of the building was Stantstead granite, except the red band above the green wainscot, which was Minnesota red granite.
>
> Above the panelled [sic] ceiling of the colonnade and extending around the building was an attic roofed over with a reinforced concrete slab covered with a flat roof of square slate tiles and one and one-quarter inch thick….In the center of the stone ceiling was

[15] U.S. Department of the Interior, National Park Service, "List of Classified Structures (LCS) Single Entry Report for IDLCS: 00434 Clark, George Rogers, Memorial," Entered 21 March 1995.

> an ornamental ceiling light 30 feet in diameter, made of bronze and carved and colored glass.
>
> In the finished portion of the basement were restrooms, switch-room, custodian's room, meter room, electric equipment room, and boiler room.[16]

The Memorial Terrace, once finished with an exposed aggregate surface, is currently surfaced with concrete. Leaks in the terrace level into the basement level of the building have plagued the structure since its initial construction and these leaks continue to this day. A recent assessment of the terrace level determined that the following conditions exist on the Memorial Terrace:

- Spalling and corrosion of reinforcing steel in the bottom of concrete slabs
- Spalling and corrosion of reinforcing steel in the bottom of concrete beams
- Spalling and corrosion of reinforcing steel in the vertical sides of the concrete beams.
- Diagonal cracking in stepped concrete beams."[17]
- Additional findings of this report include cracks and "exposed reinforcing steel with significant corrosion."[18]

[16] Bearss, 162-163. Note: The author writes his description in the past tense; however, this description is of the existing Memorial Building.
[17] RATIO, *Terrace*, 5.
[18] *Ibid.*

Figure 3.15: Memorial Building, Photo by The Jaeger Company, 2005.

There have been numerous studies conducted concerning the leaking of the Memorial Terrace. Existing conditions surveys and repair recommendations were prepared for the Memorial Terrace in 1995, 1998, 2002, and 2005. Funding has been approved for the 2005 plan. Because of the extensive leaking in the structure, the condition of this building is poor.

- *Wabash River Floodwall (IDLCS 06529)*

The Wabash River Floodwall runs the length of the original Memorial area for approximately 1000 feet along the riverbank. The wall consists of a forty-four inch parapet with evenly spaced piers. There are concrete gates at the north end of the park on either side of the railroad spur.[19] According to a May 2005 study of the wall, "although the U.S. Army Corps of Engineers no longer considers the wall part of their flood control system, the reinforced concrete wall continues to provide flood protection for the park, as evidenced this past winter, and also functions as a retaining wall to inhibit erosion loss."[20] A thorough existing conditions assessment of the visible portions of the Floodwall was also performed for this report and came to the following conclusions:

[19] U.S. Department of the Interior, National Park Service, "List of Classified Structures (LCS) Single Entry Report for IDLCS: 70162 Wabash River Floodwall," Entered 21 March 1995, 1.
[20] RATIO, *Floodwall*, 2.

- Spalling is present on the cap and wall portions of the parapet and portions of the front and back face of the wall itself.
- Spalling on the face of the wall seems to be concentrated at the pilasters where there are joints in the wall.
- Many horizontal cracks in the face of the wall are susceptible to leakage when the river crests against the Floodwall.
- The predominant cause of the deterioration evidenced by both cracking and spalling is the freeze/thaw action of the concrete.
- Previous repairs, mostly cosmetic in nature, have not solved the deterioration problems of the Floodwall, and the deterioration appears to be progressing. [21]

Due to the severity of the spalling and cracking of the Wabash River Floodwall (see Figure 3.16 – Figure 3.19), the condition of this element is poor. Existing conditions reports and repair plans for the Floodwall were conducted in 1989 and in 2005. Funding has been proposed to implement the 2005 plan.

Figure 3.16: Wabash River Floodwall, southern portion, Photo by The Jaeger Company, 2005.

[21] *Ibid*., 5-6.

Figure 3.17: Wabash River Floodwall, view of northern portion, Photo by The Jaeger Company, 2005.

Figure 3.18: Wabash River Floodwall, view of spalling and cracking, Photo by The Jaeger Company, 2005.

Figure 3.19: Wabash River Floodwall, view of exposed reinforcement, Photo by The Jaeger Company, 2005.

- *Lincoln Memorial Bridge Approach and Plaza (IDLCS 06528)*

The Lincoln Memorial Bridge Approach and Plaza constitute a major visual feature of the park. This landscape component includes the poured concrete structures in the bridge approach as well as the granite-faced walls along the approach (see Figure 3.20 and Figure 3.21). The approach includes the two granite pylons at the entrance to the bridge (see Figure 3.22). These pylons depict two Native American figures (Tecumseh and The Prophet) in bas relief. The sidewalks along the bridge approach are exposed aggregate with smooth concrete borders. The road surfacing in this area is asphalt. Sidewalks in this area are approximately fifteen (15'-0") wide. The condition of the Bridge Approach and Plaza is fair due to structural deterioration caused by seepage of rust through the granite facing.

Figure 3.20: Granite wall on south side of Lincoln Memorial Bridge Approach, Photo by The Jaeger Company, 2005.

Figure 3.21: Detail of walls and sidewalk on Lincoln Memorial Bridge Approach, note cracking in mortar joints, Photo by The Jaeger Company, 2005.

Figure 3.22: Detail of Pylon on Lincoln Memorial Bridge Approach, Photo by The Jaeger Company, 2005.

- *Lincoln Memorial Bridge – South Terrace (IDLCS 70160)*

The South Terrace of the Lincoln Memorial Bridge is part of the "axial Beaux Arts design for the Memorial [G]rounds."[22] The South Terrace rests on a concrete substructure with large granite wall panels on all walls, platforms, piers, and coping (see Figure 3.23 – Figure 3.25). The wall facing south has three sections each with carved inscriptions about the "territorial road which crossed the river at Vincennes". A set of six steps leads from the central Mall area of the Memorial Grounds to the elevated terrace. Additional stairs lead up on either side to the Lincoln Memorial Bridge Approach and Plaza. Large planters with granite facing flank the Terrace. Iron rust stains exist on the face of the granite panels of the Terrace. Some of the mortar joints show cracking. Due to the state of these materials, the condition of the South Terrace is fair.

The South Terrace is part of the primary axis of the Memorial Grounds design and acts as a defining edge of the Mall and provides elevation change from the pedestrian area around the Memorial Building and the automotive area on the Bridge Approach. The walls which compose the South Terrace provide enclosure for this portion of the site. The South Terrace provides a visual gateway and the formal entry to the Memorial Grounds from downtown Vincennes. From the top of the terrace, visitors

[22] U.S. Department of the Interior, National Park Service, "List of Classified Structures (LCS) Single Entry Report for IDLCS: 70160 Lincoln Memorial Bridge – South Terrace," Entered 21 March 1995, 1.

can look north toward the downtown commercial district, west toward the Lincoln Memorial Bridge and the Wabash River, south toward the Memorial Building, and east toward Saint Francis Xavier Cathedral.

Figure 3.23: View of South Terrace, Photo by The Jaeger Company, 2005.

Figure 3.24: Detail view of South Terrace showing date inscription, Photo by The Jaeger Company, 2005.

Figure 3.25: View of inscription panels at South Terrace, note discoloration, Photo by The Jaeger Company, 2005.

- *Lincoln Memorial Bridge – North Terrace (IDLCS 70161)*

The North Terrace of the Lincoln Memorial Bridge contains a large parapet and a massive flagpole (see small-scale features). This terrace has a concrete substructure faced with granite panels which make up the large parapet and a circular platform with a granite balustrade (see Figure 3.26). The ground level of the Terrace serves as a public event area. Two sets of stairs lead up to the circular portion of the North Terrace from ground level at the northeast and northwest corners of the Terrace. Seven circular stairs then lead up to the flagpole level. The granite panels on the North Terrace also have iron rust stains and the mortar joints are cracked in several locations (see Figure 3.27). There is a room under the North Terrace which NPS employees use for storage. This room exhibits signs of leakage similar to the Memorial Terrace. Stalactites and water seepage are also visible in this room. Due to the state of these materials, the condition of the Lincoln Memorial Bridge North Terrace is poor. The leakage condition may indicate that there are similar problems both on the South Terrace and on the Bridge Approach.

The North Terrace provides visitors approaching from the north end of the site a sense of arrival to the main axis of the Memorial Grounds. As visitors climb the stairs of the North Terrace, they are elevated to a vantage point from which the organization of the Memorial Grounds becomes more apparent. The visitor's eye is drawn across the Mall and toward the Memorial Building.

Figure 3.26: View of Lincoln Memorial Bridge North Terrace and public assembly area, Photo by The Jaeger Company, 2005.

Figure 3.27: Detail of iron rust stains below balustrade of North Terrace, Photo by The Jaeger Company, 2005.

- *George Rogers Clark Memorial Visitor Center*

Built in 1975-1976, the Visitor Center is composed of brick and concrete with a low horizontal profile (see Figure 3. 28). A simple, unadorned colonnade surrounds the building. The main entrances to the Visitor Center are on axis with a central sidewalk which leads to the Memorial Grounds. A secondary lower entrance gives access to the GERO administrative offices. The overall condition of the Visitor Center is good. The Visitor Center is approximately 6300 square feet.

Figure 3. 28: Visitor Center, Photo by The Jaeger Company, 2005.

- *Maintenance Building*

The Maintenance Building, constructed in 1992, is a low red brick building situated on the southwest corner of the Memorial Grounds across from the railroad tracks and Willow Street (see Figure 3.29). There are three small maintenance sheds outside the building itself. The condition of the Maintenance Building is good. The Maintenance Building is approximately 3,312 square feet.

Figure 3.29: Maintenance Building, Photo by The Jaeger Company, 2005.

- *Building Inholdings*

There are two buildings residing on inholdings adjacent to GERO. One property includes a one story wood frame building with a basement and detached garage at the corner of Lower Second Street and Willow Street. This building is currently used as a business. The second inholding is a one story wood frame house with a detached garage which is currently used as a residence. This building is located at the corner of Nicholas Street (now the entrance to the Parking Area) and Lower Second Street. Both parcels are currently privately owned.

Small-Scale Features

The Memorial Grounds include historic and non-historic small scale elements. A description of the individual structures and other features present at the site and their current condition is included in Table 1 in this chapter. Many of the small scale features present on the site are in the List of Classified Structures (LCS) database. Small-scale features are illustrated on *Illustrations L-1 and L-2*.

Lincoln Memorial Bridge – Flagpole (IDLCS 70162)

The large flagpole on the north terrace of the bridge approach "represents the five states formed from each of the Northwest Territory: Ohio, Indiana, Michigan, Wisconsin, and Illinois."[23] The pole itself is approximately eighty feet high and is set into a "stepped circular granite base" and was installed between 1931 and 1933. A five-pointed aluminum star sits at the top step of the base with the "five state names inscribed in granite between [the] star points."[24] The lower two steps of the base are grey and unpolished and the upper step is dark and polished. There is some discoloration of the lower granite steps caused by the metal from the post (see Figure 3.30); therefore, the condition of the flagpole is fair.

[23] U.S. Department of the Interior, National Park Service, "List of Classified Structures (LCS) Single Entry Report for IDLCS: 70162 Lincoln Memorial Bridge – Flagpole," Entered 21 March 1995, 1.
[24] *Ibid.*

Figure 3.30: Lincoln Memorial Bridge – Flagpole, Photo by The Jaeger Company, 2005.

Vigo Statue (IDLCS 06526)
The Vigo Statue is located on the northwest edge of the site between the Memorial Building and the Floodwall and was installed in 1936. The granite statue rests in its original location (see Figure 3.31). As described in the LCS listing, this statue depicts Francis Vigo "seated with his arm resting on a bale of furs." The statue "measures 4'x 9'x 11' high" with "some staining" visible on the stones. As listed in the LCS system "Two fingers on [the] left hand [are] partially missing"; however these features have been repaired. The nose on the statue is not original and was repaired in 1943 and 1990. The figure "sits on [a] granite terrace with [a] course aggregate perimeter wall with granite coping."[25] The condition of this statue is fair due to past damage.

The statue is surrounded by a granite pedestal which is bordered by an exposed aggregate concrete wall with a granite coping. Wide granite steps flank both sides of the statue and wall area leading down toward the riverbank. Exposed aggregate planters flank rest on either side of the steps.

[25] U.S. Department of the Interior, National Park Service, "List of Classified Structures (LCS) Single Entry Report for IDLCS: 06526 Vigo Statue," Entered 21 March 1995, 1.

Figure 3.31: Francis Vigo Statue, Photo by The Jaeger Company, 2005.

Gibault Statue (IDLCS: 06527)

The statue of Father Pierre Gibault rests in the plaza of the Second Street immediately in front of (northeast of) Saint Francis Xavier Catholic Church where it was installed in 1936 (see Figure 3.32). The statue rests in its original location. As described in its LCS listing, the bronze statue depicts an "8' high robed priest holding a cross and parchment." The statue rests on a dark green pedestal/base. The base inscription reads, "Pierre Gibault – 1737-1804 – Vicar-General of the Illinois Country-Who in 1778 gained the allegiance to the United States of the French Population of Vincennes."[26] The condition of the Gibault statue is good. The statue is surrounded by exposed aggregate concrete which is bordered on the front by lawn and on the rear by a planting bed with junipers.

[26] U.S. Department of the Interior, National Park Service, "List of Classified Structures (LCS) Single Entry Report for IDLCS: 06527 Gibault Statue," Entered 21 March 1995, 1.

Figure 3.32: Gibault Statue, photo by The Jaeger Company, 2006.

Memorials and Plaques
Numerous memorials and plaques dot the landscape throughout the GERO site. All of the plaques are listed in the LCS system and are described below:

- The War Memorial *(IDLCS: 06530)* is located on the northwest side of the green between Main Street and Patrick Henry Drive (see Figure 3.33). This feature is a "limestone memorial on [a] rectangular concrete slab base" and was dedicated in 1937 to commemorate the residents of Knox County who lost their lives in World War I. This structure consists of three pieces: two pieces acting as a stepped base and a "massive top piece with [a] shallow double-pitched top." There are bronze plaques on the front and back of the top piece. The "front plaque has [a] bas-relief of fighting soldiers and names of 60 [sixty] men."[27] The condition of this memorial is good.

[27] U.S. Department of the Interior, National Park Service, "List of Classified Structures (LCS) Single Entry Report for IDLCS: 06530 War Memorial," Entered 21 March 1995, 1.

Figure 3.33: War Memorial, Photo by The Jaeger Company, 2005.

- The Headquarters Site Marker *(IDLCS 06531)* is located on the southeast corner of the green north of First Street (see Figure 3.34). This memorial consists of a "bronze plaque (2'-4" x 1'-8") set into [an] angled granite base (3' x 2'-9")" which were erected in 1954. These structures are "sitting on [a] concrete pad (3'-9" x 3'-10")" which is flush with grade. The plaque containing the inscription has a "raised border" and the symbol of the Daughters of the American Revolution above the text. The inscription identifies "the Clark Headquarter site during the attack on Fort Sackville in 1779."[28] The base of this monument is cracked, therefore the marker is in fair condition.

[28] U.S. Department of the Interior, National Park Service, "List of Classified Structures (LCS) Single Entry Report for IDLCS: 06531Headquarters Site Marker," Entered 21 March 1995, 1.

Figure 3.34: Headquarters Site Marker, Photo by The Jaeger Company, 2005.

- The Fort Sackville Site Memorial *(IDLCS: 06532)* sits at the base of the Memorial Building on the northeast corner (see Figure 3.35). A bronze plaque measuring 1'-7" by 10" is set in a limestone base and reads "Site of Fort Sackville". An inscription in the limestone base reads "Captured by Col. George Rogers Clark from the British – February 25, 1779 – Resulting in the U.S. acquiring the Great Northwest Territory, embracing the States of Indiana, Ohio, Illinois, Michigan, Wisconsin, and Minnesota." According to the LCS listing, the original base was replaced in 1936 with the existing stone. "Bronze stains from water runoff [are] evident on [the] base."[29] The Memorial was originally installed on the GERO site in 1905, but it was moved to its current location in 1936. Due to damage and the impact of vegetation, the condition of the memorial is fair.

[29] U.S. Department of the Interior, National Park Service, "List of Classified Structures (LCS) Single Entry Report for IDLCS: 06532 Fort Sackville Site Memorial," Entered 21 March 1995, 1.

Figure 3.35: Fort Sackville Site Memorial, Photo by The Jaeger Company, 2005.

- The Charles Gratiot Monument (Listed as Gratiot, Charles, Monument in *IDLCS: 17023*) is located at the intersection of First Street and Patrick Henry Drive at the northwest side of the intersection (see Figure 3.36). According to GERO staff, this monument was installed on November 18, 1905 and replaced in 1936. This monument consists of a "bronze tablet (20" x 28") mounted on [an] angled granite base (32.5" x 36")." The tablet and base are mounted on a concrete footing which is mounted flush with existing grade.[30] The monument was dedicated by the Huguenot Societies of the Old Northwest Territory as part of Bicentennial celebrations at the site. The primary inscription on the plaque reads "Through the patriotism of Charles Gratiot in furnishing material aid, Colonel George Rogers Clark was enabled to keep his forces intact and thus to recapture Fort Sackville in 1779." The condition of the monument is good.

[30] U.S. Department of the Interior, National Park Service, "List of Classified Structures (LCS) Single Entry Report for IDLCS: 17023 Gratiot, Charles, Monument," Entered 21 March 1995, 1.

Figure 3.36: Gratiot Monument, Photo by The Jaeger Company, 2005.

- The Ferry Landing Plaque *(IDLCS: 70166)* is located on the floodwall northwest of the bridge approach (see Figure 3.37). The plaque, which was installed in 1930, "commemorates Lincoln's crossing of the Wabash" and reads, "Site of ferry landing, from this place in the year 1830 Abraham Lincoln crossed the Wabash River to Illinois." The bronze plaque has been "marred from cleaning and vandals (inscribed names and initials)."[31] Due to this damage the condition of the plaque is fair.

Figure 3.37: Ferry Landing Plaque, Photo by The Jaeger Company, 2005.

- The USS Vincennes Memorial *(IDLCS: 70167)* is located in the green west of Vigo Street and north of Second Street where it was installed in 1989 (see Figure 3.38).

[31] U.S. Department of the Interior, National Park Service, "List of Classified Structures (LCS) Single Entry Report for IDLCS: 70166 Ferry Landing Plaque," Entered 21 March 1995, 1.

The memorial is situated on a spur off of the diagonal sidewalk running from the southeast corner of the green up to the bridge approach area. The memorial was "erected to commemorate the four U.S. Naval ships commissioned the USS Vincennes." The construction of the memorial consists of a "circular grey granite base with [a] rough edge and 8 [eight] compass points on top. [The] memorial is polished black marble" which is square at the base with a "pyramidal, [beveled] and truncated" top half. There is a bronze plaque on each side of the memorial and a common "plaque on the north side of the base of the memorial."[32] The condition of the memorial is good.

Figure 3.38: USS Vincennes Memorial, Photo by The Jaeger Company, 2005.

- The Vincennes in the American Revolution Marker *(IDLCS: 70168)* is located between the Gratiot Monument and the Headquarters Site Marker where it was installed in 1976 (see Figure 3.39). The plaque was erected by the Illinois Bicentennial Commission, Illinois State Historical Society and the Indiana Historical Society and is navy blue with raised white letters. The "plaque is secured to the pole with brackets at [the] middle and top" of a silver painted aluminum pole.[33] The condition of the plaque is good.

[32] U.S. Department of the Interior, National Park Service, "List of Classified Structures (LCS) Single Entry Report for IDLCS: 70167 USS Vincennes Memorial," Entered 21 March 1995, 1.
[33] U.S. Department of the Interior, National Park Service, "List of Classified Structures (LCS) Single Entry Report for IDLCS: 70168 Vincennes in the American Revolution," Entered 21 March 1995, 1.

Figure 3.39: Vincennes in the American Revolution Marker, Photo by The Jaeger Company, 2005.

- The Name of Vincennes Marker (*IDLCS: 70169*) is located at the intersection of Main Street and Second Street where it was installed by Delta Theta Tau Sorority, Epsilon Psi Chapter and Alumni Association in 1976 (see Figure 3.40). This rectangular plaque is a traditional historical marker with the symbol of the American Revolution Bicentennial Commission above the text. The plaque is black with raised white letters. The plaque is posted on a concrete and metal post which is mounted into the ground. The condition of this plaque is good.

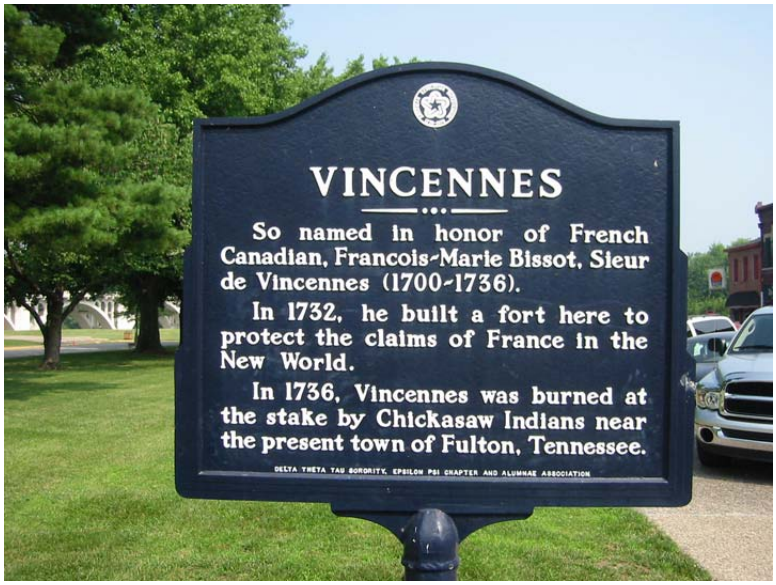


Figure 3.40: Name of Vincennes Marker, Photo by The Jaeger Company, 2005.

Non-historic Signs

Non-historic directional or welcome signs exist in several locations on the site. One of the largest signs on the site is a concrete slab sign located between Second Street and the Visitor Center. A modern sign kiosk exists along the sidewalk leading from the Parking Area to the Visitor Center. This kiosk is a location for the posting of community and Park events. The kiosk also houses some interpretive information. A "Welcome to Vincennes" sign is located in front of the Saint Francis Church along Vigo Street. Additional directional signs exist throughout the park site including standard brown NPS signs and blue Vincennes Historical Site signs.

Benches

There are two types of benches located within the site. The benches are associated with the different development periods of the site. Historic granite benches dating from the Memorial Era period of significance are listed within the LCS system as IDLCS: 70164 (see Figure 3.41 and Figure 3.42). These "unpolished granite benches [are] supported by three fluted granite piers. The bench tops measure two feet by eight feet and are "rectangular with rounded edges on top." There are twelve of these benches located along the approach to the Memorial Building sitting on exposed aggregate pads adjacent to the sidewalks. Additional granite bench locations include six benches located around the perimeter of the sidewalk surrounding the Memorial Building. The benches were installed in 1933. The condition of these benches is good. Nonhistoric benches associated with the Visitor Center construction period and not included on the LCS are exposed aggregate concrete. The benches are placed in several locations on the site near sidewalks (see Figure 3.43). Many of these benches have chips, scratches, and discolorations apparent on the surface which is a result of skateboard and bicycle abuse. Due to this damage, the condition of these benches is fair.

Figure 3.41: Granite Bench, Photo by The Jaeger Company, 2005.

Figure 3.42: Detail of Granite Bench foot, Photo by The Jaeger Company, 2005.

Figure 3.43: Exposed aggregate bench, Photo by The Jaeger Company, 2005.

Trash receptacles are placed throughout the site, usually adjacent to sidewalks or bench locations (see Figure 3.44). Most trash receptacles are brown steel with exposed aggregate siding. A small trash station with brown painted steel cans resides near the bus parking area.

Figure 3.44: Typical exposed aggregate trash receptacle, Photo by The Jaeger Company, 2005.

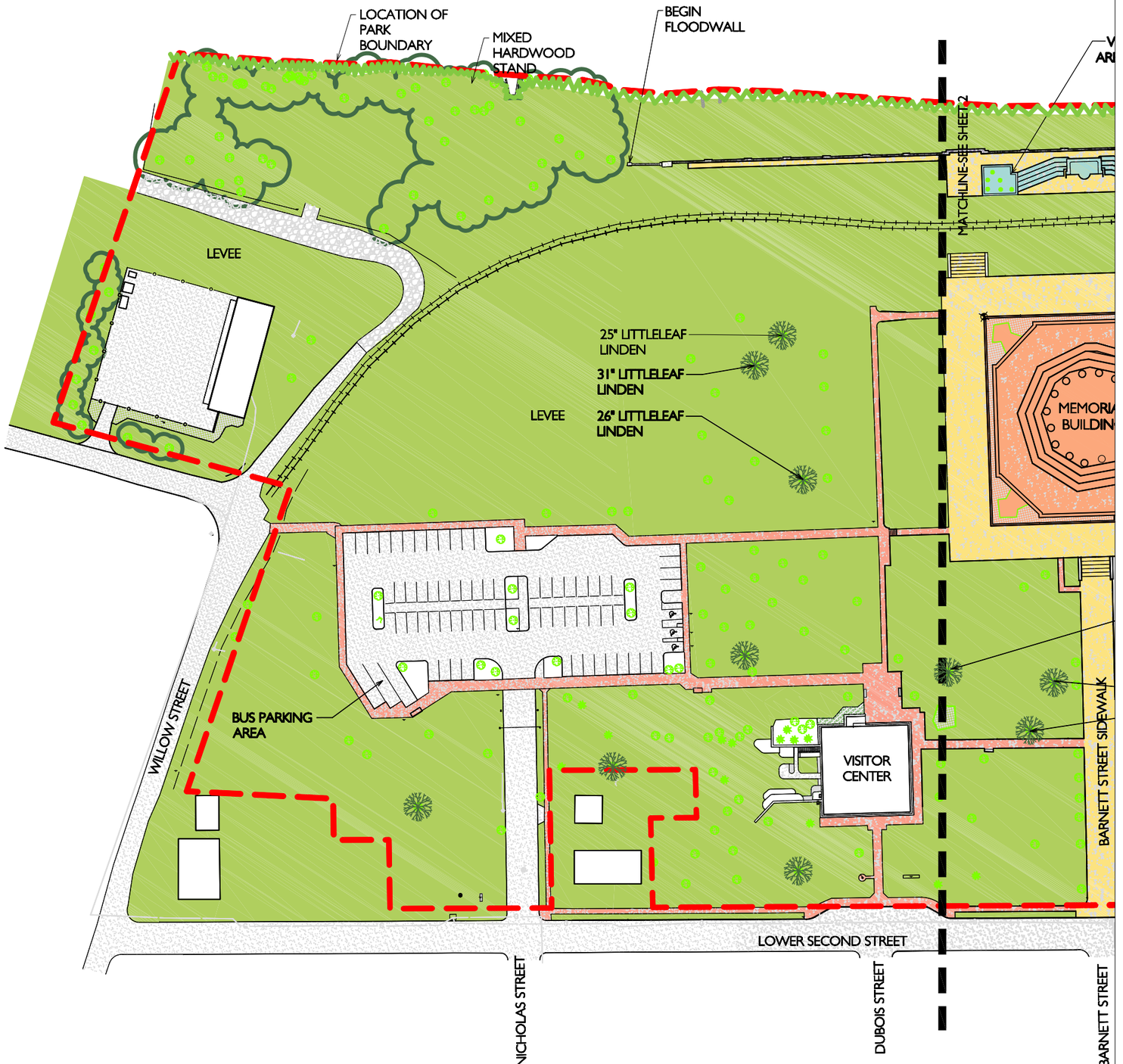
Features Adjacent to Visitor Center
In addition to various benches and trash receptacles located near the Visitor Center there are also several nonhistoric small-scale features located in this area. These items are not included on the LCS for GERO. These include a cannon replica, an exposed aggregate surfaced water fountain, and a bike rack. The cannon was damaged by a pipe bomb during the 1980s, rendering it non-fireable. As a prop the cannon is in good condition; however, it does not function. The carriage which holds the cannon is in poor condition due to deteriorating wood pieces. The water fountain and the bike rack are in good condition.

Circulation
Pedestrian Circulation
Pedestrian circulation is represented graphically on *Illustrations M-1 and M-2.* For the purposes of orientation in this report, north is assumed to be in the direction of the North Terrace, which technically is slightly northeast, and south is thus assumed to be in the direction of the South Terrace. This will facilitate a quicker orientation for the reader to the features on the site.

Sequential movement by pedestrians through the site differs somewhat from the historic intent. The main axes of the park include the Mall and the Barnett Street sidewalk (both features are described below). Pedestrians access the Memorial Grounds via these routes or via a series of walkways from the Visitor Center Parking lot. Visitors accessing the site from downtown Vincennes enter public square areas, the circulation around and through which ties into the primary axes of the Memorial Grounds.

- *Main Access*

  The most prominent pedestrian circulation pathways are organized around the Memorial Building (original layout c. 1933). The primary pedestrian feature on the site is the double sidewalk Mall to the north of the Memorial Building (see Figure 3.45). These pathways are approximately twenty feet wide and over three hundred feet long and are constructed of exposed aggregate concrete (see Figure 3.46). The historic sidewalks are listed in the LCS system as IDLCS 70165. Many areas of the original concrete have been replaced over time; however, these improvements have not been documented. The Mall is approximately 272 feet in width. This includes the two linden allée areas (80 feet in width), the two exposed aggregate sidewalks (20 feet in width), and the central lawn panel (72 feet in width).



VEHICULAR CIRCULATION
PEDESTRIAN CIRCULATION-HISTORIC LOCATION
PEDESTRIAN CIRCULATION-NON-HISTORIC LOCATION
LAWN
SHRUBS
NON-HISTORIC TREE
TREES FROM MEMORIAL ERA PERIOD OF SIGNIFICANCE
RIVERINE VEGETATION & STABILIZATION

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VINCENNES, INDIANA

EXISTING CONDITIONS: VEGETATION & CIRCULATION

ILLUSTRATION M-1

0 100

Landscape Architecture · Historic Preservation · Planning

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GEORGE ROGERS CLARK NATIONAL HISTORICAL PARK

VINCENNES, INDIANA

EXISTING CONDITIONS: VEGETATION & CIRCULATION

ILLUSTRATION M-2

MATCHLINE-SEE SHEET

VIGO STATUE AREA / PLANTERS

VIGO STATUE STEPS & PLANTERS

RAILROAD TRACKS

LOCATION OF PARK BOUNDARY

60" NORTHERN RED OAK

48" NORTHERN RED OAK

END FLOODWALL

SOUTH TERRACE

BRIDGE APPROACH

NORTH TERRACE

MEMORIAL BUILDING

MALL

FIRST STREET

PATRICK HENRY DRIVE

PATRICK HENRY SQUARE

MAIN STREET (MARKET ST)

52" NORTHERN RED OAK

36" NORTHERN RED OAK

60" NORTHERN RED OAK

54" NORTHERN RED OAK

CEMETERY

32" AMERICAN LINDEN

40" AMERICAN LINDEN

BARNETT STREET SIDEWALK

ST. FRANCIS XAVIER CATHEDRAL

VIGO STREET

SECOND STREET

THE PLAZA

SECOND STREET

CHURCH STREET

27" SUGAR MAPLE

21" SUGAR MAPLE

PATRICK HENRY DRIVE

35" SUGAR MAPLE

35" SUGAR MAPLE

DUBOIS STREET

BARNETT STREET

VEHICULAR CIRCULATION

PEDESTRIAN CIRCULATION-HISTORIC LOCATION

PEDESTRIAN CIRCULATION-NON-HISTORIC LOCATION

LAWN

SHRUBS

NON-HISTORIC TREE

TREES FROM MEMORIAL ERA PERIOD OF SIGNIFICANCE

RIVERINE VEGETATION & STABILIZATION

N

0 100

Figure 3.45: View of Memorial Building and sidewalks leading toward and around the structure, Photo by The Jaeger Company, 2005.

Figure 3.46: Typical exposed aggregate concrete sidewalk surface, Photo by The Jaeger Company, 2005.

- *Sidewalk Area at Base of Memorial*

The sidewalks around the base of the Memorial Building are approximately fifty feet wide. The color of the aggregate closest to the Memorial Building is darker than that further away from the building (see Figure 3.47).

Figure 3.47: Contrast in aggregate colors adjacent to Memorial Building, Photo by The Jaeger Company, 2005.

- *Barnett Street Sidewalk*

Another primary axis of the current configuration of the Memorial Grounds is the historic sidewalk which acts as the extension of Barnett Street into the site (referred to by staff as the "Barnett Street Sidewalk"). This sidewalk is approximately twenty-eight feet wide and is lined with redbud trees. It is unclear when these trees were planted on the site. A set of granite steps as well as a universal access ramp separate the grades of this sidewalk from the grade of the sidewalks surrounding the Memorial.

- *East Sidewalks, Memorial Building to Vigo Street*

A five foot wide sidewalk serves as access from the east side of the Memorial Building to Vigo Street. This sidewalk runs north to south and parallels the property border with Saint Xavier Catholic Church. The pavement is lined by sweet gum and linden trees. This sidewalk intersects with a nearly eight-foot wide diagonal sidewalk which directs foot traffic from the South Terrace Area and Vigo Street to the entrance of the cathedral building. Sidewalks line the edges of the greenspace in this area. An almost mirror image of this sidewalk is present on the north side of Vigo Street leading from the North Terrace area down to the intersection of Patrick Henry Drive and Second Street. This greenspace is also bordered by sidewalks. All sidewalks in these areas are exposed aggregate concrete. The five foot wide sidewalk extending from the Memorial Building to Vigo Street is in poor condition at several locations and has subsided due to the settling of the underlying fill material (see Figure 3.48). In other locations the walkway is in good condition.

Figure 3.48: Area of concrete sidewalk subsidence, Photo by The Jaeger Company, 2005.

- *Memorial Building / River Connection*

A pair of formal granite steps leads down from the northwest and southwest corners of the sidewalks surrounding the Memorial Building. These stairs are built into the slope leading from the Memorial Building level down to the train tracks. The sidewalks into which these stairs were intended to connect do not exist because the full extent of Parsons' plan was not carried out in this area (due to the railroad spur). Instead, the northwest set of steps leads to a sidewalk with a crossing point over the tracks themselves (see Figure 3.49). A nearly six-foot wide exposed aggregate sidewalk, which is part of the Vigo Statue area, leads from the at-grade crossing point (see Figure 3.50) to the sidewalk system adjacent to the Wabash River Floodwall and the steps leading from the Vigo Statue area down to the riverbank. The sidewalk along the Wabash River Floodwall is typically five feet in width and runs approximately 700 feet along the length of the wall. Various sets of stairs and sidewalk spurs tie into other portions of the pedestrian circulation system along the sidewalk which parallels the Floodwall which begins at the Vigo Statue area.

Figure 3.49: Steps leading from sidewalk at base of Memorial Building to railroad tracks, Photo by The Jaeger Company, 2005.

Figure 3.50: At-grade crossing of railroad tracks, Photo by The Jaeger Company, 2005.

- *The Plaza*

The Plaza in front of Saint Francis Xavier Cathedral contains several narrow sidewalks and a terrace which houses the Gibault Statue. Five-foot wide sidewalks line the exterior of the plaza with two three-foot wide sidewalks in the interior. These sidewalks are exposed aggregate consistent with the rest of the site. The concrete portion directly below the statue (completed in October 1933) is composed of somewhat larger aggregate than what was typical to the other sidewalks around the Memorial Grounds (see Figure 3.51). This is the only known piece of original

sidewalk pavement at the Memorial Grounds based on field inspections and interviews with GERO staff.

Figure 3.51: Large aggregate at base of Gibault Statue, Photo by The Jaeger Company, 2005.

- *Greenspaces and Sidewalks along the Northern Boundary*

The greenspace between Patrick Henry Drive and Main Street (Patrick Henry Squre), the triangular lawn area defined by Patrick Henry Drive, Vigo Street, and Second Street, and the greenspace just northwest of the intersection of Lower Second Street and Vigo Street are all defined on their outer perimeters by exposed aggregate sidewalks of varying widths. The sidewalks on the east side of Patrick Henry Drive also lie within the GERO boundary. These sidewalks were part of the original layout for the park and are constructed of exposed aggregate concrete. The configuration of the sidewalks in this area provides access from each corner of the adjacent downtown commercial district to the Memorial. Despite isolated areas with cracking, the sidewalks in the downtown greenspaces are in good condition.

- *Visitor Center Circulation*

Non-historic pedestrian circulation on the site connects the Visitor Center and the Visitor Center parking lot with the Memorial Grounds circulation system. A five-foot wide sidewalk parallels Lower Second Street from the intersection with Vigo Street to the Nicholas Street entrance to the Parking Lot. (The sidewalk is not within the GERO boundary for this entire length.) A sidewalk, which varies in width from five to ten feet, surrounds the entire parking area. A universal access ramp for access to the Visitor Center is on the northwest side of the building. These sidewalks are all exposed aggregate concrete.

The Memorial Grounds do not have full universal access. While most walks within the Mall area are accessible due to the mostly flat grades, stairs leading from the Mall to the

Vigo Statue prevent universal access. Stairs leading from the Mall to the Bridge Approach level prevent direct access; however, a more circuitous route along the walkways allows some access to the Bridge Approach level and back down to the north end of the North Plaza. (Grades in this area slightly exceed five percent, and there are no handrails provided.)

Vehicular Circulation
Vehicles entering downtown Vincennes approach from various directions, but typically via four routes:

1. From Sixth Street to Main Street
2. From Vigo or Barnett Streets
3. From Willow Street via the bypass
4. From Illinois via the Lincoln Memorial Bridge

There is on-street parking both along Main Street and in front of the Visitor Center. However, most visitors to GERO who arrive via car typically park in the Visitor Center parking lot (see Figure 3.52). Although provisions for bus parking are made in the parking lot, conversations with park staff reveal that the turning radii for buses are inadequate and result in frequent visitor complaints. The parking lot is asphalt with painted striping and concrete curb stops. Several tree islands exist within the lot planted with Bradford pear trees. The southwest corner of the parking lot has sunken since original construction. Park staff speculates that the sinking has been caused by breakage of underground water lines. Because of this sinking and the fact that cracks and wearing are evident in some areas, the condition of the asphalt pavement in the parking area is fair.

All vehicular routes on the site are paved with asphalt with two exceptions. One is a small portion of Main Street where it extends toward the railroad tracks. This surface consists of brick pavers for approximately 100 feet. This portion of Main Street is approximately thirty-four feet wide.

Figure 3.52: View facing northeast in parking lot, Photo by The Jaeger Company, 2005.

Another non-asphalt route is the extension of Willow Street leading to Pearl City, a residential area located on the banks of the Wabash River south of GERO. This unpaved route runs in front of the southernmost riverside portion of the levee for approximately 345 feet in distance.

Railroad Spur

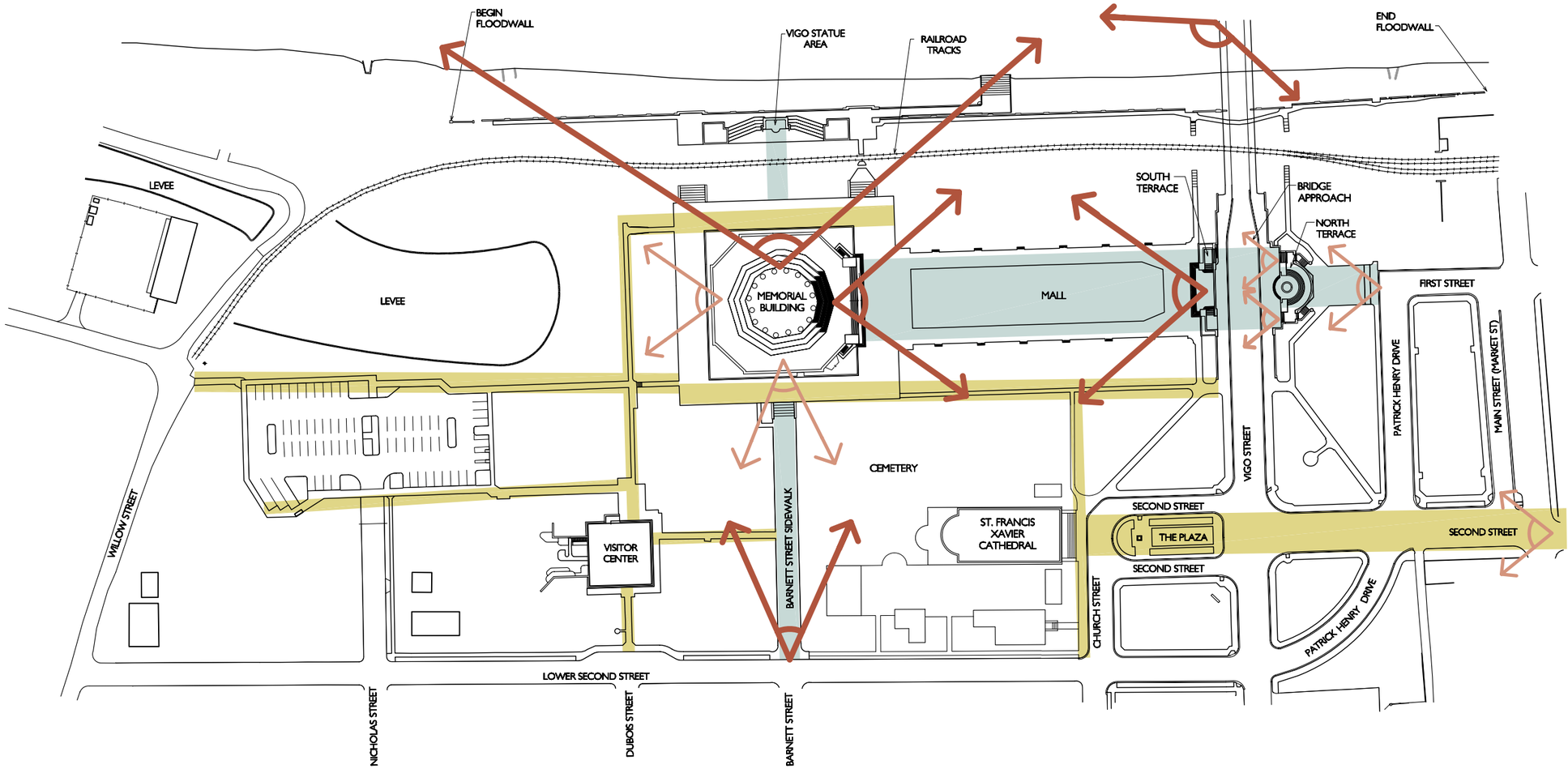
Although the original design for the Memorial Grounds called for a boulevard along the river, the retention of the railroad tracks in the proposed location has negated installation of this major design feature. Although the tracks predate the Memorial Era period of significance, they are not considered contributing to the design and are a barrier to universal access to the riverfront (see Figure 3.53). They currently receive very minimal use by cars reaching the grain elevator northeast of the site.

Figure 3.53: Railroad tracks with Vigo Statue and Lincoln Memorial Bridge in the background, Photo by The Jaeger Company, 2005.

Views and Vistas

Views and vistas on the site are dictated by the Memorial Grounds' axial plan. Views are defined as "the expansive and/or panoramic prospect of a broad range of vision which may be naturally occurring or deliberately contrived."[34] Vistas are "the controlled prospect of a discrete linear range of vision, which is deliberately contrived."[35] The primary and secondary views on the site are conveyed graphically on *Illustration N*. Whether approaching the site by car or foot the eye is drawn toward the Memorial Building. One of the most impressive views of the Memorial Building is from the Lincoln Memorial Bridge when approaching from Illinois. This view was present historically on the site and is still evident today. This view is nearly a birds-eye orientation in which the form of the structure and its axial orientation within the formally planned grounds is apparent. Views facing south on First Street from the intersection with Main Street have the Memorial Building as an axial focus with the North Terrace of the Bridge Approach and Flagpole in the foreground (see Figure 3.54). This view was present historically on the site and is still evident today. From the North Terrace, the view toward the Memorial Buildings is unobstructed and framed by the remaining linden trees in the Mall area (see Figure 3.55). Views out from the Memorial Building are framed by the remaining trees in the linden allée over the South Terrace of the Bridge Approach up toward the flagpole (see Figure 3.56). This view is not compliant with the intended historic view as envisioned by the Parsons plan due to the inconsistencies in canopy within the Linden allée. The remaining redbud trees along the Barnett Street Sidewalk frame the other existing primary view to the Memorial Building from the adjacent in-town residential area (see Figure 3.57). Consistent with historic conditions, the vista across the Memorial Terrace toward the Wabash River is of a natural setting (see Figure

[34] Page, 85.
[35] *Ibid*., 85.



LEGEND

- PRIMARY AXIS
- SECONDARY AXIS
- PRIMARY VIEWSHED
- SECONDARY VIEWSHED

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VINCENNES, INDIANA

EXISTING CONDITIONS - VIEWS & AXES

ILLUSTRATION N

0 150

3. 58 – Figure 3.59). Several contemporary intrusions exist along the riverbank, but it is largely vegetated. The majority of visitors to the site approach the Memorial Building from the Visitor Center parking lot. From this approach, the view to the Memorial Building is obstructed by mature trees. A narrow sight line, directed off center from the Memorial Building prevents visitors from viewing the Memorial on the intended historic axis.[36] In historic conditions, the terminus of a view down Second Street is the Plaza area containing the Gibault Statue with St. Francis Xavier Cathedral as a backdrop. This view still exists. Intended views from the "Boulevard" intended by the original Parsons plan have never been realized due to the railroad spur. However, future removal of these tracks may allow this view to be realized.

Figure 3.54: View across public assembly area from Main Street toward Memorial Building remains fairly true to historic conditions despite maturing vegetation, Photo by The Jaeger Company, 2005.

[36] Jones, 187.

Figure 3.55: Views across the center lawn of the Mall remain unobstructed; however, the linear effect of the view has been diminished by loss of linden trees, Photo by The Jaeger Company, 2005.

Figure 3.56: View across center lawn from Memorial Building remains true to historic conditions including the view of the grain elevator; however, linear effect of view has been diminished by the loss of linden trees, Photo by The Jaeger Company, 2005.

Figure 3.57: The allée of trees lining the Barnett Street Sidewalk is interrupted by missing trees, vista is not consistent with historic conditions, Photo by The Jaeger Company, 2005.

Figure 3. 58: Views across the Wabash River to the Illinois side fairly similar to historic conditions, Photo by The Jaeger Company, 2005.

Figure 3.59: View from Memorial Building of Vigo Statue with wooded backdrop, Photo by The Jaeger Company, 2005.

The following tables summarize the condition of some of the key features at the GERO site:

TABLE 1: HISTORIC FEATURES				
Historic Structure/ Feature	**Figure No.**	**Condition**	**Deficiency**	**LCS ID No. (if applicable)**
Historic Vegetation (Shrubs and Trees)		Poor	Few specimen trees left from period of significance. Few trees replaced in-kind from period of significance.	
George Rogers Clark Memorial Building	Figure 3.15	Poor	Leakage from Terrace level.	00434
Wabash River Floodwall	Figure 3.16	Poor	Cracking, spalling, exposed reinforcement.	06529
Lincoln Memorial Bridge Approach and Plaza	Figure 3.22	Fair	Structural deterioration caused by seepage of rust through granite facing.	06528
Lincoln Memorial Bridge – South Terrace	Figure 3.23	Fair	Structural deterioration caused by seepage of rust through granite facing.	70160
Lincoln Memorial Bridge – North Terrace	Figure 3.26	Poor	Structural deterioration caused by seepage of rust through granite facing and leakage from terrace level into storeroom below.	70161
Building Inholdings		Good		
Sidewalks	Figure 3.46	Fair	Areas of subsidence and cracking; Aggregate is inconsistent in size and color throughout park.	70165
Vehicular Circulation		Fair	Some areas of pavement cracking.	
Railroad Tracks	Figure 3.53			

Lincoln Memorial Bridge – Flagpole	Figure 3.30	Fair	Discoloration of lower granite steps caused by metal from post.	70162
Vigo Statue	Figure 3.31	Fair	Past damage (some repaired).	06526
War Memorial	Figure 3.33	Good		06530
Headquarters Site Marker	Figure 3.34	Fair	Base is cracked.	06531
Fort Sackville Site Memorial	Figure 3.35	Fair	Vegetation impact; stains.	06532
Charles Gratiot Monument	Figure 3.36	Good		17023
Ferry Landing Plaque	Figure 3.37	Fair	Marks from vandalism; damage from over-cleaning.	70166
USS Vincennes Memorial	Figure 3.38	Good		70167
Vincennes in the American Revolution Marker	Figure 3.39	Good		70168
Name of Vincennes Marker	Figure 3.40	Good		70169
Granite Benches	Figure 3.41	Good		70164
Views and Vistas		Fair	Lack of historic vegetation to frame primary and secondary views.	
Street Lamps	Figure 3.62	Good		70163

TABLE 2: NON-HISTORIC FEATURES

Non-Historic Features	Figure No.	Condition	Deficiency
Ornamental Shrub Plantings in historic planting locations	Figure 3.13	Good	
Linden Allée	Figure 3.3	Poor	Missing specimens; some leaning trees.
Riverside Vegetation	Figure 3.12	Fair	Some areas of erosion continue.
George Rogers Clark Memorial Visitor Center		Good	
Visitor Center Courtyard	Figure 3.9	Good	Requires much maintenance to maintain good condition.
Maintenance Building Compound	Figure 3.10	Good	
Exposed Aggregate Benches & Trash Receptacles	Figure 3.43	Fair	Chips, scratching, and marring due to skateboards and bicycles.

Archeological Resources

Known Archeological Resources

The exact location of Fort Sackville is not known. With regard to its placement, Bearss writes in the 1970 HSR that his estimations of the Fort location are based on primary resources including journal entries noting the distance of the Fort from the Main street in the Village of Vincennes and from the Wabash River.[37] This information was utilized in locating the trenches used for an archeological investigation.

In the summer and fall of 1970 and 1971 a team of archeologists led by Curtis H. Tomak conducted research on the GERO site to attempt to determine the location of the Fort Sackville on the site. "The project was complicated by the facts that locational and descriptive data for Fort Sackville are less than desirable, that the area has been continuously occupied up to the present time, and that within the present park there are buildings, pavements, trees, areas of fill, etc. which pose problems for excavation. Moreover, in addition to Fort Sackville (1777-1782), two other forts are reported to have been built in the same general location. These are the French Post Vincennes (c. 1732-?) and the American Fort Knox No. 3 (1813-1816)."[38] Excavations revealed many artifacts that dated from periods after fort occupation of the site, but little data was found to support definitive fort locations. Two walls (Wall A and Wall B) were located in one of the investigatory trenches. "Just how they are related to one another and to other features is not clear. Fort Knox No. 3 is seemingly represented at least by Wall A. Perhaps some remnant of Fort Sackville has been found. Post Vincennes apparently remains undiscovered."[39]

There is conflicting information about the amount of fill used in the construction of the Memorial Grounds. According to Charles Konen, a contractor who worked on the construction of the grounds including grading and sidewalk work, "oh, I don't know how thick this is on top of here. I say at least twelve-fifteen inches…"[40] In another interview with a contractor who worked on the project, the interviewer states," we know that there is at least six feet of fill in all of the area in the front of the memorial mall and everywhere. Involved a tremendous amount of fill work."[41] An archeological Overview and Assessment for the site conducted in 2002 by Robert Nickel states the need for further investigation into fill amounts used in construction of the Memorial Grounds. Recommendations from the Nickel report have been included in the Recommended Treatment (Chapter 7) section of this report.

[37] Bearss, 133.
[38] Curtis H. Tomak, *Archaeological Investigations at the George Rogers Clark National Memorial, Vincennes, Indiana*, (Washington, DC: US Department of the Interior, NPS, November 1972), 62.
[39] *Ibid*., 63.
[40] Charles Konen. "Oral History Project." Interview by Robert Holden and Dennis Latta, 30 January 1981, 8.
[41] James Harlow. "Oral History Project." Interview by Dennis Latta, 27 February 1981, 8.

Visitor Use and Experience

The overall visitation at GERO has fluctuated slightly, decreasing slightly in 2003 and then increasing steadily in 2004 and 2005. Posted visitor numbers include

Fiscal Year	Total Park Visitation
2005	135,997
2004	127,939
2003	123,658
2002	129,953
2001	128,920

Many visitors to the site are school children. The most concentrated period of time for visitation is during mid-April to mid-May when the site sometimes hosts between 400 and 500 children per day.[42]

According to park staff, the majority of visitors to GERO are from the region. During the inventory and analysis visit, it was observed that many of the users in the park were local citizens recreating and enjoying the riverside area. The park itself is open year round and is accessible twenty-four hours a day. The Visitor Center is open from 9:00 am to 5:00 pm daily with the exception of Thanksgiving, Christmas, and New Year's Day. The Memorial Building is open from 9:00 am until 4:45 pm, but it is not staffed at all times. The Visitor Center offers a thirty-minute movie, "The Long Knives", featuring information on Clark's western campaign. Costumed living history programs are also offered for groups. Inside the Visitor Center an exhibit interprets the construction of the George Rogers Clark Memorial Building, and a mannequin exhibit represents participants from the Clark story including a Native American, French inhabitant, British soldier, and American militia.[43]

Visitor facilities at the park include the Visitor Center itself plus the supporting parking area. Universal accessibility is provided into the Visitor Center and up to the Memorial Grounds. The Memorial Building, the sidewalk next to the Floodwall and the Terraces to the Bridge approach are not universally accessible.

[42] Chief Ranger Frank Doughman, interview by The Jaeger Company, 23 August 2005, Vincennes, IN.
[43] U.S. Department of the Interior, National Park Service, "George Rogers Clark National Historical Park," <http://www.nps.gov/gero/index.htm> (15 August 2005).

Figure 3. 60: A school group enjoys a tour of the GERO site in early autumn, Photo by The Jaeger Company, 2005.

Lightscape Management

Site lighting at GERO currently consists of historic street lamps (discussed below) as well as lighting in the parapet of the Memorial Building. Parapet lighting is dim as many of the bulbs are not functioning and the fixtures themselves need to be cleaned. The City of Vincennes coordinates floodlighting of the Memorial Building during special events (see Figure 3.61).

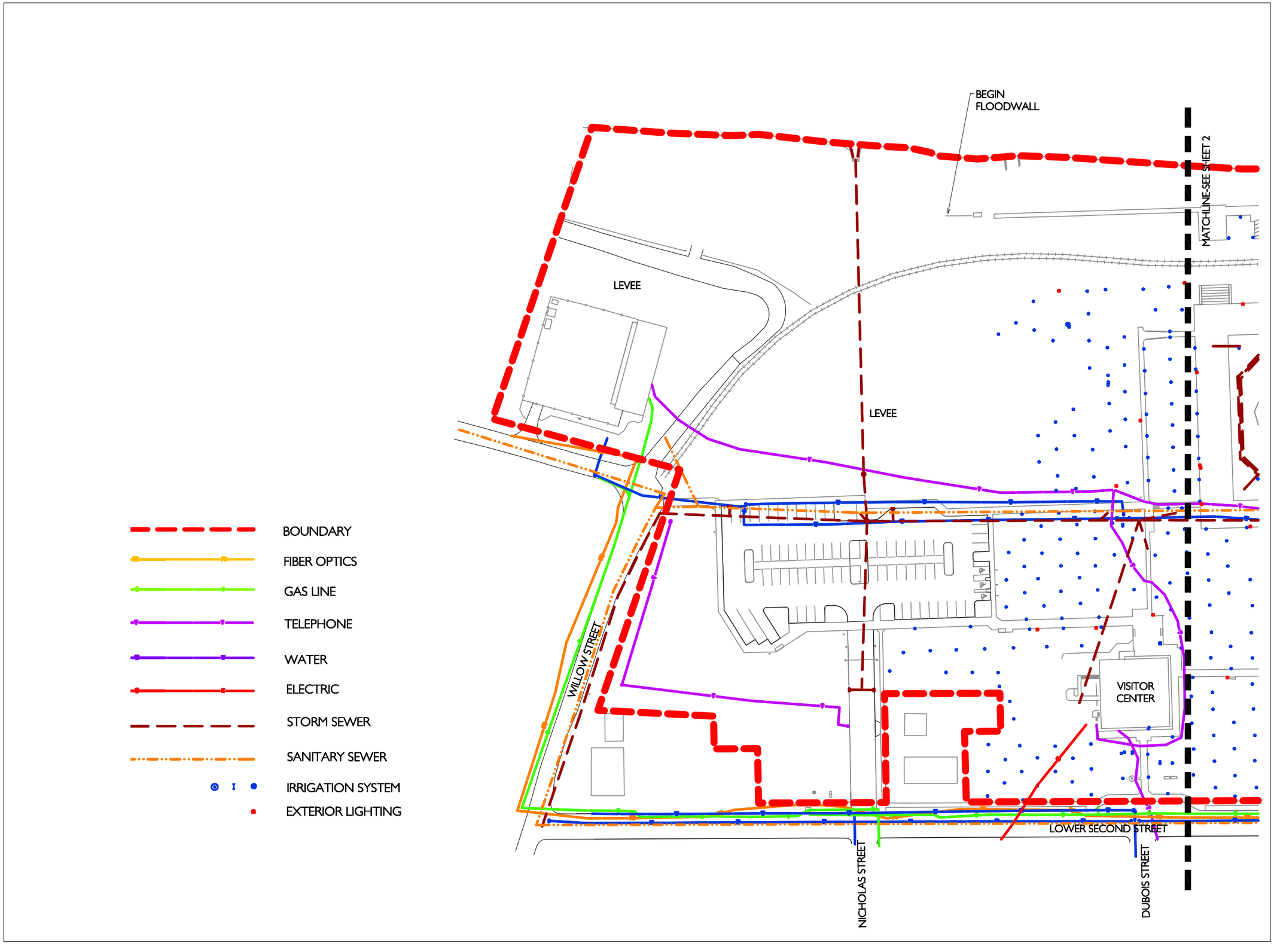
Figure 3.61: Flood lighting installed for special events uplights the Memorial Building, Photo courtesy of the City of Vincennes.

Utilities

Site utilities are represented graphically on *Illustrations O-1 and O-2.*

Street lamps(IDLCS 70163)

The forty-eight existing street lamps on the site are part of the original design for the Memorial Building and date to the period of significance. Street lamps are present on "either side of [the] Bridge Approach, along Main Street, [at the] base of the North Bridge Terrace, [on the] east side of [the] railroad tracks continuing past [the] Vigo Sculpture." Some lamps have been removed from their original location and placed along Second Street. The lamps rest on octagonal brass posts which taper from bottom to top and are mounted on concrete bases. The posts have a solid band with an acanthus leaf pattern at the top. The light standards are composed of copper and are four sided and



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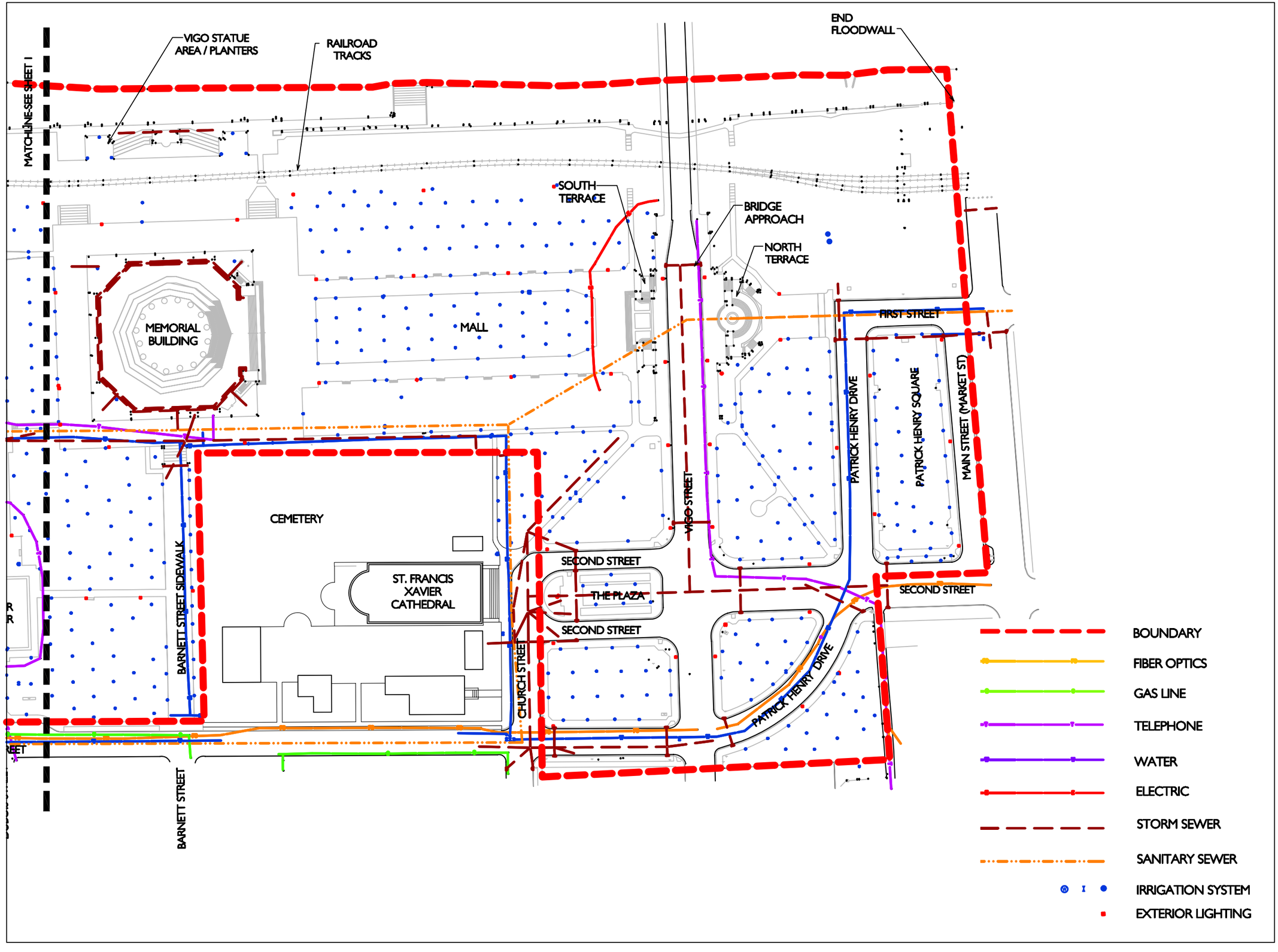
EXISTING CONDITIONS: UTILITIES

ILLUSTRATION O-1

0 100



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EXISTING CONDITIONS: UTILITIES

ILLUSTRATION O-2

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"topped with an ornamental ear of corn."[44] There are two sizes of light standards. Ten foot standards are present in front of the Memorial Building and twelve foot standards are typical near street corners. The maintenance of these standards includes periodic cleaning and waxing.[45] In 2005 all of the wiring and bulbs in the fixtures were updated to meet contemporary electrical standards. The condition of the street lamps is good.

According to research conducted by GERO staff, replacement lamp posts are not commercially available for the historic street lamps. In the event that lamp posts are irreversibly damaged, NPS will have to make a decision on whether to copy and fabricate new posts based on the historic design or to replace with a post as similar to the original design as possible. A copy replacement is preferred, but this option may be cost prohibitive. The Indiana State Historic Preservation Office should be consulted in the event that replacement is needed.

Figure 3.62: Typical street lamp, Photo by The Jaeger Company, 2005.

Surface Drains and Utility Manhole Covers

There are several types of surface drain and utility manhole covers throughout the site. None of these utility features are included in the List of Classified Structures for the site. Many utility covers date from the original construction of the Memorial Grounds and

[44] U.S. Department of the Interior, National Park Service, "List of Classified Structures (LCS) Single Entry Report for IDLCS: 70163 Street Lamps," Entered 21 March 1995, 1.
[45] Doug Blome and Dale Miley, interview by The Jaeger Company, 22 August 2005, Vincennes, IN.

others are more modern additions. The general condition of most utility covers and inlets on the site is good.

Figure 3.63: Ornate surface drain inlet on Memorial Grounds, Photo by The Jaeger Company, 2005.

Figure 3.64: Utility manhole cover on Memorial Grounds, Photo by The Jaeger Company, 2005.

Chapter 4: Analysis and Evaluation

This section provides an analysis of the historic significance of GERO and an integrity evaluation of the landscape's physical character. The analysis is based on criteria developed by the National Register of Historic Places Program, which lists properties significant to our country's history and prehistory. Included here is a review of the current National Register status for GERO and a discussion of the property's integrity in accordance with National Register criteria. An awareness of the site's contributing features and analysis of its historic integrity will facilitate the development of recommendations included in the subsequent chapters of this document.

National Register Status

The National Register is the official federal list of properties with local, state, or national pre-historical or historical significance. To achieve National Register status, a property must possess integrity of location, design, setting, materials, workmanship, feeling, or association and meet at least one of the following National Register criteria:

A. Association with events that have made a significant contribution to the broad patterns of our history; or
B. Association with the lives of persons significant in our past; or
C. Embodiment of the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
D. Yielding or potential to yield information important to prehistory or history.[1]

The National Park Service completed the first National Register Nomination for GERO in 1975, and the nomination was accepted the next year. In this documentation, the site's association with the events that took place during the fall of Fort Sackville and the planning and construction of the Memorial Building and Grounds themselves are the justification for significance. The areas of significance listed include architecture, art, landscape architecture, military, and sculpture. The level of significance is listed as National. The Memorial Grounds are listed as a contributing feature. Robert J. Holden completed an update to the National Register Nomination in 1986. This report includes the addition of photographic data from the site as well as site mapping. The update includes parcels added to the property since the original submission (most acquired in July of 1984) as well as additional LCS listings including the Charles Gratiot Monument and a listing of non-historic structures in the park. The consultants and NPS were not able to determine if the 1986 NRN update was accepted by the Indiana State Historic Preservation Office (SHPO). Sections of the NRN are being updated concurrently with this report to reflect that the Memorial Grounds are not only a contributing feature to

[1] United States Department of the Interior, National Park Service, Cultural Resources, *National Register Bulletin 16A: How to Complete the National Register Nomination Form* (Washington, DC: Government Printing Office, 1991).

NRN eligibility; rather the Memorial Grounds have equal standing in NRN eligibility with the Memorial Building.

Statement of Significance

This section provides a brief assessment of the values, meaning and importance of the GERO site. In this statement, criteria outlined by the National Register of Historic Places are applied and utilized to evaluate the significance of the site.

The George Rogers Clark National Historical Park is significant in the areas of Military, Architecture, Landscape Architecture, Art and Sculpture. The site commemorated by the construction of the George Rogers Clark Memorial Building and Grounds is significant because of its association with a person and an event that made a significant contribution to American history; therefore, the site is eligible for the National Register under Criterion A and B.

The location of George Rogers Clark National Historical Park in Vincennes, Indiana, is on the presumed site of Fort Sackville, a British garrison during the American Revolution-era. George Rogers Clark (1765-1815) led a daring and successful expedition in 1777-1779 that resulted in the securing of the Northwest Territory for the Americans; the construction of the Memorial Building commemorates this successful Clark expedition and Clark himself. The reasons for this commemorative effort are explained in a 1986 NR nomination:

> It was on this spot [Fort Sackville], with the surrender of Fort Sackville to Clark on February 25, 1779, that British options for the possession of the Northwest Territory were decisively ended, as the culmination of a succession of losses to Clark in present Indiana and Illinois. Important in these events were the actions of the native French settlers, who under the leadership of Father Pierre Gibault and Francis Vigo (who, along with Charles Gratiot, contributed material aid), chose to align themselves against the British. As a result of the Clark campaign, the Northwest Territory became acknowledgely American in the Treaty of Paris in 1783. Four years later, the Northwest Ordinance was passed to organize the territory, establishing the basic legal framework for further territorial expansion in the next century.[2]

The current interpretation of the site focuses on the military campaign of George Rogers Clark, which extends from 1779 with the falling of Fort Sackville to the death of Clark in 1815. The extension of this period of significance to 1815 also recognizes the "subsequent military, political, and economic development of the region north of the Ohio River during the territorial period, with emphasis on the years from 1787 to 1815."[3] These dates (1779-1815) mark the Military Era period of significance for the site.

[2] Robert J. Holden, *National Register of Historic Places Nomination Form, George Rogers Clark National Historical Park*, revised 4 December 1986.
[3] *Ibid*.

George Rogers Clark National Historical Park is eligible under Criterion C for its significance to the fields of architecture, landscape architecture, and the visual arts (art and sculpture).

In 1929, William E. Parsons, of the Chicago urban planning firm of Bennett, Parsons and Frost, was chosen as Architectural Adviser for the Memorial Building and Grounds. His responsibilities included the development of a program of competition for the Memorial Building and the plan of the Memorial Grounds.[4]

The employment of Parsons by the George Rogers Clark Sesquicentennial Commission was in part a result of his work on the Lincoln Memorial Bridge. He had successfully argued to the Planning Commission of the City of Vincennes and the State Highway Department that the bridge was an integral part of the site.

The architectural firm of Hirons and Mellor of New York City won the architectural competition in 1930. Designed in Beaux Arts style, the Memorial Building relies on the implied strength and masculinity of the Doric order and its compact massiveness to symbolize the perceived strength of Clark and his cause.[5] The Beaux Arts style,

> "is the classically oriented style popularized by the Ecole des Beaux Arts in Paris. Most critical to this style was the concept of functional and spatial relationships between all portions of the site. This was most often achieved through a series of axes, extending through interior spaces into the site, used as a means to create visual or physical sequence of varied design events. In Beaux Arts design, symmetry—particularly bilateral symmetry—was often employed, proportions of spaces followed classical norms, and details of structures were derived from historical prototypes."[6]

The design and construction of the George Rogers Clark Memorial Building in the classic Beaux Arts style is significant because it is 'perhaps the last major Classical style built in this country, and one of the largest and finest examples of such a memorial outside Washington, D.C.'[7] The increasing popularity of Modernism during the period of the memorial's design and construction, with Modernism's new materials and abstract expressionism, was already eclipsing the classic expression of Beaux Arts.

Parsons' proposed Beaux Arts landscape reflected his traditional Beaux Arts training and his land planning experience. His formal plan included a simple symmetric design with a

[4] Additional designers were associated with the preliminary decisions in choosing the location, setting, and design parameters for the Memorial Building and Grounds. Please refer to Chapter 2, Site History or *The Cultural Landscape Report for George Rogers Clark National Historical Park*, 1995 by Christina Jones for further detail.
[5] *Ibid*.
[6] Philip Pregill and Nancy Volkman, *Landscapes in History: Design and Planning in the Eastern and Western Traditions*, Second Edition (New York: John Wiley & Sons, 1999), 579.
[7] Jones, 234.

strong axial arrangement to align the site. The monumental size, scale, and massing of the Memorial Building was balanced by the placement and form of the Lincoln Memorial Bridge, the River Wall, and the contrast of open and closed/shaded areas of the grounds. The grand approach of the bridge provided a successful balance to offset the Clark memorial; the unified landscape and architecture of the Memorial Grounds stand as a symbolic gateway between Indiana and Illinois, and recall the passage of the family of Abraham Lincoln over the same route.[8] Classic detailing such as formal terraces, sculptures, plazas and broad vistas were used to unify the memorial grounds and to create a sense of formality and sequential rhythm.[9] Views into and from the site plus planned circulation patterns create visual and physical links between the Memorial Grounds, downtown Vincennes, the Lincoln Memorial Bridge, and Saint Francis Xavier Cathedral. This system of views and circulation reinforces the axial arrangement of the Beaux Arts landscape design.

The site is also significant for its iconographic art and sculpture that reflect the noble grandeur of the Memorial and its Grounds. As expressed in the 1986 National Register Nomination,

> [t]he heroicism of the Memorial is realized in its interior with Hermon A. MacNeil's heroic bronze statue of Clark and the seven murals by Ezra Winter depicting stages of the Clark campaign and its aftermath. All materials, primarily Vermont granite and several kinds of marble, were carefully selected for their aesthetic qualities within the whole.[10]

Significant objects of sculpture on the Memorial Grounds include the Francis Vigo Statue and the Father Pierre Gibault statue. The statue of Father Pierre Gibault rests in the plaza of the Second Street immediately in front of (northeast of) Saint Francis Xavier Catholic Church. The statue rests in its original location and its base inscription reads, "Pierre Gibault – 1737-1804 – Vicar-General of the Illinois Country-Who in 1778 gained the allegiance to the United States of the French Population of Vincennes."[11] The Vigo Statue is located on the northwest edge of the site between the Memorial Building and the Floodwall, in its original location.

The completion of the Memorial in 1934 and its subsequent dedication on July 4, 1936, by President Franklin D. Roosevelt marks the terminus of the period of significance for the Memorial Grounds (1929-1936).

The George Rogers Clark Memorial National Park is also eligible for the National Register under Criterion D since much of the park's significance is related to its association with the site where the event most important in this history took place (the overtaking of Fort Sackville by George Rogers Clark). The potential for archaeological

[8] Holden.
[9] Jones, 232-233.
[10] Holden.
[11] U.S. Department of the Interior, National Park Service, "List of Classified Structures (LCS) Single Entry Report for IDLCS: 06527 Gibault Statue," Entered 21 March 1995, 1.

discovery on the site remains a possibility for future exploration. "The Fort, despite extensive archaeological investigation, had never been positively located, although it is certain the park encompasses the original site."[12]

Landscape Characteristics

This section provides an evaluation of the landscape's integrity by comparing landscape characteristics and features present during the periods of significance with current conditions in 2005. Each characteristic or feature is classified as either contributing or noncontributing to the site's overall historic significance. Contributing characteristics or features were either present during the periods of significance or are in-kind replacements of historic elements.

The periods of significance considered in this analysis will be referred to as the Military Period (1779-1815) and the Memorial Era (1929-1936). Landscape characteristics identified for GERO are spatial organization, vegetation, land use, buildings and structures, circulation, small-scale features, and views and vistas.

Spatial Organization

Spatial organization includes the three-dimensional organization of physical forms and visual associations in the landscape, including the articulation of ground, vertical, and overhead planes that define and create spaces.

The patterns of spatial organization on the GERO site are largely defined by the formal axes designed for the site. The site has a rhythm moving along a primary axis from the public greenspaces adjacent to downtown Vincennes, up over the Lincoln Memorial Bridge Approach, down the Mall to the punctuation of the Memorial Building at the end of the Mall (see Figure 4.1 and Figure 4.2). The placement and orientation of buildings, structures, and sidewalks that organize these spaces are in their original locations and feature intact materials. Secondary axes around the site are defined by roadways and sidewalks and are terminated by sculptural pieces. The secondary axis of Second Street terminates at the intact Gibault Statue. The axis along Barnett Street terminates at the intact Vigo Statue. The Barnett Street Sidewalk has shifted from being a secondary axis to a primary axis due to the location of the Visitor Center and the flow of pedestrian traffic.

A notable exception to the integrity of the historic spatial organization is the current vegetation. Missing from the area directly behind the Memorial Building, the Mall, and the area north of the North Plaza are designed groupings of linden trees that were original to the design of the site. These groupings of linden trees were intended to emphasize the primary axis. The lindens were intended to be a common element along this axis stretching from the downtown greenspaces to the Memorial Building defining these spaces at the beginning, middle, and end of the axis with vegetation. Few lindens (none of them dating from the Parsons plan) exist along the historic primary axis. Significantly, the hardwood (sugar maples and oaks) plantings around the perimeter of the property

[12] *Ibid*.

have been completely lost over time. The close spacing of the original hardwood plantings around the site boundary was intended to create a defined edge for the Memorial Grounds. The loss of plantings around the perimeter of the site decreases a sense of enclosure around the boundary of the site. Due to this lack of definition and enclosure, it is no longer clear that the downtown greenspaces are intended to be part of the Memorial Grounds.

Figure 4.1: View to Memorial Building from Lincoln Memorial Bridge, Photo by The Jaeger Company, 2005.

Figure 4.2: View to Memorial Building from Lincoln Memorial Bridge, c. 1932, Courtesy of Richard Day, Personal Collection.

Vegetation

Vegetation on the site includes both native and introduced trees, shrubs, vines, ground covers, and herbaceous materials. It is unlikely that any vegetation remains within the zone originally designed by Parsons from prior to the Memorial Era construction. Additionally, much of the Memorial Era vegetation has been lost on the site over time. Several historic linden trees exist behind the Memorial Building, but the majority of the plantings implemented from Parsons' plan have been lost. The majority of the existing vegetation dates from installations associated with the Visitor Center and the subsequent replacement of deteriorating historic plant material. The largest mass installation was the linden allée, replanted in 1986 based on Parsons' plan. Mass replacement of species has occurred in some areas including the Barnett Street sidewalk area where original crabapples were replaced with redbuds. Plantings around the base of the Memorial Building and at the Lincoln Memorial Bridge Approach Plazas included evergreen plant material as in the original Parsons plan, but the vegetation palette has been simplified and does not have the same species mix specified in the Parsons plan. The minimal amount of vegetation (fourteen trees throughout the site) original to the Parsons plan still remaining on the site does contribute to the integrity of the site. While these trees appear to be scattered around the site, they are remnants of Parsons' original plan which included a mixed palette of deciduous and evergreen vegetation. Individual plants which were once part of larger planting beds read as individual specimens in the landscape rather than pieces of a larger planting scheme.

Land Use

Land use has impacted the character of this landscape by shaping the organization, form, and shape of the property. During the Military Era of the property, the principal use of the site was for fort occupation. After 1815 and the dismantling of Fort Knox, and prior to Memorial construction, the principal land uses on the GERO site prior included residential and industrial uses typical to other nineteenth century downtown development in Vincennes. Post-Memorial Era residential uses and commercial sites have developed over time around the perimeter of the site. From its conception by the George Rogers Clark Sesquicentennial Commission, the park purpose was to: (1) memorialize the legacy of George Rogers Clark and his military conquests; (2) act as a gateway to the city of Vincennes; and (3) serve as public space for the citizens of Vincennes for recreation and public assembly. GERO continues to meet these goals. The site has also come to serve as a public spot for erecting memorials. Several monuments have been added to the public greenspaces over time, creating a grouping of stone monuments on the north side of the site. While vegetation specified in the original Parsons plan has been lost on the site over time, the pedestrian use of the space is still relevant. This continued use and connection to downtown Vincennes, the Lincoln Memorial Bridge and Saint Francis Xavier Cathedral reinforces the spatial organization established by the original Beaux Arts design philosophy.

Buildings and Structures

The buildings and structures at GERO, including the Memorial Building, the Floodwall, the Bridge Approach, and the North and South Terraces, are the most prominent constructed elements in the cultural landscape. No above-ground buildings or structures remain on the site from the Military Era period of significance. All of the structures erected during the Memorial Era remain on the site and contribute to the site's significance. Buildings and structures situated near the GERO site are also intact. These include Saint Francis Xavier Cathedral and the Lincoln Memorial Bridge.

Circulation

The spaces, features, and applied material finishes which constitute patterns of pedestrian and vehicular movement in a landscape make up a circulation system.

Writings from the Military Era, including those of Clark himself, make references to the relationship of Fort Sackville to the road believed to be First Street. First Street aligns with the primary axis of the site which is centered northeast to southwest along the center of the Memorial Building. Main Street serves as the northeast border of the site and remains an important thoroughfare to both Vincennes and the GERO. The circulation routes laid out in the initial implementation of the Memorial Grounds plans remain intact. Although circulation route materials have been upgraded and most of the surface improvements (mainly walkways) have been replaced in-kind, their historic alignments still contribute to the Memorial Era period of significance. While roads are continuously resurfaced due to vehicular wear and tear, the layout of the roads within the park boundary is consistent with the original implementation. The addition of a visitor parking lot behind the Memorial Building helps to facilitate visitor traffic to the site, but the parking lot is not considered contributing to the site's significance.

The railroad spur running through the site has historically been perceived as a negative effect on the circulation connecting the Memorial Grounds to the riverfront. Site planners understood the importance of its removal during the planning stages for the Memorial. Therefore, although the tracks pre-date the Memorial, the tracks are considered non-contributing to the site's significance.

Small-Scale Features

Small-scale features are the elements which provide detail and diversity for both functional needs and aesthetic concerns in the landscape. At GERO, the small-scale features provide unity in design and diversity in scale and function. No small-scale features remain on the site from the Military Era period of significance. Those small-scale features that remain from the Memorial Era period of significance include benches, street lamps, monuments, statues, and various memorials around the site. Most of these historic small-scale features, such as the granite benches and street lamps, are in good condition and contribute to the Memorial Era period of significance. Contemporary features, such as benches, fencing, utilities, signage kiosks, and trash receptacles, are in good condition but do not contribute to the historic significance of the site.

Views and Vistas

Views and vistas into, out of, and within the site are influenced by the composition of other landscape characteristics present on the site and bordering properties. It is not known what the views and vistas were like during the Military Era period of significance. The view across the Wabash was likely less structured as levees were not constructed on the banks of the Wabash until the twentieth century. These control mechanisms have altered the riverbanks from what was likely a bank of high prairie grass to a shrub and tree bank. The ground plane which is now primarily consistently sloping lawn, likely undulated with the effects of alluvial deposit patterns. Erosion caused by modern development has resulted in silt deposits along the banks of the river.

Prior to the Memorial Era period of significance, the view of the site was of an industrial and commercial area with little planned character. The construction of the Memorial Building created a view of an ordered and manicured grounds on the Indiana bank of the Wabash across the river to a less manicured setting on the Illinois side. This view from manicured grounds to a wooded riverbank still exists on the site. Continuous sight lines within the designed vista from the bridge approach to the Memorial are intact. The ground plane of lawn and concrete which made up much of the Memorial Grounds has remained unchanged in many areas, but is not consistent with historic conditions in areas where there were originally shrub and tree masses. The framing of the vista from Lower Second Street to the Memorial Building along the Barnett Sidewalk is disrupted by missing plant material from the allée in this area. This visual axis still terminates at the Vigo Statue. From the Vigo Statue, the view across the Wabash River to Illinois remains largely un-obscured by modern developments. The vista across the Mall from the North Terrace no longer resembles either the Parsons planned vista or the more expansive view preferred by the original Hirons Plan. The massive loss of linden trees in the Mall results in the loss of the intended view. Views from the South Plaza looking toward the Wabash

River are more open due to the missing trees within the Linden allée (see Figure 4.3 and Figure 4.4). The visual connection between the Memorial Grounds and the riverfront is interrupted by the railroad spur which parallels the Floodwall. These tracks disrupt the intended consistent lawn graded down toward the riverfront. The view down Second Street toward Saint Francis Xavier Cathedral is intact and still terminates at the Cathedral with the Gibault Statue in the foreground. However, in the original Parsons plan, this view would have been framed by the hardwood boundary trees.

Figure 4.3: View from Bridge Approach across Mall toward Wabash River, c. 1935, Courtesy of Old Cathedral Library and Museum, Saint Francis Xavier Church.

Figure 4.4: View from Bridge Approach across Mall toward Wabash River, Photo by The Jaeger Company, 2005.

Integrity of the Landscape

The National Register has identified seven aspects or qualities that define integrity: location, design, setting, materials, workmanship, feeling and association. Although the analysis of the aspects of integrity is a subjective measure, the determination is based on thorough knowledge of the historical significance of the property and how well current features convey significance. To be listed on the National Register, a property must possess significance under one or more of the four criteria and retain a degree of historic integrity.

The cultural landscape at GERO retains a large degree of historic integrity and contributes to the significance of the site. The landscape does not contain any elements dating from the Military Era (1779-1815) of the site; however, this is the primary period of interpretation at the Memorial due to the mandate of the park to communicate that aspect of the nationally important history of the site. In addition, there is potential for future archeological research on this site to assist in determining the exact location of Fort Sackville. Many of the significant landscape features dating from the Memorial Era (1929-1936) are still present on the site and retain their integrity.

Location

This aspect of integrity refers to the place where the landscape was constructed or where a historic event occurred. As stated in the 1995 CLR,

> [t]he area where the George Rogers Clark National Historical Park is located had been important to the history of the United States since the

> 1700s. The construction of the park is a culmination of the efforts of the citizens of Vincennes and Indiana to commemorate an event and persons pivotal to our national history. Although the archeological evidence of fort-era structures found at GERO has not been associated with an exact time period, historical documents, including maps, suggest that Fort Sackville was located on the grounds of the Memorial.[13]

Although the boundary of the original George Rogers Clark Memorial Grounds has expanded since its inception, the location of the primary features of the original plan have remained unchanged. All contributing historic buildings and structures on the site retain their original locations. Existing small-scale features from the Memorial Era period of significance have also retained their original locations. Therefore, the site retains high integrity of location from the Memorial Era period of significance.

Design
The combination of elements that create the form, plan, space, structure, and style of a cultural landscape or historic property falls under this category.

GERO maintains high integrity of design for the buildings, structures, and landscape. Existing buildings retain their original design schemes and features including materials, proportion, scale, site placement, and ornamentation. The original structures that were part of the initial implementation have remained relatively true to their original design. Structures outside of the site but integral to the design such as Saint Francis Xavier Cathedral and the Lincoln Memorial Bridge remain intact. The original layout of most designed landscape elements has been retained on the site. Open spaces planned as lawn panels flanked by exposed aggregate walkways remain intact despite the loss of historic vegetation and the addition of non-historic vegetation. Roadways have remained as planned in the original Parsons scheme with the exception of the boulevard area which was never constructed due to the presence of the railroad spur.

The overall design integrity for the site during the Memorial Era period of significance remains intact with some revisions to the site affecting the degree of integrity. Buildings and additional structures such as the Visitor Center, Maintenance Compound and Levee have been added to the site since the Memorial's initial implementation. Planned views and vistas along the major axes of the park have been compromised by loss of vegetation intended to frame major design elements such as sculpture and buildings. As stated in the 1995 CLR,

> [t]he park design, as it exists today, has suffered some loss of integrity. Although the formal layout of the park incorporating the GRC Memorial as the focus of the bi-axial design still exists, the experiential sequencing of the plan has lost its integrity. The planned experience of the visitor as he approaches the GRC Memorial from Main Street, the Bridge Terrace, and then through the open Mall space, has been lost due to the alteration

[13] Jones, 238.

> of the circulation pattern to the park and then to the Memorial structure within the park. The "monumental" experience of the park visitor is acutely foreshortened by this modification of the park plan which forces a completely backward approach to the designed park.[14]

Another important part of the original design that has yet to be fulfilled is the intent to connect the Memorial Building and Grounds with the surrounding state historic sites. This connection would complete a major design component in the Parsons plan and would create a complete link between the City of Vincennes and the GRC Memorial. This desire is partially fulfilled by the sidewalk and street grid connections between the Memorial Grounds to Main Street and Second Street. The implementation of the Vincennes Riverwalk will provide a stronger, direct connection to the nearby state historic sites and help this design idea come to fruition.

Setting

Setting is the physical environment within and surrounding a property. Influences to the setting of a site include natural systems and land uses.

Most of the natural systems of the GERO site, including view across the Wabash River and views of much of the undeveloped land on the Illinois side of the river, remain intact. Despite several small intrusions, the surrounding land within view of the Memorial Grounds is still much the same as it was during the Memorial Era period of significance. The Memorial remains in a residential area bordering on downtown Vincennes, acting as a public gathering and park open space for the city. Buildings and structures which were outside the Memorial Grounds but integral to the original design, such as the Lincoln Memorial Bridge and Saint Francis Xavier Cathedral, remain intact. Regionally, GERO remains a stop along the network of historic sites along the Lincoln Memorial Highway, as originally intended. The integrity of setting for the Memorial Era period of significance is high.

Materials

Materials include the physical elements that were combined or deposited during particular periods of time and in a particular pattern or configuration to form the cultural landscape. All types of construction materials, such as paving, plants, and other landscape features as well as the materials' placement in the landscape, should be considered in the evaluation.

There is still evidence in the Memorial Grounds of the fine quality of historic materials exhibited in the site's historic structures. Large pieces of granite are quality materials and have endured the test of time. However, some concrete components of site structures such as the Floodwall and Memorial Terrace are in severe need of repairs or replacement in-kind to prevent complete loss of the structures.

[14] Jones, 241.

Many materials used in the original construction have been replaced in-kind. Examples include walkway materials and asphalt paving. Others such as the Memorial Terrace surface and the Floodwall have been altered in an attempt to repair damage. Consistent problems throughout the history of the site have included leaks in the Memorial Terrace and the leaching of iron rust stains onto granite facing. Most of these problems have not been rectified.

Vegetation by its nature is an evolving component of the cultural landscape. Because vegetation grows and dies, it is constantly changing. As stated in the 1995 CLR, during the Memorial Era,

> The vegetation functioned to create a setting for the GRC Memorial that would enhance and maximize the design of the structure to communicate the site. The planting plan created a sequence of outdoor rooms or spaces that would enhance the experience of approaching and viewing the Memorial. The open turf areas created a contrast to the shaded tree spaces and afforded opportunities for views and visual linkage throughout the site and vicinity…there has been a decline in integrity at the site due to the loss of vegetative materials, or to the addition of non-historic vegetative features. Most of the border tree canopy has neither survived, nor been replaced in-kind. The mass plantings of shade and ornamental trees have perished…[15]

The quality, condition, and placement of materials found on the GERO site are varied, resulting in a moderate integrity of materials. Some of the materials used on the site are of high quality and thus have not deteriorated as quickly as others. The loss of historic vegetation and planting patterns has diminished the integrity of materials on the site.

Workmanship

This aspect of integrity refers to the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory. As stated in the 1995 CLR, "[t]he historic function of the workmanship was to communicate a sense of grandeur, importance, and quality to the experience of the park. That function has persisted."[16] The degraded state of some site features detracts from the integrity of workmanship on the site. Structural degradation of the Floodwall and Memorial Terrace has caused aesthetic and functional problems to major site features. The rust staining apparent on the Bridge Approach and North and South Terraces causes an aesthetic problem for the site which detracts from the workmanship of these structures. The workmanship used to construct the walkways within the Memorial Grounds is not equal to the workmanship observed in the small piece of original paving found under the Gibault Statue. The degraded state of historic vegetation and some of the historic Memorial Grounds features detracts from the integrity of workmanship. For these reasons, GERO currently maintains a moderate degree of integrity of workmanship.

[15] *Ibid*., 250.
[16] *Ibid*., 250-251.

Feeling
A cultural landscape's expression of the aesthetic or historic sense of a particular time period is evaluated under this aspect of integrity. Present day land use surrounding the site does not differ greatly from those land uses present during the Memorial Era period of significance. The residential and downtown setting in which the Memorial was constructed still exist. Remnants of the site's industrial past are present in the view of the grain elevator to the northeast. However, visitor movement across the site has been negatively impacted by the Visitor Center and parking area. The approach to the site from the Visitor Center parking lot rather than from the grand approach over the Lincoln Memorial Bridge has greatly affected the feeling of the site. Many of the greenspaces on the site remain open lawns, but the border canopy envisioned by Parsons' plan no longer exists. The GERO landscape has moderate integrity of feeling to the Memorial Era period of significance.

Association
This aspect refers to the direct link between the significant historic event or person and the cultural landscape. The association with the Military Era of the site is strong. The connection of GERO to Fort Sackville, George Rogers Clark, Vigo, Gibault, and others exists primarily through commemorative efforts representing people and events and through the interpretive efforts. The remaining landscape design, characteristics, and features primarily date to the Memorial Era period of significance, thus the integrity of association with this period of significance is high. The GERO landscape maintains high integrity of association.

Integrity of the Property as a Whole
GERO retains some integrity for each of the seven aspects defined by the National Register. The site retains high integrity of location, design, setting, and association. Due to degradation of some features over time, the site has a moderate degree of integrity of materials, workmanship, and feeling. Future site improvements should aim to protect the historic integrity of the site and improve it where possible.

Chapter 5: Landscape Treatment

Overview

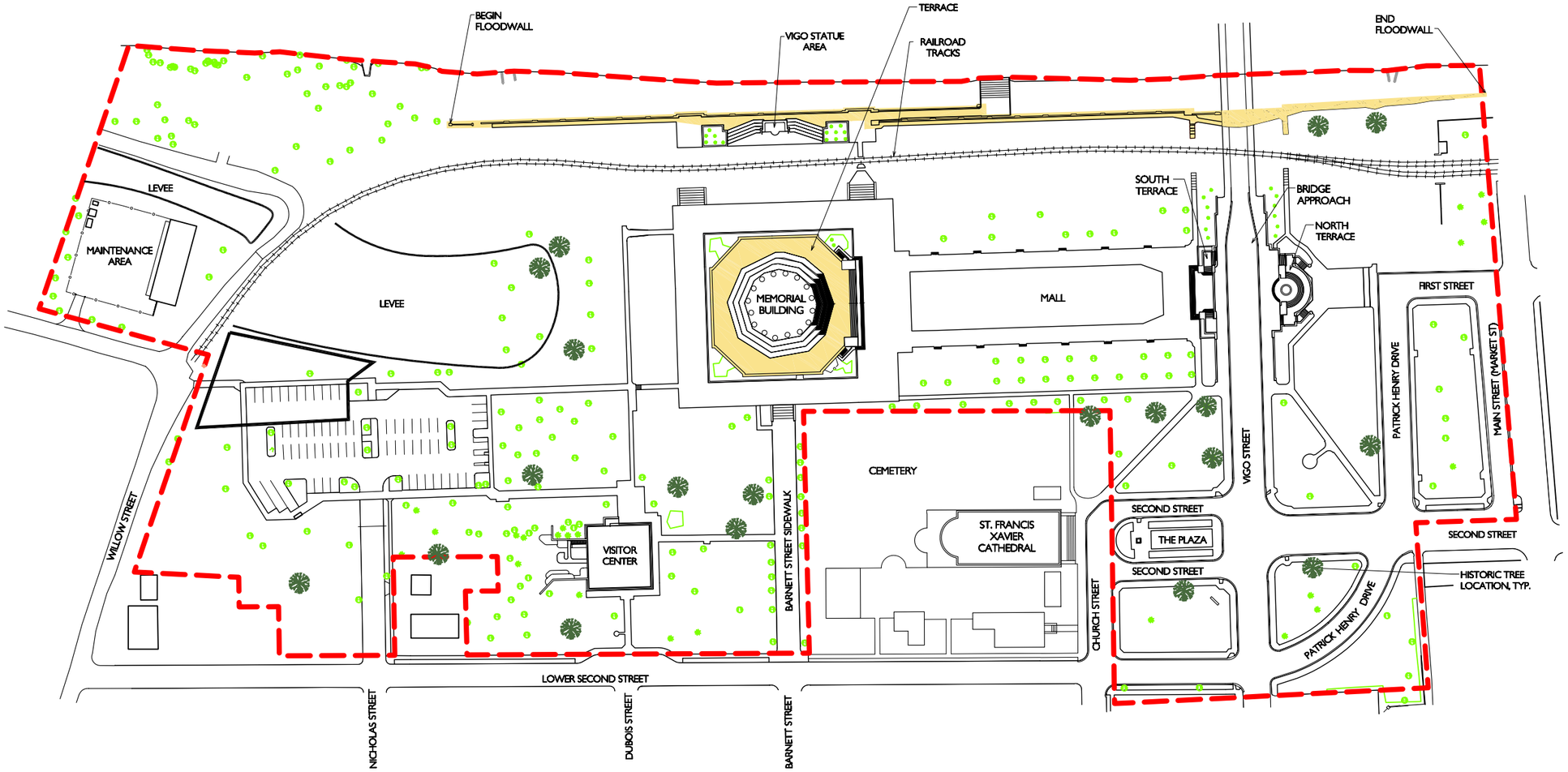
This section provides a range of schematic alternatives for George Rogers Clark National Historical Park. The treatment alternatives include the no action alternative and two action alternatives. The no action alternative is required by NEPA and provides a baseline for evaluating potential impacts from each treatment alternative. The evaluation of the potential impacts from these treatment alternatives is presented in Chapter 6: *Environmental Consequences (Impacts from Treatment).* The Treatment Alternative selected from the following outlined treatments will be detailed fully in Chapter 7: *Recommended Treatment (Preferred Alternative).*

An overall rehabilitation management philosophy has been applied to both of the action alternatives. All of the contributing structural site elements dating from the Memorial Era period of significance remain on the site. However, the majority of the plant materials dating from this period including trees and shrubs have been lost over time, which has resulted in a reduction in the site's integrity. Restoration depicts a property at a particular period of time in its history, while removing evidence of other periods. Since much documentation concerning the original design intent and materials used during the Memorial Era period construction is available, it is possible to restore areas in which the condition of contributing resources warrants such action. Some areas of the park require rehabilitation to meet the current needs of visitors to the site. Since rehabilitation acknowledges the need to alter or add to a historic property to meet continuing or changing uses while retaining the property's historic character, this treatment is applied to areas where restoration to the Memorial Era period of significance is not possible for functional, environmental, safety or aesthetic reasons.

The original design intent for the Memorial Grounds is expressed in Parsons' original site plan (*Illustration E*). This plan shows an allée (Mall) bordered on either side by two (double row) of linden trees. The borders of the property are demarcated by single rows of sugar maples and red oaks. (These trees are represented by small dots symbols on the plan, making them difficult to distinguish at a reduced scale). Shrub areas and informal groupings of flowering trees are strategically located around the site to provide visual interest or to buffer views to adjacent uses.

Actions Common to All Alternatives

Since two line item projects for GERO have already been approved and proposed for funding, these projects would proceed as outlined by the Schematic Draft Design Reports prepared by RATIO Architects, Inc. in 2005. The Floodwall would be restored and the Memorial Terrace would be rehabilitated. Temporary storage of materials removed during or imported to the site for use in the projects would need to be staged in areas which allow pedestrian circulation to continue through the site. A potential location for storage of materials has been indicated on the treatment graphics (*Illustrations P, Q, and R.*)



TREATMENT

REHABILITATION

CONSTRUCTION MATERIALS STAGING AREA

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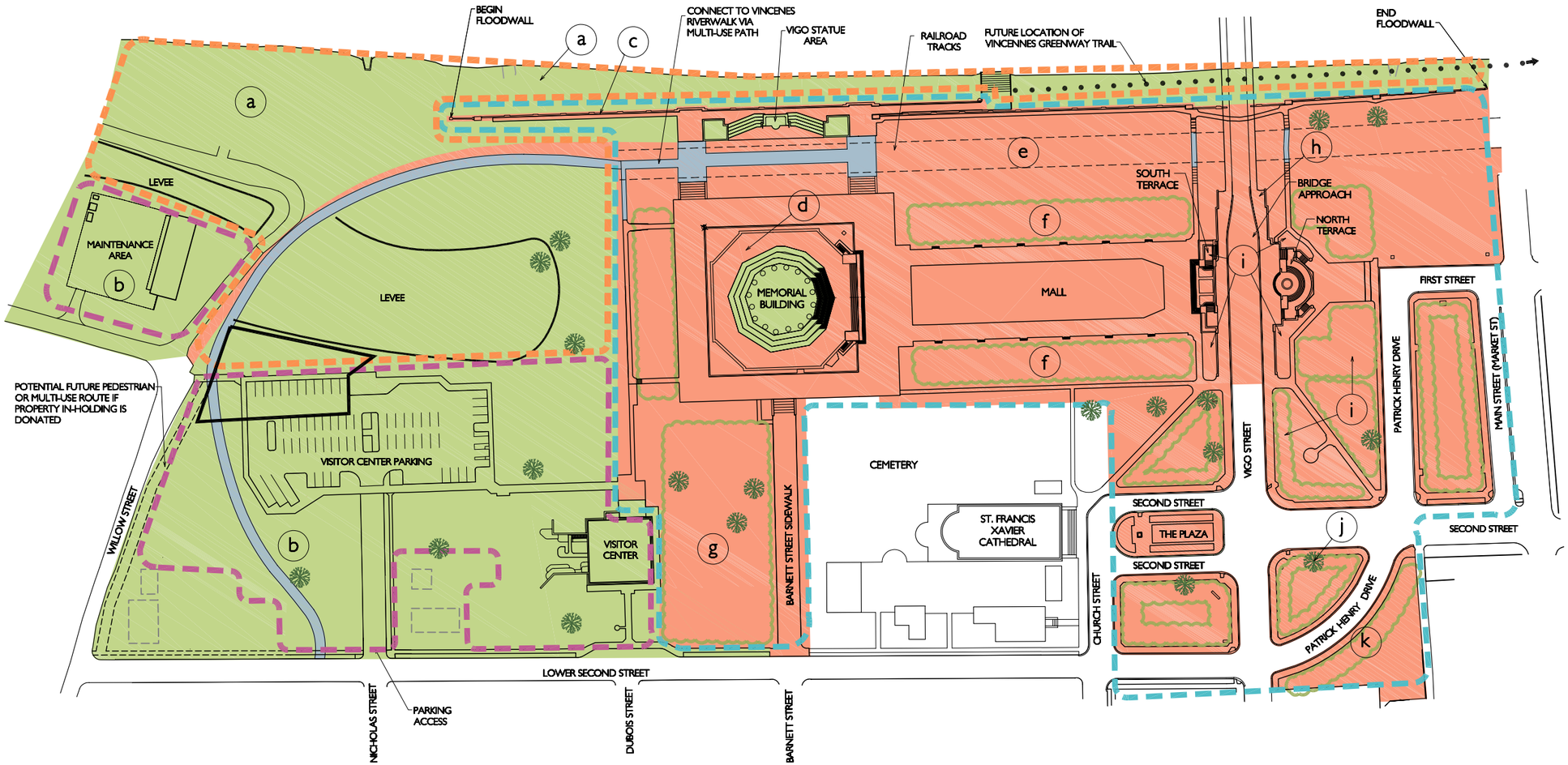
GEORGE ROGERS CLARK NATIONAL HISTORICAL PARK

VINCENNES, INDIANA

TREATMENT ALTERNATIVE 1
No Action Alternative

ILLUSTRATION P

0 150



LEGEND

TREATMENT

- REHABILITATION
- PRESERVATION
- NEW CONSTRUCTION
- CONSTRUCTION MATERIALS STAGING AREA
- HISTORIC TREES

MANAGEMENT ZONE

- HISTORIC RESOURCE MANAGEMENT & INTERPRETIVE ZONE
- NATURAL RESOURCE MANAGEMENT ZONE
- PARK OPERATIONS & VISITOR ORIENTATION ZONE

TREATMENT NOTES:

a: Preserve riverine vegetation
b: Maintain visitor support services areas
c: Rehabilitate Floodwall
d: Rehabilitate Memorial Terrace
e: Remove railroad tracks
f: Rehabilitate linden allee
g. Remove walkway to reinforce proper pedestrian approach to Memorial Building
h: Rehabilitate Bridge Approach and Terraces
i: Rehabilitate planting areas
j: Preserve historic trees
k: Rehabilitate site border of hardwood trees

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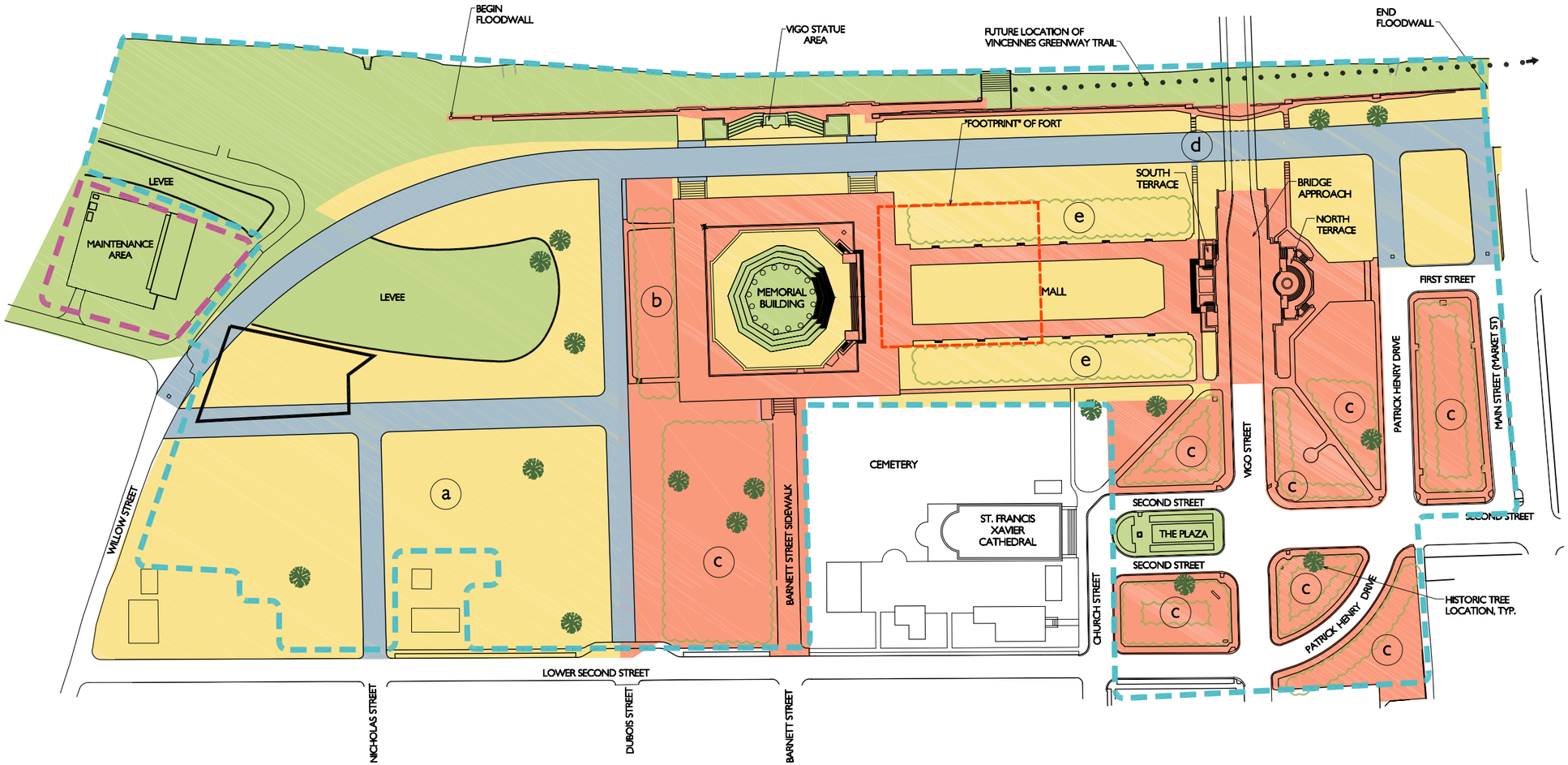
TREATMENT ALTERNATIVE 2

ILLUSTRATION Q

0 150



LEGEND

TREATMENT

- RESTORATION
- REHABILITATION
- PRESERVATION
- NEW CONSTRUCTION
- FOOTPRINT
- CONSTRUCTION MATERIALS STAGING AREA

MANAGEMENT ZONE

- HISTORIC RESOURCE MANAGEMENT & INTERPRETIVE ZONE
- PARK MAINTENANCE ZONE

TREATMENT NOTES:
a: Remove Visitors Center and parking and relocate to adjacent downtown property
b: Rehabilitate Memorial plantings, typical
c: Rehabilitate planting area
d: Install "Boulevard"
e: Rehabilitate linden allee

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TREATMENT ALTERNATIVE 3

ILLUSTRATION R

0 150

The Floodwall would be repaired through replacement in-kind utilizing the methodology outlined in *NPS Task Order Number: T200005A026, May 2005*.[1] This report outlines compatible treatment and replacement of portions of the wall improving the appearance of the top of the wall while retaining the historic form of the structure. Recommendations include removal and reconstruction of the parapet wall and cap "to match the original configuration using epoxy coated steel reinforcement." Spalling areas of concrete would be removed from the walls and patched. Any hollow or deteriorated areas would be removed and patched on the Floodwall. Large cracks and joints would be properly cleaned and patched or sealed. The entire structure would be chemically cleaned to provide a uniform appearance per historic conditions. Subsurface drainage would be addressed in this scheme with replacement in-kind of historic walkway materials where necessary. [2]

The Memorial Terrace would be rehabilitated in this scheme utilizing the methodology outlined in *NPS Task Order Number: T200005A016, February 2005*[3] to eliminate moisture penetration into the base of the Memorial Building. The Memorial Terrace Report reviews and comments on previous design documents for replacing this area of the structure and recommends some modifications to these designs. The amended recommendations include removal of all existing granite steps, stairs, granite parapet and the concrete on the terrace level. Substructure would be repaired as required and a new waterproof membrane would then be installed. Deck drainage improvements would be implemented to "insure optimum performance from the new terrace waterproofing" and additional deck drains would be provided. All granite steps, stairs and parapet stones would be reinstalled over a new setting bed. Granite would be cleaned using non-abrasive methods. It is not practical to replace the terrace surface with a reconstruction of the original egg-sized exposed aggregate concrete surface due to safety and snow removal/maintenance concerns. Therefore a rehabilitation of the surface is proposed in the report. One of the options outlined in a previous report was to replace a majority of the terrace surface with something similar to the original "hens' egg" sized exposed aggregate surface and pave the remaining areas of the highest traffic flow (near the entry doors) with a much more typical broom finish concrete surface. This solution allows the majority of pedestrian flow on the Memorial Terrace to travel over a relatively smooth surface. Options for making the exposed aggregate areas comply with safety standards and maintenance needs for snow removal should be considered. The aggregate utilized in construction of these areas could be slightly smaller than the original design intent to meet the needs of the park. The exposure of the aggregate could be limited to just the tops of the stones to create a smoother surface for snow removal.

Construction materials for both of the potentially funded projects mentioned above should be carefully stored on the site to prevent damage to underground utilities. Two construction storage areas have been outlined on the treatment graphics. One area utilized

[1] RATIO, *Floodwall*.
[2] *Ibid*., 7.
[3] RATIO, *Terrace*.

a portion of the Visitor Center parking lot. This area is ideal for a construction trailer if needed on the site. Any damage to the lot caused by construction would need to be repaired upon completion of the construction project. This area would need to be fenced during construction for the safety of park visitors. If additional storage space is needed, it is recommended that contractors utilize the areas adjacent to this portion of the Visitor Center Parking lot. This grassy portion of the park is fairly flat and devoid of mature vegetation. As with the parking lot, all construction material storage should be fenced and repaired per the approved Treatment Master Plan upon completion of the construction project. Any stored materials such as granite from the buildings and structures should be secured to prevent damage or theft.

Both action alternatives (Treatment Alternatives #2 and #3) show recommendations outside the GERO boundary in areas adjacent to the park boundary. If implemented, these recommendations would need to be approved and coordinated with the corresponding property owners.

Treatment Alternative #1: Current Treatment (No Action)

Illustration P

The GERO would continue to be managed as it is currently and no new policies would be implemented. The George Rogers Clark Memorial Building and its Memorial Grounds are currently managed as an interpretive area. Guided tours of the interior of the Memorial Building are available. Tickets for the tour are purchased at the Visitor Center. The Center contains orientation materials and interpretation of the Military period of significance. Visitors tour the Memorial Grounds informally without a guide. Visitors approach the site either from the downtown business district or from the Visitor Center parking lot and move through the site unguided. Maintenance procedures at the park would be unchanged from current practices with the maintenance facility serving as a hub for these activities. The plant materials on the site would be maintained as they are currently with in-kind replacement as they decline. Sidewalks in locations original to the initial installation of the Memorial Grounds would be replaced on an as needed basis with materials as specified in the original landscape plan. Sites of significance within the Memorial Grounds are demarcated with plaques and historic markers. Various other memorials are scattered throughout the site. Lighting on the site would remain in its current condition. Street lamps placed throughout the historic area of the site would continue to act as the only pathway lighting and down-lighting from the Memorial Building parapet would highlight this structure.

Treatment Alternative #2: Rehabilitation of Memorial Grounds

Illustration Q

This alternative aims to present GERO as it existed during the Memorial Era period of significance (1929-1936). This period of significance represents the completed Memorial Building and Memorial Grounds as envisioned by the designers. Some elements of the envisioned grounds such as the allée of linden trees in the Mall and the Boulevard were never successfully implemented on the grounds; however, they played an important role in the original design intent. To more accurately convey the original design intent of the

Memorial Grounds, an overall management philosophy of rehabilitation would be applied to the Memorial Grounds.

This alternative includes three proposed management zones including: 1) Historic Resource Management and Interpretation Zone; 2) Natural Resource Management Zone and 3) Park Operations and Visitor Orientation Zone.

Historic Resource Management and Interpretation Zone
All of the historic Memorial Grounds would fall within the Historic Resource Management and Interpretation Zone. The historic area would be restored to represent the original Memorial Grounds design intent as accurately as possible, based on the historic planting plan by Johnston drawn on the construction documents by Parsons (referred to collectively in this document as the Parsons plan). Interpretation of the Military period of significance would continue to occur inside the Memorial itself through the murals and on the grounds through the various monuments, statues, and inscriptions on the site. Visitor experience on the Memorial Grounds would be enhanced by the following improvements:

The North and South Terraces of the Bridge Approach are in need of repair. The degradation of reinforcement in these structures has caused rust stains on the granite facing. The granite panels on these walls should be removed and protected, existing steel fabric should be replaced with epoxy coated or stainless steel reinforcement, and the granite panels should be cleaned using non-abrasive methods and reset on the walls. Great care should be taken when restoring areas of the wall with inscription or engraving. The storeroom below the North Terrace experiences leakage similar to the leakage present in the Memorial Terrace. While there is no mechanical equipment in this area, the leaks indicate a structural problem and should be addressed in the rehabilitation effort.

Sidewalks throughout the Memorial Grounds remain in the configuration from the original Parsons layout plan (s*ee Illustration E*). The layout of these sidewalks is contributing to the historic integrity of the site. This includes all sidewalks adjacent to and north and west of the Memorial Building and the Barnett Street Sidewalk. The sidewalks immediately south of the Memorial Building and the stairs leading to this sidewalk are also included. The materials used in replacement areas of the sidewalks have been inconsistent over time. There is a lack in continuity in color and size of materials utilized throughout the historic pedestrian circulation system. The materials used in sidewalk replacement do not contribute to the historic integrity of the site. The exposed aggregate surface utilized in the initial site construction contained specific aggregate composition (¾ inch aggregate) and slump characteristics; these construction standards should be adhered to in any replacement material. Aggregate sizes used in replacement areas have not always adhered to the historic ¾ inch standard. First priority for replacement should be any areas which are cracking or lack structural integrity and those areas which are considered unsafe. All replacements areas should adhere to guidelines outlined in oral interviews conducted with contractors who worked on the site during its

initial construction period.[4] A quarry will have to be located where the appropriate supplies of ¾ inch aggregate material can be obtained. This material should be utilized consistently until all sidewalks within the historic Memorial Grounds have been replaced over time.

To comply with the original design intent for the site, the railroad tracks should be removed and the land around them re-graded to provide a smooth transition between the Mall and the Floodwall. This area was originally intended as a vehicular and pedestrian Boulevard through the site; however, it does not seem prudent to introduce vehicles into the site at the present time. Since the proposed Vincennes Greenway Trail will follow the Wabash River and there is a walkway adjacent to the Floodwall a pedestrian path through this area would be somewhat redundant. Also preservation standards do not require adding an element that was never built, even if it was part of the original design plan. A small portion of pathway should be installed in the westernmost portion of the train tracks within the historic resource management and interpretive zone to connect into the proposed multi-use path along the train tracks. This pathway would help permit universal access to the Vigo Statue area from the Mall area (see Figure 5.1).

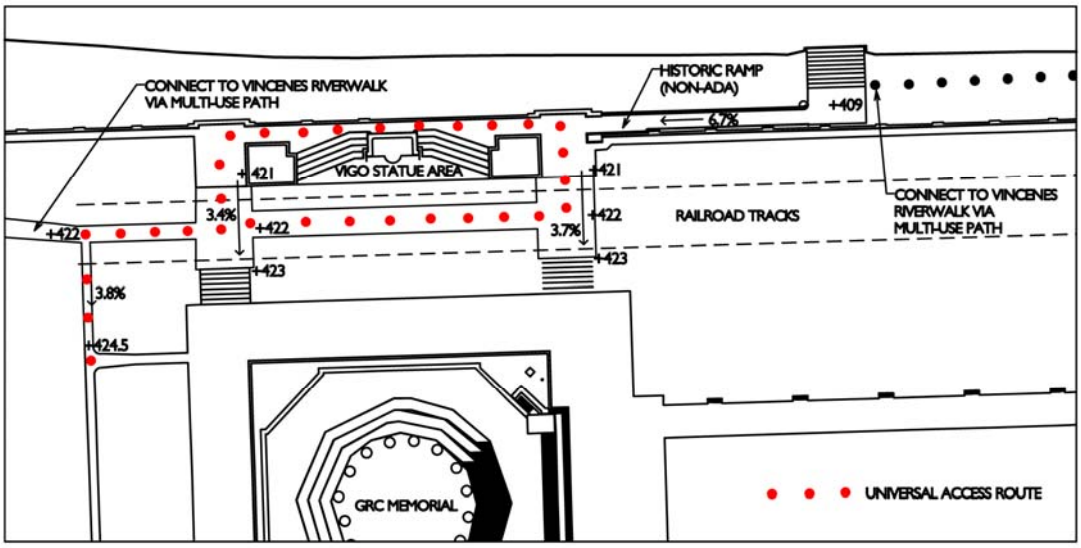


Figure 5.1: Map indicating universal access route proposed in Alternative #2.

Vegetation within the Memorial Grounds should be rehabilitated to represent the period of initial site construction. Parsons' original design implementation for the site completed the vision for the Memorial Building and Grounds as a unit. Many of the trees installed during the initial landscape implementation died shortly thereafter. Only seven trees remain on the site dating from this installation. Other plantings date from the second iteration of Parsons' plan or from replacements over time by park staff. Linden trees in

[4] Mullins, n.p.

the Mall area have never been successful as hardy plant materials. The spacing called out on the Parsons plan is fairly tight for a medium-sized shade tree (approximately fifteen feet on center) and very few of the lindens planted on the site in either the initial tree planting or in the subsequent restoration have had a successful lifespan. Soils in the Mall are fill dirt imported during initial construction. There is no knowledge of soils testing having been performed in this area. It is recommended that a professional soil scientist test the soil in this area and make recommendations for amending the soil to support the linden trees. Local horticultural experts should also be consulted in selecting an appropriate linden hybrid species for the site. Wind is often cited as the reason for the lack of success of lindens in the Mall. Trees should be staked with below-grade anchors to assure wind resistance during establishment. One example of this type of system is a "Platipus" tree anchoring system which anchors the rootball of the tree below grade, eliminating all trip hazards. Anchors should be removed after two seasons of growth to assure tree viability. It is recommended that underdrainage be installed in the allée area to ensure proper drainage of the soils in the Mall. Proper mulching practices should be implemented around all newly planted trees at the site to promote moisture retention and trunk protection.

Lawn in this area should be refurbished concurrent with the tree installation. It is not expected that lawn will be able to survive directly under the trees indefinitely. As the trees grow and they begin to shade out lawn areas, the mulch rings around the trees should increase to protect the trees from root exposure. Mulch will also aid in the retention of soils and moisture in this area. The middle panel of the Mall should remain lawn and should be vigorously maintained.

Other vegetation throughout the site should be replaced per the original Parsons scheme. This includes plantings in the planter areas of both the George Rogers Clark Memorial Building and the North and South Terraces of the Bridge Approach (which are detailed in the Parsons plan). Plantings in the planters at the base of the Memorial Building would likely be destroyed by the rehabilitation of the Memorial Terrace and should be replanted utilizing species specified in the Parsons plan. The planting palette for the Terrace planters, the Memorial Building base planters, and the Vigo Statue planters includes the following:

Juniperus [chinensis] Pfitzer	Pfitzer juniper
Juniperus depressa [horizontalis] Plumosa	creeping juniper 'Plumosa'
Juniperus [chinensis] 'Sargenti'	Sargent juniper
Ilex [crenata] 'Microphylla'	box-leaved holly
Taxus cuspidata (Mat type)	Japanese yew
Taxus cuspidata 'Capitata'	'Capitata' Japanese yew
Cretaegus pyracantus [Pyracantha coccinea]	pyracantha
Ligustrum lucidum	glossy privet

Vegetation within the grassy islands near downtown should be rehabilitated. Vegetation in these islands should be replanted in historic locations to the extent possible; however, some material may need to be deleted or moved to prevent intrusions into driving line of

sight. Any construction documents developed should follow guidelines set forth by the Indiana Department of Transportation and the City of Vincennes Engineering Department in regard to intersection sight line distances. Trees and shrubs above 3' in height should not be placed within these sight lines. Lawn in these areas should be refurbished where there is a proliferation of weeds. The refurbishing of lawns should include weed removal, soil preparation, seeding, and fertilization. The planting palette for these islands includes:

Quercus rubra	red oak
Cercis canadensis	redbud
Cornus florida	white dogwood
Pseudotsuga menziesii	Douglas fir
Acer saccharum	sugar maple
Ilex crenata	box-leaved holly
Taxus cuspidate 'Nana'	yew

The Barnett Street sidewalk axis should be restored to Parsons' plan. The ailing replacement Redbud trees in this area should be removed and a cultivar of Crabapple (*Malus sp*.) should be chosen for this area which is resistant to common Crabapple diseases and is suitable for this USDA hardiness zone. This variety should match the form and bloom color of the historic crabapple variety as closely as possible. The walkway is in the location delineated on the Parsons plan; however, materials do not match original specifications and should be replaced to match original implementation.

Plantings per the Parsons plan should be restored in the large lawn area between the Visitor Center and the Barnett Street sidewalk. This would include the addition of eight hardwoods, three evergreens, and numerous smaller trees and shrubs from the original planting palette. The three remaining original trees in this area would be preserved and replaced in-kind when they die. Lawns within the park should be rehabilitated with a species of grass to withstand the limited mowing occurring at the site due to the small maintenance staff. Two types of lawn species suggested for GERO are Bermuda and Zoysia[5]. Plantings in the area between the Visitor Center and the Barnett Street Sidewalk should include the following species:

Cornus florida	white dogwood
Quercus rubra	red oak
Pseudotsuga menziesii	Douglas fir
Tilia americana	American linden
Juniperus [chinensis] Pfitzer	Pfitzer juniper

Vistas into the site should be improved. The row of sweet gum trees on the west side of the cemetery site should not be replaced as these trees decline. These trees were not present in the original Parsons plan and they disrupt the visual relationship of the Church

[5] Note: If Zoysia is chosen as a grass species, a variety resistant to cold winters should be chosen such as Amazoy®.

site with the Memorial Grounds. The Visitor Center and the parking lot will be largely screened from the Memorial Building by the implementation of restored plantings in the zone between the Memorial Building and these two modern intrusions. The viewshed from the site across the Wabash River should be maintained with additional visual intrusions limited as possible. Since NPS does not own the property directly across the Wabash River, this should be achieved by maintaining open communication with owners of properties in this location. In this alternative, most visitors to the site will exit their cars and proceed to the Visitor Center along the existing sidewalk which leads from the parking area to the Visitor Center. From the Visitor Center, visitors wishing to experience the site as intended by the original Parsons plan, should be directed to exit through the door located on the Lower Second Street side of the building. Vegetation implemented in the quadrant between the Visitor Center and the Barnett Street Sidewalk will buffer views to the Memorial Building from this walkway. Visitors will then walk along Lower Second Street and approach the Memorial Building along one of the primary axes of the site with views of the Memorial Building framed by the newly implemented crabapple allée.

Visitor access to the site should be improved to allow approaches via the originally intended axes along the Mall and the Barnett Street Sidewalk. Visitors will continue to approach the Memorial Grounds via downtown Vincennes on foot. Improvements to the Park Operations and Visitor Orientation Zone outlined below will allow visitors to access the Memorial Building via the Barnett Street axis as they make their way to the Grounds from the Visitor Center.

Lighting within the Memorial Grounds should be enhanced slightly. The historic street lamps provide ample lighting for pathways; however improvements are proposed for the lighting of the Memorial Building. Parapet lighting should be cleaned and repaired with all bulbs changed to provide appropriate lighting for the structure. It is desired that the Memorial Building be highlighted at nighttime, but the structure should not be flooded with light. A large amount of light on the structure would create a “washed out” look that de-emphasizes the contrast in volumes represented by the different types of granite and the form of the structure.

Natural Resource Management Zone

Several areas of the site currently accommodate support activities for the Spirit of Vincennes Rendezvous grounds. These areas also provide a vegetated backdrop for the Memorial Building which contributes to the integrity of the site’s setting. Areas within this zone include the riverbank, levee and grassy open area adjacent to the parking lot. These areas were not part of the original design for the Memorial Grounds, however they play an important role on the site for support activities (such as picnicking for school groups, hosting activities for Rendezvous attendees who camp nearby, and buffering from adjacent uses.) These areas should be maintained much as they currently are. Lawn areas should be mown regularly and trees should be pruned as necessary. Anti-erosion devices implemented along the riverbank should be maintained to prevent further degradation of this area. A multi-use path should be installed in this area to create a connection between the proposed Vincennes Riverwalk and the western portion of the

site. The purpose of the trail is to help establish a multi-use link between the river front and this site. This pathway could follow the area where the train tracks were removed and then turn southeast to access the Visitor Center parking lot. The trail would then end at an extension of the existing city sidewalk which parallels Lower Second Street. The extension of the sidewalk along Lower Second Street will help facilitate pedestrian movement from the downtown area to this side of the Memorial Grounds. Materials appropriate for this path include pervious material such as porous concrete or GravelPave®. The pathway should be wide enough to accommodate multiple uses. Widths of ten to twelve feet are appropriate. If in-holding properties are donated to the park in the future, these may be utilized for the routing of the multi-use path. A potential route for the pathway runs parallel to Willow Street providing an easily accessed connection to the Rendezvous Grounds. In this potential future scheme, the city sidewalk should be extended along Lower Second Street to the corner of Willow Street.

Park Operations and Visitor Orientation Zone

The Park Operations and Visitor Orientation Zone includes the Visitor Center and Maintenance Area. Additional buffer plantings would be added to the area between the Memorial Building and the Visitor parking lot in this scheme to make the Visitor Orientation Zone less obtrusive to the Memorial Building. Improved bus circulation is desired by visitors and should be accommodated in this scheme. A lawn area with large specimen trees should remain between the street and the reconfigured parking lot to maintain visibility of the parking area from the road for security reasons. Sidewalk connections to Second Street should be maintained.

Sidewalks in this area should be distinct from those in the Historic Resources Management and Interpretation Zone. Distinguishing new construction from historic materials on the site is common in preservation treatments of historic sites. Distinguishing non-historic materials from historic materials gives visitors visual clues as to which materials date to the period of significance. Current locations are appropriate for visitors to move from the parking area to the Visitor Center and Memorial Building; however a more typical brushed finish concrete surface should be employed in these areas to contrast with the ¾ inch exposed aggregate sidewalks that are recommended for the Historic Resource Management and Interpretation Zone. These walkways should be replaced as needed with the recommended broom-finish concrete. Broom-finish concrete is recommended because it is a clearly modern, simple surface which will be easily distinguished from the historic exposed aggregate concrete. Where possible, large sections of the concrete should be replaced at one time to eliminate potential differences in material colors and textures. One section of eight foot wide asphalt sidewalk exists near the corner of the parking lot closest to Willow Street. This sidewalk should be replaced with concrete to match other sidewalks in this zone.

This zone also includes the Maintenance Area which is somewhat isolated and nicely screened from the Memorial Grounds and Natural Resource Management Zone. Maintenance procedures would continue to operate from this area with access via Willow Street.

Treatment Alternative #3: Rehabilitation of Memorial Grounds and Removal of Visitor Center

Illustration R

The purpose of this treatment alternative is to protect and interpret existing historic resources while returning the visitor experience to the original intent of the Parsons Memorial Grounds design as fully as possible. The overall treatment philosophy would be rehabilitation with preservation applied to selected elements. New construction would be necessary in several areas to support visitor activities. Interpretation of the Fort Sackville location would be enhanced (this would require further archeological investigation). Elements on the site in critical need of repair would be restored or rehabilitated. Pedestrian circulation and connections would be improved. The visitor experience and approach to the site would return to the original design intent.

This alternative includes two proposed management zones including: 1) Historic Resource Management and Interpretation Zone and 2) Park Maintenance Zone.

Historic Resource Management and Interpretation Zone

All of the historic Memorial Grounds would fall within the Historic Resource Management and Interpretation Zone. The historic area would be restored to represent the original Memorial Grounds design intent as accurately as possible, based on the historic planting plan by Donald B. Johnston drawn on the construction documents by Parsons. Interpretation of the Military period of significance would continue to occur inside the Memorial itself through the murals and would be represented on the site not only by the statues and inscriptions currently existing on the site, but also through further interpretation utilizing "footprinting" (described below). Visitor experience on the Memorial Grounds would be enhanced by the following improvements:

The North and South Terraces of the Bridge Approach are in need of repair. The degradation of reinforcement in these structures has caused rust stains on the granite facing. The granite panels on these walls should be removed and protected, existing steel fabric should be replaced with epoxy coated or stainless steel reinforcement, and the granite panels should be cleaned using non-abrasive methods and reset on the walls. Great care should be taken when restoring areas of the wall with inscription or engraving. The storeroom below the North Terrace experiences leakage similar to the leakage present in the Memorial Terrace. While there is no mechanical equipment in this area, the leaks indicate a structural problem and should be addressed in the rehabilitation effort.

Sidewalks throughout the Memorial Grounds remain in the configuration from the original Parsons layout plan (s*ee Illustration E*). The layout of these sidewalks is contributing to the historic integrity of the site. This includes all sidewalks adjacent to and north of the Memorial Building and the Barnett Street Sidewalk. The sidewalks immediately south of the Memorial Building and the stairs leading to this sidewalk are also included. The materials used in replacement areas of the sidewalks have been inconsistent over time. There is a lack in continuity in color and size of materials utilized throughout the historic pedestrian circulation system. The materials used in sidewalk

replacement do not contribute to the historic integrity of the site. The exposed aggregate surface utilized in the initial site construction contained specific aggregate composition (¾ inch aggregate) and slump characteristics; these construction standards should be adhered to in any replacement material. Aggregate sizes used in replacement areas have not always adhered to the historic ¾ inch standard. First priority for replacement should be any areas which are cracking or lack structural integrity and those areas which are considered unsafe. All replacements areas should adhere to guidelines outlined in oral interviews conducted with contractors who worked on the site during its initial construction period.[6] A quarry will have to be located where the appropriate supplies of ¾ inch aggregate material can be obtained. This material should be utilized consistently until all sidewalks within the historic Memorial Grounds have been replaced over time.

Circulation within the Memorial Grounds would return to the original design intent. The Visitor Center and Visitor Center Parking Lot would be removed from the site and located elsewhere in the downtown business district. There are many options for the exact location of a Visitor Center, but long range options include any commercial or residential building in the downtown area adjacent to the site. Locations from which visitors can access the site via one of the primary axes should be a priority for consideration. Construction of a new building as infill in the areas adjacent to the site should also be considered. The location of these visitor resources outside the current park boundary would return the site to the original intended undeveloped backdrop for the Memorial Building. The original circulation present on the site during the period of significance would be represented by wide pathways which could be utilized as multi-use connections to the Wabash River Greenway. Visitors would approach the Memorial Building either from existing downtown pedestrian connections or via the “Boulevard”. A new construction item, the Boulevard fulfills the original design intent. Rather than a vehicular route, this construction is envisioned as a multi-use path connecting the downtown walkway system with a wide walkway along the Wabash River. The Boulevard would connect to the above mentioned Vincennes Riverwalk system, crossing under the Lincoln Memorial Bridge and parallel the Floodwall for its entirety. The Boulevard should be constructed out of pervious material such as porous concrete so as to not contribute to surface runoff. The configuration of the Boulevard presents an opportunity to provide universal access from the Mall area to the Vigo Statue Area (see Figure 5.2). Construction of the Boulevard would improve the view from the Memorial Building down toward the riverfront area as the grades in this area would be more consistently sloped, and the railroad spur would no longer be present.

[6] Mullins, n.p.

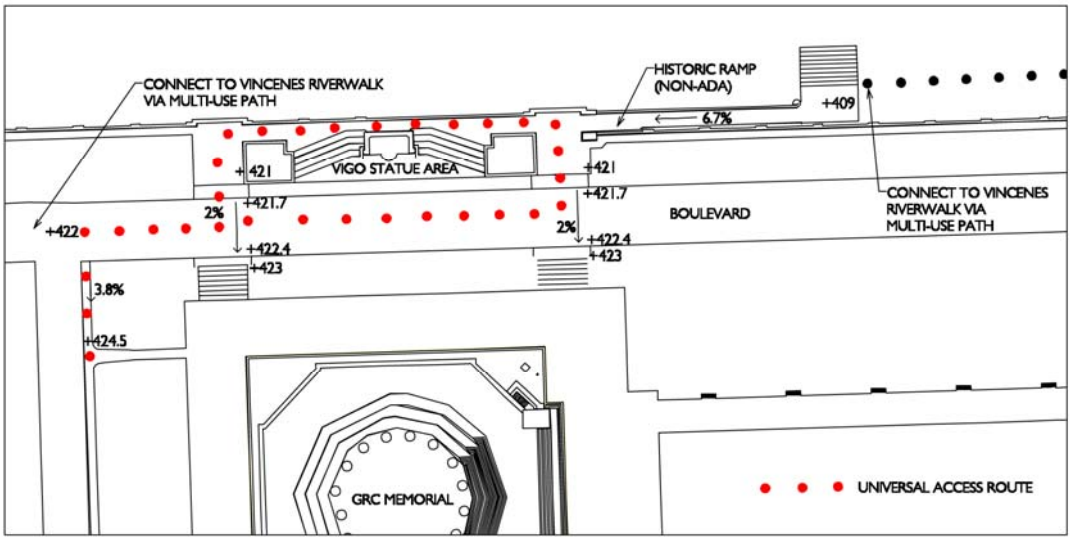


Figure 5.2: Map indicating a universal access route from the Mall area to the Vigo Statue area along the proposed Boulevard.

Structures which were present within the current park boundary during the Military period of significance would be represented by "footprinting", an interpretive method for demarcating the location of previously existing structures on the site. Footprinting on the site would also allow for additional interpretation of the Fort Sackville location. Currently the site of Fort Sackville is denoted with a plaque due to the lack of evidence for the location of the fort. The exact location of Fort Sackville has not been pinpointed using past archeological methodology. Current and future archeological methods may yield additional information on the Fort Sackville location; however, levels of fill on the site and past disturbance of strata may obscure potential information. If evidence of location of the fort is pinpointed in the future, this location evidence could be denoted with footprinting. Footprinting can be carried out in various ways, but is typically fairly subtle with the footprint demarcated flush with the ground. Brick or concrete paving, typically of a width similar to a former wall, are potential materials that might be used in footprinting. Sometimes a wall at seating height is also used. At GERO the intent for the fort location would be to use a footprint that remains flush with the grade, thus not obstructing the important vistas within this site. A more visual approach to footprinting is "ghosting," which would involve not only the footprint but also the form of the missing structure. As an example the structural frame of a former building might be represented in a ghosting approach. Depending on the findings and the precise location of Fort Sackville, if discovered through future archeology, ghosting might be considered as a method of further highlighting this important, but until now visually lost element of the park. Footprinting should only occur once sufficient exploration and excavation is completed.

Vegetation within the Memorial Grounds should be rehabilitated to represent the period of initial site construction. Parsons' original design implementation for the site completed the vision for the Memorial Building and Grounds as a unit. Many of the trees installed during the initial landscape implementation died shortly thereafter. Only seven trees remain on the site dating from this installation. Other plantings date from the second iteration of Parsons' plan or from replacements over time by park staff. Linden trees in the Mall area have never been successful as hardy plant materials. The spacing called out on the Parsons plan is fairly tight for a medium-sized shade tree (approximately fifteen feet on center) and very few of the lindens planted on the site in either the initial tree planting or in the subsequent restoration have had a successful lifespan. Soils in the Mall are fill dirt imported during initial construction. There is no knowledge of soils testing having been performed in this area. It is recommended that a professional soil scientist test the soil in this area and make recommendations for amending the soil to support the linden trees. Local horticultural experts should also be consulted in selecting an appropriate linden hybrid species for the site. Wind is often cited as the reason for the lack of success of lindens in the Mall. Trees should be staked with below-grade anchors to assure wind resistance during establishment. One example of this type of system is a "Platipus" tree anchoring system which anchors the rootball of the tree below grade, eliminating all trip hazards. Anchors should be removed after two seasons of growth to assure tree viability. It is recommended that underdrainage be installed in the allée area of ensure proper drainage of the soils in the Mall. Proper mulching practices should be implemented around all newly planted trees at the site to promote moisture retention and trunk protection.

Lawn in this area should be refurbished concurrent with the tree installation. It is not expected that lawn will be able to survive directly under the trees indefinitely. As the trees grow and they begin to shade out lawn areas, the mulch rings around the trees should increase to protect the trees from root exposure. Mulch will also aid in the retention of soils and moisture in this area. The middle panel of the Mall should remain lawn and should be vigorously maintained.

Other vegetation throughout the site should be replaced per the original Parsons scheme. This includes plantings in the planter areas of both the George Rogers Clark Memorial Building and the North and South Terraces of the Bridge Approach (which are detailed in the Parsons plan). Plantings in the planters at the base of the Memorial Building would likely be destroyed by the rehabilitation of the Memorial Terrace and should be replanted utilizing species specified in the Parsons plan. Plantings in the Terrace planters and the Vigo Statue planters may be damaged when recommended repairs to walls and sidewalks take place. Since these plantings are non-historic, they should be replaced with species from the historic planting palette. The planting palette for the Terrace planters, the Memorial Building base planters, and the Vigo Statue planters includes the following:

Juniperus [chinensis] Pfitzer	Pfitzer juniper
Juniperus depressa [horizontalis] Plumosa	creeping juniper 'Plumosa'
Juniperus [chinensis] 'Sargenti'	Sargent juniper
Ilex [crenata] 'Microphylla'	box-leaved holly

Taxus cuspidata (Mat type)	Japanese yew
Taxus cuspidata 'Capitata'	'Capitata' Japanese yew
Cretaegus pyracantus [Pyracantha coccinea]	pyracantha
Ligustrum lucidum	glossy privet

Vegetation within the grassy islands near downtown should be rehabilitated. Vegetation in these islands should be replanted in historic locations to the extent possible; however, some material may need to be deleted or moved to prevent intrusions into driving line of sight. Any construction documents developed should follow guidelines set forth by the Indiana Department of Transportation and the City of Vincennes Engineering Department in regard to intersection sight line distances. Trees and shrubs above 3' in height should not be placed within these sight lines. Lawn in these areas should be refurbished where there is a proliferation of weeds. The refurbishing of lawns should include weed removal, soil preparation, seeding, and fertilization. The planting palette for these islands includes:

Quercus rubra	red oak
Cercis canadensis	redbud
Cornus florida	white dogwood
Pseudotsuga menziesii	Douglas fir
Acer saccharum	sugar maple
Ilex crenata	box-leaved holly
Taxus cuspidate 'Nana'	yew

The Barnett Street sidewalk axis should be restored to Parsons' plan. The ailing replacement Redbud trees in this area should be removed and a cultivar of Crabapple (*Malus sp.*) should be chosen for this area which is resistant to common Crabapple diseases, is suitable for this USDA hardiness zone, and matches the color and form of the historic variety as closely as possible. The walkway is in the location delineated on the Parsons plan; however, materials do not match original specifications and should be replaced to match original implementation.

Plantings per the Parsons plan should be restored in the large lawn area between the Visitor Center and the Barnett Street sidewalk. Lawns within the park should be rehabilitated with a species of grass to withstand the limited mowing occurring at the site due to the small maintenance staff.

Vegetation in the zones including the levee, river bank, and quadrant north of the Maintenance Area should be maintained as they are currently with mowing of lawn areas and pruning of necessary for large shade trees. A registered arborist should be consulted regarding large tree pruning. Riverbank vegetation should remain and be supplemented with native riverine species for erosion prevention. Any area where structures have been removed should be reseeded with lawn and planted with large shade trees. The area between Willow Street and the extension of Dubois Street should function as a support area for interpretation and continued use by visitors to the Vincennes Rendezvous.

Lighting within the Memorial Grounds should be enhanced slightly. The historic street lamps provide ample lighting for pathways; however improvements are proposed for the lighting of the Memorial Building. Parapet lighting should be cleaned and repaired with all bulbs changed to provide appropriate lighting for the structure. It is desired that the Memorial Building be highlighted at nighttime, but the structure should not be flooded with light. A large amount of light on the structure would create a "washed out" look that de-emphasizes the contrast in volumes represented by the different types of granite and the form of the structure.

Park Maintenance Zone:
The Maintenance Area in its current location is nicely screened from the Memorial Grounds. Maintenance procedures would continue to operate from this area with access via Willow Street.

Chapter 6: Impacts from Treatment Alternatives (Environmental Consequences)

Environmental Consequences

Section 101(b)(4) of the National Environmental Policy Act of 1969 (P.L. 91-190), as amended, requires the Federal government to coordinate and plan its actions to "preserve important historic, cultural and natural aspects of our national heritage." The Council on Environmental Quality's implementing regulations requires the consideration of impacts on cultural resources either listed in or eligible for the National Register of Historic Places.

In this *Environmental Assessment*, impacts to cultural resources are described in terms of type, context, duration, and intensity, which is consistent with the regulations of the National Environmental Policy Act. This section of the Environmental Assessment forms the scientific and analytic basis for the comparisons of treatment alternatives under CEQ Section 1502.14. This section consolidates the discussions for each impact topic and compares treatment alternatives within the context of these topics. The discussion will include the environmental impacts of the alternatives and will include descriptions of the short-term, long-term, beneficial, and adverse impacts of each alternative. The comparison of impacts is summarized in Table 3.

Intensity, Duration and Type of Impact

Potential impacts to the resources at George Rogers Clark National Historical Park are described in terms of:

- Type – beneficial or adverse
- Context – site-specific, local or regional
- Duration – short-term or long-term
- Intensity – negligible, minor, moderate, or major

The intensity of impacts is evaluated within a local context (i.e. the GERO site), while the intensity of the contribution to cumulative impacts is evaluated in a regional context (i.e. Vincennes, Indiana). A general introduction to intensity evaluation is included below; however, individual definitions of intensity are included separately for each impact topic considered.

Evaluation of alternatives takes into account whether the impacts would be:

- Negligible – the impact is at the lowest levels of detection and barely measurable with no perceptible consequences either beneficially or adversely
- Minor – the impact is detectable, but does not affect the integrity of the resource either beneficially or adversely
- Moderate – the impact is clearly detectable and could have a significant effect on the resource, or is sufficient enough to cause a change in the character-defining of a cultural resource either beneficially or adversely

- Major – the effect is highly noticeable, and would have a substantial influence on the resource or results in a considerable and highly perceptible change in character-defining features of a cultural resource either beneficially or adversely

Duration of impacts is evaluated based on the short-term or long-term nature of alternative-associated changes on existing conditions. Type of impact refers to the beneficial or adverse consequences of implementing a given alternative. More exact interpretations of intensity, duration, and type of impact are given for each resource area examined. Professional judgment is used to reach reasonable conclusions as to the intensity and duration of potential impacts.

Cumulative Impacts

The Council on Environmental Quality (CEQ) regulations, which implement the National Environmental Policy Act (NEPA), requires assessment of cumulative impacts in the decision-making process for federal projects. Cumulative impacts are defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonable foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions" (40 CFR 1508.7). Cumulative impacts are considered for both the no-action and proposed action alternatives.

Cumulative impacts were determined by combining the impacts of the proposed alternative with potential other past, present, and reasonably foreseeable future actions. Therefore, it was necessary to identify other ongoing or foreseeable future projects within the surrounding area.

- Past cumulative actions:
  - Repeated efforts to repair the Memorial Terrace
  - Construction of the Visitor Center and parking lot
  - Repeated flooding adjacent to Floodwall
  - Erosion of riverbank area
  - Loss of historic vegetation on site
- Foreseeable cumulative actions:
  - Rehabilitation of the Memorial Terrace
  - Rehabilitation/Repair of the Floodwall
  - Construction of the Vincennes Wabash River Greenway

Impairment Analysis

The *National Park Service Management Policies* (NPS, 2001a) requires analysis of potential effects to determine whether or not actions would impair park resources or values. The fundamental purpose of the NPS, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. NPS managers must always seek ways to avoid, or minimize to the greatest degree practicable, adverse impacts to park resources and values. However, the laws do give the National Park Service the management discretion to allow

certain impacts. That discretion is limited by the statutory requirement that NPS must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise.

The prohibited impairment is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values. An impact to any park resource or value may constitute impairment. Impairment may result from NPS activities in managing the park, from visitor activities, or from activities undertaken by others operating in the park. Impairment of park resources can also occur from activities occurring outside park boundaries. An impact would be more likely to constitute impairment to the extent that it has a major or severe adverse effect upon a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park.
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park.
- Identified as a goal in the park's GMP or other relevant NPS planning documents.

An impairment determination is included in the environmental consequences analysis section for all impact topics relating to park resources and values.

Actions Common to All Alternatives

The impacts of the two potentially funded projects, the rehabilitation of the Memorial Terrace and Floodwall, will not be evaluated in this EA. The impacts associated with these projects are covered by a Categorical Exclusion.

Cultural Resources

Basis of Analysis:

- Preservation of Archeological/Historic Cultural Resource – Impacts are examined from the perspective of *The Secretary of Interior's Standards for the Treatment of Historic Properties*
- Preservation of Cultural Landscape Elements – Impacts are examined from the perspective of *Guidelines for the Treatment of Cultural Landscapes*

Definition of Intensity Levels

For the purpose of analyzing potential impacts to historic structures/cultural landscapes, the thresholds of change for the intensity of an impact are defined as follows:

- Negligible – Impact(s) is at the lowest levels of detection – barely measurable with no perceptible consequences either adverse or beneficial. For purposes of Section 106, the determination of effect would be *no adverse effect*
- Minor

  - Adverse Impact – impact would alter a feature(s) of the cultural landscape, but would not diminish the overall integrity of the resource. For purposes of Section 106, the determination of effect would be no adverse effect
  - Beneficial Impact – stabilization or preservation of the cultural landscape in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* and the *Guidelines for Treatment of Cultural Landscapes*. For purposes of Section 106, the determination of effect would be *no adverse effect*.
- Moderate
  - Adverse Impact – impact would alter a feature(s) of the cultural landscape, diminishing the overall integrity of the resource to the extent that its National Register status or eligibility would be jeopardized. For purposes Section 106, the determination would be *no adverse effect.*
  - Beneficial Impact – rehabilitation of the cultural landscape or one or more of the significant landscape characteristics in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* and the *Guidelines for Treatment of Cultural Landscape.* For purposes of Section 106, the determination would be *no adverse effect.*
- Major
  - Adverse Impact – impact would alter a feature(s) of the cultural landscape, diminishing the overall integrity of the resource to the extent that its NRHP status or eligibility is jeopardized. For purposes of Section 106, the determination of effect would be *adverse effect.*
  - Beneficial Impact – Restoration of the cultural landscape or one or more of the landscape characteristics in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* and the *Guidelines for Treatment of Cultural Landscape.* For purposes of Section 106, the determination of effect would be *no adverse effect.*

Duration: Short Term – Effects lasting for the duration of the construction activities (less than one year); Long term – Effects lasting longer than the duration of construction (longer than one year).

Treatment Alternative #1: Current Treatment (No Action)

Analysis

Under the No-Action Alternative, the visitors would continue to be oriented in the Visitor Center and then tour the site utilizing the current circulation network. Visitors would continue to park in the Visitor Center parking lot or in downtown Vincennes. The Memorial Building and Grounds would continue to be affected by vegetation and hardscape replacement on an ad-hoc basis.

Under Alternative #1, plant materials on the site would be maintained as they are currently with occasional replacement as possible as individual plants decline. When there are not sufficient funds for plant replacement, the landscape is left with a void. Many plants on the site do not match the species specified in the original design for the

site. The impact of these continued stop-gap efforts in plant replacement would be long-term, moderate, and adverse. Sidewalks throughout the site would be replaced on an as-needed basis creating variation in types of construction methodologies and materials utilized. The impact of this continued methodology of sidewalk replacement would be a long-term, moderate, and adverse. Visually the Visitor Center and parking lot would continue to intrude on the Historic and Interpretive Zone of the park. These impacts are long-term, moderate, and adverse.

Cumulative Effects
The historic site would be maintained as it currently is; however, the condition of the Memorial Terrace and Floodwall would be greatly improved. The lack of a master plan for replacement of sidewalks and vegetation would continue to leave the management of the park without guidance for replacement. The visual intrusion of the Visitor Center and parking lot would not be mitigated and would continue to detract from the site's integrity. These cumulative impacts to the historic integrity of the site would be long-term, minor and adverse.

Conclusion
The No-Action Alternative would result in long-term, minor, adverse impacts to the historic structures and cultural landscape. Cumulative effects would be long-term, minor, and adverse. No impairment to park resources would occur under the No-Action Alternative.

Treatment Alternative #2: Rehabilitation of Memorial Grounds

Analysis
Under this alternative, visitors to the site would continue to be oriented in the Visitor Center and then tour the site utilizing the current circulation network. However, these uses would be screened from view of the Memorial Building and Memorial Grounds with the installation of additional vegetation. The greenspaces northeast of the Visitor Center would be rehabilitated to reflect the original design intent of the Parsons plan creating a visual buffer of the Visitor Center from the Memorial Grounds. Parking areas would be buffered with additional plantings implemented from the original palette for the grounds. The maintenance of Visitor Center and parking lot in their current configuration with additional visual buffering has a long-term, moderate, and beneficial impact on the site.

This treatment maximizes the site's ability to represent the Memorial Era period of significance while eliminating confusion about which site elements date from this era. Sidewalks implemented concurrently with the Memorial Grounds would be clearly distinguishable from sidewalks implemented concurrently with the Visitor Center and parking lot. The contrast in materials would have a long-term, moderate, and beneficial impact on the site. The integrity of the vegetation on the site would improve in this treatment option as all planting areas would be rehabilitated to reflect the original planting plan implemented on the site. Planned vistas would be restored within the site framed by tree-planted allées along the primary axes (Barnett Street Sidewalk and the Mall). These impacts would be long-term, moderate, and beneficial.

The railroad tracks which currently run through the site would be removed in this scheme. This area would be regraded and a smooth transition would be constructed in the area. A connection to the Vincennes Greenway Trail would be included in a small portion of the former track area within the Historic Resource Management and Interpretive Zone and the entire track area in the Natural Resource Management Zone would be rehabilitated to accommodate a multi-use trail. Because of the disruptive nature of construction activities, the impact of the demolition of the tracks and construction of these trail portions would be short-term, moderate, and adverse. The inclusion of this link to the Greenway Trail system and into the site would be a long-term, moderate, and beneficial impact.

Cumulative Effects
The rehabilitation of the historic structures in the park including the North and South Terrace and the Lincoln Memorial Bridge Approach would have short-term, minor or moderate, and adverse impacts on the cultural landscape during the construction period. Once completed, these efforts would have a long-term, moderate and beneficial impact.

The rehabilitation of plantings and the circulation within the site would have a long-term, moderate, and beneficial impact. Regrading the area formerly occupied by the railroad spur existed would have a long-term, moderate, and beneficial impact on the site.

Conclusion
Treatment Alternative #2 would have a long-term, moderate, and beneficial impact to cultural resources following the rehabilitation of the historic structures, vegetation and circulation routes on the site. A short-term, minor, and adverse impact would occur only during the construction efforts to rehabilitate these items. There would be no major, adverse impacts to the cultural resources on the site. The changes would improve the overall integrity of the contributing features to GERO which is listed on the National Register of Historic Places.

Treatment Alternative #3: Rehabilitation of Memorial Grounds and Removal of Visitor Center

Analysis
Under this alternative, the Visitor Center and parking area would be removed from the site. These structures would be demolished and visitor services would be located somewhere outside the current park boundary. NPS would have to acquire a property in which to house the visitor services, preferably in the adjacent downtown area. The area currently occupied by the Visitor Center and parking area would be converted into a undeveloped backdrop for the Memorial Grounds. Construction impacts would be short-term, moderate and adverse. Once planting was restored in these areas the impact would be long-term, moderate and beneficial to the cultural resources.

This treatment maximizes the representation of both the Military Era and the Memorial Era periods on the site. Sidewalks implemented concurrently with the Memorial Grounds would be clearly distinguishable from sidewalks implemented concurrently with the Visitor Center and parking lot. The contrast in materials would have a long-term,

moderate, and beneficial impact on the site. The integrity of the vegetation on the site would improve in this treatment option as all planting areas would be rehabilitated to reflect the original planting plan implemented on the site. Planned vistas would be restored within the site framed by tree-planted allées along the major axes (Barnett Street Sidewalk and the Mall). These impacts would be long-term, moderate, and beneficial. After positive location of site of Fort Sackville, this location would be interpreted through "footprinting". The footprinting would have a long-term, moderate, adverse impact on the Memorial Era Grounds design as it would detract from the axial symmetry now present on the site.

The railroad tracks which currently run through the site would be removed in this scheme. This area would be converted to the Boulevard originally conceived in the Parsons layout for the Memorial Grounds. This circulation route would tie into the Wabash River Greenway and allow a multi-use connection to run through the site compliant with the originally planned circulation. The construction of this route would be a short-term, moderate, adverse impact. The full realization of the original circulation plan would be a long-term, moderate, beneficial impact.

Cumulative Effects
The rehabilitation of plantings and the circulation within the site would have a long-term, moderate, and beneficial impact. Regrading the area formerly occupied by the railroad spur would have a long-term, moderate, and beneficial impact on the site.

Conclusion
Treatment Alternative #3 would have a long-term, moderate, and beneficial impact to cultural resources following the rehabilitation of the historic structures, vegetation and circulation routes on the site. A short-term, minor, and adverse impact would occur only during the construction efforts to rehabilitate these items. There would be no major, adverse impacts to the cultural resources on the site. The changes would improve the overall integrity of the contributing features.

Archeological Resources

Basis for Analysis
Impact analysis focused on the amount of disturbance to potential archeological resources in GERO.

Intensity levels

- Negligible – Impacts to park archeological features are not detectable based on standard archeological methodologies.
- Minor – Low probability of impact because either the activity would occur in an area where archeological features are not known to contain potential features and the disturbance would be negligible or the activity would occur in an area containing archeological features but the volume of disturbance would be nearly indiscernible.
- Moderate – Moderate probability of impact because either the activity would occur in an area not known to contain archeological features and the volume of disturbance would be moderate, or the activity would occur in an area containing archeological features but the volume of disturbance would be small or moderate. Monitoring would identify most affected archeological features, but some features and/or associated contextual information would be lost.
- Major – High probability of impact because either the action would occur in an area containing archeological features and the volume of disturbance would be large. Even with monitoring, many features and/or associated contextual information would likely be lost.

Duration

- Short-term – The impact lasts less than one year.
- Long-term – The impact lasts more than one year.

Treatment Alternative #1: No Action Alternative

The No Action Alternative would have no effect on archaeological sites within the park boundary. Based on current archeological information, none of the proposed alterations would penetrate below the area of construction fill that was imported on the site during the initial Memorial construction. During implementation of the proposed improvements to the Memorial Terrace and Floodwall, materials or features relating to the initial site construction and/or modification efforts could potentially be encountered. Should resources be encountered during construction, however, activities should stop while appropriate studies are conducted.

Cumulative Impact
Past efforts to locate the archeological site of Fort Sackville have not yielded a large quantity of information. Graves from the adjacent Old French Cemetery lie within the park boundary, but these grave locations have not been identified. Excavations on the site

were made difficult by the depth of fill imported during Memorial construction. Depths of fill vary throughout the site and mapping of depth locations has not occurred. There is no documentation of archeological finds associated with the implementation of the Visitor Center, parking lot, or Maintenance Area. Site improvements have and would continue under this alternative to take place in areas already disturbed by previous construction efforts. The cumulative impact of improvements made to the site since the initial construction of the Memorial has been long-term, negligible and beneficial.

Conclusion
Under the No Action Alternative a long-term, negligible, and beneficial impact would occur as no work would be implemented below the stratum of fill that was imported to the site during the initial site construction. There would be no contribution to cumulative effects as a result of the No Action Alternative.

Treatment Alternative #2: Rehabilitation of Memorial Grounds

Treatment Alternative #2 would have no effect on archaeological sites within the park boundary. Based on current archeological information, none of the proposed alterations would penetrate below the area of construction fill that was imported on the site during the initial Memorial construction. Replacement of sidewalk areas and implementation of new plant materials may reveal similar artifacts. Should resources be encountered during construction, however, activities should stop while appropriate studies are conducted.

Cumulative Impact
Past efforts to locate the archeological site of Fort Sackville have not yielded a large quantity of information. Graves from the adjacent Old French Cemetery may lie within the park boundary, but these grave locations have not been identified. Excavations on the site were made difficult by the depth of fill imported during Memorial construction. Depths of fill vary throughout the site and mapping of depth locations has not occurred. There was no documentation provided to the consultants during this study of archeological finds associated with the implementation of the Visitor Center, parking lot, or Maintenance Area.[1] Site improvements have and would continue under this alternative to take place in areas already disturbed by previous construction efforts. The cumulative impact of improvements made to the site since the initial construction of the Memorial has been long-term, negligible and beneficial.

Conclusion
Under Treatment Alternative #2 a long-term, negligible, and beneficial impact would occur as no work would be implemented below the stratum of fill that was imported to the site during the initial site construction. There would be no contribution to cumulative effects as a result of Treatment Alternative #2.

[1] Two archeological reports were provided to the consultants in preparation of this report: Curtis H. Tomak, *Archaeological Investigations at the George Rogers Clark National Memorial* (1972) and Robert K. Nickel, *An Archeological Overview and Assessment of George Rogers Clark National Historical Park* (2002).

Treatment Alternative #3: Rehabilitation of Memorial Grounds and Removal of Visitor Center

Treatment Alternative #3 would have an effect on archaeological sites within the park boundary. It is proposed that further efforts be conducted to locate Fort Sackville and other archeological resources. The location of these resources would be a long-term, moderate and beneficial impact. Based on current archeological information, none of the proposed alterations would penetrate below the area of construction fill that was imported on the site during the initial Memorial construction. Replacement of sidewalk areas and implementation of new plant materials may reveal similar artifacts. Should resources be encountered during construction, however, activities should stop while appropriate studies are conducted.

Cumulative Impact

Past efforts to locate the archeological site of Fort Sackville have not yielded a large quantity of information. Graves from the adjacent Old French Cemetery may cross into the park boundary, but these grave locations have not been identified. Excavations on the site were made difficult by the depth of fill implemented during Memorial construction. Depths of fill vary throughout the site and mapping of depth locations has not occurred. There is no documentation of archeological finds associated with the implementation of the Visitor Center, parking lot, or Maintenance Area. Site improvements have and would continue under this alternative to take place in areas already disturbed by previous construction efforts. The cumulative impact of improvements made to the site since the initial construction of the Memorial has been long-term, negligible and beneficial.

Conclusion

Under Treatment Alternative #3 a long-term, negligible, and beneficial impact would occur for improvement projects as no work would be implemented below the stratum of fill that was imported to the site during the initial site construction. The location of archeological resources within the park would be a long-term, moderate and beneficial impact.

Visitor Use and Experience

Basis for Analysis

GERO was established to memorialize the efforts of George Rogers Clark during the American Revolution for the benefit and enjoyment of the public. The interpretation of George Rogers Clark and his military conquests plays an important role in the understanding of the Memorial. The methodology used for assessing impacts to visitor use and experience are based on how the cultural resources are interpreted and incorporated into the overall visitor experience, and how any changes to these resources would affect the visitor.

Intensity Levels

- Negligible – Visitors would not be affected or changes in visitor use and/or experience would be below or at the level of detection. Visitors to the site would not likely be aware of the effects associated with the alternative.
- Minor – Changes in visitor use and/or experience would be detectable, although the changes would be slight.
- Moderate – Changes in visitor use and/or experience would be readily apparent.
- Major – Changes in visitor use and/or experience would be readily apparent. The visitor would be aware of the effects associated with the alternative, and would likely express a strong opinion about the changes.

Duration

Short-term – Less than one year
Long-term – More than one year

Treatment Alternative #1: No Action Alternative

Visitor use and experience would continue as it does currently under this alternative. The cultural resources on the site would continue to deteriorate over time. The effect of this deterioration would be short-term, minor, and adverse. As resources continue to deteriorate without repair, rehabilitation or replacement in-kind, the effect would be long-term, moderate, and adverse.

Cumulative Impact

Past efforts to improve visitor use and experience at the site have included the construction of the Visitor Center and parking lot in the mid-1970s and expanded interpretation efforts by NPS. The Visitor Center and the parking lot have a long-term, minor, beneficial impact on visitor use and experience because the visitor has support services available; however, their presence within the context of the cultural landscape has had a long-term, moderate, adverse impact. Some of the features within the cultural landscape are in a state of decline resulting in a long-term, moderate, adverse impact.

Conclusion
Under the No Action Alternative a long-term, moderate, and adverse impact would occur. There would be an adverse contribution to cumulative effects as a result of the No Action Alternative.

Treatment Alternative #2: Rehabilitation of Memorial Grounds

Improved pedestrian circulation would occur in Treatment Alternative #2. Areas within the Historic Resource Management and Interpretive Zone would be clearly delineated by changes in pavement type from those in the Park Operations & Visitor Orientation Zone. This delineation will allow visitors to more easily distinguish areas that were originally part of the Memorial Grounds. Views of the non-historic Visitor Center and parking area would be visually buffered by the rehabilitation of the planting areas between the historic Memorial Grounds and these zones. Visitors may be frustrated during construction periods as existing routes along sidewalks are detoured. The effect of construction efforts would be short-term, moderate, and adverse. However, the improvements will result in a long-term, moderate, and beneficial impact.

Cumulative Impacts
Past efforts to improve visitor use and experience at the site have included the construction of the Visitor Center and parking lot in the mid-1970s and improved interpretation efforts by NPS. The existing visitor services on the site have a long-term, minor, beneficial impact on visitor use and experience because the visitor has support services available; however, some of the features within the cultural landscape are in a state of decline resulting in a long-term, moderate, adverse impact. The improvements associated with Treatment Alternative #2 combined with the cumulative impacts on the site would have a short-term, moderate, adverse impact. The long-term impacts would be moderate and beneficial.

Conclusion
Under Treatment Alternative #2, a long-term, moderate, and beneficial impact would occur as an effect of the proposed improvements. There would be a beneficial contribution to cumulative effects as a result of Treatment Alternative #2.

Treatment Alternative #3: Rehabilitation of Memorial Grounds and Removal of Visitor Center

The Visitor Center and parking lot would be removed from within the current park boundary under Treatment Alternative #3. This would result in long-time visitors possibly being confused as to the location of visitor services. Parking would also be much further away from the Memorial Building, resulting in a longer trek for visitors to what many perceive is the main attraction of the site. For most of the general public, removal of the Visitor Center and parking lot from the site would have a long-term, moderate, and beneficial impact on visitor use and experience. The relocation of the Visitor Center to the downtown commercial district of Vincennes may have a long-term, minor, and beneficial impact on downtown businesses due to the influx of visitors to this area.

Interpretation of the location of Fort Sackville would occur under this alternative. While the ghosting of the structure would add an interpretive element from the Military Era period of significance to the site, many visitors may be confused by the potentially random form existing within the highly formal landscape. Without signed interpretive points, the impact of the footprinting would be long-term, minor, and adverse.

Cumulative Impacts

Past efforts to improve visitor use and experience at the site have included the construction of the Visitor Center and parking lot in the mid-1970s and improved interpretation efforts by NPS. The existing visitor services on the site have a long-term, minor, beneficial impact on visitor use and experience because the visitor has support services available; however, some of the features within the cultural landscape are in a state of decline resulting in a long-term, moderate, adverse impact. The improvements associated with Treatment Alternative #3 combined with the cumulative impacts on the site would have a short-term, moderate, adverse impact. The long-term impacts would be minor to moderate and adverse.

Conclusion

Under Treatment Alternative #3, a long-term, minor to moderate, and adverse impact would occur as an effect of the proposed improvements. There would be a beneficial contribution to cumulative effects as a result of Treatment Alternative #3.

Lightscape Management

Basis for Analysis

According the *NPS Management Policy 2001*,

> [t]he Service will preserve, to the greatest extent possible, the natural lightscapes of parks, which are natural resources and values that exist in the absence of human-caused light. Recognizing the roles that light and dark periods and darkness play in natural resource processes and the evolution of species, the Service will protect natural darkness and other components of the natural lightscape in parks. To prevent the loss of dark conditions and of natural night skies, the Service will seek the cooperation of park visitors, neighbors, and local government agencies to prevent or minimize the intrusion of artificial light into the night scene of the ecosystems of parks.[2]

Intensity Levels

- Negligible – Effects to the current lightscape would be at or below the current level; changes would be so slight that they would not be of any measurable or perceptible consequence to the lightscape of the park.
- Minor – Effects to the current lightscape would be detectable, localized and would be small and of little consequence to the overall lighting levels on the site.
- Moderate – Effects to the current lightscape would be readily detectable and localized. The action would not completely alter the light levels of the park, but would be a marked change to the existing condition.
- Major – Effects to the current lightscape would be obvious with substantial consequences to the lighting levels within the park.

Duration

Short-term – Less than one year
Long-term – More than one year

Treatment Alternative #1: No Action Alternative

No improvements or changes to the lightscape of the park would occur under this alternative. Existing street lamps would continue to provide subtle lighting for pathways and roads and parapet lighting in the Memorial Building would remain unchanged. The impacts would be long-term, negligible, and beneficial.

Cumulative Impacts

Recent efforts to improve the street lamps on the site have included the rewiring and addition of new bulbs to all fixtures. The impact of these improvements has been long-term, minor, and adverse since lighting levels have increased slightly. Because no

[2] US Department of the Interior, NPS, Management Policies 2001 (Washintgon, DC: US Department of the Interior, 2000) Accessed via <http://www.nps.gov/policy/mp/policies.pdf>

changes would occur under the No Action Alternative, no cumulative effects related to this alternative would occur.

Conclusion
The No Action Alternative would have a long-term, negligible and beneficial impact to the lightscape of the park as lighting levels would continue at their current levels. There would be no impairment to park resources or values.

Treatment Alternative #2: Rehabilitation of Memorial Grounds

Only minor improvements and changes to the lightscape of the park would occur under this alternative. Existing street lamps would continue to provide subtle lighting for pathways and roads. Parapet lighting within the Memorial Building would be cleaned and bulbs would be changed. The "downlighting" of the monument would increase slightly having a long-term, minor, adverse effect on the natural light levels at the park.

Cumulative Impacts
Recent efforts to improve the street lamps on the site have included the rewiring and addition of new bulbs to all fixtures. The impact of these improvements has been long-term, minor, and adverse since lighting levels have increased slightly. Improvements to the parapet lighting in the Memorial Building would slightly increase light levels at the park resulting in an overall long-term, minor, adverse impact.

Conclusion
Treatment Alternative #2 would have a long-term, minor and adverse impact to the lightscape of the park as lighting levels would increase slightly. There would be no impairment to park resources or values.

Treatment Alternative #3: Rehabilitation of Memorial Grounds and Removal of Visitor Center

Only minor improvements and changes to the lightscape of the park would occur under this alternative. Existing street lamps would continue to provide subtle lighting for pathways and roads. Parapet lighting within the Memorial Building would be cleaned and bulbs would be changed. The "downlighting" of the monument would increase slightly having a long-term, minor, adverse effect on the natural light levels at the park.

Cumulative Impacts
Recent efforts to improve the street lamps on the site have included the rewiring and addition of new bulbs to all fixtures. The impact of these improvements has been long-term, minor, and adverse since lighting levels have increased slightly. Improvements to the parapet lighting in the Memorial Building would slightly increase light levels at the park resulting in an overall long-term, minor, adverse impact.

Conclusion

Treatment Alternative #3 would have a long-term, minor and adverse impact to the lightscape of the park as lighting levels would increase slightly. There would be no impairment to park resources or values.

Utilities

Basis for Analysis
Analysis of the potential impacts to utilities is based on the available survey information of existing underground and above ground utilities.

Intensity Levels

- Negligible – Utilities would not be affected or changes in utilities would be below or at the level of detection.
- Minor – Changes in utilities would be detectable, although the changes would be slight.
- Moderate – Changes in utilities would be readily apparent but the overall utility system within the site would not be affected.
- Major – Changes in utilities would be readily apparent. The overall quality of the utility system within the site would be affected.

Duration
Short-term – Less than one year
Long-term – More than one year

Treatment Alternative #1: No Action Alternative

No improvements to utilities would occur under this alternative.

Cumulative Impacts
There have not been recent upgrades to the utilities on the site (except for the street lamp improvements mentioned above).

Conclusion
The No Action Alternative would have a short-term, minor and adverse impact on site utilities. There would be no impairment to park resources or values.

Treatment Alternative #2: Rehabilitation of Memorial Grounds

No improvements to utilities would occur under this alternative. However, any construction activities could potentially impact underground utilities including the historic irrigation system. Construction equipment would need to be routed around areas with many underground utilities such as the south corner of the Memorial Building. So long as this area is off-limits to storage of heavy materials or movement through by construction equipment, the impact on utilities would be short-term, minor, and adverse.

Cumulative Impacts
There have not been recent upgrades to the utilities on the site (except for the street lamp improvements mentioned above.) Construction projects on the site would have a short-term, minor and adverse impact on utilities.

Conclusion
Treatment Alternative #2 would have a short-term, minor and adverse impact on site utilities. There would be no impairment to park resources or values.

Treatment Alternative #3: Rehabilitation of Memorial Grounds and Removal of Visitor Center

No improvements to utilities would occur within the Historic Resource Management and Interpretation Zone under this alternative. However, construction activities could potentially impact underground utilities including the historic irrigation system. Construction equipment would need to be routed around areas with many underground utilities such as the south corner of the Memorial Building. So long as this area is off-limits to storage of heavy materials or movement through by construction equipment, the impact utilities within the Historic Resource Management and Interpretation Zone would be short-term, minor, and adverse. If the Visitor Center were removed from the site, utilities associated with the structure would also be demolished. The impact of removal of these utilities would be short-term, minor, and adverse.

Cumulative Impacts
There have not been recent upgrades to the utilities on the site (except for the street lamp improvements mentioned above.) So long as they are conducted properly, construction projects on the site including removal of utilities associated with the Visitor Center would have a short-term, minor and adverse impact on utilities.

Conclusion
Treatment Alternative #3 would have a short-term, minor and adverse impact on site utilities. There would be no impairment to park resources or values.

Conclusion

The following table includes a summary of the environmental consequences described in the narrative above.

TABLE 3 IMPACT COMPARISON			
Resource Area	**Treatment Alternative 1 No Action Alternative**	**Treatment Alternative 2**	**Treatment Alternative 3**
Cultural Resources	• Long-term, minor, adverse cumulative impacts. • Long-term, minor adverse impacts.	• Long-term, moderate, beneficial cumulative impacts. • Long-term, moderate, beneficial impacts.	• Long-term, moderate, beneficial cumulative impacts. • Long-term, moderate, beneficial impacts.
Archeological Resources	• Long-term, negligible, beneficial cumulative impacts. • Long-term, negligible, beneficial impacts.	• Long-term, negligible, beneficial cumulative impacts. • Long-term, negligible, beneficial impacts.	• Long-term, negligible, beneficial cumulative impacts. • Long-term, moderate, beneficial impacts.
Visitor Use and Experience	• Long-term, moderate, adverse cumulative impacts. • Long-term, moderate, adverse impacts.	• Long-term, moderate, beneficial cumulative impacts. • Long-term, moderate, beneficial impacts.	• Long-term, minor to moderate, adverse cumulative impacts. • Long-term, minor to moderate, adverse impact.
Lightscape Management	• Long-term, minor, adverse cumulative impact. • Long-term, negligible, and beneficial impact.	• Long-term, minor, adverse cumulative impact. • Long-term, minor, adverse impact.	• Long-term, minor, adverse cumulative impact. • Long-term minor, adverse impact.
Utilities	• No cumulative impact. • No impact.	• Short-term, minor, adverse cumulative impact. • Short-term, minor, adverse impact.	• Short-term, minor, adverse cumulative impact. • Short-term, minor, adverse impact.

Chapter 7: Recommended Treatment (Preferred Alternative)

Recommended Treatment (Alternative #2): Rehabilitation of Memorial Grounds

The recommended treatment for the GERO site is Treatment Alternative #2: Rehabilitation of Memorial Grounds. The environmentally preferred alternative is determined by applying the criteria suggested in the National Environmental Policy Act of 1969 (NEPA, 42 U.S.C.A. § 4321 et seq., Public Law 91- 190 (1970)), which is guided by the Council on Environmental Quality (CEQ). The CEQ provides direction that "[the] environmentally preferable [alternative] is the alternative that will promote the national environmental policy as expressed in NEPA's Section 101:

- Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations.
- Ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings.
- Attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences.
- Preserve important historic, cultural, and natural aspects of our heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice.
- Achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities.
- Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources (40 CFR § 1500 et seq.).

The purpose of this recommended treatment is to rehabilitate the elements at GERO which were constructed during the Memorial Era period of significance. The overall treatment philosophy would be rehabilitation, with preservation and new construction applied to selected elements. Critical needs of the site such as the repair of the Floodwall and rehabilitation of the Memorial Terrace would be resolved in this alternative and additional rehabilitation needs would be addressed as well.

This alternative includes three proposed management zones including: 1) Historic Resource Management and Interpretation Zone; 2) Natural Resource Management Zone and 3) Park Operations and Visitor Orientation Zone. This chapter includes specific treatment recommendations for cultural landscape resources on the site.

Historic Resource Management and Interpretation Zone Treatment

The Historic Resource Management and Interpretation Zone includes the area planned and implemented according to the original Parsons site plan. This includes the Memorial Building, Floodwall, Lincoln Memorial Bridge Approach, South and North Terraces, the Plaza, Mall, Barnett Street Sidewalk, and various greenspaces on the north side of the

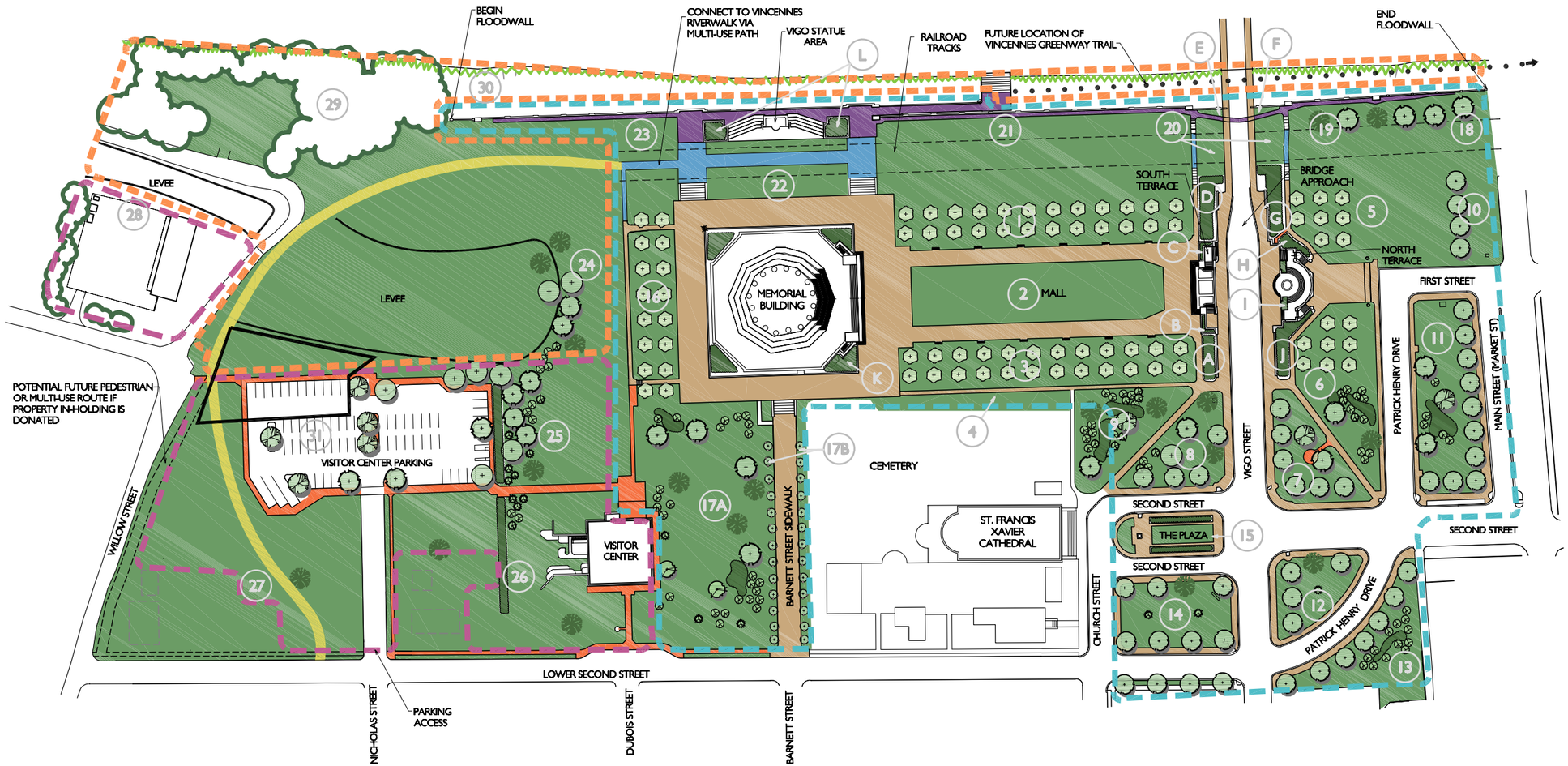
park. Quantities of plant materials and recommendation locations are represented in *Illustration S.*

It should be noted that many of the recommendations for planting areas increase the number of plants on the site. These plants will need maintenance. Recommendations outlined in the Park Operations and Visitor Orientation Zone section are intended to alleviate the amount of maintenance time required by the plantings currently in this area. However, the increased plant materials in the Historic Resource Management and Interpretation Zone may increase the overall maintenance needs of the park. Additional maintenance staff may be required to properly maintain the newly implemented landscape and all maintenance staff should receive training in historic landscape management practices.

Per Indiana Code 14-21-1-26.5, a cemetery development plan is required for the disturbance of the ground within 100 feet of a burial ground for the purpose of erecting, altering, or repairing any structure and must be approved by the Department of Natural Resources. Before any land disturbing activities commence within 100 feet of the cemetery adjacent to St. Francis Xavier Cathedral, a cemetery development plan will be required for the site. In his 2002 *Archeological Overview and Assessment of GERO*, Robert Nickel also makes further archeological recommendations for the site. He states, "The area adjacent to the Old Cathedral is thought to have been used as a cemetery at least from the mid-1700s through the mid-1800s. In his analysis of the Clark Memorial, Bearss (1970:106) cites a local newspaper account of the discovery of a human skull and other bones at a depth of 4 ft (120 cm) in a gravel matrix. The discovery was made by a contractor installing the irrigation system in the 1930s and was found in an area east-northeast of the Old Cathedral Complex."[1] Nickel goes on to recommend in his report to recommend,

> "a geophysical assessment of the locations, amounts, and types of fill applied over portions of the historic grade and the extent to which the historic grade has been reduced or removed in other locations. Previously unknown graves might be detected as well. If the officials responsible for the Old Cathedral Complex agree, a geophysical survey to include a search for unmarked graves would begin within the present cemetery…this information is essential for the interpretation of data gathered from areas outside the fenced cemetery that possibly contain unknown graves…the other goal of the geophysical work should be to map the fill used to create the modern surface around the Clark Memorial, the Mall, and the approach to the Lincoln Memorial Bridge. It is likely that although ground-penetrating radar and soil resistivity will prove useful for mapping the stratigraphy of the fill soil, memorial developed features (e.g. streets, utilities), but it is not realistic to expect to detect remains of the eighteenth-century posts or Fort Knox III. Rather, the objective is to develop a basis for evaluating the potential impact of park

[1] Nickel, 8.



LEGEND

- NEW EXPOSED AGG. PAVEMENT
- EXPOSED AGG. SIDEWALKS ASSOC. WITH FLOODWALL PROJECT
- REHABILITATED EXPOSED AGG. SIDEWALKS
- BROOM-FINISH CONCRETE SIDEWALKS
- NEW MULTI-USE TRAIL CONNECTOR
- CONSTRUCTION MATERIALS STAGING AREA
- RIVERINE VEGETATION AND STABILIZATION
- EXISTING TREES
- PROPOSED SHADE TREES
- PROPOSED FLOWERING TREES
- PROPOSED SHRUB / PERENNIAL BED

MANAGEMENT ZONE

- HISTORIC RESOURCE MANAGEMENT & INTERPRETIVE ZONE
- NATURAL RESOURCE MANAGEMENT ZONE
- PARK OPERATIONS & VISITOR ORIENTATION ZONE

PLEASE REFER TO CLR / EA TEXT FOR SPECIFIC SPECIES PLANTING RECOMMENDATIONS

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> maintenance and development projects and to define areas that might be suitable for future archeological research efforts."[2]

The following are specific recommendations for each area (planting areas are noted utilizing the numbering system found on the original Parsons plan):

Memorial Terrace Rehabilitation
The Memorial Terrace would be rehabilitated in this scheme utilizing the methodology outlined in *NPS Task Order Number: T200005A016, February 2005*[3] to eliminate moisture penetration into the base of the George Rogers Clark Memorial. The Memorial Terrace Report reviews and comments on previous design documents for replacing this area of the structure and recommends some modifications to these designs. The amended recommendations include removal of all existing granite steps, stairs, granite parapet and the concrete on the terrace level. Substructure would be repaired as required and a new waterproof membrane would then be installed. Deck drainage improvements would be implemented to "insure optimum performance from the new terrace waterproofing" and additional deck drains would be provided. All granite steps, stairs and parapet stones would be reinstalled over a new setting bed. Granite would be cleaned using non-abrasive methods. It is not practical to replace the entire terrace surface with a reconstruction of the original egg-sized exposed aggregate concrete surface due to safety and snow removal/maintenance concerns. Therefore a rehabilitation of the surface is proposed. The majority of the terrace surface should be paved with an exposed aggregate surface similar in size to the original "hens' egg" sized aggregate surface. The area of high traffic flow near the entry doors should be finished with a typical broom finish concrete surface. The exposed aggregate surface can be slightly smaller than the original design hens' egg size and the exposure of the aggregate can be limited to just the tops of the stones to create a smoother surface for snow removal. Other portions of the Memorial Building would be preserved and rehabilitated as necessary in the future.

Memorial Building Foundation Plantings (Planting Area K):
This area includes the raised planters on the four corners and sides of the Memorial Building. The plantings in this area are foundation plantings which have been replaced since the initial implementation of the landscape at GERO. The original planting plan for this area was not located for this report; however, historic photographs reveal that this area contained yews around the perimeter of the planters with pyracantha and junipers in the interior of the beds (see Figure 7.1). The yew only configuration found at the site today does not have the differentiation in texture originally intended for this area. It is anticipated that the yews in this area will be damaged during the rehabilitation of the Memorial Terrace. Construction documents for this area including a formal planting plan should be developed concurrent with construction documents for the Memorial Terrace project. Once construction is complete, these plantings should be restored to match the original design intent. Soil in this area should be amended and a mulch layer should be applied to all planting beds. Irrigation heads in this area will likely be damaged during the

[2] *Ibid*., 12.
[3] RATIO, *Terrace*.

project. A design for the rehabilitation of these irrigation lines and spray heads should be included in the construction documents for the Memorial Terrace project. The species proposed for this area are:

Cretaegus pyracantus [Pyracantha coccinea]	pyracantha
Juniperus [chinensis] Pfitzer	Pfitzer juniper
Taxus spp.	yew

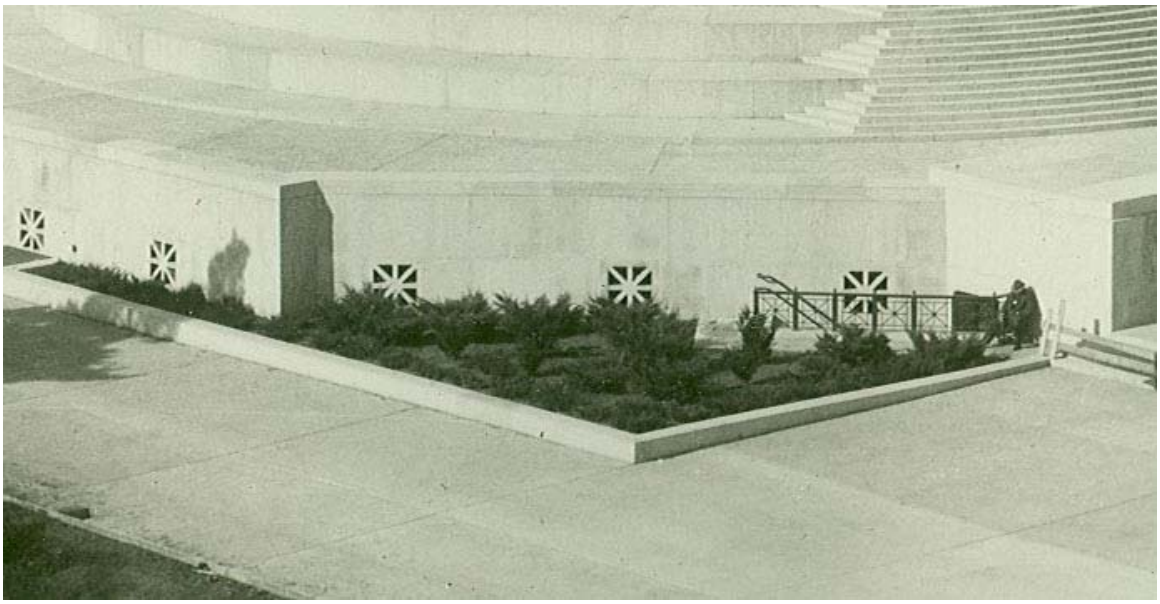

Figure 7.1: Enlargement of planting bed adjacent to Memorial Building c. 1934, Courtesy of Lewis Library, Vincennes University.

Vigo Statue and Surrounding Area (Planting Area L)

The Vigo Statue should be preserved in its current location. The planters adjacent to the statue currently contain yew masses. According to the 1995 CLR the original planting plan indicated that both yews and junipers were originally planted in this area. Upon decline, the yews in this area should be replaced with both yews and junipers per the original plan. Soil in this planting area should be amended and a mulch layer should be applied to all planting beds. Should the original planting plan for this area be located, construction documents showing planting locations should be developed for the planter. If the original plan cannot be located, an arrangement similar to the Memorial Building (Area K) plantings (without pyracantha) would be appropriate. The species for this area should include:

Juniperus [chinensis] Pfitzer	Pfitzer juniper
Taxus spp.	yew

Wabash River Floodwall Rehabilitation/Repair

The Floodwall would be repaired through replacement in-kind utilizing the methodology outlined in *NPS Task Order Number: T200005A026, May 2005*.[4] This report outlines compatible treatment and replacement of portions of the wall improving the appearance of the top of the wall while retaining the historic form of the structure. Recommendations include removal and reconstruction of the parapet wall and cap "to match the original configuration using epoxy coated steel reinforcement." Spalling areas of concrete would be removed from the walls and patched. Any hollow or deteriorated areas would be removed and patched on the Floodwall. Large cracks and joints would be properly cleaned and patched or sealed. The entire structure would be chemically cleaned to provide a uniform appearance per historic conditions. Subsurface drainage would be addressed in this scheme with replacement in-kind of historic walkway materials where necessary. [5]

Linden Allée in Mall (Planting Areas 1, 2, and 3)
Lawns in the Mall should be refurbished. Many portions are declining due to a lack of sun and/or runoff problems. Bermuda grass would be an appropriate species to plant in these areas. This grass will need to be seeded and maintained on a regular basis including mowing, weeding, and fertilization. As the linden trees (detailed below) begin to shade out grass in the side panels of the Mall, the mulch rings around the linden trees should be expanded to prevent areas of exposed soil from forming. Any exposed soil on the site has the potential to erode and undermine sidewalks. Drainage for all soils in the Mall area should be improved with soil testing and appropriate soil conditioning which may include such actions as aeration and the addition of compost.

The planned vista across the Mall should be restored, and the east and west side panels of the Mall should be rehabilitated to accurately reflect the initial implementation of the landscape on the grounds. The spacing called out on the Parsons planting plan is fairly tight for a medium-sized shade tree (approximately fifteen feet on center) and very few of the lindens planted on the site in either the initial tree planting or in the subsequent restoration have had a successful lifespan. Soils in the Mall are fill dirt imported during initial construction. There is no knowledge of soils testing having been performed in this area. It is recommended that a professional soil scientist test the soil in this area and make recommendations for amending or replacing the soil to support the linden trees. Local horticultural experts should also be consulted in selecting an appropriate linden hybrid species for the site. Wind is often cited as the reason for the lack of success of lindens in the Mall. Trees should be staked with in-ground anchors to assure wind resistance during establishment.

Soils should be conditioned in this area to support tree life. However, specific care should be taken to evaluate the depth of fill soils in this area since there are potentially archeological resources below the original grade on the site. Soil conditioning per a soil scientists recommendations to support trees and lawn should only occur to the level of original fill to eliminate the possibility of disturbing sensitive areas. An appropriate

[4] RATIO, *Floodwall*.
[5] *Ibid*., 7.

methodology for remediation of the soil in this area is to apply organic matter to the soil at a two inch depth and then till organic matter into the subsoil to twelve inches. An under drainage system should be installed under the tree pit area. A four inch perforated pipe in a gravel trench with soil separator would tie into the storm water system at the south end of the Memorial Building. Sleeving for pipes should be installed under pavement. Historic irrigation lines and heads in this area should be carefully removed and restored during any soil remediation and under drainage installation processes. Upgrades to deteriorated portions of the system should be conducted as necessary.

Laurelhurst Crimean linden (*Tilia x euchlora 'Laurelhurst'*) or Greenspire linden (*Tilia cordata 'Greenspire'*) are recommended for planting in the Mall area thirty feet on center. These types of lindens are successful in the USDA plant hardiness zone in which Vincennes is located. Limited park maintenance staff can not provide the level of pruning required to achieve the historic pleached[6] appearance shown in the Parsons plan and model, thus, tight spacing is not necessary (see Figure 7.2).

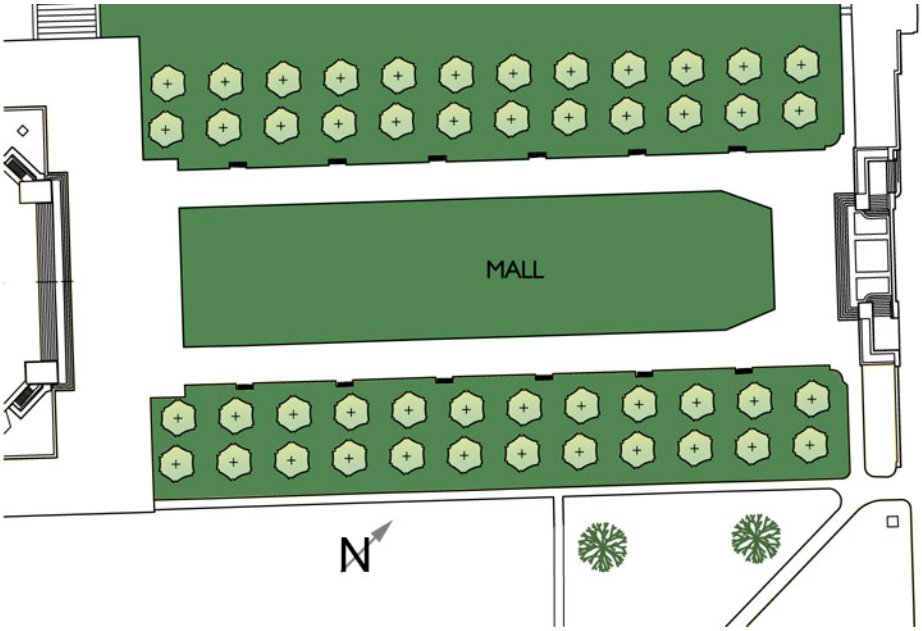

Figure 7.2: Rendering of Mall indicating planting and spacing of lindens, Scale 1" = 100', The Jaeger Company, 2005.

Planting Area 4

The sweet gum trees in this area should be maintained but not replaced upon decline or death. The yew hedge in this location should be maintained according to pruning practices outlined on page 272 of the 1995 *Cultural Landscape Report* by Christina

[6] The model produced of the site (see Figure 2.6) shows the linden trees "pleached" or entwined and heavily pruned. The rigorous maintenance procedures required by such pruning is not practicable on the site today. Other trees are shown in the model as maintaining their natural form.

Jones. This hedge is not currently on NPS property, but is maintained by NPS under an agreement with Saint Francis Xavier Catholic Church.

Planting Area 16
This planting area was originally envisioned on the Parsons plan to be a tight planting of linden trees much like the allée in the Mall area. The design intent is to frame the back side of the Memorial Building with a tightly spaced "wall" of small green trees. Like the Mall area, it is recommended that Laurelhurst Crimean linden (*Tilia x euchlora 'Laurelhurst'*) or Greenspire linden (*Tilia cordata 'Greenspire'*) be planted thirty feet on center in this area. Soils should be tested and conditioned following the methololgy outlined above. Underdrainage should also be installed under all plantings in this area. Grass should be installed, but as it is shaded out by the growing lindens, the mulch rings for the trees should be increased to prevent bare soil from eroding.

North and South Terraces
The North and South Terraces of the Bridge Approach are in need of repair. The degradation of reinforcement in these structures has caused rust stains on the granite facing. The granite panels on these walls should be removed and protected, existing steel fabric should be replaced with epoxy coated or stainless steel reinforcement, and the granite panels should be cleaned using non-abrasive methods and reset on the walls. Great care should be taken when restoring areas of the wall with inscription or engraving. The storeroom below the North Terrace experiences leakage similar to the leakage present in the Memorial Terrace. While there is no mechanical equipment in this area, the leaks indicate a structural problem and should be addressed in the rehabilitation effort.

North and South Terrace Planters (Planting Areas A, B, C, D, G, H, I, J)
Landscaping in the planters on the North and South Terraces should be rehabilitated to reflect the original Parsons planting plan (see *Illustration E*). Plantings in their current configuration in these areas are evergreen; however, they do not reflect the full Parsons palette. The following plants made up the original planting list (plant symbols are denoted in parentheses):

(JP) Juniperus [chinensis] Pfitzer	Pfitzer juniper
(J) Juniperus depressa [horizontalis] Plumosa	Creeping juniper 'Plumosa'
(JS) Juniperus [chinensis] 'Sargenti'	Sargent juniper
(I) Ilex [crenata] 'Microphylla'	box-leaved holly
(TC) Taxus cuspidata (Mat type)	Japanese yew
(TCC) Taxus cuspidata 'Capitata'	'Capitata' Japanese yew
(CP) Cretaegus pyracantus [sic][Pyracantha coccinea]	pyracantha
(LL) Ligustrum lucidum	glossy privet

The locations of these plants correspond to the enlarged planting plan by Parsons. These plantings should be implemented and soils amended with a mulch layer applied to all planting beds. Enlargements of these planting areas show planting locations (see Figure 7.3 – Figure 7.10).

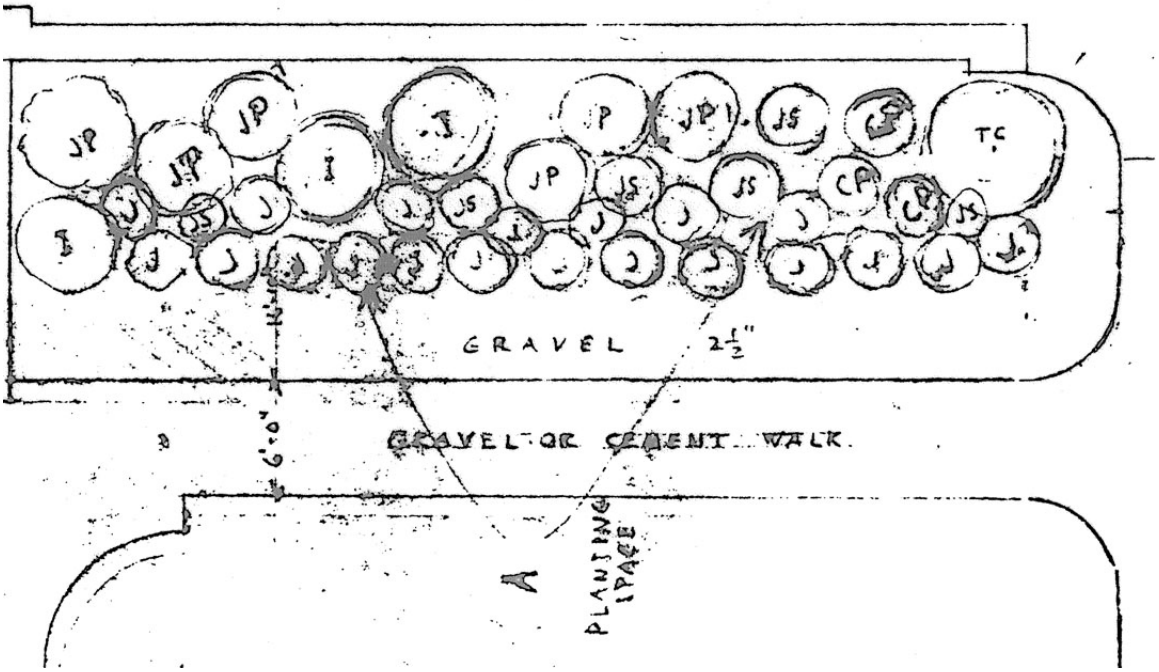

Figure 7.3: Planter A, Enlargement from Parsons' Plan, courtesy of GERO drawing collection.

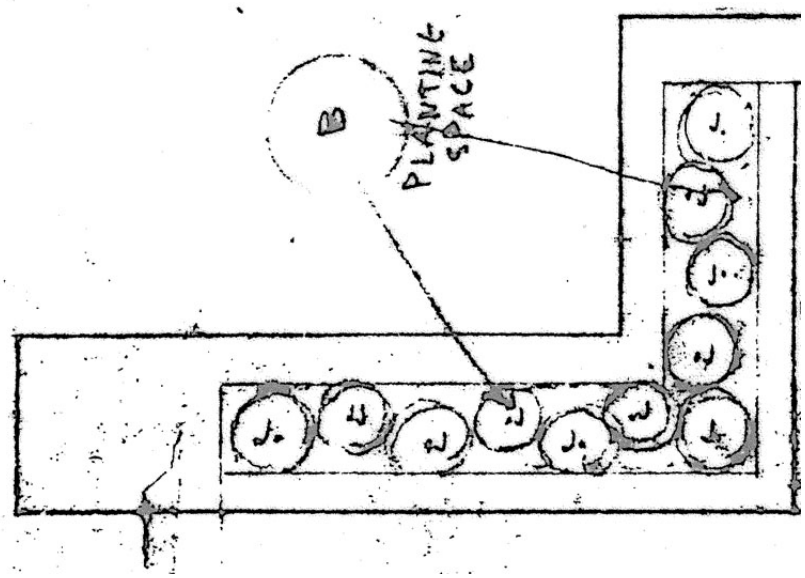

Figure 7.4: Planter B, Enlargement from Parsons' Plan, courtesy of GERO drawing collection.

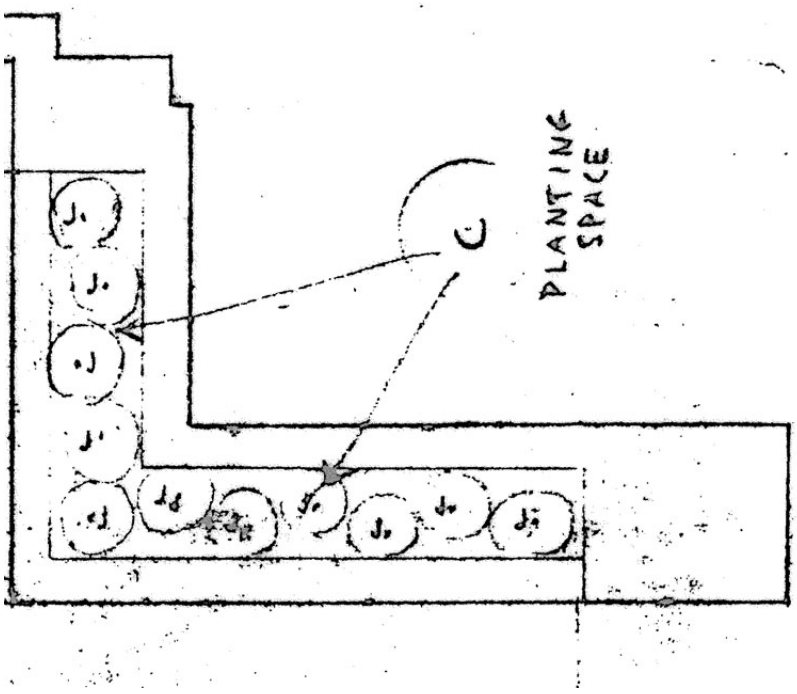

Figure 7.5: Planter C, Enlargement from Parsons' Plan, courtesy of GERO drawing collection.

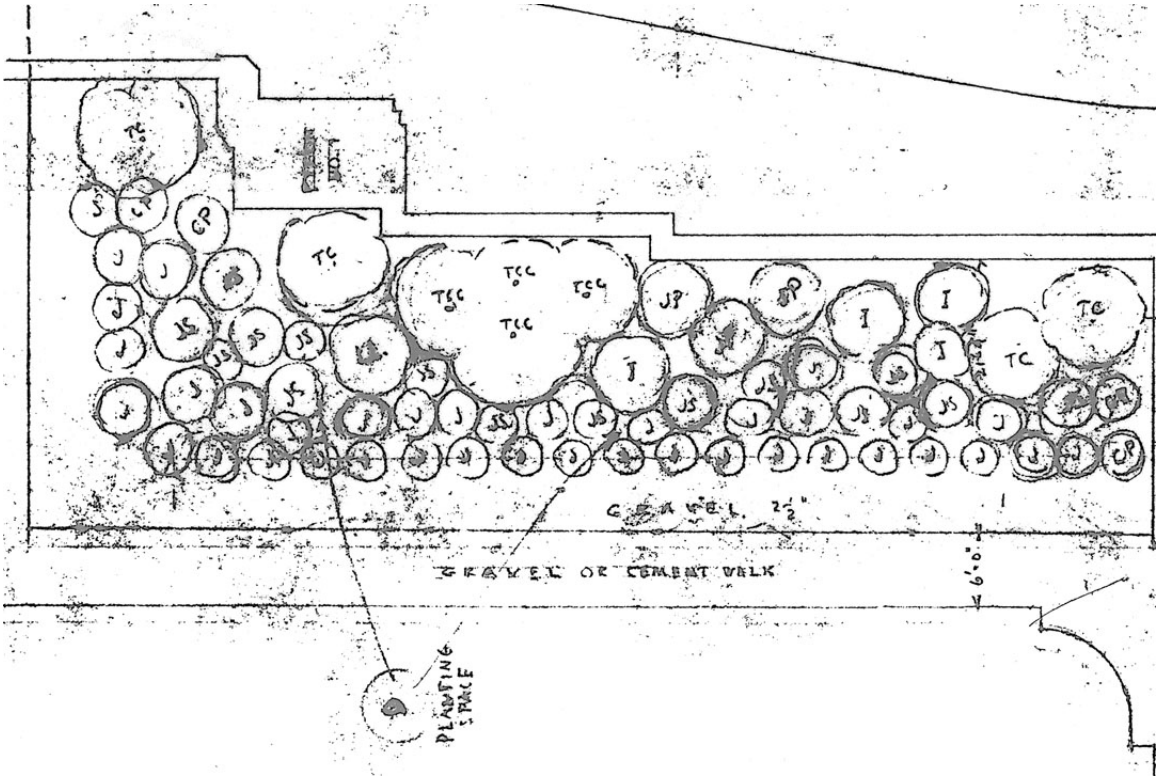

Figure 7.6: Planter D, Enlargement from Parsons' Plan, courtesy of GERO drawing collection.

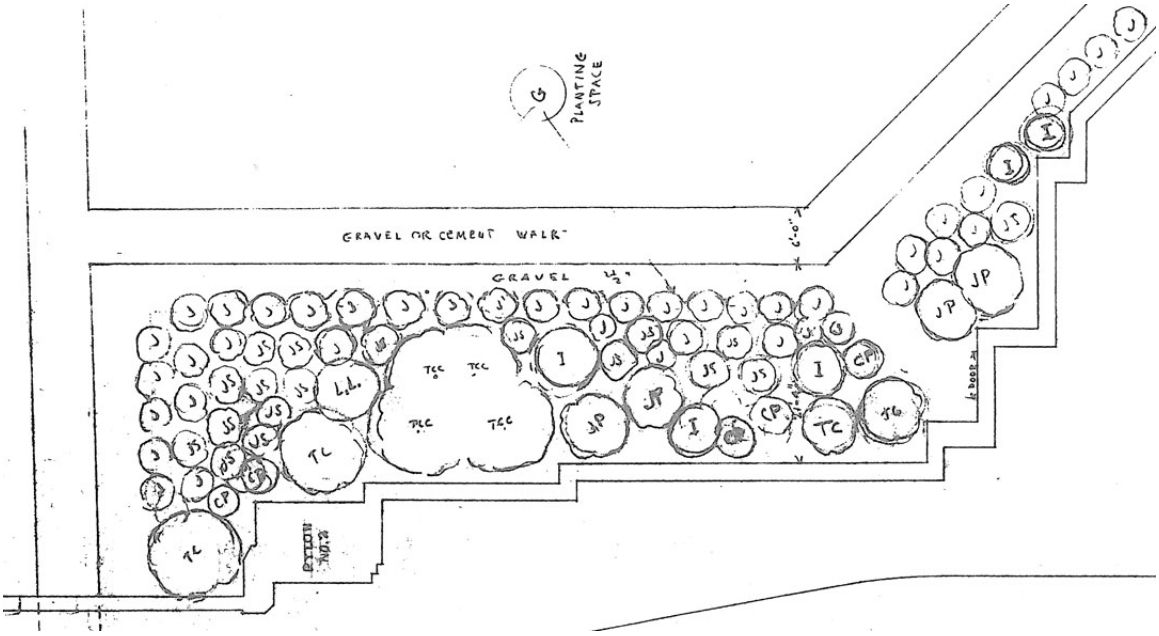

Figure 7.7: Planter G, Enlargement from Parsons' Plan, courtesy of GERO drawing collection.

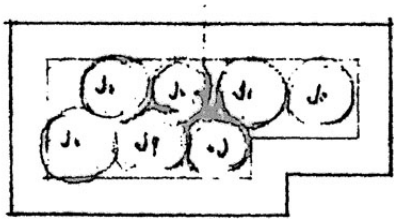

Figure 7.8: Planter H, Enlargement from Parsons' Plan, courtesy of GERO drawing collection.

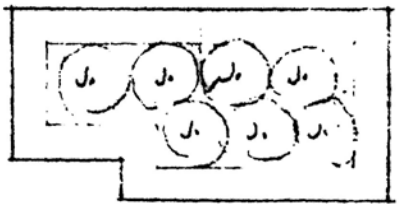

Figure 7.9: Planter I, Enlargement from Parsons' Plan, courtesy of GERO drawing collection.

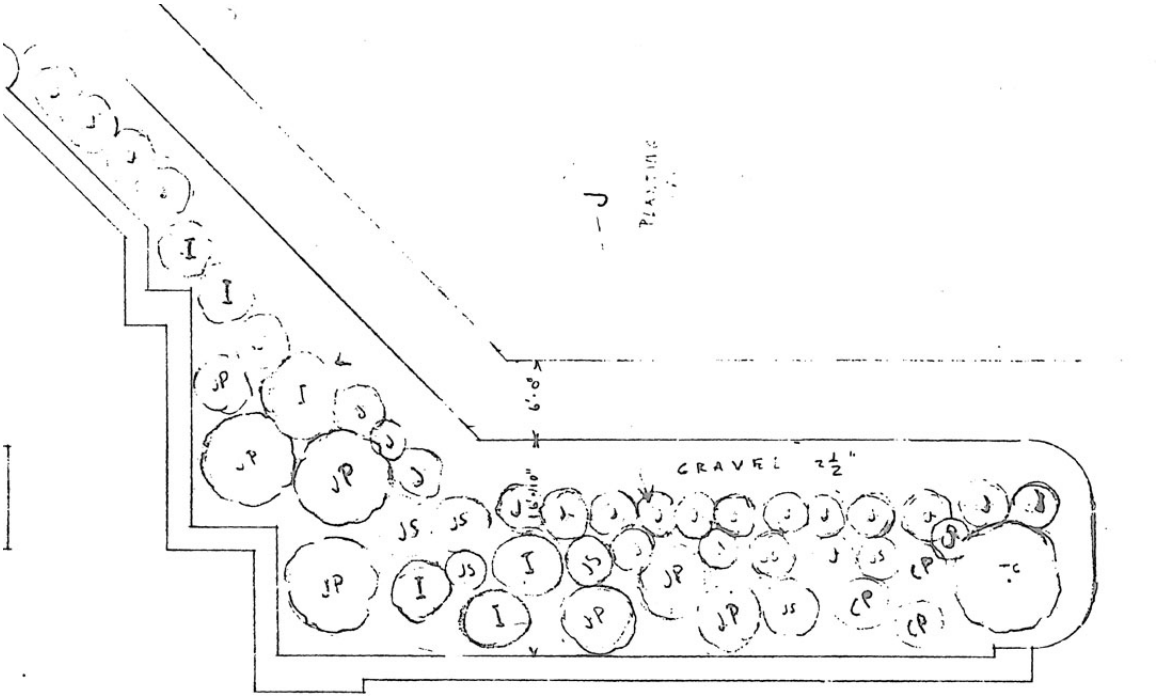

Figure 7.10: Planter J, Enlargement from Parsons' Plan, courtesy of GERO drawing collection.

Planting Areas 5, 6, and 7 (North and Northeast of the North Terrace)

Lawn repair should be conducted in areas 5, 6, and 7. The plantings in this area should be rehabilitated utilizing the original Parsons planting scheme. Vegetation includes two pleached rows of American lindens flanking the walkway leading to the North Terrace. These trees should be planted at a more generous spacing than the original planting plan since current management levels do not allow for the pleaching originally envisioned in the design. Eight trees would fill the footprint for the bosquette originally laid out by Parsons. Area 6 includes the preservation of an existing red oak dating from the initial implementation of the Parsons plan. One additional red oak would be added to this area as well as a grouping of redbuds and white dogwood trees. These trees would surround a small shrub bed (see Figure 7.11) .

Figure 7.11: 1934 photo showing newly installed shrub masses and linden bosquette in Area 6, courtesy of Bass Photo Co. Collection, Indiana Historical Society, (Negative No. P0130-P-Box22-Folder8-229722F).

Planting Areas 10 and 11 (greenspace between Patrick Henry Drive and Main Street and greenspace northwest of First Street)

Parsons original layout indicates that Area 10 should be its own greenspace defined by the Boulevard to the north, First Street to the South, Patrick Henry Drive to the west and Main Street to the East. Since the Boulevard was never realized, this space lacks definition. The addition of four sugar maples in this area would provide such definition. Area 11 serves as the first interface between commercial buildings and the Memorial Grounds, thus this area should be rehabilitated to reflect the original planting scheme. Trees currently in this area should be supplemented with two red oaks, a tulip poplar and a border of sugar maples. Under plantings include white dogwoods, redbuds and a shrub bed.

Planting Areas 12, 13 and 14 (greenspaces southeast of Second Street)

These greenspaces act as the entryway to the Memorial Grounds and Lincoln Memorial Bridge from the southeast. They also define the boundary of the view along the axis which terminates at the Gibault Statue and the view of the Lincoln Memorial Bridge. Lawns in these areas should be renovated and border tree plantings of sugar maples should be rehabilitated. This will include the planting of twenty two new trees. Douglas firs should be installed in the middle of areas 12 and 14 (3 trees total). The existing Douglas fir should be preserved and replaced once it begins to decline. The shrub and white dogwood mass in the southeast corner of Area 13 should be rehabilitated. This

would include the installation of thirteen white dogwoods and a large shrub mass of evergreen shrubs. The boundary hedge in this area should be maintained and replaced in-kind upon decline of the plant material. These shrubs should be chosen from the following planting palette (developed from Parsons' plan):

Juniperus [chinensis] Pfitzer	Pfitzer juniper
Taxus spp.	yew
Ilex [crenata] 'Microphylla'	box-leaved holly

Portions of Area 13 fall outside of the GERO park boundary. Maintenance of the hedge in this area will have to be coordinated with the adjacent property owner.

The Plaza (Planting Area 15)

The Plaza traditionally had a central lawn panel lined with a shrub border in the panels adjacent to Second Street. The lawn in the center of the Plaza should be renovated. The existing juniper mass in this area should be maintained in its current condition and replaced upon decline. Shrub masses flanking either side of the middle lawn panel should be rehabilitated with *Ilex crenata 'Microphylla'* as specified in the original Parsons plan. These shrubs should be planted at five feet on center (see Figure 7.12).

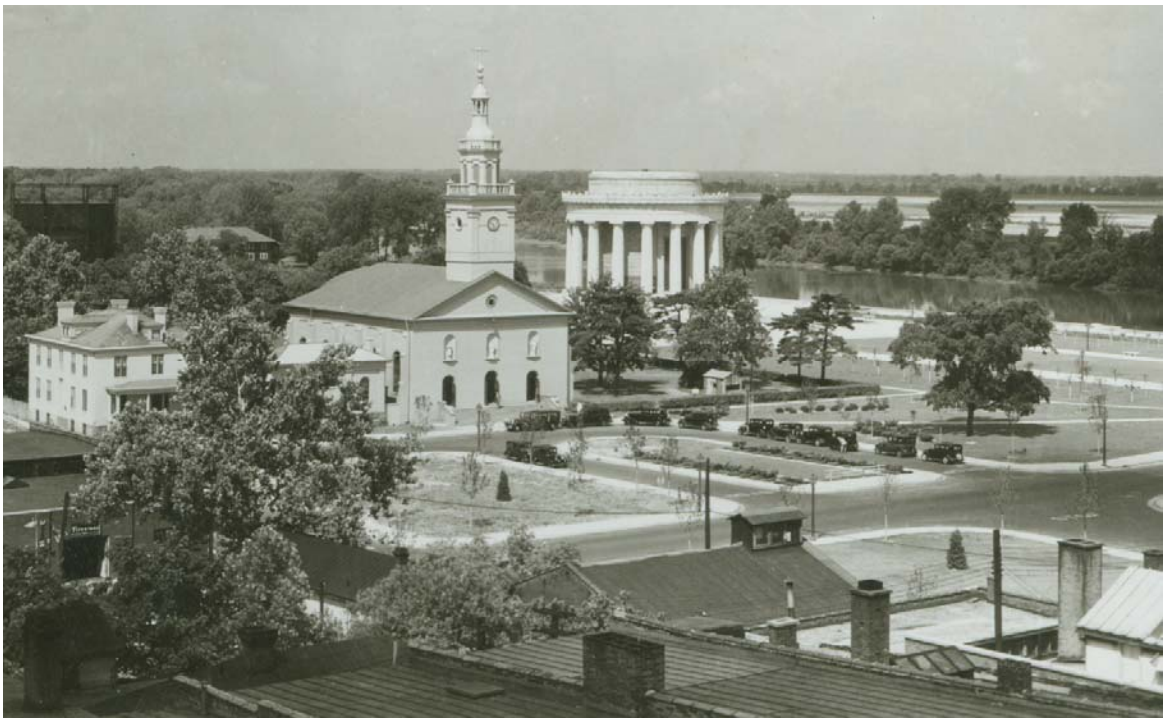

Figure 7.12: Birdseye view of Area 14 (note Douglass fir in center and sugar maple border) and the Plaza (note shrub border), courtesy of Richard Day, personal collection.

Planting Areas 8 and 9 (north of St. Francis Xavier Cathedral)

These planting areas contain some trees originally implemented during the initial installation of plant materials on the site. These trees should be preserved. Additional trees per Parsons' plan should be implemented in these areas including two red oaks and

one tulip poplar. A sweet gum was present in this area during the initial installation. This tree should be installed with the rehabilitation. Additional plantings in this area include six redbuds, fourteen white dogwoods and shrub masses. The shrub masses should be planted in a configuration matching the arrangement seen in Figure 7.13. Shrub species will include Pfitzer juniper (*Juniperus [chinensis] Pfitzer)* and yew *(Taxus spp.)*

All of the plantings in Area 9 do not fall within the GERO park boundary. Plantings outside of the park boundary will have to be coordinated with St. Francis Xavier Catholic Church.

Figure 7.13: 1934 view to Lincoln Memorial Bridge from the intersection of two walkways north of Saint Francis Xavier Cathedral, courtesy of Old Cathedral Library and Museum, Saint Francis Xavier Church.

Barnett Street Sidewalk (Planting Area 17B)

The allée along the Barnett Street sidewalk should be rehabilitated. The redbuds in this area should be removed and twenty six crabapples should be planted at twenty feet on center. Appropriate disease-resistant hybrids of crabapples appropriate for this hardiness zone include 'Strawberry Parfait' crabapples (*Malus x* 'Strawberry Parfait') or *Malus hupehensis* 'Cornell'. Both of these varieties meet the design criteria (form and color) of the historic variety originally specified on the Parsons plan, plus these varieties are highly

resistant to many of the diseases which plague crabapple varieties.[7] The historic variety is not recommended because it is not disease resistant.

Planting Area 17A (northeast of Visitor Center)
This area contains several trees dating from the Memorial Era period of significance. This includes two American lindens and one red oak. Rehabilitation of this area would include refurbishing of the lawn and installation of trees as shown on the original Parsons plan for the Memorial Grounds (see Figure 7.14). The rehabilitation of this area will include the planting of four red oaks, two American lindens, three Douglas fir, and several masses of white dogwoods with shrub beds. The two bald cypress trees in this planting area were not part of the original planting scheme for the Memorial Grounds. However, they are specimen trees and are not located in the central part of the Memorial Grounds. Therefore, they should be removed and not replaced upon decline, but it is not necessary to remove them from the site immediately. The hawthorns in this area conflict with the locations of the proposed plantings. These trees should be removed upon commencement of the rehabilitation of this area.

[7] Note: Staff at GERO have expressed a desire to plant a fruitless variety of crabapple at the site due to maintenance concerns. A fruitless variety has not been located which meets the historic design criteria (pale pink flowering, 20-25' mature height, with vase-shaped form). However, crabapples are highly propagated and new varieties are often available. If a variety becomes available which meets the historic design criteria but does not fruit, substitution with this variety is acceptable.

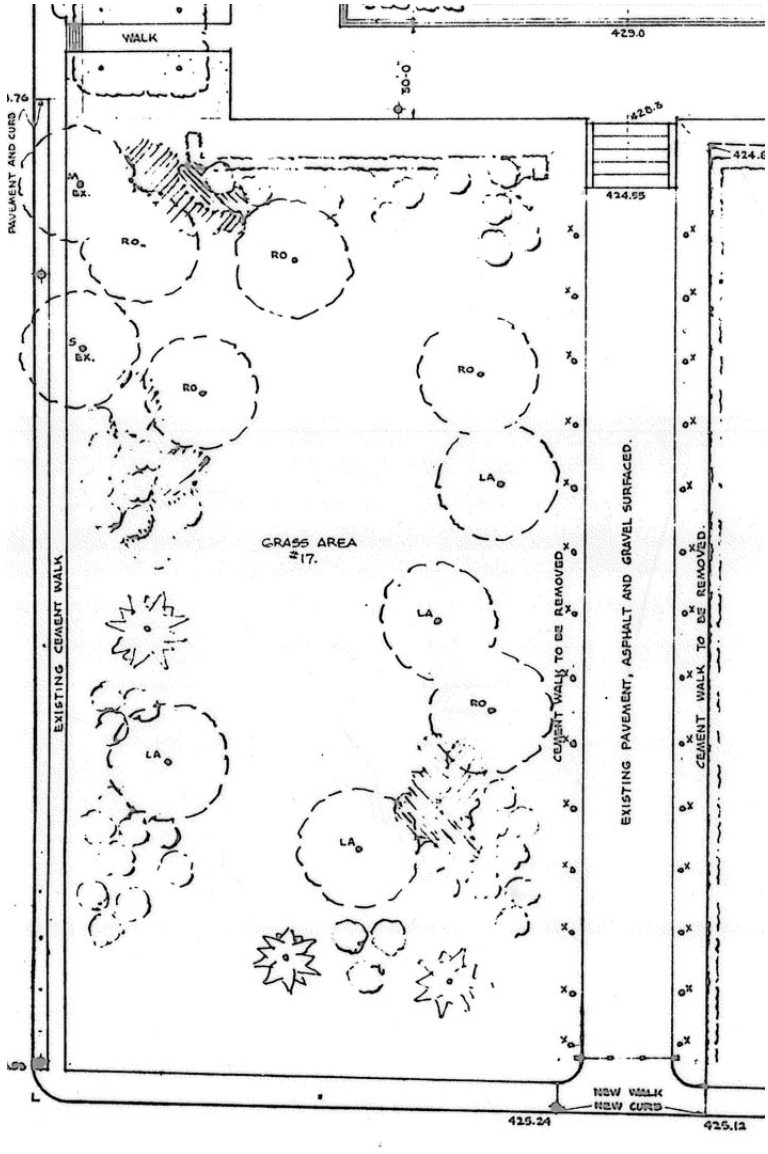

Figure 7.14: Planting Area 17, Enlargement from Parsons' Plan, courtesy of GERO drawing collection.

Floodwall Planting (Planting Areas 18 and 19)

Parsons' plan originally called for eleven red oaks to be planted along the Floodwall on the northeast end of the site. Some of this area falls outside of the current park boundary. Therefore plantings are only recommended in areas inside the park boundary. This includes the planting of four red oaks and the preservation of the two existing red oaks. The park should continue to coordinate appropriate landscape treatments with adjacent landowners.

Planting Areas E and F

Detailed plans for these areas under the Lincoln Memorial Bridge could not be located in the course of the research for this report. Photos of this area were also not located. However, it can be inferred from the lettering system outlined on the Parsons plan that

these areas were intended as shrub planting beds. (The areas demarcated by letters were all shrub planting areas). Therefore it is recommended that yews and Pfitzer junipers be planted in this area. These shrubs should be planted at five feet on center in masses to fill the planting areas. These plantings should be coordinated with any plans for the future greenway route in this area.

Lawn Only Areas (Areas 20, 21, 22, 23)
Lawn in these areas should be refurbished. Many portions are declining due to a lack of sun and/or runoff problems. Bermuda grass would be an appropriate species to plant in these areas. This grass will need to be seeded and maintained on a regular basis including mowing, weeding, and fertilization. Another appropriate grass choice is Zoysia. A Zoysia variety which is hardy in cold weather conditions is recommended for the GERO site. One such variety is Amazoy®. Zoysia grasses must be plugged or sodded, but it needs far less watering than traditional grass types. Another advantage of this species is its low profile which requires less mowing than other lawn grasses. Soil amendments and fertilization of grassed areas should be in keeping with NPS management practices.

Circulation
Circulation improvements in this zone would include the replacement of all sidewalks with materials matching the historic condition. Granite steps should be preserved in all locations. In cases where the granite must be removed for concrete replacement, it should be protected from damage from construction. Construction materials should be located to match historic aggregate size and coloration and be ¾ inch size. Exposure of aggregate during construction should occur by a skilled contractor who understands the proper installation methodology. The remaining original portion of aggregate under the Gibault Statue in the Plaza should be retained and protected from damage and deterioration as it reflects the only known existing section of the original sidewalk paving.

Modern walkway locations within this zone should be distinguished from historic locations. Brushed finish concrete should be located at the USS Vincennes Monument and at the modern walkway to the storage room under the North Plaza. Connector sidewalks indicated on the Parsons plan should be finished in exposed aggregate as described above.

The walkway running from the visitor center to the Barnett Street Sidewalk should be removed. This sidewalk bisects a historic planting area that is proposed for rehabilitation. The sidewalk also does not allow visitors to approach the Memorial Building along the full axis of the Barnett Street Sidewalk.

Once the railroad track become unnecessary for transporting freight cars to the grain elevator northeast of the site, these tracks should be removed, and the area should be rehabilitated to a gentle grassy slope. It will be necessary to import fill into this area to create the desired slope. Imported fill should contain a high percentage of easily permeable soils to facilitate surface drainage. This fill should be graded as to provide positive drainage north and south around the Floodwall so that additional water is not directed toward this structure. The area adjacent to the Vigo Statue should be

rehabilitated to accommodate visitors arriving via the Vincennes River Greenway. A sixteen foot connector path is sufficient for this use.

Small-Scale Features
Small-scale features in this zone should be preserved. New monuments and memorials should not be added to the site as the collection of plaques, signs and markers is adequate for a site this size. In the event that an additional ship is commissioned under the name USS Vincennes, this monument may be modified, but it should remain in its current configuration. Features dating to the Memorial Era of significance such as the flagpole should be well-cared for as they contribute to the integrity of the cultural landscape. Features such as historic utility covers should be preserved and protected during any construction activities.

Lighting
The historic street lamps should be maintained in their current configuration and repaired as needed. Research has been conducted by GERO staff into the replacement cost of the poles for these lamps. The reported cost is high (approximately $20,000 per pole with a $12,000 cost to set up molds for creating the poles). It is recommended that alternate materials be considered for the posts (such as cast iron painted in a bronze color). As these posts deteriorate or become damaged, alternatives will have to be considered.

Lighting around the parapet of the Memorial Building should be cleaned and repaired to improve light levels.

Park Operations and Visitor Orientation Zone Treatment

The Historic Resource Management and Interpretation Zone includes the Visitor Center, parking area, and the adjacent lawn zones. Specific quantities and locations of plant materials are depicted on *Illustration S.*

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Buffer Plantings – Visitor Center Parking Area (Planting Area 25)
Buffer plantings for the zone between the Memorial Grounds and the parking area should include trees compatible with other plantings on the site. Native hardwoods are recommended for this area including twenty-two shade trees and eleven flowering trees. Native evergreen choices will increase the ability of these plants to buffer the visibility of the parking lot even during winter months. Parsons' plan originally called for a hedge of ligustrum in this zone. While this zone is outside of the Historic Resource Management and Interpretation Zone, Parsons did include this area in his original scheme. It is believed that the plantings in this area were never implemented since the property on which the shrubs are shown in the plan were under private ownership at the time of the initial landscape installation. However, the shrubs in this area could serve a modern day purpose to visually buffer the parking area from the Memorial Grounds. These plantings should be three to five gallon shrubs installed five feet on center in a configuration which parallels the east-west sidewalk on the north border of the parking lot. These plantings would cross over into the Natural Resource Management Zone and transition into the informal plantings along the Levee. All plantings should include soil amendments and a

mulch application. The planting palette for this area could include the following native species:

Acer saccharum	sugar maple
Acer rubrum	red maple
Cercis canadensis	redbud
Cornus florida	dogwood
Fagus grandifolia	American beech
Pinus strobus	eastern white pine
Platanus occidentalis	sycamore
Quercus rubra	red oak

Visitor Center Parking Lot (Planting Area 31)
The Visitor Center parking lot should be reconfigured to allow for bus traffic to move more easily into the lot. One potential method for enhancing the parking lot for buses is to slightly modify the current footprint of the lot. The four parking spaces on either end of the parking lot could be converted into planting beds to allow for an increased radius to accommodate buses and trailers. The southwestern end of the parking lot could be enlarged slightly to allow buses to maneuver into and out of the parking spaces. Additional parking lot lighting is desired by some of the adjacent residents to deter nighttime activity in the parking lot. This should be achieved with lighting provided by bollard lights placed throughout the parking lot. A lighting engineer should design the lighting plan for this area to light only the parking surface. Any additional parking lot lighting should not significantly increase lighting levels throughout the park.

The Bradford pear trees in the parking lot islands should be removed when the parking lot is reconfigured. These trees should be replaced with native hardwood shade tree species such as red oak, red maple, or sugar maple.

Visitor Center Plantings (Planting Area 26)
The plantings around the Visitor Center and in the Visitor Center courtyard area should be rehabilitated. Maintenance staff at the park currently spends a large quantity of time maintaining and pruning the shrubs around the Visitor Center. It is recommended that the shrub plantings around the Visitor Center be replaced with lower maintenance native shrubs and small trees. These plantings will require occasional pruning (semi-annual), but they will not require the detailed pruning efforts required by the evergreen plantings currently present around the building. Suggested native species include:

Amelanchier arborea	serviceberry
Ceanothus americanus	New Jersey tea
Cephalanthus occidentalis	buttonbush
Cornus racemosa	grey dogwood
Lindera benzoin	spicebush

In planters that are too small for small trees and shrubs, the following ferns and perennials are recommended:

Asarum canadense	wild ginger
Iris cristata	dwarf crested iris
Phlox subulata	creeping phlox
Dryopteris marginalis	evergreen shield fern
Polystichum acrostichoides	Christmas fern

Large shade trees, evergreen trees, and flowering trees in this area should be maintained and replaced in kind upon decline. All planting implemented should include soil amendment and application of mulch.

Maintenance Area (Planting Area 28)
The Maintenance Area should be maintained as it is currently with maintenance operations centered on this location. It is well buffered from the park, and its vegetative border should be preserved. Plant materials should be replaced in kind upon decline.

Planting Area 27
The lawn and trees in this area should be preserved and maintained. Shade trees should be replaced in kind upon decline to maintain consistent canopy cover for the park.

Inholdings
Two privately-owned properties are currently adjacent to the park boundary at Lower Second Street. GERO's enabling legislation does not allow for acquisition of additional lands; new property must be donated. If these two inholdings were ever to be donated to the park, they should become part of the Park Operations and Visitor Orientation Zone. The buildings on these properties could be demolished and the land should be converted into open lawn greenspace with large hardwood shade trees. This treatment would expand opportunities for passive use of this space.

Natural Resource Management Zone

This area should be maintained much as it is currently. This area provides a natural looking backdrop for the Memorial Building and the levees in this area provide flood protection for the site and portions of the city beyond the park boundary.

Levee Area (Planting Area 24)
Trees, including historic trees, and lawn in this area should be preserved. Hardwood and flowering trees in this area site should be under-planted over time to assure consistent cover. Tree species appropriate for this area include:

Acer saccharum	sugar maple
Acer rubrum	red maple
Cercis canadensis	redbud
Cornus florida	dogwood
Fagus grandifolia	American beech
Platanus occidentalis	sycamore
Quercus rubra	red oak

The massing and spacing of trees in this area should be consistent with current conditions. New plantings should adhere to the current boundary of trees.

Riverfront Vegetation (Planting Areas 29 and 30)
Riverfront vegetation should be maintained as it is with a lawn area on the river side of the Floodwall transitioning into more natural herbaceous riverbank plantings. Tri-lock should be extended in these areas to the limits of the park property to assure that bank erosion is kept to a minimum. As possible, vegetation in this area should be enhanced with native riverine herbaceous species and shrubs. The stairs leading down to the river from the Vigo Statue area should be maintained as they provide one of the few formal access points to the riverbank in Vincennes.

The large grove of riverfront trees should be preserved (Planting Area 29) and under-planted with small trees of the same species to promote a range in ages of trees in this area. As larger trees decline, smaller under-planted trees will increase in size and fill in, maintaining the look of the area.

Circulation
Circulation in this area includes a multi-use trail connection to the Vincennes River Greenway. This pathway should be constructed of a pervious surface due to the close proximity to the river. The pathway should follow the railroad track location until it reaches the bend in Willow Street and then turn southeast to intersect with Lower Second Street. The intent of the multi-use path is to route users through the Natural Resource Management Zone rather than disrupting the Memorial Grounds with an additional modern pathway. The path creates a loop for users which ties them into the city sidewalk system at Lower Second Street. The city sidewalk will need to be extended to this location. (It currently terminates at the entry drive to the Visitor Center parking lot.)

Chapter 8: Costs and Implementation

Implementation Guidelines

This chapter provides guidelines for implementing the Recommended Treatment Approach for GERO. The implementation has been divided into three phases. The phases do not imply importance; however, Phase One implementation has already been approved for funding. Beyond Phase One, the phases do not indicate a sequence for implementation.

Phase One includes projects that have been funded as a result of costing exercises completed during the schematic design phase. These projects include the Rehabilitation/Repair of the Historic Wabash River Floodwall (PMIS No. 8354, FMSS work order no. 766541) and the Repair of the Memorial Terrace (PMIS 8464, FMSS work order no. 766600).

Phase Two includes projects which relate to improvements within the Historic Resource Management & Interpretive Zone. The projects within this phase could be implemented individually or as a group. However, circulation improvements should occur at one time to assure consistency in materials. Vegetation recommendations could be implemented in any sequence; however, the rehabilitation of the Mall is seen as an immediate need.

Phase Three includes projects which relate to improvements within the Natural Resource Management Zone and the Park Operations & Visitor Orientation Zone. Connections to the Vincennes Riverwalk should occur concurrently with implementation of that project. Vegetative buffering of the parking lot is of high importance to improve the integrity of the adjacent cultural landscape. Circulation improvements could occur on an as-need basis; however, circulation improvements should occur at one time to assure consistency in materials.

Cultural Landscape Report and Environmental Assessment
George Rogers Clarke National Historic Park

Phase I Implementation: Line Item Improvements

Project: Memorial Terrace Rehabilitation*

ITEM	*QTY.*	*UNIT*	*UNIT COST*	*ITEM TOTAL*	*SUBTOTAL*
Sitework	1	LS	$689,900.00	$689,900.00	
Concrete	1	LS	$74,763.00	$74,763.00	
Masonry	1	LS	$865,100.00	$865,100.00	
Metals	1	LS	$3,375.00	$3,375.00	
Thermal Moisture Protection	1	LS	$270,800.00	$270,800.00	
Mechanical	1	LS	$22,400.00	$22,400.00	
				$1,926,338.00	
			Total Cost, escalated to FY 06		$2,948,992.00

*Figures taken from 2.10.05 Value Analysis Study

Project: Wabash River Floodwall Rehabilitation/Repair*

ITEM	*QTY.*	*UNIT*	*UNIT COST*	*ITEM TOTAL*	*SUBTOTAL*
Demolition	1	LS	$123,560.00	$123,560.00	
Construction/Repairs	1	LS	$774,459.00	$774,459.00	
Parapet	1	LS	$290,300.00	$290,300.00	
Underdrain	1	LS	$94,125.00	$94,125.00	
				$1,282,444.00	
			Net Construction, escalated		$1,911,355.00

*Figures taken from 5.18.05 Value Analysis Study

SUBTOTAL PHASE I IMPLEMENTATION	**$4,860,347.00**

Phase II Implementation

Project: Vegetation

ITEM	*QTY.*	*UNIT*	*UNIT COST*	*ITEM TOTAL*	*SUBTOTAL*
Lawn Rehabilitation	14.25	AC	$5,000.00	$71,250.00	
					$71,250.00

Project: Buffer Plantings - Visitors Center Parking Area

ITEM	*QTY.*	*UNIT*	*UNIT COST*	*ITEM TOTAL*	*SUBTOTAL*
Native Large Shade Trees	22	EA	$540.00	$11,880.00	
Native Evergreen Trees	9	EA	$375.00	$3,375.00	
Native Flowering Trees	11	EA	$375.00	$4,125.00	
Ligustrum (5' o.c.)	2,729	SF	$2.20	$6,003.80	
					$25,383.80

Project: Linden Allée in Mall

ITEM	*QTY.*	*UNIT*	*UNIT COST*	*ITEM TOTAL*	*SUBTOTAL*
Common Linden, 3" cal.*	48	EA	$650.00	$31,200.00	
Soil Remediation	1	AC	$24,000.00	$24,000.00	
Underdrainage System	2000	LF	$12.00	$24,000.00	
					$79,200.00

*Cost per tree includes root anchoring

Project: Historic Concrete Areas - South of Lincoln Memorial Bridge

ITEM	*QTY.*	*UNIT*	*UNIT COST*	*ITEM TOTAL*	*SUBTOTAL*
Paving Removal	8,575	SF	$2.00	$17,150.00	
Rehabilitate Exposed Aggregate	64,866	SF	$19.00	$1,232,454.00	
					$1,249,604.00

Project: Barnett Street Sidewalk Planting

ITEM	*QTY.*	*UNIT*	*UNIT COST*	*ITEM TOTAL*	*SUBTOTAL*
Crabapples	26	EA	$325.00	$8,450.00	
					$8,450.00

Project: Barnett Street Sidewalk Paving

ITEM	*QTY.*	*UNIT*	*UNIT COST*	*ITEM TOTAL*	*SUBTOTAL*
Paving Removal	8,575	SF	$2.00	$17,150.00	
Rehabilitate Exposed Aggregate	8,575	SF	$19.00	$162,925.00	
					$180,075.00

Project: N and S Terrace Rehabilitation (based on 60% of cost of Memorial Terrace)

ITEM	*QTY.*	*UNIT*	*UNIT COST*	*ITEM TOTAL*	*SUBTOTAL*
Sitework	1	LS	$275,960.00	$275,960.00	
Concrete	1	LS	$29,900.00	$29,900.00	
Masonry	1	LS	$346,040.00	$346,040.00	
Metals	1	LS	$1,350.00	$1,350.00	
Thermal Moisture Protection	1	LS	$108,320.00	$108,320.00	
					$761,570.00

SUBTOTAL PHASE II IMPLEMENTATION	**$2,375,532.80**

Phase III Implementation

Project: Linden Bosque southwest of Memorial Building (Area 16)

ITEM	*QTY.*	*UNIT*	*UNIT COST*	*ITEM TOTAL*	*SUBTOTAL*
Common Linden, 3" cal.*	16	EA	$650.00	$10,400.00	
Soil Remediation	0.33	AC	$24,000.00	$7,920.00	
Underdrainage System	512	LF	$12.00	$6,144.00	
					$24,464.00

*Cost per tree includes root anchoring

Project: Floodwall Planting

ITEM	*QTY.*	*UNIT*	*UNIT COST*	*ITEM TOTAL*	*SUBTOTAL*
Red Oaks, 3" cal.	11	EA	$540.00	$5,940.00	
					$5,940.00

Project: Memorial Foundation Plantings

ITEM	*QTY.*	*UNIT*	*UNIT COST*	*ITEM TOTAL*	*SUBTOTAL*
Shrub Removal	4250	SF	$1.00	$4,250.00	
Juniper	170	EA	$60.00	$10,200.00	
Pyracantha	70	EA	$60.00	$4,200.00	
Yew	70	EA	$125.00	$8,750.00	
Irrigation Repair	1	LS	$7,500.00	$7,500.00	
					$34,900.00

Project: North & South Terrace Planters

ITEM	*QTY.*	*UNIT*	*UNIT COST*	*ITEM TOTAL*	*SUBTOTAL*
Shrub Removal	6800	SF	$1.00	$6,800.00	
Creeping Juniper 'Plumosa'	130	EA	$60.00	$7,800.00	
Sargent Juniper	46	EA	$60.00	$2,760.00	
Pfitzer Juniper	20	EA	$60.00	$1,200.00	
Box-leaved Holly	17	EA	$125.00	$2,125.00	
Japanese Yew	12	EA	$125.00	$1,500.00	
'Capitata' Japanese Yew	8	EA	$125.00	$1,000.00	
Pyracantha	14	EA	$60.00	$840.00	
Ligustrum	2	EA	$60.00	$120.00	
					$24,145.00

Project: Vigo Statue Area Planters

ITEM	*QTY.*	*UNIT*	*UNIT COST*	*ITEM TOTAL*	*SUBTOTAL*
Shrub Removal	1250	SF	$1.00	$1,250.00	
'Capitata' Japanese Yew	8	EA	$125.00	$1,000.00	
Pfitzer Juniper	20	EA	$60.00	$1,200.00	
					$3,450.00

Project: The Plaza

ITEM	*QTY.*	*UNIT*	*UNIT COST*	*ITEM TOTAL*	*SUBTOTAL*
Ligustrum	900	SF	$2.20	$1,980.00	
					$1,980.00

Project: Area No. 5, 6 & 7

ITEM	*QTY.*	*UNIT*	*UNIT COST*	*ITEM TOTAL*	*SUBTOTAL*
Common Linden, 3" cal.*	16	EA	$650.00	$10,400.00	
Tulip Poplar, 3" cal.	1	EA	$540.00	$540.00	
Sugar Maple, 3" cal	6	EA	$540.00	$3,240.00	
Red Oak, 3" cal.	2	EA	$375.00	$750.00	
Redbud	4	EA	$375.00	$1,500.00	
White Dogwood	8	EA	$375.00	$3,000.00	
Japanese Yew	2	EA	$125.00	$250.00	
					$19,680.00

*Cost per tree includes root anchoring

Project: Area No. 8 & 9 (North of St. Francis Xavier)

ITEM	*QTY.*	*UNIT*	*UNIT COST*	*ITEM TOTAL*	*SUBTOTAL*
Red Oak, 3" cal.	2	EA	$540.00	$1,080.00	
Tulip Poplar, 3" cal.	1	EA	$540.00	$540.00	
Sugar Maple, 3" cal	4	EA	$540.00	$2,160.00	
Sweet Gum, 3" cal.	1	EA	$540.00	$540.00	
Redbud	9	EA	$375.00	$3,375.00	
White Dogwood	9	EA	$375.00	$3,375.00	
Shrub Bed	1,352	SF	$2.20	$2,974.40	
					$14,044.40

Project: Area No. 10 & 11

ITEM	*QTY.*	*UNIT*	*UNIT COST*	*ITEM TOTAL*	*SUBTOTAL*
Red Oak, 3" cal.	6	EA	$540.00	$3,240.00	
Sugar Maple, 3" cal.	10	EA	$540.00	$5,400.00	
Tulip Poplar, 3" cal.	1	EA	$540.00	$540.00	
White Dogwood	5	EA	$375.00	$1,875.00	
Shrub Bed	931	SF	$2.20	$2,048.20	
					$13,103.20

Project: Area No. 12, 13 & 14

ITEM	*QTY.*	*UNIT*	*UNIT COST*	*ITEM TOTAL*	*SUBTOTAL*
Sugar Maple, 3" cal.	22	EA	$540.00	$11,880.00	
Douglas Fir	3	EA	$375.00	$1,125.00	
White Dogwood	13	EA	$375.00	$4,875.00	
Shrub Bed	447	SF	$2.20	$983.40	
					$18,863.40

Project: Area No. 17 (Northeast of Visitors Center)

ITEM	*QTY.*	*UNIT*	*UNIT COST*	*ITEM TOTAL*	*SUBTOTAL*
Red Oak, 3" cal.	4	EA	$540.00	$2,160.00	
American Linden, 3" cal.	2	EA	$540.00	$1,080.00	
Douglas Fir, 6' ht.	3	EA	$375.00	$1,125.00	
White Dogwood	26	EA	$375.00	$9,750.00	
Shrub Bed	1,286	SF	$2.20	$2,829.20	
					$16,944.20

Project: Historic Concrete Areas - North of Lincoln Memorial Bridge

ITEM	*QTY.*	*UNIT*	*UNIT COST*	*ITEM TOTAL*	*SUBTOTAL*
Paving Removal	33,137	SF	$2.00	$66,274.00	
Rehabilitate Exposed Aggregate	33,137	SF	$19.00	$629,603.00	
					$695,877.00

Project: Replace Non-historic Concrete Areas

ITEM	*QTY.*	*UNIT*	*UNIT COST*	*ITEM TOTAL*	*SUBTOTAL*
Paving Removal	27,350	SF	$2.00	$54,700.00	
New Exposed Aggregate	7,700	SF	$19.00	$146,300.00	
Concrete Sidewalk	17,170	SF	$5.00	$85,850.00	
Multi-use Trail	11,817	SF	$3.00	$35,451.00	
					$322,301.00

Project: Remove, Regrade and Reseed Railroad Spur

ITEM	*QTY.*	*UNIT*	*UNIT COST*	*ITEM TOTAL*	*SUBTOTAL*
Railroad Track Removal	1690	LF	$50.00	$84,500.00	
Grading	11575	CY	$16.00	$185,200.00	
Lawn Seeding	1	AC	$5.00	$6.00	
					$269,706.00

Project: Visitor Center Planting Rehabilitation

ITEM	*QTY.*	*UNIT*	*UNIT COST*	*ITEM TOTAL*	*SUBTOTAL*
Shrub Removal	1000	SF	$1.00	$1,000.00	
Native Flowering Trees	8	EA	$375.00	$3,000.00	
Shrub Bed (Native)	750	SF	$2.20	$1,650.00	
					$5,650.00

SUBTOTAL PHASE III IMPLEMENTATION	**$1,471,048.20**

SUBTOTAL ALL PHASES COMBINED		***$8,706,928.00***
General Conditions	8%	$696,554.24
Overhead & Profit	15%	$104,483.14
Design Contingency	15%	$15,672.47
TOTAL IMPLEMENTATION ALL PHASES		***$9,523,637.85***

Notes:
All shade trees are specified at 3" cal. And include 1 cy soil and .35 cy mulch
All evergreen trees are specified at 12-14' ht and include .5 cy soil and .25 cy mulch
All understory trees are specified at 6' ht include .5 cy soil and .25 cy mulch
All shrubs are specified at 5 gal. and include .25 cy soil and .25 cy mulch
CLR/EA text contains specifics on each planting area. Please refer to text for species information.

Chapter 9: Consultation and Coordination

NPS mailed a press release to the Vincennes Sun-Commercial to announce the date for the two public scoping meetings. This press release is included in this chapter. NPS representatives were present at Vincennes City Hall at 2:00 pm and at GERO at 6:30 pm on Thursday October 13, 2005 for the public meetings. The meetings were not well attended, but those attending included Vincennes government officials and members of the local press corps. The GERO Superintendent gave a brief presentation on the purpose and need for the CLR/EA and the consultants presented on the two line item projects (Memorial Terrace Rehabilitation and Floodwall Repair/Rehabilitation) and the CLR/EA process.

Coordination/scoping letters were also sent to the following offices during March 2006:

- U.S. Fish and Wildlife Service
- Indiana State Historic Preservation Office

These letters and the responses are included on subsequent pages.

A draft of this document was made available to the public for review. One person replied to the public review with hand-written comments. These comments were primarily editorial in nature, and were intended to clarify the information included in the narrative. Comments that provided further detailed information or explanation were accepted, resulting in minor editorial changes to the document. Other comments that were beyond the scope of the project were rejected.

National Park Service
U.S. Department of the Interior

George Rogers Clark
National Historical Park

401 S. 2nd St.
Vincennes, IN 47591

812-882-1776 phone
812-882-7270 fax

George Rogers Clark NHP News Release

September 29, 2005
For Immediate Release
Dale Phillips (812) 882-1776 ext. 102

George Rogers Clark NHP Announces Public Meetings

The National Park Service at George Rogers Clark National Historical Park is pleased to announce the scheduling of two public meetings on October 13, 2005, to introduce to the pubic two vitally important new park projects. The projects are the rehabilitation the Wabash River Retaining/Flood Wall and the completion of a long-term cultural landscape plan. Included in these presentations will be further information on the public review dates of the draft project documents and the completion of the environmental assessments (EA's).

The National Park Service at George Rogers Clark National Historical Park welcomes the public to attend these meetings and learn more about the development of these two projects and the completion of the EA's. The first meeting on October 13, 2005, will be at 2 p.m. at the Vincennes City Hall, 201 Vigo Street, Vincennes, IN. The second meeting will begin at 6:30 p.m. in the George Rogers Clark Visitor Center, 401 South 2nd Street, Vincennes, IN.

For further information, contact the George Rogers Clark National Historical Park at 812-882-1776, extension 102.

-NPS-

EXPERIENCE YOUR AMERICA
The National Park Service cares for special places saved by the American people so that all may experience our heritage.

United States Department of the Interior

NATIONAL PARK SERVICE
George Rogers Clark National Historical Park
401 South Second Street
Vincennes, Indiana 47591
812-882-1776
Fax: 812-882-7270

IN REPLY REFER TO

H2217

March 2, 2006

Acting Field Supervisor
Great Lakes – Big River Region
U.S. Fish and Wildlife Service
1 Federal Drive
BHW Federal Building
Fort Snelling, Minnesota 55111

Reference: Preserve/Rehabilitate Historic Structure and Correct Safety Problems;
George Rogers Clark National Historical Park, Vincennes, Indiana

Dear Colleague:

George Rogers Clark National Historical Park is pleased to announce the availability of a Cultural Landscape Report and Environmental Assessment (CLR/EA) for public review until March 30, 2006. The report will guide future development, and recommend appropriate improvements to and management of historic landscape resources. It is our understanding that no threatened or endangered species or critical habitats are present on site. We are requesting your concurrence regarding any listed or proposed threatened or endangered species or critical habitats that occur in the project vicinity and any special management considerations for such species. We also welcome any comments you may have regarding the project.

This letter will serve as a record that the NPS is initiating formal consultation with your agency pursuant to the requirements of the 1973 Endangered Species Act, as amended, and NPS *Management Policies*, 2001. Your participation in the public review process for this project is important to us and we look forward to hearing from you.

Sincerely,

Dale Phillips
Superintendent

cc:
Greg Cody
Technical Specialist for Cultural Resources, Denver Service Center

United States Department of the Interior
Fish and Wildlife Service

Bloomington Field Office (ES)
620 South Walker Street
Bloomington, IN 47403-2121
Phone: (812) 334-4261 Fax: (812) 334-4273

May 8, 2006

Mr. Dale Phillips
U.S. Department of the Interior
National Park Service
George Rogers Clark National Historical Park
401 South Second Street
Vincennes, IN 47591

Project No: Preserve/Rehabilitate Historic Structures and Correct Safety Problems
George Rogers Clark National Historical Park
County(ies): Knox

Dear Mr. Phillips:

This responds to your letter dated March 1, 2006, requesting our comments on the aforementioned project.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et. seq.) and are consistent with the intent of the National Environmental Policy Act of 1969, the Endangered Species Act of 1973, and the U. S. Fish and Wildlife Service's Mitigation Policy.

The proposed project will have no significant effect on wetlands and will not affect any Federally endangered species. Other project impacts will be minor in nature. Based on a review of the information you provided, the U.S. Fish and Wildlife Service has no objections to the project as currently proposed.

We appreciate the opportunity to comment at this early stage of project planning. If project plans change such that fish and wildlife habitat may be affected, please recoordinate with our office as soon as possible. If you have any questions about our recommendations, please call (812)334-4261.

Sincerely yours,

for Scott E. Pruitt,
Field Supervisor

TOTAL P.02

United States Department of the Interior

NATIONAL PARK SERVICE
George Rogers Clark National Historical Park
401 South Second Street
Vincennes, Indiana 47591
812-882-1776
Fax: 812-882-7270

IN REPLY REFER TO

H2217

March 2, 2006

Mr. Jon Smith
Indiana State Historic Preservation Office
Indiana Department of Natural Resources
Division of Historic Preservation and Archaeology
402 West Washington Street, W274
Indianapolis, Indiana 46204-2739

Dear Jon:

George Rogers Clark National Historical Park is pleased to announce the availability of a Cultural Landscape Report and Environmental Assessment (CLR/EA) for public review. The CLR/EA includes historic research and documentation of the memorial as it has evolved over time, records existing conditions and evaluates landscape character and integrity. Treatment recommendations presented in the document address how the park can adequately protect and manage the historic memorial landscape to convey its significance, accommodate ongoing public use, resolve life safety concerns, rehabilitate or restore missing features and meet uniform accessibility requirements.

We are asking for your concurrence that the alternatives presented in the CLR/EA will have no adverse effect on historic resources within the park. Please provide any comments to me by March 30. Thank you for your assistance.

Sincerely,

Dale Phillips
Superintendent

Enclosures

cc:
Greg Cody
Technical Specialist for Cultural Resources, Denver Service Center

Mitchell E. Daniels, Jr., Governor
Robert E. Carter, Jr., Director

DNR Indiana Department of Natural Resources

Division of Historic Preservation & Archaeology•402 W. Washington Street, W274 · Indianapolis, IN 46204-2739
Phone 317-232-1646•Fax 317-232-0693 · dhpa@dnr.IN.gov

June 20, 2007

Dale Phillips
Superintendent
George Rogers Clark National Historical Park
401 South Second Street
Vincennes, Indiana 47591

Federal Agency: National Park Service

Re: Your cover letter of May 21, 2007 transmitting and requesting signatures on two duplicates of the "Memorandum of Agreement . . . Regarding the Cultural Landscape Report for George Rogers Clark National Historical Park in Vincennes, Vincennes Township, Knox County, Indiana"; DHPA #1955

Dear Superintendent Phillips:

Pursuant to Section 106 of the National Historic Preservation Act (16 U.S.C. § 470f) and 36 C.F.R. Part 800, the staff of the Indiana State Historic Preservation Officer ("Indiana SHPO") has reviewed the aforementioned letter and memorandum of agreement ("MOA"), which we received on May 29, 2007.

Enclosed please find the duplicates of the MOA, which have been signed on behalf of the Indiana SHPO.

If you have questions regarding our participation in this MOA or about the implementation of the Cultural Landscape Report, please contact our office. You may contact John Carr at (317) 233-1949 or jcarr@dnr.IN.gov regarding issues pertaining to buildings or structures. You may contact Dr. Rick Jones at (317) 233-0953 or rjones@dnr.in.gov regarding archaeological issues. In all future correspondence regarding the MOA or the Cultural Landscape Report, please refer to DHPA #1955.

Very truly yours,

James A. Glass, PhD
Deputy State Historic Preservation Officer

JAG:JLC:jlc

Enclosures (2)

MEMORANDUM OF AGREEMENT

BETWEEN THE NATIONAL PARK SERVICE AND

THE INDIANA STATE HISTORIC PRESERVATION OFFICER

SUBMITTED TO THE ADVISORY COUNCIL ON HISTORIC PRESERVATION

PURSUANT TO 36 C.F.R. § 800.6(b)(iv)

REGARDING THE CULTURAL LANDSCAPE REPORT FOR

GEORGE ROGERS CLARK NATIONAL HISTORICAL PARK

IN VINCENNES, VINCENNES TOWNSHIP, KNOX COUNTY, INDIANA

WHEREAS the National Park Service (NPS), the Advisory Council on Historic Preservation (Council) and the National Conference of State Historic Preservation Officers executed a Nationwide Programmatic Agreement effective October 1, 1995 (NPA), pursuant to Section 800.13 of the regulations then in place (36 CFR Part 800) (1986) implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470f) for planning, operating, managing and administering the National Park System; and

WHEREAS Stipulation V (C) of the NPA provides for park-specific agreements independent of and supplemental to the 1995 Nationwide PA; and

WHEREAS the National Park Service – George Rogers Clark National Historical Park (NPS/GERO) proposes to implement a Cultural Landscape Report for George Rogers Clark National Historical Park in Vincennes, Vincennes Township, Knox County, Indiana; and

WHEREAS the NPS/GERO, in consultation with the Indiana State Historic Preservation Officer ("Indiana SHPO"), has defined this Cultural Landscape Report's area of potential effects, as the term is defined in 36 C.F.R. § 800. 16(d), to be the area within the exterior boundaries of George Rogers Clark National Historical Park; and

WHEREAS the NPS/GERO, in consultation with the Indiana SHPO, has found that George Rogers Clark National Historical Park is within the area of potential effects; and

WHEREAS the NPS/GERO and the Indiana SHPO both recognize that George Rogers Clark National Historical Park is listed in the National Register of Historic Places; and

WHEREAS the NPS/GERO, in consultation with the Indiana SHPO, has determined, pursuant to 36 C.F.R. § 800.5(a), that the Cultural Landscape Report recommendations may impact presently unidentified archeological resources within George Rogers Clark National Historical Park; and

WHEREAS the NPS/GERO, in consultation with the Indiana SHPO, has determined, pursuant to 36 C.F.R. § 800.5(a), that the Cultural Landscape Report recommendations will only impact the grounds within George Rogers Clark National Historical Park, and, will not have an impact on the monumental structures or other historic buildings within George Rogers Clark National Historical Park; and

WHEREAS the NPS/GERO has consulted with the Indiana SHPO in accordance with Section 106 of the National Historic Preservation Act (16 U.S.C. § 470f) and it's implementing regulations (36 C.F.R. Part 800) to resolve any adverse effect on George Rogers Clark National Historical Park; and

WHEREAS the NPS/GERO has consulted with the Indiana SHPO in accordance with Section 106 of the National Historic Preservation Act (16 U.S. C. § 470f) and its implementing regulations (36 C.F.R. Part 800) concerning the scope of the draft Cultural Landscape Report, and agreed to proceed with the project as proposed;

NOW, THEREFORE, the NPS/GERO and the Indiana SHPO agree that, upon the submission of a copy of this executed memorandum of agreement, as well as the documentation specified in 36 C.F.R. § 800.11(e) and (f), to the Council pursuant to 36 C.F.R. § 800.6[b][1][iv]) and upon the National Park Service's approval of the Cultural Landscape Report, the National Park Service shall ensure that the following stipulations are implemented in order to take into account the effect of the recommendations of the Cultural Landscape Report on historic properties.

STIPULATIONS

I. PROJECTS AND ACTIVITIES

A. This stipulation addresses the projects and activities that have been proposed by the NPS/GERO as part of the recommendations of the preferred alternative of the Cultural Landscape Report (CLR). These projects and activities include the following:

1. Repair/replace sidewalks with appropriate aggregate and mortar combination. Highest priority would be replacing sidewalks that are cracked and unsafe; eventually the complete system of sidewalks would be replaced over time. NPS/GERO also intends to replace large sections of sidewalks at one time when funding makes it possible.
2. Clean/repair North and South terraces on the Bridge Approach. Replace linden trees along alleé 30 feet on center.
3. Replace shrubs in planters at bridge approaches, at the base of Memorial Terrace, and on either side of the Vigo Statue.
4. Rehabilitate vegetation in islands near downtown.
5. Restore Barnett Street sidewalk planting according to the original historic plan. The non-historic redbuds will be removed and replaced with a suitable crabapple cultivar.
6. Rehabilitate the Lawn between the Visitor Center and Barnett Street sidewalk. The non-historic plantings will be revitalized, including canopy trees, understory trees, and shrubs, using the historic plant palette.
7. Install a multi-use path to connect the proposed riverwalk and western portion of the site. The path will be surfaced with porous concrete or "Gravelpave."
8. Enhance vegetation buffers between Visitor Center and Parking Lot.

B. Where NPS/GERO can demonstrate these projects and activities will take place wholly within areas comprised of fill from the construction of the monument, and where there is a reasonable expectation that original buried surfaces or materials will not be rendered irreversibly or permanently inaccessible by the project or activities, no further consultation will be necessary. The determination of the extent of fill will be by mutual agreement between NPS/GERO and the Indiana SHPO; a meeting on-site will attempt to develop an understanding of where proposed projects are likely to be entirely in fill. The NPS/GERO determines, and the Indiana SHPO concurs, that projects and activities implemented in fill will have no adverse effect on historic properties.

C. Where NPS/GERO has demonstrated that these projects and activities will take place within areas not comprised of fill, or where there is a reasonable expectation that original buried surfaces or materials may be penetrated or rendered irreversibly or permanently inaccessible by the project or activities, the following stipulations will apply. The NPS/GERO determines, and the Indiana SHPO concurs, that projects or activities not in areas of fill, or with the potential to penetrate fill zones, has the potential to adversely effect historic properties, subject to this agreement.

D. Replacement of the Wabash River Floodwall and rehabilitation of the Memorial Building Terrace are not covered by this agreement. GERO will consult with the Indiana SHPO separately for those projects.

II. IMPLEMENTATION

Implementation of the recommendations of the preferred alternative of the CLR, subject to subsection I.C above, will be subject to the following conditions:

A. All archaeological investigations necessary to identify and evaluate archaeological sites, and necessary to mitigate adverse effects of the undertaking, will be conducted prior to the implementation of those recommendations in the CLR that have the potential to cause adverse effects on the resource. The investigations will conform to the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, Indiana Code (IC) 14-21-1; Indiana Administrative Code (IAC) 312 IAC 21 and 312 IAC 22; and the most current Guidebook for Indiana Historic Sites and Structures Inventory—Archaeological Sites.

B. All archaeological work will be conducted by a professional meeting the Secretary of the Interior's Professional Qualification Standards (48 FR 44716, Sept. 1983) in archaeology and the supervisory qualifications for archaeology under 312 IAC 21-3-4.

C. Archaeological plans for any subsurface reconnaissance, test excavations, or large-scale excavations of archaeological resources will be submitted to the SHPO for review and comment prior to initiation of the archaeological fieldwork activities. The plans will conform to the provisions of the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, IC 14-21-1, 312 IAC 21, 312 IAC 22, and the most current Guidebook for Indiana Historic Sites and Structures Inventory—Archaeological Sites.

D. All appropriate archaeological laboratory work, studies, tests, and analyses will be conducted for each site investigated.

E. All archaeological investigations conducted under the terms of this Memorandum of Agreement will be presented in professional archaeological reports conforming to the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, IC 14-21-1, 312 IAC 21, 312 IAC 22, and the most current Guidebook for Indiana Historic Sites and Structures Inventory—Archaeological Sites.

F. Any cemeteries or burial grounds will be treated in accordance with IC 14-21-1 and 312 IAC 22. Any construction within 100 feet of a cemetery or burial ground will comply with the provisions of IC 14-21-1-26.5.

G. NPS/GERO may withhold or limit public disclosure of information about historic properties in accordance with Section 304 of the National Historic Preservation Act and 36 CFR § 800.6(a)(5) and 36 CFR § 800.11(c).

III. OBJECTION RESOLUTION PROVISION

Disagreements and misunderstanding about how this memorandum of agreement is or is not being implemented shall be resolved in the following manner:

A. If the Indiana SHPO or any invited signatory to this memorandum of agreement should object in writing to the NPS/GERO regarding any action carried out or proposed with respect to the CLR or implementation of this memorandum of agreement, then the NPS/GERO shall consult with the objecting party to resolve the objection. If after initiating such consultation the NPS/GERO determines that the objection cannot be resolved through consultation, then the NPS/GERO shall forward all documentation relevant to the objection to the Council, including the NPS/GERO's proposed response to the objection. Within 45 days after receipt of all pertinent documentation, the Council shall exercise one of the following options:

1. Provide the NPS/GERO with a staff-level recommendation, which the NPS/GERO shall take into account in reaching a final decision regarding its response to the objection; or

2. Notify the NPS/GERO that the objection will be referred for formal comment pursuant to 36 C.F.R. § 800.7(c), and proceed to refer the objection and comment. The NPS/GERO shall take into account the Council's comments in reaching a final decision regarding its response to the objection.

B. If comments from the Council are provided in accordance with stipulation (A) of this memorandum of agreement, NPS/GERO shall take into account any Council comment provided in accordance with 36 C.F.R. § 800.7(a)(4) with reference only to the subject of the objection. The NPS/GERO's responsibility to carry out all actions under this memorandum of agreement that are not the subjects of the objection shall remain unchanged.

IV. POST REVIEW DISCOVERY

Unanticipated discoveries relating to individual projects or activities which are part of the CLR recommendations will conform to the following:

A. If, during the implementation, a previously unidentified historic property is encountered, or a previously identified historic property is affected in an unanticipated manner, the NPS/GERO will consult with the SHPO, and ensure that work shall cease in the area, and the provisions of IC 14-21-1, 312 IAC 21, and 312 IAC 22 will be followed.

B. If human remains are discovered, the appropriate county coroner and law enforcement officials will be notified immediately, and the discovery of any human remains dating on or before December 31, 1939, will be reported to the Indiana Department of Natural Resources within two (2) business days. The discovery will be treated in accordance with IC 14-21-1 and 312 IAC 22, in as far as Federal law allows.

C. If a Native American Indian burial ground is discovered within the boundaries of George Rogers Clark National Historical Park, compliance and notification will be performed by the park superintendent as specified with the Native American Graves Protection and Repatriation Act (NAGPRA) for Federal land managers (25 USC 3001 et seq. and 43 C.F.R. § 10).

D. Should the discovery extend outside the boundaries of Federal property the adjacent landowner will be notified, in writing, of the need to comply with existing Indiana state regulations.

V. AMENDMENT

Any signatory to this memorandum of agreement may request that it be amended, whereupon the parties shall consult to consider the proposed amendment. 36 C.F.R. § 800.6(c) (7) shall govern the execution of any such amendment.

VI. TERMINATION

A. If the terms of this memorandum of agreement have not been implemented by January 1, 2018, then this memorandum of agreement shall be considered null and void. In such an event, the NPS/GERO shall so notify the parties to this memorandum of agreement and, if it chooses to continue with the CLR, then it shall reinitiate review of the CLR in accordance with 36 C.F.R. §§ 800.3 through 800.7.

B. Any signatory to the memorandum of agreement may terminate it by providing thirty (30) days notice to the other parties, provided that the parties shall consult during the period prior to termination to seek agreement on amendments or other actions that would avoid termination. In the event of termination, the NPS/GERO shall comply with 36 C.F.R. §§ 800. 3 through 800.7 with regard to the review of the CLR.

C. In the event that the NPS/GERO does not carry out the terms of this memorandum of agreement, the NPS/GERO shall comply with 36 C.F.R. §§ 800.3 through 800.7 with regard to the review of the CLR.

MOA George Rogers Clark National Monument 4

2. Notify the NPS/GERO that the objection will be referred for formal comment pursuant to 36 C.F.R. § 800.7(c), and proceed to refer the objection and comment. The NPS/GERO shall take into account the Council's comments in reaching a final decision regarding its response to the objection.

B. If comments from the Council are provided in accordance with stipulation (A) of this memorandum of agreement, NPS/GERO shall take into account any Council comment provided in accordance with 36 C.F.R. § 800.7(a)(4) with reference only to the subject of the objection. The NPS/GERO's responsibility to carry out all actions under this memorandum of agreement that are not the subjects of the objection shall remain unchanged.

IV. POST REVIEW DISCOVERY

Unanticipated discoveries relating to individual projects or activities which are part of the CLR recommendations will conform to the following:

A. If, during the implementation, a previously unidentified historic property is encountered, or a previously identified historic property is affected in an unanticipated manner, the NPS/GERO will consult with the SHPO, and ensure that work shall cease in the area, and the provisions of IC 14-21-1, 312 IAC 21, and 312 IAC 22 will be followed.

B. If human remains are discovered, the appropriate county coroner and law enforcement officials will be notified immediately, and the discovery of any human remains dating on or before December 31, 1939, will be reported to the Indiana Department of Natural Resources within two (2) business days. The discovery will be treated in accordance with IC 14-21-1 and 312 IAC 22, in as far as Federal law allows.

C. If a Native American Indian burial ground is discovered within the boundaries of George Rogers Clark National Historical Park, compliance and notification will be performed by the park superintendent as specified with the Native American Graves Protection and Repatriation Act (NAGPRA) for Federal land managers (25 USC 3001 et seq. and 43 C.F.R. § 10).

D. Should the discovery extend outside the boundaries of Federal property the adjacent landowner will be notified, in writing, of the need to comply with existing Indiana state regulations.

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A. If the terms of this memorandum of agreement have not been implemented by January 1, 2018, then this memorandum of agreement shall be considered null and void. In such an event, the NPS/GERO shall so notify the parties to this memorandum of agreement and, if it chooses to continue with the CLR, then it shall reinitiate review of the CLR in accordance with 36 C.F.R. §§ 800.3 through 800.7.

B. Any signatory to the memorandum of agreement may terminate it by providing thirty (30) days notice to the other parties, provided that the parties shall consult during the period prior to termination to seek agreement on amendments or other actions that would avoid termination. In the event of termination, the NPS/GERO shall comply with 36 C.F.R. §§ 800. 3 through 800.7 with regard to the review of the CLR.

C. In the event that the NPS/GERO does not carry out the terms of this memorandum of agreement, the NPS/GERO shall comply with 36 C.F.R. §§ 800.3 through 800.7 with regard to the review of the CLR.

MOA George Rogers Clark National Monument 4

The execution of this memorandum of agreement by the NPS/GERO and the Indiana SHPO, the submission of a copy of it to the Council with the appropriate documentation specified in 36 C.F.R. § 800.11(e) and (f), and the implementation of its terms evidence that the NPS/GERO has afforded the Council an opportunity to comment on the Cultural Landscape Report and its effects on historic properties and that the NPS/GERO has taken into account the effects of the Cultural Landscape Report on historic properties.

SIGNATORIES

NATIONAL PARK SERVICE

Signed by: Dale K. Phillips Date: 7/2/2007

Name and title: Dale K. Phillips
(Typed or printed)

INDIANA STATE HISTORIC PRESERVATION OFFICER

Signed by: James A. Glass Date: 6/19/2007

Name and title: James A. Glass, Deputy SHPO
(Typed or printed)

INVITED SIGNATORIES:

COMPANY, ORGANIZATION OR AGENCY NAME

Signed by: _____ Date: _____

Name and title: _____
(Typed or printed)

COMPANY, ORGANIZATION OR AGENCY NAME

Signed by: _____ Date: _____

Name and title: _____
(Typed or printed)

CONCURRING PARTIES:

COMPANY, ORGANIZATION OR AGENCY NAME

Signed by: _____ Date: _____

MOA George Rogers Clark National Monument
Cultural Landscape Report Implementation

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List of Preparers

National Park Service

Dale Phillips – Superintendent, George Rogers Clark National Historical Park
Marla McEnaney – Project Manager, NPS Midwest Regional Office

Consultants

Dale Jaeger – Principal Landscape Architect and Planner, The Jaeger Company
Madie Fischetti – Project Manager Landscape Architect, The Jaeger Company
William Shealy – Landscape Architect, The Jaeger Company
Diana Miles – Preservation Planner, The Jaeger Company
David Kroll – Associate Principal & Director of Preservation, RATIO Architects, Inc.
Dawn Hein – Interior Design/Historic Preservation Specialist, RATIO Architects, Inc.

Appendix A – Rare and Endangered Species List

The following list is adapted from the Indiana Department of Natural Resources " Rare and Endangered Animals of Indiana" List published on the Department's website at www.in.gov/dnr/fishwild/endangered/rare.pdf. The following classifications are used in the list:

Federal Classifications
Endangered – Any species that is in danger of extinction throughout all or a significant portion of its range. Federal-endangered species are designated with (FE).
Threatened – Any species that is likely to become endangered within the foreseeable future throughout all or a significant portion of its range. Federal-threatened species are designated with (FT).
Candidate – Any species that has been submitted for review for protection under the Federal Endangered Species Act. If added to the federal list, it will automatically be considered a state-endangered species in Indiana. Candidates for the Federal list are designated with (FC).

Indiana Classifications
Endangered – Any animal species whose prospects for survival or recruitment within the state is in immediate jeopardy and is in danger of disappearing from the state. This includes all species classified as endangered by the federal government that occur in Indiana.
Special Concern – Any animal species about which some problems of limited abundance or distribution in Indiana is known or suspected and should be closely monitored.

AMPHIBIANS

Endangered

1. Crawfish frog *Rana areolata*
2. Four-toed salamander *Hemidactylium scutatum*
3. Green salamander *Aneides aeneus*
4. Hellbender *Cryptobranchus alleganiensis*
5. Red salamander *Pseudotriton rubber*

Special Concern

6. Blue-spotted salamander *Ambystoma laterale*
7. Eastern spadefoot *Scaphiopus holbrookii*
8. Common mudpuppy *Necturus maculosus*
9. Northern leopard frog *Rana pipiens*
10. Plains leopard frog *Rana blairi*

BIRDS

Endangered

11. American bittern *Botaurus lentiginosus*
12. Bald eagle (FT) *Haliaeetus leucocephalus*
13. Barn owl *Tyto alba*
14. Black rail *Laterallus jamaicensis*
15. Black tern *Chlidonias niger*
16. Black-crowned night-heron *Nycticorax nycticorax*
17. Common moorhen *Gallunula chloropus*
18. Golden-winged warbler *Vermivora chrysoptera*
19. Henslow's sparrow *Ammodramus henslowii*
20. King rail *Rallus elegans*
21. Kirtland's warbler (FE) *Dendroica kirtlandii*
22. Least bittern *Ixobrychus exilis*
23. Least tern (FE) *Sterna antillarum*
24. Loggerhead shrike *Lanius ludovicianus*
25. Marsh wren *Cistothorus palustris*
26. Northern harrier *Circus cyaneus*
27. Osprey *Pandion haliaetus*
28. Peregrine falcon *Falco peregrinus*
29. Piping plover (FE) *Charadrius melodus*
30. Sedge wren *Cistothorus platensis*
31. Short-eared owl *Asio flammeus*
32. Trumpeter swan *Cygnus buccinator*
33. Upland sandpiper *Bartramia longicauda*
34. Virginia rail *Rallus limicola*
35. Whooping crane (FE) *Grus americana*
36. Yellow-crowned night-heron *Nyctanassa violacea*
37. Yellow-headed blackbird *Xanthocephalus xanthocephalus*

Special Concern

38. Black-and-white warbler *Mniotilta varia*
39. Broad-winged hawk *Buteo platypterus*
40. Cerulean warbler *Dendroica cerulea*
41. Common nighthawk *Chordeiles minor*
42. Great egret *Ardea alba*
43. Hooded warbler *Wilsonia citrina*
44. Mississippi kite *Ictinia mississippiensis*
45. Red-shouldered hawk *Buteo lineatus*
46. Sandhill crane *Grus canadensis*
47. Sharp-shinned hawk *Accipiter striatus*
48. Western meadowlark *Sturnella neglecta*
49. Whip-poor-will *Caprimulgus vociferus*
50. Worm-eating warbler *Helmitheros vermivorum*

FISHES

Endangered

51. Bantam sunfish *Lepomis symmetricus*
52. Channel darter *Percina copelandi*
53. Gilt darter *Percina evides*
54. Greater redhorse *Moxostoma valenciennesi*
55. Lake sturgeon *Acipenser fulvescens*
56. Northern brook lamprey *Ichthyomyzon fossor*
57. Northern cavefish *Amblyopsis spelaea*
58. Pallid shiner *Hybopsis amnis*
59. Redside dace *Clinostomus elongatus*
60. Variegate darter *Etheostoma variatum*

Special Concern

61. Banded pygmy sunfish *Elassoma zonatum*
62. Bigmouth shiner *Notropis dorsalis*
63. Cisco *Coregonus artedi*
64. Cypress darter *Etheostoma proeliare*
65. Lake whitefish *Coregonus clupeaformis*
66. Longnose dace *Rhinichthys cataractae*
67. Longnose sucker *Catostomus catostomus*
68. Northern madtom *Noturus stigmosus*
69. Ohio River muskellunge *Esox masqinongy ohioensis*
70. Pugnose shiner *Notropis anogenus*
71. Slimy sculpin *Cottus cognatus*
72. Spotted darter *Etheostoma maculatum*
73. Tippecanoe darter *Etheostoma tippecanoe*
74. Trout-perch *Percopsis omiscomaycus*
75. Western sand darter *Ammocrypta clara*

MAMMALS

Endangered

76. Allegheny woodrat *Neotoma magister*
77. Badger *Taxidea taxus*
78. Bobcat *Lynx rufus*
79. Evening bat *Nycticeius humeralis*
80. Franklin's ground squirrel *Spermophilus franklinii*
81. Gray myotis (FE) *Myotis grisescens*
82. Indiana myotis (FE) *Myotis sodalis*
83. River otter *Lontra canadensis*
84. Southeastern myotis *Myotis austroriparius*
85. Swamp rabbit *Sylvilagus aquaticus*

Special Concern

86. Eastern pipistrelle *Pipistrellus subflavus*
87. Eastern red bat *Lasiurus borealis*
88. Hoary bat *Lasiurus cinereus*
89. Least weasel *Mustela nivalis*
90. Little brown myotis *Myotis lucifugus*
91. Northern myotis *Myotis septentrionalis*
92. Plains pocket gopher *Geomys bursarius*
93. Pygmy shrew *Sorex hoyi*
94. Rafinesque's big-eared bat *Corynorhinus rafinesquii*
95. Silver-haired bat *Lasionycteris noctivagans*
96. Smoky shrew *Sorex fumeus*
97. Star-nosed mole *Condylura cristata*

MOLLUSKS

Endangered

98. Clubshell (FE) *Pleurobema clava*
99. Eastern fanshell (FE) *Cyprogenia stegaria*
100. Fat pocketbook (FE) *Potamilus capax*
101. Longsolid *Fusconaia subrotunda*
102. Northern riffleshell (FE) *Epioblasma torulosa rangiana*
103. Orangefoot pimpleback (FE) *Plethobasus cooperianus*
104. Pink mucket (FE) *Lampsilis abrupta*
105. Pyramid pigtoe *Pleurobema rubrum*
106. Rabbitsfoot *Quadrula cylindrica*
107. Rough pigtoe (FE) *Pleurobema plenum*
108. Sheepnose (FC) *Plethobasus cyphyus*
109. Snuffbox *Epioblasma triquetra*
110. Tubercled blossom (FE) *Epioblasma torulosatorulosa*
111. White catspaw (FE) *Epioblasma obliquataperobliqua*
112. White wartyback (FE) *Plethobasus cicatricosus*

Special Concern

113. Ellipse *Venustaconcha ellipsiformis*
114. Kidneyshell *Ptychobranchus fasciolaris*
115. Little spectaclecase *Villosa lienosa*
116. Ohio pigtoe *Pleurobema cordatum*
117. Pointed campeloma *Campeloma decisum*
118. Purple lilliput *Toxolasma lividus*
119. Rayed bean (FC) *Villosa fabalis*
120. Round hickorynut *Obovaria subrotunda*
121. Salamander mussel *Simpsonaias ambigua*
122. Swamp lymnaea *Lymnaea stagnalis*
123. Wavyrayed lampmussel *Lampsilis fasciola*

REPTILES

Endangered

124. Alligator snapping turtle *Macrochelys temminckii*
125. Blanding's turtle *Emydoidea blandingii*
126. Butler's garter snake *Thamnophis butleri*
127. Copperbelly water snake (FT*) *Nerodia erythrogasterneglecta*
128. Cottonmouth *Agkistrodon piscivorus*
129. Eastern mud turtle *Kinosternon subrubrum*
130. Hieroglyphic river cooter *Pseudemys concinna*
131. Kirtland's snake *Clonophis kirtlandii*
132. Massasauga (FC) *Sistrurus catenatus*
133. Ornate box turtle *Terrapene ornate*
134. Scarlet snake *Cemophora coccinea*
135. Smooth green snake *Liochlorophis vernalis*
136. Southeastern crowned snake *Tantilla coronata*
137. Spotted turtle *Clemmys guttata*
138. Timber rattlesnake *Crotalus horridus*
139. Western mud snake *Farancia abacura*

Special Concern

140. Rough green snake *Opheodrys aestivus*
141. Western ribbon snake *Thamnophis proximus*

*Northern population only

Appendix B – Plant Glossary

The following are botanical and common names of plant species mentioned in this report.

Trees

Acer platanoides 'Crimson King'	crimson king maple
Acer rubrum	red maple
Acer saccharinum	silver maple
Acer saccharum	sugar maple
Amelanchier arborea	serviceberry
Ceanothus americanus	new jersey tea
Celtis occidentalis	hackberry
Cercis canadensis	redbud
Cornus florida	white dogwood
Cornus mas	Cornelian cherry dogwood
Cornus racemosa	grey dogwood
Cotinus coggygria	smoketree
Crataegus phaenopyrum	hawthorn
Gleditsia triancanthos	locust
Juglans nigra	black walnut
Liriodendron tulipifera	tulip poplar
Liquidambar styraciflua	sweet gum
Magnolia grandifolia	magnolia
Malus spp.	crabapples
Malus x 'Strawberry Parfait'	'Strawberry Parfait' crabapple
Malus hupehensis 'Cornell'	Cornell variety crabapple
Pinus strobus	eastern white pine
Populus deltoides	cottonwood
Platanus occidentalis	sycamore
Pseudotsuga menziesii	Douglas fir
Pyrus calleryana	Bradford pear
Quercus alba	white oak
Quercus rubra	red oak
Spiraca ripponica 'Snowmound'	snowmound spirea
Taxodium distichum	bald cypress
Tilia americana	American linden
Tilia cordata 'Greenspire'	Greenspire linden
Tilia x euchlora 'Laurelhurst'	Laurelhurst Crimean linden
Tilia vulgaris	linden
Ulmus americana	American elm

Shrubs and Perennials

Asarum canadense	evergreen wild ginger
Berberis thunbergii	barberry
Brassicaceae	mustard family

Cuscuta gronovii	dodder
Cephalanthus occidentalis	buttonbush
Dryopteris marginalis	evergreen shield fern
Ilex cornuta	small-leaf holly
Ilex crenata 'Microphylla'	box-leaved holly
Iris cristata	dwarf crested iris
Juniper chinensis	Chinese juniper
Juniperus chinensis 'pfitzeriana'	Pfitzer juniper
Juniperus chinensis 'Sargentii'	Sargent juniper
Juniprus horizontalis 'plumosa'	creeping juniper
Hypericum frondosum	Saint Johnswort
Ligustrum lucidum	glossy privet
Lindera benzoin	spicebush
Phlox subulata	creeping phlox
Polystichum acrostichoides	Christmas fern
Pyracantha coccinea	pyracantha
Rumex spp.	sheep sorrel
Taxus cuspidata 'Capitata'	'Capitata' Japanese yew
Taxus cuspidata 'Nana'	Japanese yew
Taxus spp.	yew
Viburnum carlesii	viburnum

Appendix C – Finding of No Significant Impact

Finding of No Significant Impact

George Rogers Clark National Historical Park
Vincennes, Indiana

Introduction and Background
The National Park Service (NPS) has prepared a combined Cultural Landscape Report (CLR) with an environmental assessment (EA) that evaluates the impact and guides the treatment and use of the aboveground resources associated with the historic area at George Rogers Clark National Historical Park (GERO). The report will serve as a guide for future development, improvements, and management of the cultural landscape resources at GERO.

Park History
During the period from 1732-1790, Vincennes, Indiana was a strategic trading location for the French. Subsequent struggle for control of this area by French, British, and American interests eventually led to the expansion of the United States into the Northwest Territory. Military efforts at Fort Sackville in Vincennes by Lt. Col. George Rogers Clark were pivotal in securing the Northwest Territory for American interests. By the 1850s, the city had become home to a river port and rail crossroad. By 1920, the town's population reached approximately 17,000 people. From 1925 to 1939, a commission was established to find an appropriate way to commemorate the five heroic efforts of George Rogers Clark at Fort Sackville. A competition for a Memorial Building design ensued. In 1927, the state of Indiana created the George Rogers Clark Memorial Commission (GRCMC). The first large tract of land was acquired for the memorial site in January of 1928. President Coolidge signed into law the public resolution establishing a national commission and appropriating funding for the memorial project, and in March of 1929 plans for the Lincoln Memorial Bridge were approved. The GRCMC then appointed William E. Parsons of Barnett, Parsons and Frost as Architectural Advisor in the competition for the design of the memorial structure in April, 1929. The Indiana Department of Conservation maintained ownership of the park from 1940 until 1966. During this period, repairs were made on several of the site features and a variety of individual memorials and plaques were placed throughout the site. In July of 1966, the Memorial Building and Memorial became property of the National Park Service when President Johnson signed into law the measure establishing George Rogers Clark National Historical Park.

The purpose of the park is to honor the actions of Lt. Col. George Rogers Clark and his frontiersmen who captured Fort Sackville (believed to be located on this site) from British Lt. Governor Henry Hamilton and his soldiers. The march of Clark's men from Kaskaskia on the Mississippi River in mid-winter and the subsequent victory over the British remains one of the greatest feats of the American Revolution and contributed to the establishment of the Northwest Territory. None of the site features present during this period exist at GERO today. Instead, these actions are memorialized through the existing cultural landscape features.

Congress established the George Rogers Clark Sesquicentennial Commission (GRCSC) "for the purpose of designing and constructing at or near the site of Fort Sackville, in the city of

Vincennes, Ind., a permanent memorial, commemorating the winning of the Old Northwest and the achievements of George Rogers Clark and his associates in the War of the American Revolution." The GRCSC instituted a competition for a design of this Memorial Building and chose F.C. Hirons as its designer. Implementation of his design and the accompanying site and landscape plan by William E. Parsons commenced in 1931 with the razing of several structures present on the Memorial site. The Lincoln Memorial Bridge was completed and dedicated in 1933. While the Memorial Building was completed during this same year, completion of the surrounding grounds continued in the three years following, with the initial installation of landscape features and plantings occurring in 1934. On June 14, 1936, President Franklin D. Roosevelt dedicated The George Rogers Clark Memorial.

GERO was first listed on the National Register in 1966 when the park became part of the NPS. Cultural landscape resources associated with the Memorial Grounds were initially listed in the National Register of Historic Places under a nomination that was accepted by the Keeper of the National Register in 1976 (nomination form completed in 1975) with an updated nomination being completed by NPS in 1985. Contributing resources include the Memorial Building, the Floodwall, the Lincoln Memorial Bridge Approach and Terraces, and a variety of historical markers, memorials, and statues scattered throughout the site. Walkways and vegetation also contribute to the significance of the cultural landscape.

Preferred Alternative

The Preferred Alternative for the GERO site is Treatment Alternative 2. The preferred alternative aims to present GERO as it existed during the Memorial Era period of significance (1929-1936). This period of significance represents the completed Memorial Building and Memorial Grounds as envisioned by the designers. The overall treatment philosophy would be rehabilitation, with preservation and new construction applied to selected elements. Critical needs of the site such as the repair of the Floodwall and rehabilitation of the Memorial Terrace would be resolved in this alternative and additional rehabilitation needs throughout the site would be addressed as well.

Some elements of the envisioned grounds such as the allée of linden trees in the Mall and the Boulevard were never successfully implemented; they played an important role in the original design intent. To more accurately convey the original design intent of the Memorial Grounds, an overall management philosophy of rehabilitation would be applied to the Memorial Grounds. This alternative includes three proposed management zones including: 1) *Historic Resource Management and Interpretation Zone* 2) *Natural Resource Management Zone* and 3) *Park Operations and Visitor Orientation Zone*.

The purpose of this recommended treatment is to rehabilitate the elements at GERO, which were constructed during the Memorial Era period of Significance.

The *Historic Resource Management and Interpretation Zone* includes the area planned and implemented according to the William E. Parsons site plan. This includes the Memorial Building, Floodwall, Lincoln Memorial Bridge Approach, South and North Terraces, the Plaza, Mall, Barnett Street Sidewalk, and various greenspaces on the north side of the Park.

The *Natural Resource Management Zone* includes several areas that accommodate support activities for the Spirit of Vincennes Rendezvous grounds. These areas also provide a vegetated backdrop for the Memorial Building, which contributes to the integrity of the site's setting. Areas within this zone include the riverbank, levee and grassy open area adjacent to the parking lot. These areas were not part of the original design for the Memorial Grounds, however they play an important role on the site for support activities (such as picnicking for school groups, hosting activities for Rendezvous attendees who camp nearby, and buffering from adjacent uses.) These areas should be maintained much as they currently are. Lawn areas should be mown regularly and trees should be pruned as necessary. Anti-erosion devices implemented along the riverbank should be maintained to prevent further degradation of this area. A multi-use path should be installed in this area to create a connection between the proposed Vincennes Riverwalk and the western portion of the site.

The *Park Operations and Visitor Orientation Zone* includes the Visitor Center and Maintenance Area. Additional buffer plantings would be added to the area between the Memorial Building and the Visitor parking lot in this scheme to make the Visitor Orientation Zone less obtrusive to the Memorial Building. Improved bus circulation is desired by visitors and should be accommodated in this scheme. A planted buffer with a sidewalk should remain between the street and the reconfigured parking lot.

The CLR/EA considered two other alternatives:

- Alternative 1: No Action Alternative
- Alternative 3: Rehabilitation B

No Action Alternative – The GERO would continue to be managed as it is currently and no new policies would be implemented. The George Rogers Clark Memorial Building and its Memorial Grounds are currently managed as an interpretive area. The Visitor Center contains orientation materials and interpretation of the Military period of significance (1779-1815). Visitors approach the site either from the downtown business district or from the Visitor Center parking lot and move through the site unguided. Maintenance procedures at the park would be unchanged from current practices with the maintenance facility serving as a hub for these activities. The plant materials on the site would be maintained as they are currently with in-kind replacement as they decline. Sidewalks in locations original to the initial installation of the Memorial Grounds would be replaced on an as needed basis with materials as specified in the original landscape plan. Sites of significance within the Memorial Grounds are demarcated with plaques and historic markers. Various other memorials are scattered throughout the site. Lighting on the site would remain in its current condition. Street lamps placed throughout the historic area of the site would continue to act as the only pathway lighting and down-lighting from the Memorial Building parapet would highlight this structure

Alternative 3: Rehabilitation B– The purpose of this treatment alternative is to protect and interpret existing historic resources while returning the visitor experience to the original intent of the William E. Parsons design for the Memorial Grounds as fully as possible. The overall treatment philosophy would be rehabilitation with preservation applied to selected elements.

New construction would be necessary in several areas to support visitor activities. The Visitor Center would be relocated to another site adjacent to the park, and the current building would be demolished. Interpretation of the Fort Sackville location would be enhanced (this would require further archeological investigation). Elements on the site in critical need of repair would be restored or rehabilitated. Pedestrian circulation and connections would be improved. The visitor experience and approach to the site would return to the original design intent. This alternative includes two proposed management zones including: 1) Historic Resource Management and Interpretation Zone and 2) Park Maintenance Zone.

Environmentally Preferred Alternative

The environmentally preferred alternative is determined by applying the criteria suggested in the National Environmental Policy Act of 1969 (NEPA, 42 U.S.C.A. § 4321 et seq., Public Law 91-190 (1970)), which is guided by the Council on Environmental Quality (CEQ). The CEQ provides direction that "[the] environmentally preferable [alternative] is the alternative that will promote the national environmental policy as expressed in NEPA's Section 101:

- Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations.
- Ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings.
- Attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences.
- Preserve important historic, cultural, and natural aspects of our heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice.
- Achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities.
- Enhance the quality of renewable resources and approach the maximum attainable recycling of delectable resources (40 CFR § 1500 et seq.).

Alternative 2 Rehabilitation A is the environmentally preferred alternative because it provides the most long-term benefits to the environment and minimizes potential impacts to architectural and cultural resources. Under this alternative, visitors to the site would continue to be oriented in the Visitor Center and then tour the site utilizing the current circulation network. However, these uses would be screened from view of the Memorial Building and Memorial Grounds with the installation of additional vegetation. The greenspace northeast of the Visitor Center would be rehabilitated to reflect the original design intent of the Parsons plan creating a visual buffer of the Visitor Center from the Memorial Grounds. Parking areas would be buffered with additional plantings implemented from the original palette for the grounds. The maintenance of Visitor Center and parking lot in their current configuration with the additional visual buffering has a long-term, moderate, and beneficial impact on the site.

Why the Preferred Alternative Will Not Have a Significant Effect on the Human Environment

The preferred alterative would not have a significant impact on the natural and cultural environment or the socioeconomic resources of the park. The Fish and Wildlife Service, Bloomington Field Office reviewed the environmental assessment and provided a memorandum dated May 8, 2006 in which they concur with the National Park Service assessment that there would be no significant impacts to federally endangered or threatened species due to this project. The intensity or severity of impacts resulting from implementation of the Preferred Alternative is evaluated using the ten (10) criteria listed in 40 CFR 1508.27. Key areas in which impacts were evaluated included: cultural resources, archeological resources, wildlife and threatened/endangered species, visitor use and experience, lightscape management, and utilities.

1. *Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal Agency believes that on balance the effect will be beneficial.*

Treatment Alternative 2 would have a long-term, moderate, and beneficial impact to cultural resources following the rehabilitation of the historic structures, vegetation and circulation routes on the site. A short-term, minor and adverse impact would occur only during the construction efforts to rehabilitate these items. There would be no major adverse impacts to the cultural resources on the site. The changes would improve the overall integrity and condition of the property's contributing features.

2. *The degree to which the proposed action affects public health and safety.*

Improved pedestrian circulation would occur in Treatment Alternative 2. Areas within the *Historic Resource Management and Interpretive Zone* would be clearly delineated by changes in pavement type from those in the *Park Operations & Visitor Orientation Zone*. This delineation will allow visitors to more easily distinguish areas that were originally part of the Memorial Grounds. Visitors may be frustrated during construction periods as existing routes along sidewalks are detoured. The effect of construction efforts would be short-term, moderate, and adverse. However, these improvements will result in a long-term, moderate, and beneficial impact.

The railroad tracks running along the western perimeter of the park have been a safety concern for the park since its inception. The recommendation to remove the railroad tracks once they are obsolete will provide a safer and universal access to the Vigo Statue and the future Riverwalk Bicycle and Pedestrian Walkway System, an Indiana Department of Transportation project, which will run parallel to the river connecting historic sites along a continuous bicycle/pedestrian route. The removal of these tracks would help fulfill the original design intent for the Memorial. Pedestrian connections and universal access across this area of the park is essential to tie into the proposed Vincennes Riverwalk.

The report recommends that the Visitor Center parking lot be reconfigured to allow for bus traffic to move more easily into the lot. One potential method for enhancing the parking lot for buses is to slightly modify the current footprint of the lot. Additional parking lot lighting would deter nighttime activity in the parking lot. It is recommended that this be achieved with lighting

provided by bollard lights placed throughout the parking lot. A lighting engineer would design the lighting plan for this area to light only the parking surface. Any additional parking lot lighting should not significantly increase lighting levels throughout the park.

3. *Unique characteristics of the geographic area such as proximity to historic or cultural resources, wild and scenic rivers, ecologically critical area, wetlands or floodplains, park lands, and so forth.*

The preferred alternative does not negatively impact any known historic or cultural resources. George Rogers Clark Memorial Park lies on the banks of the Wabash River, with a view of Illinois across the river. The park's location along the Wabash River contributes to its scenic quality. The park is also located adjacent to downtown Vincennes and St. Francis Xavier Catholic Church. Vincennes contains a number of historic and historical sites including Grouseland, the home of Territorial Governor and later President of the United States William Henry Harrison, as well as the Indiana Territory State Historic Site, which includes buildings dating from the area's territorial period. In addition, George Rogers Clark Memorial Park is located along the Lincoln Heritage Trail, which marks the passage of Abraham Lincoln and his family from Kentucky through Indiana to Illinois.

4. *The degree to which the impacts on the quality of the human environment are likely to be highly controversial.*

There were no highly controversial effects on the quality of the human environment identified during either preparation of the EA or the public review period.

5. *Degree to which the potential impacts on the quality of the human environment is highly uncertain or involves unique or unknown risks.*

Although it is highly unlikely, the repair of the Memorial Terrace could unearth archeological artifacts. None of the proposed alterations would be below the stratum of fill that was imported on the site during the initial Memorial construction. Consequently, potential archaeological sites would be located below the project area or outside of the project area bounds. Replacement of sidewalk areas and implementation of new plant materials may reveal similar debris. Should resources be encountered during construction, however, activities would stop while appropriate studies are conducted.

6. *Degree to which the action may establish a precedent for future actions with significant effects, or represents a decision in principle about a future consideration.*

The proposed actions of the Preferred Alternative are within the guidelines set by the park's original *General Management Plan* (GMP) prepared in 1967. This plan identifies three major issues for improvement: (1) the condition of the Memorial; (2) exterior and grounds lighting; and (3) visitor use. A *Historic Structures Report* (HSR) for the Memorial was prepared in 1977. This report summarizes the sequence of construction and development of the Memorial Building and Memorial Grounds at GERO. Other planning documents include a *Resource Management Plan* (RMP) and *EA* completed in 1981. These documents address needed repairs to the Memorial Building and the condition of the Floodwall and riverbank erosion.

The intent of this combined Cultural Landscape Report and Environmental Assessment (CLR/EA) is to guide treatment and use of the aboveground resources associated with the historic area at George Rogers Clark National Historic Park. The previous documents, along with research conducted as part of this CLR/EA, have helped to guide the development of treatment alternatives and the analysis of their potential impacts.

7. *Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.*

Cumulative impacts were determined by combining the impacts of the preferred alternative with other past, present and reasonably foreseeable future actions. Four related actions were identified: The General Management Plan (1967), the Historic Structures Report (1977), the Resource Management Plan/EA (1981), and the Cultural Landscape Report, developed as a thesis project in 1995. Cumulatively, implementation for the preferred alternative of the CLR/EA and any or all of the other actions is expected to enhance the cultural landscape and built resources by improving condition and integrity, specifically those related to circulation patterns, spatial organization, and historic views.

8. *The degree to which the action may adversely affect historic districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places, or may cause loss or destruction of significant scientific, cultural, or historical resources.*

The George Rogers Clark National Historical Park is listed on the National Register of Historic Places. It is located adjacent to the downtown Vincennes and St. Francis Xavier Catholic Church. The Preferred Alternative would improve the overall integrity of the park by restoring missing pieces of the cultural landscape. Indiana State Historic Preservation Office (IN SHPO) and GERO signed a Memorandum of Agreement, dated June --, 2007, that states that while it is unlikely that archeological resources will be impacted by the preferred alternative, that possibility does exist. As the preferred alternative is implemented, the NPS will consult with the IN SHPO. The IN SHPO agrees that the CLR/EA will serve the park well as it continues to assess, plan, preserve and interpret the site and its resources.

9. *The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the endangered Species Act of 1973.*

The U.S. Fish and Wildlife Service reviewed the project proposal and stated in a letter dated May 8, 2006 that the proposed project will not affect any federally endangered species. There were no objections to the project as proposed.

10. *Whether the action threatens a violation of Federal, state, or local law or requirements imposed for the protection of the environment.*

The preferred alternative violates no federal, state, or local law, including environmental protection laws. Proper consultation with the Indiana Department of Natural Resources has been completed.

Public Involvement

Two public open houses were held on October 13, 2005 at the following locations: Vincennes City Hall and the George Rogers Clark Visitor Center. The Cultural Landscape Report/Environmental Assessment was made available for public review and comment during a 30-day period ending March 30, 2006. The combined report was made available at the park's visitor center, the Knox County Public Library and Vincennes City Hall. The report was also available to download electronically from the National Park Services' Planning, Environment and Public Comment web page. Additionally, the report was sent to a list of park neighbors and National Park Service site managers. One set of hand written comments was received during the 30-day public review period. They included suggestions on clarifying the document and requests for further information. Comments that improved the quality of the narrative were accommodated in the document following the public review; others that were beyond the scope of the project or did not result in improved quality were not accommodated.

Impairment

In addition to reviewing the list of significance criteria, the NPS has determined that implementation of the proposal will not constitute impairment to the critical resources and values of GERO. This conclusion is based on a thorough analysis of the environmental impacts described in the CLR/EA, public comment, and the professional judgment of the decision-maker guided by the direction in NPS Management Policies. The Preferred Alternative would not result in any major, adverse impacts on environmental or cultural resources. Overall, the Preferred Alternative results in benefits to the park resources and opportunities for enjoyment; it does not result in impairment. A short-term, minor, and adverse impact would occur only during the construction efforts to rehabilitate the floodwall and terrace. There would be no major, adverse impacts to the cultural resources on the site. The changes would improve the overall integrity of the contributing features to GERO, which is listed on the National Register of Historic Places.

The *National Park Service Management Policies* (NPS, 2001a) requires analysis of potential effects to determine whether or not actions would impair park resources or values. The fundamental purpose of the NPS, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. NPS managers must always seek ways to avoid, or minimize to the greatest degree practicable, adverse impacts to park resources and values. However, the laws do give the National Park Service management discretion to allow certain impacts. That discretion is limited by the statutory requirement that NPS must leave park resources and values unimpaired, which the preferred alternative achieves. The impacts of the two potentially funded projects, the rehabilitation of the Memorial Terrace and Floodwall, were not evaluated in this EA. The impacts associated with these projects are covered by Categorical Exclusion.

Finding of No Significant Impact and No Impairment

Finding of No Significant Impact and No Impairment Based on my review of the facts and analysis contained in this Cultural Landscape Report/Environmental Assessment, which is incorporated herein, I conclude that the Preferred Alternative for the George Rogers Clark National Historical Park in Vincennes, Indiana would not have a significant impact on the human environment either by itself or considering cumulative impacts. Accordingly, the requirements of the National Environmental Policy Act, regulations promulgated by the President's Council on Environmental Quality, and provisions of National Park Service (NPS) Director's Order-12 and Handbook (Conservation Planning and Environmental Impact Analysis and Decision-Making) have been fulfilled. Furthermore, the Preferred Alternative selected for implementation would not impair park resources or values and would not violate the NPS Organic Act. The Preferred alternative does not constitute an action that normally requires preparation of an environmental impact statement and one will not be prepared. (EIS). The Preferred Alternative will not have a significant effect on the human environment and negative environmental impacts that could occur are primarily minor in intensity. In addition, the Preferred Alternative supports the enabling legislation establishing George Rogers Clark National Historical Park with the intended purpose of preserving the scenic, recreational, fish and wildlife, historic, cultural, and other values associated with the park for future generations.

Recommended: Dale K. Phillips — Superintendent George Rogers Clark National Historical Park — 7/6/07 Date

Approved: Ernest Quintana — Midwest Regional Director — 7-17-2007 Date

MITIGATIVE ACTIONS

RESOURCE OR ISSUE AREA	MITIGATION
Site geology and soils	Site-specific best management practices (BMPs) will be used for erosion and sediment control. These BMPs will possibly include but not be limited to minimal soil disturbance; using silt fences and straw bales; and using fast-growing grasses or other vegetation to cover temporarily stockpiled soil. Monitoring and maintenance of all erosion control devices would occur throughout the duration of the project. No additional impervious surfaces would be added to the project area.
Visitor use and experience	Short-term temporary access to the Memorial Building would be necessary during repairs to the Memorial Terrace. To prevent denial of access to the building by visitors, the Terrace would be replaced in phases, working around the building to allow a path of access into the structure for the maximum time possible during the duration of the construction project.
Archeological resources	Potential damage to the archeological sites is expected to be minimal. Mitigative actions for archeology are outlined in the Memorandum of Agreement with the Indiana State Historic Preservation Office.