FORT NEGLEY MASTER PLAN

for

METROPOLITAN GOVERNMENT
OF
NASHVILLE AND DAVIDSON COUNTY, TENNESSEE

November 1996

HICKERSON FOWLKES, INC., ARCHITECTS

with

THE OFFICE OF MICHAEL EMRICK, AIA

HAWKINS PARTNERS, INC.

ZADA L. LAW, Consulting Archaeologist

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General James S. Negley

Tennessee State Library and Archives

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Table of Contents

Table of Contents - continued

Table of Contents - continued

FORT NEGLEY MASTER PLAN

List of Figures

FORT NEGLEY MASTER PLAN

Executive Summary

Fort Negley appears to be the only stone fortification erected specifically for use during the Civil War. Completed by Union forces in 1864, Fort Negley was the centerpiece of a complex of mutually supportive fortifications erected for the defense of Nashville. It was intended to serve as the military planning and administrative headquarters for the "domination of the Trans-Appalachian Confederacy and as springboard for the final Union assault in Georgia and the Carolinas."

Several factors have resulted in the development of this Master Plan for Fort Negley. The fort is a fragile dry stacked stone structure atop one of the highest hills in Nashville. "Reconstructed" by the WPA sixty years after the Civil War, it is now in an advanced state of deterioration which, if left unchecked, will result in a "lost resource" because of numerous locations for imminent additional structural failure. Also, the interest in Civil War sites has dramatically increased since the late-1980s. Already established is a partnering of the counties south of Nashville to encourage Civil War tourism in those areas. Finally, the Mayor and Metro Council have made available $450,000 for the preparation of this Master Plan and the initial stabilization of the fort itself.

This Master Plan Report on Fort Negley is organized in six major sections: Introduction, Archaeology, Architecture, Site, Administrative Issues, and Recommendations/ Project Phasing. The three initially defined and interdisciplinary "working" areas of archaeology, architecture, and site, tackle the fort by considering its condition and situation from their particular vantage points. During the course of the project each of these three areas found itself grappling with its impact on or how it was impacted by specific issues outside of but relating to all three areas. As a result, these issues were gathered together and organized into a fourth major "working" section entitled "Administrative Issues." The final major section of the Master Plan presents the overall list of recommendations grouped by phase and within each phase by major area.

Section 1.0
Introduction

The Introduction considers Fort Negley and its significance, as well as enumerating the various planning goals and objectives previously outlined in the "Report to Mayor Phil Bredesen from the Fort Negley Advisory Committee." Important to the Master Plan were the goals of increased "heritage tourism," the preservation of the fort for future generations, and using the fort to interpret the story of Nashville during the Civil War. This section concludes with a presentation of various issues and opportunitites revolving around the Fort Negley site, both positive and negative and on site or off. While these are more fully developed in later sections of the Master Plan, outlined are the various planning issues and future work needs at Fort Negley.

Section 2.0
Archaeology

Archaeology and the significant role it will play in the future of Fort Negley was initially well-defined in the introductory section by the Advisory Committee where its most important task was defined to be "to maintain the archaeological integrity of the site." It is basically assumed that archaeological investigations relating to stabilization work or by and of themselves as a component of a larger research plan can be a

valuable tool in uncovering and interpreting information from both the Civil War and WPA-eras. An important component of archaeology, as well as for architecture, is the need to continue on with archival research for both periods to guide the development of archaeological research questions and provide a sound basis for determining a "restoration" period or state for the fort. Recommendations in this section of the Master Plan define and propose research plans, site monitoring and physical investigations; the curation of artifacts and project materials; and the role of archaeology in site and fort stabilization and enhancement.

Section 3.0
Architecture

Architecture necessarily concerns itself with the existing physical condition if the fort and the definition of a methodology for and phasing of the required stabilization of the fort's stonework. Easily recognized are two varying types of stonework at the fort, clearly distinguising Civil War period work from WPA-era reconstruction. What is not clear is how much "repair" was completed by the WPA "in the style" of the Civil War stonework. Because of this, and the lack of available documentation on the WPA-era work, the plan proposed in this section assumes the final result is to be the stabilization and repair of the fort stonework as it exists today, without any alterations or reconstruction relating to either period being proposed. Clearly, immediate stabilization is required, in the form of temporary bracing and shoring to prevent further, costly to repair damage. The "levels of intervention" proposed, their phasing, and the general approach for each level of intervention are the focus of this section.

Section 4.0
Site

Site investigations include an inventory of the various components and characteristics of the site - soils, vegetation, drainage and erosion, landform and topography and various man-made features on the site and their impact on the site and the fort. The site analysis revealed the relatively unstable soils condition under the fort, probably a major factor in the substantial reconstruction work undertaken by the WPA and now the focus of this Master Plan. Analysis focusses on site stabilization, the impact of various site components on the physical fort, and the impact of various man-made components on both the site and the fort, culminating in a site management plan with design guidelines and recommendations.

Section 5.0
Administrative Issues

The added "working" section of the Master Plan develops the various administrative issues noted, uncovered, discovered, and tripped over during the development of initial sections on archaeology, architecture, and site. Six particular areas were noted: regulatory protection, lease agreement revisions, a variety of "site" issues, archival research, interpretation, and general administration and support. Regulatory protection identified the need for a Metro ordinance to protect the site from relic collectors as well as to have the site listed on the state archaeological register and the need to provide restrictive (warning) signage around the site. The two major site "tenants" - the Cumberland Science Museum and Greer Stadium - have somewhat vague lease provisions or specific lease provisions that can potentially negatively impact the Fort Negley resource. As such, several revisions have been recommended.

The site issues involve recommendations for a new site survey, the on-going stone monitoring at the fort, improved security patrolling, completion of perimeter fencing, the addition of gates and possible closure of Fort Negley Blvd., and additional land acquisition. Recommendations under archival research include a "status" report as well as future "avenues" of research to be considered. A variety of recommendations

were provided under Interpretation and involved both the interpretation of the site as well as alternatives for an intepretive center on the site. Finally administration and support provides recommendations for the establishing of a technical advisory committee, a non-profit "friends" support group, the seeking of grants and the development of internet visibility.

Section 6.0 Recommendations/ Project Phasing

The final section presenting the overall list of recommendations and project phasing has the Fort Negley Master Plan divided into five distinct phases - an immediate phase with respect to short-term stabilization of the fort stonework, three distinct phases of fort and site repair and development, and a long-range phase that addresses continuing research, larger scale site interpretation and dedvelopment, and the possibility of reconstructing missing fort components.

Summary

It is important to note that the Master Plan does not forsee the Fort Negley Park reopening to the general public until the completion of the work outlined in Phase Two, when the fort is sufficiently repaired to allow safe access. Also, cost estimates are provided through Phase Two of the Master Plan. After that, due to the amount of time involved in the preceeding phases as well as the range of planning and decision-making that will take place in those phases, this will influence the programming and definition of work scopes for the various items making it difficult to develop cost estimates without actually defining a program and scope of work to price, something not within the scope of this Master Plan.

As this Master Plan has had to make use of information already available on the fort and its past history, this information was not sufficient with respect to determining the extent to which original Civil War-era components survived and were merely repaired or the extent to which the WPA completely reconstructed components of the fort. Not having the benefit of WPA-era archival information and having only a preliminary archaeological investigation of the site, for the purposes of this Master Plan it has been necessary to focus on the repairs necessary to stabilize and restore the deteriorated stone components of the fort as they currently exist.

With respect to the "reconstruction" of missing components of the fort, as proposed by the Mayor's Advisory Committee, this Master Plan does not philosophically or practically make a recommendation for such reconstruction. And, in light of the significance of the WPA-era reconstruction work, until sufficient documentary information (through further archival research and archaeological investigations) can be discovered for these components and the actual extent and form of the original Civil War-era fort, the issue of "reconstruction" of Fort Negley to an "assumed" Civil War design cannot be recommended.

Acknowledgement

The Master Plan team members would like to express their gratitude to Ann Reynolds and Curt Garrigan of the Metro Historical Commission and to Lallie Richter and Tim Netsch of the Metro Board of Parks and Recreation for their time and assistance in the preparation of this document. Their interest and devotion were crucial in developing the parameters for the stabilization and development of Fort Negley Park and to help realize the potential for this nationally important site.

--Jim Thompson, Zada Law, Gary Hawkins and Michael Emrick

1.0
INTRODUCTION

1.0 INTRODUCTION

1.1 FORT NEGLEY AND ITS SIGNIFICANCE

1.1.1 Nashville and the Civil War

Established in 1843 as the state capital, Nashville had become a thriving cultural, political, mercantile and manufacturing city by the time of Tennessee's secession in 1861 and the onset of the Civil War. Nashville had also become the most important arsenal and storehouse for the Confederacy in the Western Theater because of its riverboat trade, macadamized turnpikes, and rail lines (five radiating out from the city). The largest powder mill in the South supplied garrisons as far away as Mobile and New Orleans (PCI, 1994:6). By the Fall of 1861, local ordnance plants were turning out 100,000 percussion caps per day (Adams and Christian, 1980:31-32).

The strategy of the Union Army was split into four key campaigns, one of which included an offensive through middle and east Tennessee and then along the Chattanooga-Atlanta axis to cut the South's best east-west railroad, and to deny the Confederates Tennessee's resources. Believing that Nashville was inadequately equipped to defend itself, the Union Army quickly moved on the city. Realizing that Nashville would be burned or destroyed, the city fathers decided to surrender.

Confederate General Nathan Bedford Forrest arrived on February 18, 1862, charged with the task of withdrawal. Union General Buell arrived in Edgefield on February 23 and the next morning the mayor of Nashville crossed the river and surrendered the city peacefully. Federal troops entered Nashville on February 25, 1862 (Horn, 1941:99ff; Jordan and Pryor, 1973:104; Lovett, 1982:3).

Senator Andrew Johnson was appointed Military Governor of Tennessee in March 1862 and was concerned about protecting Nashville. He immediately began to pressure Secretary of War Edward Stanton to fortify Nashville (Lovett, 1982:3-4) and his request was recognized five months later.

1.1.2 Fortifications for the Defense of Nashville

As General Buell was to pull out all but 6,000 troops from Nashville in the late summer of 1862, he realized that this would leave the city vastly undermanned. Buell ordered Captain James St. Clair Morton, a West Point graduate, to "go at once to Nashville and select sites and give plans and instructions for redoubts to protect the city" (Scott, 1886, Vol. 16:268, 269). Morton commanded the Pioneer Brigade, which was equipped to move in advance of the army in order to prepare or repair bridges, fortifications, railroads and roads (Lovett, 1982:7). His instructions were that the fortifications "must all be practical and as simple as possible in the beginning, so that they can be constructed with the greatest promptness and occupied immediately" (Scott, 1886, Vol. 16:268).

Morton's defensive strategy greatly exceeded the scope of Buell's original order. At the core of his elaborate system would be three large forts: Fort Negley, Fort Morton and Fort Houston. West of Negley and south of Morton was Blockhouse Casino, protected

by both forts. Also, earth parapets and log stockades were constructed around the capitol building. Morton continued to supervise the construction of redoubts at Nashville until 1864, when he was reassigned to Washington.

On August 6, 1862, an order was issued contracting the work of local men and slaves in the work on Nashville's defenses. The use of blacks in this role set a precedent that was eventually expanded to involve African-Americans in virtually every facet of the Union war effort (McPherson, 1965).

With Morton's reassignment, the direction of the remaining construction was left to General Z.B. Tower. His initial reports were that the Nashville defenses were not pushed forward as much as they should have been and that "the forts as planned were entirely too large to be speedily built" (Scott 1892, Vol. 39:193). Tower's ordered revisions intended to expedite the completion of the city's defenses. Forts Morton and Houston were scaled down, and Fort Negley, essentially completed by October 1864, was to be strengthened by the addition of an interior double-cased blockhouse with a parapet on the top as well as by placement of additional obstacles to the gun placements (Scott, 1892, Vol. 39:193). As Hood's approach drew nearer to Nashville, General Tower commandeered all the quartermaster and railroad department men and impressed slaves into service.

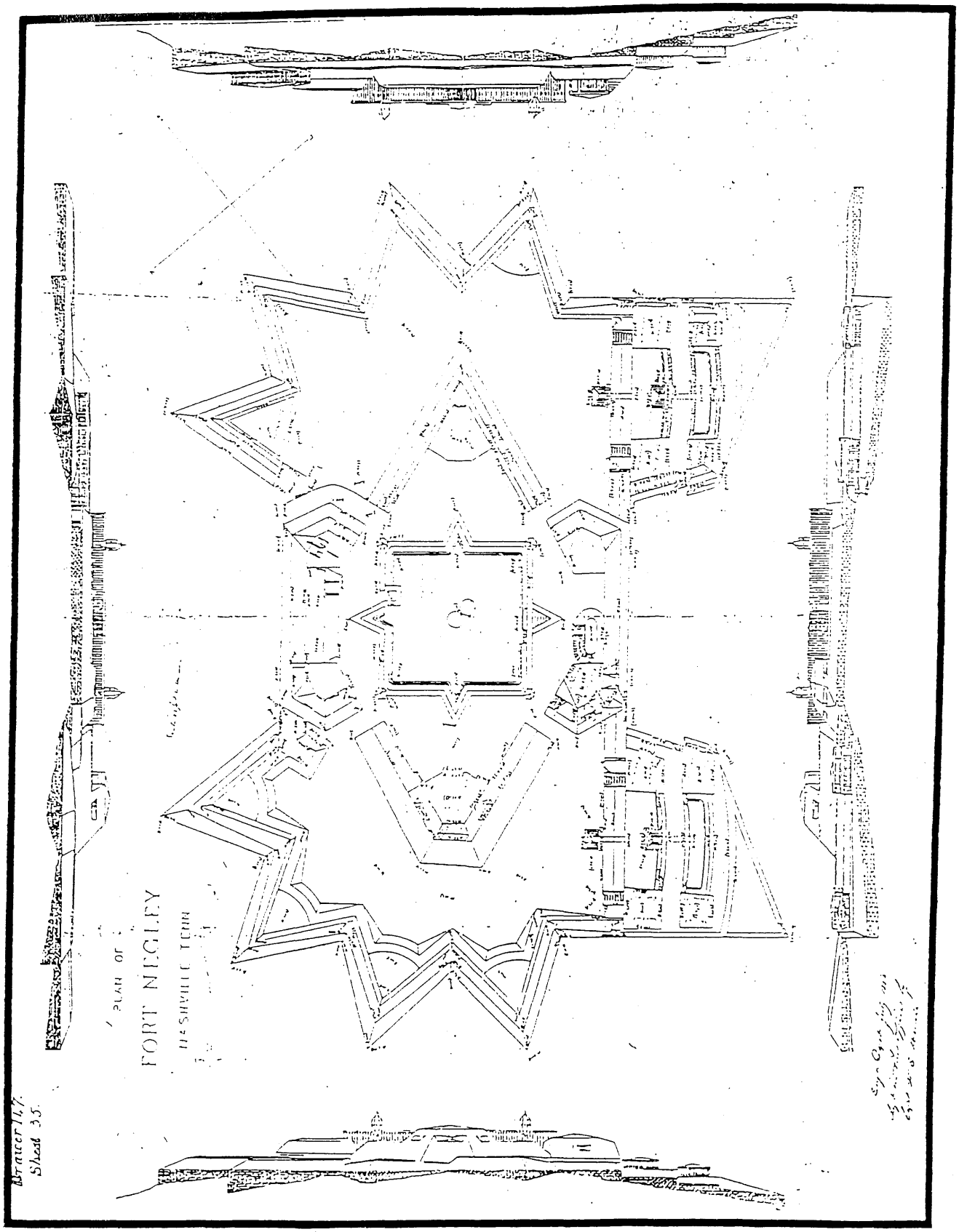
Tower pushed the completion of the forts already underway and reinforcement of existing works, beginning a number of smaller works to sustain a double line of breastworks connecting the forts. This provided both inner and outer lines of defense around the city (Horn, 1978:26-27). The overall fortification of Nashville was built at a cost of approximately $300,000 and included a ring of 23 forts, redoubts and fortified bridges (Lovett, 1982:18).

1.1.3 The Design of Fort Negley

In general, military fortifications erected during the Civil War were largely constructed of dirt from the particular site and available timber. Fort Negley appears to be the only stone fortification erected specifically for use during the Civil War, although earlier masonry fortifications on the coast were reused during the war. As such, it is a unique structure, being the largest inland masonry fortification constructed during the Civil War.

General Morton, a West Point-trained civil engineer, was probably the most highly regarded fortification architect of his time. He advanced the theories of his mentor, D.H. Mahan (who published in 1836 *A Complete Treatise on Field Fortification*, the most important work on this topic before the Civil War). With Fort Rosecrans (the central supply depot for the army), these forts were the centerpieces of a Union Army chain of fortifications that extended from Kentucky through Tennessee into the Deep South (Huhta, 1980 report in MWL plan).

Fort Negley (named for General James S. Negley of Pennsylvania) was the centerpiece of the complex, mutually supporting fortifications erected for the defense of Nashville. As built, Fort Negley is a complex star fortification design. This design was intended to withstand lengthy sieges and massive assaults. (No information has yet come to light as to why it was such an elaborate fort was necessary and why it was constructed with stone. Future research might investigate its designer, Captain James St. Clair Morton and his intentions in the design of Fort Negley and Nashville's other fortifications.)



Plan of Fort Negley, 1864.

2 View of WPA-Era Fort Negley Restoration (1938 postcard).

The construction of the fort utilized 62,500 cubic feet of stone and 18,000 cubic yards of dirt, occupying a space of 600 by 300 feet on St. Cloud Hill (Lovett, 1982:14). $130,000 was spent on the construction of Fort Negley, including $20,000 in expansion costs for adding the interior double-cased blockhouses and entrenchments ordered by General Tower (Lovett, 1982:20).

At Fort Negley's center was a cedar post stockade 12 feet high with projecting corner turrets. The stockade was, in turn, surrounded by a rectangular redoubt made up of four groups of walls, two of which (the north and south faces) were U-shaped. To the east and west sides were V-shaped ravelins. This group of walls constituted the inner or main parapets of the fort. Outside of this area, to either side of the ravelins and connected to the north and south main works were outer parapets, each made up of four sharp salients and inverted, V-shaped redan projections. To each side and south of the main work wall were projecting terraced bastions. Previously mentioned was the addition of two casements by General Tower. Casement No. 1 was added at the west end of the west ravelin, while Casement No. 2 was located at the west end of the south main work wall.

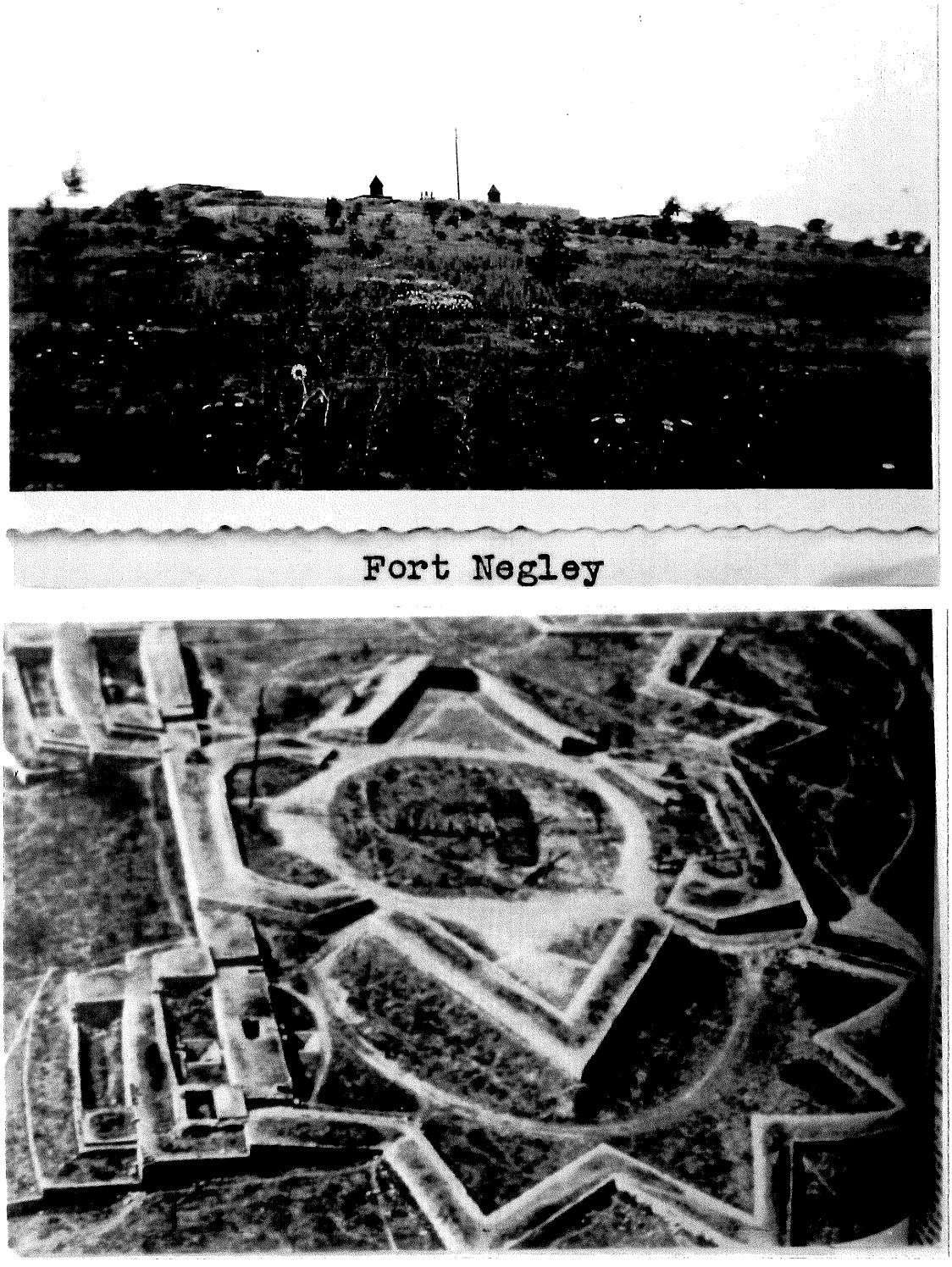
In 1865, Fort Negley was renamed Fort Harker as part of General James Negley's punishment for retreating too soon at the Battle of Chickamauga. This name was, however, never widely adopted, probably because it came into use so late in the war (Beasley, 1988). The newly rechristened fort continued to be occupied by the Union Army until 1867 when it became the secret meeting place for the Nashville Den of the Ku Klux Klan, its first non-military use (Johnson, 1946:6-7; Lovett, 1982:20). Government pressure resulted in orders from Grand Wizard Nathan Bedford Forrest for this group to disband.

With respect to the design of a star fort, Ripley (1970:247-48) indicates that it could take many forms. Intended "to correct the deficiencies of the redoubt," the design was only partially successful. He goes on to say that "if a regular polygon, 'dead' angles unprotected by fire were found at the re-enterings. The star fort also had the inherent defect that occupying the same space as a redoubt, it afforded less interior area, yet required more troops to man. It was also more difficult to construct and consequently was ignored by the engineers unless forced to it by the nature of the terrain." In that Fort Negley also utilized projecting bastions on its south face, Ripley goes on to say ""The Bastioned Fort satisfied conditions of a well-rounded defense to a greater extent than any other works, but required considerably more time and effort to construct" (Ripley, 1970:247-248).

After the war, the government sold off salvageable components, such as wood and iron from their various installations.. Following the Union withdrawal from Nashville in 1867, the wood used in the stockade and as roofing, ironwork and salvageable materials from Fort Negley were probbly sold off as part of this program (Mark Barnes, NPS, personal communication).

1.1.4 Fort Negley in the 20th Century

The purchase of Fort Negley by the city for historic purposes was proposed in 1926 by James E. Caldwell.. The probable intention was to turn the fort into a national military park. That year the Board of Park Commissioners called a special meeting to discuss the purchase of the fort from the Fargason Estate, approving a $20,000 bond issue to cover the purchase. (Board of Park Commissioners, Minutes Vol. 3:237).



3 *Top:* View of the WPA-Era Fort Negley Reconstruction. *Bottom:* Aerial view of Fort Negley after the stockade had been dismantled.

In 1934 plans for the reconstruction were initiated. Labor was to be provided by the Works Progress Administration (WPA) (Johnson, 1986:118). The first step in this process was the removal of black squatters and their houses from the hill. Accounts of the number of workers participating in the reconstruction vary from 600 to 1,150.

Plans for a national military park, apparently thwarted by Congress' rejection of a $100,000 appropriations bill, resulted in the city moving forward in 1940 to open the site as a park. A report of the Park Board secretary for January 1, 1940 through December 31, 1943 mentions that the stone for reconstruction was obtained on the site and listed a number of other features: stone entrance, roads, water system, lighting system, baseball diamonds, bleachers, comfort station, garage and storehouse (Minutes Vol. 8:222ff). While a museum facility was not mentioned at this time, it is evident on the north side of the redoubt in an aerial photograph taken around the time the park opened. Hardly four years later, in 1944, the Park Board voted to remove all wooden installations at Fort Negley due to their deteriorated condition (no specifics given as to which structures were involved) and in 1945 the park was closed to the public until repairs could be made. In late 1946 only the baseball diamonds in the park were reopened to the public.

1.2 PLANNING GOALS AND OBJECTIVES

In September 1995, the Metropolitan Government of Nashville and Davidson County (Metro) solicited proposals for "the development of a Master Plan for Fort Negley to include a phased program for site development and interpretation; infrastructure; facilities; lighting and signage; trailways and linkages; vegetation management; and capital and operational costs, for the Metropolitan Board of Parks and Recreation with the Metropolitan Historical Commission." Planning goals and objectives were established early in the development of the Master Plan to guide and focus the report.

1.2.1 Goals

The principal goal of this Master Plan is to provide a planning tool utilizing the findings and recommendations of the "Report to Mayor Phil Bredesen from the Fort Negley Advisory Committee" along with in-depth discussions with representatives from the Metro Historical Commission (MHC) and Metro Board of Parks and Recreation (MBPR) to guide the City in the development of Fort Negley Park. Additional goals include:

.1 Increasing "heritage tourism" in Nashville
.2 Preserving Fort Negley for future generations
.3 Using Fort Negley to tell the story of Nashville during the Civil War and the Western Theater

1.2.2 Objectives

Planning objectives include the preservation and interpretation of the fort site as a unique historical and cultural resource for Nashville and the region. Aspects of this include the following:

.1 Interpretation
.2 Physical Enhancement
.3 Stabilization

.4 Archaeology
.5 Linkages to Adjacent Resources
.6 Preservation of Natural Habitats
.7 Safety and Security

1.2.3
Advisory Committee and Archaeology

Specific goals and objectives were developed by the Advisory Committee with respect to archaeology:

.1 To maintain the archaeological integrity of the site
.2 To limit the impact of development and public access on archaeological deposits
.3 To base the interpretations and reconstructions on the site using archaeologically documented data
.4 To conduct all archaeological research at the site according to high technical standards
.5 To use archaeological excavations at the site as means to increase heritage tourism and enhance the visitor experience
.6 To use archaeological excavations at the site to provide an educational setting for the public to learn about social, military, and cultural history of the Civil War in Nashville

1.2.4
Planning Principles

The planning principles guiding park improvements include:

.1 Providing a safe environment for visitors to learn about the Civil War and WPA - eras in Nashville and the South, responsible and cost effective solutions for stabilization/reconstruction of the fort, and sensitive integration of new site amenities/ infrastructure
.2 Preservation and interpretation are fundamental in making Fort Negley an important and marketable part of Nashville tourism
.3 Preservation includes preserving the remnants, visible and archaeological components of the fort, and preserving the natural setting of the grounds to give the visitor a sense of becoming "a part"of the history
.4 Any development or increased access to the site should be carefully considered so as not to take away from the "sense of place" feeling or endangering the physical remains, including archaeological components
.5 Education of the visitor is important, but the basis for a memorable visit should be the interaction with the resource itself; such as "what happened where the visitor is standing," during the Civil War and more specifically during the occupation and Battle of Nashville
.6 The setting for Fort Negley is largely unspoiled and accords a significant fact from the standpoint of interpretation
.7 Importance of the WPA-era reconstruction and its role in the history of Nashville and Fort Negley

1.2.5
Planning Criteria

Planning criteria by which solutions were evaluated are as follows:

.1 Stabilization
  .1 Effect on original/historic fabric both visible and below grade

.2 Materials selections
.3 Condition after stabilization
.4 Future maintenance
.5 Costs

.2 Interpretation
.1 Locations of interpretive signage
.2 Format
.3 Construction materials
.4 Themes
.5 Methodology
.6 Costs

.3 Maintenance
.1 Vegetation control
.2 Cyclical maintenance schedules
.3 Costs

.4 Operations
.1 Budgets
.2 Long term operations - the need for the establishment of a nonprofit support organization in conjunction with Metro Board of Parks and Recreation
.3 Sovereignty
.4 Costs

.5 Archaeology
.1 Distribution, nature, and depth of archaeological deposits
.2 Research needs for interpretation and reconstruction
.3 Long term operations - the establishment of a technical advisory committee for archaeology
.4 Research project management and curation
.5 Security
.6 Costs

1.3 ISSUES AND OPPORTUNITIES

1.3.1 Community Context

.1 Existing Park Land Uses

The original property purchase for Fort Negley Park in 1928 from the John T. Fargason Estate was for 47.45 acres atop St. Cloud Hill. In the 1967 property lease for the Cumberland Science Museum, the legal language identifies that 37.20 acres of the Fort Negley Park property were leased to the museum with Greer Stadium leasing the remaining 10.25 acres. Also in this lease, it identifies that an additional 4.06 acres would be attached to the museum lease from the Edgehill Urban Renewal Project.

The Greer lease was amended in 1987 to include 6.8 acres from the Edgehill Urban Renewal Project on the east side of the park property and 1.07 acres across from the gates of the park. For the purposes of this Master Plan, the total acreage of Fort Negley Park is considered to be 59.38 acres.

The initial Cumberland Science Museum property lease in 1967 was for 50 years with one additional 50-year renewal option. The initial Greer Stadium property lease was for eleven years. Later, five ten-year renewal options were added to amended Greer Stadium leases.

In 1982, the Cumberland Museum lease was revised at the request of the musem's Executive Committee to return the majority of the Fort Negley property to the MBPR.

.1 Greer Stadium

Greer Stadium is located on 18.12 acres on the southern and eastern end of the Fort Negley Park site. Greer Stadium is the home of the Nashville Sounds Baseball club. The stadium site adjoins the fort property along the southeast and is separated from the fort property by a six-foot tall chain link fence and/or a severe change of grade where excavations have taken place to provide additional area for level stadium parking.

As Greer Stadium attracts a different clientele during different times of the day from those anticipated to visit the fort, it is unlikely that there would be a substantive relationship between a developed Fort Negley park and Greer Stadium. If agreed to by the managing ball club, the Greer parking lots could used by the fort visitor during special events such as Civil War reenactments and thereby provide another source of earned income for the ball club.

It is anticipated that the site will remain a ball field within Metro Parks and Recreation should the lease ever expire for Greer Stadium.

.2 Cumberland Science Museum

Located on the northwest side of the Fort Negley Park, the Cumberland Science Museum features more than 100 hands-on permanent exhibits, programs, and shows geared toward children. There are also changing traveling exhibits, the Sudekum Planetarium and live science demonstrations. The museum's large surface parking lot is the only off-street parking area on the north half of the site. Though presently undeveloped, the consideration of a pedestrian linkage to the fort from the museum parking and building is reasonable due to their close physical proximity, within 500 feet of the fort entrance gate.

The Museum began exploring new sites for their operation starting in May 1996 in order to attract increased attendance. Their Board of Directors feels that their current facility (70,000 SF) is too small and has a problem with access/visibility. The selection process includes three sites in Nashville as well as an addition to the current facility. They hope to have this issue resolved in three to five years.

Although their current mission no longer focuses on the natural sciences and history, the director of the museum expressed an interest in creating a cooperative relationship with Fort Negley should they stay. He foresaw a possible location within an addition for an interpretive center for the fort as well as pedestrian access connecting the two facilities and parking.

.2 Adjoining Land Uses

The Fort Negley park site is geographically isolated - separated by the interstate road system, railroad tracks, commercial properties, and its topography from its immediate neighbors. Although prominently visible from much of the central business district and surrounding areas, access is through blighted commercial and industrial areas and a small transitional residential neighborhood (which is moving toward commercial). It is one of the few remaining open areas in the vicinity.

The development of the Fort Negley park site will provide a positive impact for the surrounding area by bringing in tourists, new jobs and development. Its active use will also remove the undesirable homeless element now camping in the general area. The land uses adjacent to Fort Negley consist of:

.1 City Cemetery

The City Cemetery is located on Fourth Avenue South and is Nashville's oldest public cemetery. It contains the graves of many prominent early Nashville settlers, city leaders, as well as many Confederate soldiers that fought in the Battle of Nashville. The cemetery is separated from the fort site by private industrial property and the CSX railroad lines. It can be reached from Fort Negley by foot or auto by travelling west along Bass Street approximately .25 miles.

.2 Humphrey Street Neighborhood

This neighborhood south of Chestnut Street is a transitional commercial/residential area on the decline. There is little, if any, connection or active interplay with Greer Stadium, Fort Negley, or Cumberland Museum at this time.

.3 CSX Railroad Yards

The CSX railroad yards to the east of the fort were a major factor in the location of the fort during the Civil War. They continue to play a role, impacting the future development of the Fort Negley site as a result of both being a physical barrier separating the site from the neighborhood to the east and from the noise of the rail yards and the yard's attraction of vagrants.

1.3.2
Physical Enhancements

.1 Proposed Facilities and Development - General

The present site infrastructure was created by the WPA in the 1930s in order to establish a park for Nashville. Work included providing stone retaining walls and main entry gates at the southwest corner of the site near the intersection of Chestnut Street and Fort Negley Blvd. From these monumental gates, the park visitor could access the site by means of a circular drive surrounding the fort with a modest parking area on the north side behind the later Cumberland Science Museum. Another road provides direct access to the top of the hill from the ring road near the parking area. The WPA also constructed a drainage system with frequent catch basins adjacent to the stone curb of the ring road to remove storm water from the hill above.

The Master Plan proposes phased development to incrementally enhance the Fort Negley Park site into a world-class historical resource and destination point for tourism and Civil War research. Specifically, this work includes stabilization and restoration of the fort and site, interpretive signage by which the general public can take a self-guided tour of the site, view corridors to adjacent Civil War sites, an improved entry point and perimeter fencing to control access, parking, and a future interpretive center. Several properties adjacent to the park have also been considered for inclusion to better define the park boundaries, improve the visitor experience, and provide pedestrian linkages to other Nashville resources. Reconstruction of missing Civil War elements is discouraged.

A separate interpretive center is recommended in a later phase of the development of this park. However, with the possible relocation or expansion of the Cumberland Science Museum on this site in the next three to five years, the Master Plan also explores the costs to mount an interpretive center within or as a part of the museum. The opportunity for a Civil War museum opens a number of possibilities to develop an important tourist destination and research facility on the Civil War.

.2 Visual Connections to Fort's Immediate Environs

Clearly, the visual linkage to surrounding Civil War-era sites must be considered as a site enhancement program is developed. Visual corridors to Union inner and outer defensive positions, such as Fort Morton (Rose Park) and Casino Blockhouse (Reservoir Park) as well as Confederate battle lines could be developed with careful consideration to selective clearing of the surrounding forest canopy. Historically significant in the fort's site selection is the fact that its elevation above and proximity to the Nashville & Decatur Railroad Lines made Fort Negley a guardian over this lifeline to the south—this visual tie is therefore important. Conversely, appropriate landscape screening has been considered with respect to concealing views of Greer Stadium and the rear of the museum.

.3 Pedestrian Connections and Linkages

Proposed pedestrian connections to the Fort Negley site should concentrate on the connection to the Cumberland Science Museum as the surrounding areas are currently blighted or do not lend themselves well to pedestrian access. Police patrols should be increased within the adjacent areas to encourage the current homeless population to move elsewhere and discourage crime and drugs. Until such time as an active Humphrey Street neighborhood community group can be established to control redevelopment within their borders, pedestrian linkages to this area should be delayed.

Linkages to the City Cemetery should be considered. As the typical Fort Negley visitor will be driving to the site and is interested in history, Nashville's adjacent City Cemetery is important as the final resting place of its early settlers.

Improvements are planned in the next five years to link many of Davidson County's historical and recreational sites through existing and proposed greenway corridors. The immediate possibility with this site is the proposed bicycle route/urban greenway corridor that would link Fort Negley to the City Cemetery along Bass Street and to the Nashville Arena site area via Sixth Avenue South. The greenway corridor would continue over the Shelby Street bridge along the Shelby Safewalk to Shelby Park and the developing 800-acre Shelby Bottoms Greenway beside the Cumberland River. The improved potential

for local visitors to frequent the site using multi-use greenway corridors will necessitate a combination of public education and directional signage. As a part of this development, Metro should consider purchasing adjacent properties between the park and cemetery and north of Bass Street to support the park and cemetery.

.4 Operational Relationships to Metro Board of Parks and Recreation

With respect to the operational relationship to Metro Board of Parks and Recreation (MBPR), it is recommended that the MBPR continue to maintain the site and "operate" Fort Negley when it is first reopened to the public (self-guided, without an interpretive center). Once the interpretive center is constructed or should the Cumberland Science Museum become available, a nonprofit organization can operate the interpretive center and site, with the support of MBPR in terms of site maintenance (grass cutting, tree pruning, etc.). Representation from the Metropolitan Historical Commission (MHC) and MBPR on this proposed organization's board would protect Metro's interests in the site. One important immediate and continuing component of MBPR's operation of the park is vigilant patrolling for relic hunting and unauthorized use of metal detectors on the entirety of the park property, not just the ruins.

1.3.3 Relationships to Other Sites

Consideration should be given to establishing relationships and linkages with surrounding battlefields and interpretive centers. With the increased interest in the historic tourism that was observed throughout the late 1980s and the early 1990s, county partnering efforts on the regional scale are becoming more important. Cooperative efforts, such as the Tennessee Antebellum Trail Guide, a guidebook to antebellum homes and Civil War sites, have come about to develop interpretive linkages to many of the historically significant sites in the middle Tennessee region. Continued efforts to link Murfreesboro sites such as Fortress Rosecrans and the Stones River National Battlefield to the Columbia Pike Corridor and the Battle of Nashville sites will dramatically improve the visitors' understanding of the significance of the Fort Negley site.

Regional linkage opportunities include Fort Pillow in Memphis, Lookout Mountain in Chattanooga, and the Natchez Trace to the sites of Vicksburg and Port Hudson on the Mississippi River. To the north and northeast, Civil War sites in Kentucky and Virginia are easily accessible from a visitor based in Nashville. Only the state of Virginia has more Civil War battlefields than Tennessee. Likewise the proximity of earlier military sites such as Fort Blount or Fort Loudon in east Tennessee offer the student of military science ample opportunity for additional exploration from a starting point in Nashville. With an on-site Civil War interpretive center/museum, the linkage and sharing of information with other interpretive and teaching facilities in the region has great potential for growth.

1.3.4 WPA-Era Work

Though perhaps less important to Civil War enthusiasts, the monumental efforts of recreating this fort by the WPA in the mid-1930's is clearly an important topic for interpretation. Linkages to other significant built works in the Nashville area could be strengthened at the Fort Negley site. Linkages to other WPA-era projects in the region such as TVA dams, WPA stonework at Warner Park in Nashville, or the numerous examples of Tennessee's state park cottages constructed by WPA stone masons create possibilities for site interpretation and tourism.

1.3.5
Planning Issues

.1 General

.1 Stabilization of the structural and natural components of the site should be guided by the recommendations of this report.
.2 Ultimately, the intent of the park development should be to introduce visitors to a safe and stable environment that is thoughtfully interpreted with a level of signage that is unobtrusive, but informative.
.3 Visitors should initially have a self-guided tour using signage.
.4 Site access should be controlled.
.5 The site should be open only during specific (daylight) hours once open to the public.
.6 The site should become handicapped accessible to the extent possible without damaging the integrity of the resource.
.7 The site should be connected to other adjacent Nashville sites.
   a. Cumberland Science Museum
   b. Nashville City Cemetery
.8 The site should be connected/interpreted with related Civil War sites in Middle Tennessee.
.9 Relic hunting and the use of metal detectors on park property should be prohibited (to be enforced by regular patrols).

.2 Archaeology

.1 The effects of proposed developments on archaeological deposits should be assessed in the planning and design phases.
.2 Research designs for archaeological excavation to mitigate the impact of proposed development should address specific research and interpretation needs.
.3 Archaeological monitoring of all subsurface development should be conducted unless prior assessment and excavation and has occurred.
.4 Archaeological excavation for interpretation needs should impact as little of the deposits as possible to answer the research questions.
.5 The long and short term effects of archaeological excavation on vegetation, erosion, and visitation should be assessed.
.6 Archaeological research should be overseen by a technical advisory committee.
.7 Archaeological work should be conducted to the highest professional research, reporting, and curation standards.

.3 Fort Structure

.1 The site (fort and topography) should be stabilized.
.2 The stabilization will not arrest future deterioration due to site conditions and original construction methods.
.3 With the current available information, the fort cannot be completely restored to the Civil War period.
.4 Specific areas of the fort may be reconstructed following complete archival and archaeological investigation.

.4 Site

.1 The program elements should include a parking lot that can be linked to the site via pedestrian trails.
.2 The natural areas of the site should be maintained for habitat and wildflower/nature trails.
.3 The trail system should attempt to be barrier free in all possible ways, unless degradation to the site fabric would occur by accomplishing that goal. Trail surfacing should be capable of supporting the level of pedestrian traffic to directed portions of the site.
.4 Foot traffic to other sensitive areas of the site should be prohibited. Seating/resting areas in both shade and sun should be part of the program elements.
.5 Visual connections to the area battlefield and related points should be provided for and interpreted.
.6 The tone of the overall site development should be programmed for passive recreation, nature observance, an introspection about the significance of the site and its history. Active sport and re-enactments should not be permitted.
.7 The archaeological fabric of the site should be considered in development and maintenance of all park features.

1.3.6
Future Work

The following issues need to be addressed as part of future work at Fort Negley:

.1 The lack of information related to existing conditions after Civil War prior to WPA involvement

.2 The lack of information on WPA scope of work (records in Washington not properly indexed)

.3 The lack of a detailed site plan indexed to locations where deterioration has previously been repaired or excavations have previously been conducted (useful for tracking and monitoring)

.4 The lack of recent topography survey

.5 The lack of legal clarity on property lines (legal descriptions in leases have overlapping property lines)

.6 The lack of archaeology
.1 At walls
.2 In areas where reconstruction may be considered

.7 Considerations
.1 Vision statement (example: The City of Nashville will preserve and interpret Fort Negley in a manner that visitors can understand and appreciate the fort's significance to the events with which it was associated)
.2 Statement of interpretive themes
.3 Management objectives that should guide future development (both physical and interpretive)

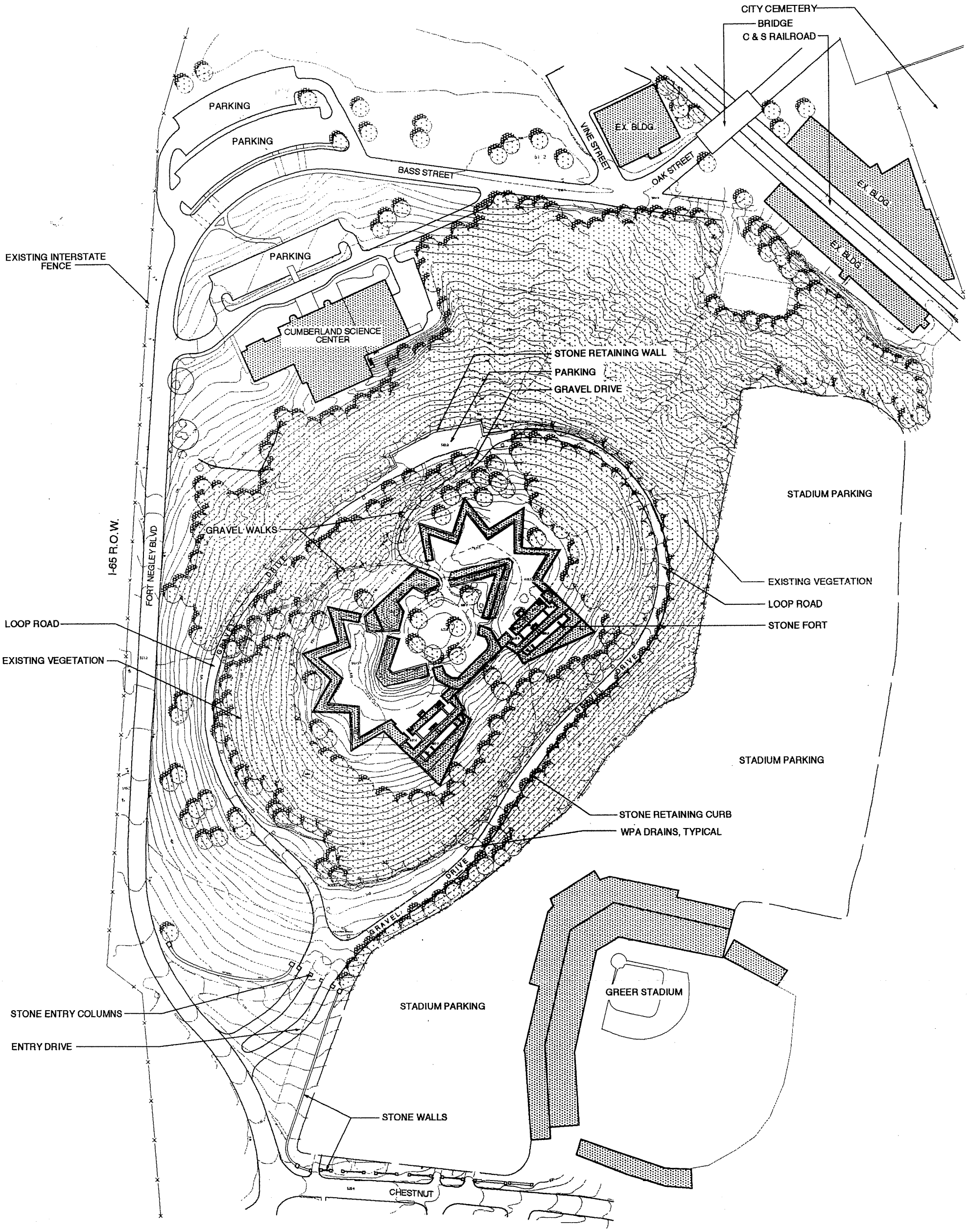
.8 Possible Interpretive Themes
- .1 The Union Occupation
- .2 The Battle of Nashville
- .3 The Western Theater of the War
- .4 The special design characteristics of the nation's largest inland masonry fortification of the Civil War
- .5 African American involvement
- .6 WPA-era Reconstruction of the fort

.9 Preservation and Maintenance
- .1 Vegetation control
- .2 Visitor circulation
- .3 Maintain archaeological integrity of the site
- .4 Create and maintain an environmental setting that will enhance the visit to the site and will encourage learning and contemplations

.10 Visitor Access and Interpretation
- .1 To provide well-marked, safe and easy access to the fort for all visitors (handicap accessibility, etc.)
- .2 Develop interpretive media that will allow visitors to understand and reflect on the significance of the site (publications, exhibits, living history, etc.)
- .3 Develop other interpretive media that will allow visitors to gain an understanding of the relationship of other Nashville Civil War sites (car tours, etc.)
- .4 Develop media (signs, exhibits, publications, etc.) that will encourage visitors to use the site in a manner that is consistent with its long term preservation

.11 Administrative Issues

- .1 During the course of developing this Master Plan, a variety of issues not specific to the basic plan areas (archaeology, architecture or the site) were noted. These issues have been developed in Section 5.0 - Administrative Issues.



EXISTING FEATURES INVENTORY

FORT NEGLEY MASTER PLAN

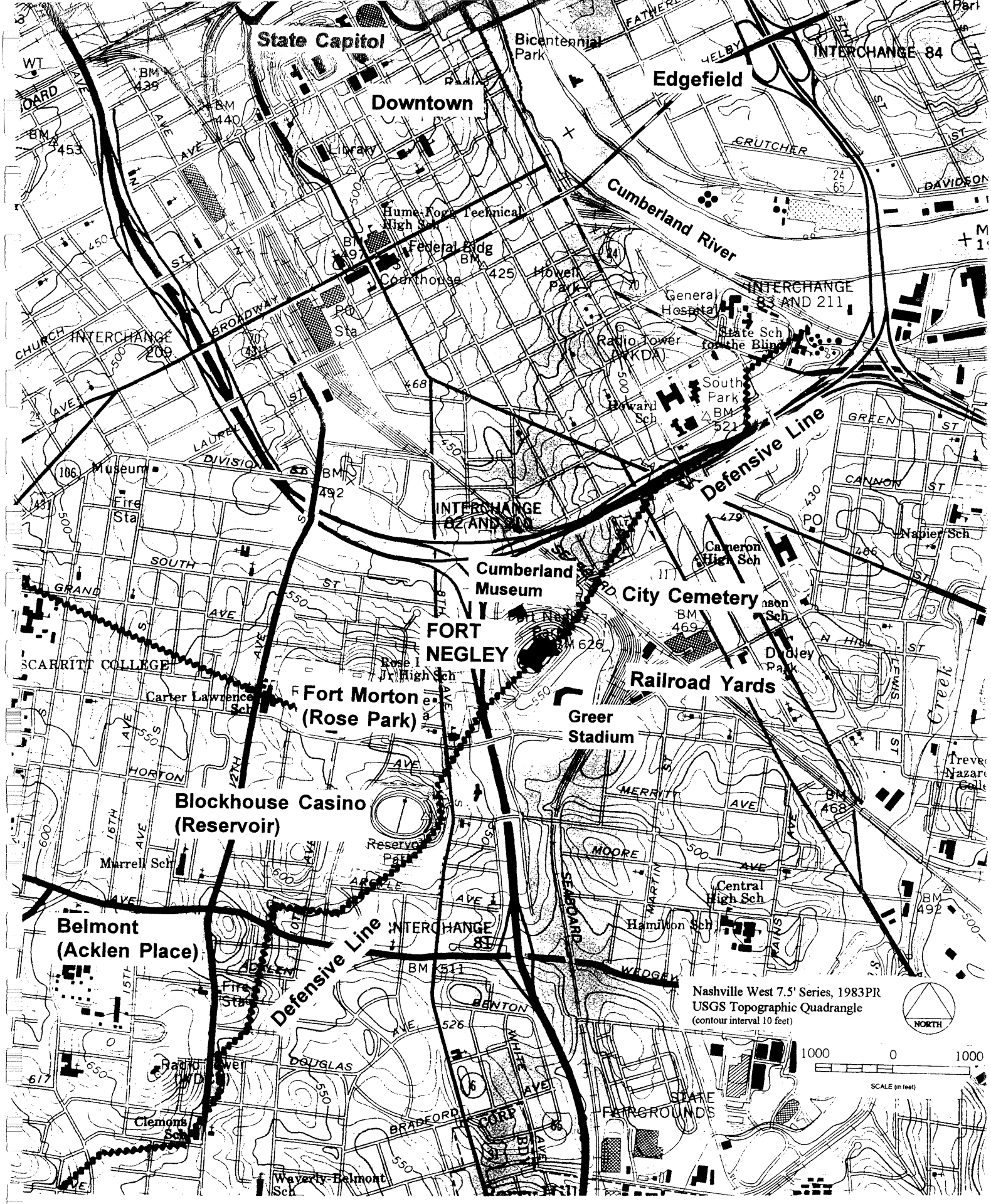
NASHVILLE, TENNESSEE

50 25 0 50 150
SCALE (in feet)

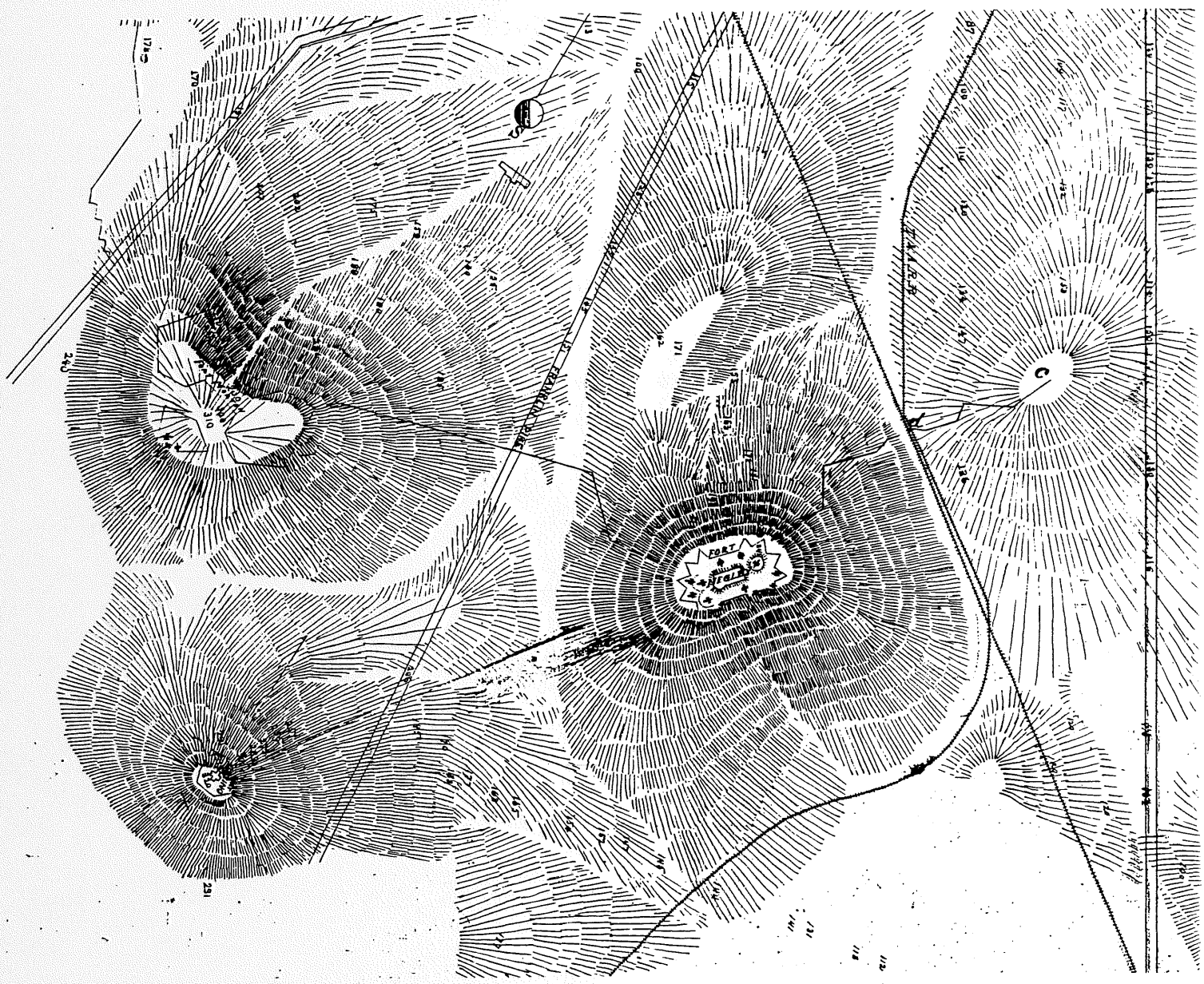
NORTH

HICKERSON FOWLKES ARCHITECTS • HAWKINS PARTNERS, INC. • OFFICE OF MICHAEL EMRICK • ZADA LAW ARCHAEOLOGY

DATE: 11-20-96 JOB NO. 95-661



4 Location Plan for Fort Negley and Related Sites.



2.0 ARCHAEOLOGY

2.0
ARCHAEOLOGY

2.1
ARCHAEOLOGICAL ISSUES

2.1.1
Existing Information

.1 Archaeological Documentation

The site of Fort Negley may contain important archaeological data relating to the fortification's Civil War-era construction and occupation and the impact of the WPA reconstruction on the original fort fabric and grounds. However, our present understanding of what lies below the ground surface of Fort Negley is largely based on assumptions and interpretations of fragmentary historical evidence rather than hard data gleaned from problem-oriented research.

Fort Negley is listed on the National Register of Historic Places and recorded as archaeological site "40DV189" in the Tennessee State Archaeological Site Files. The site is described as a "fort" and "long term encampment" in a survey of Civil War period military sites in Middle Tennessee (Smith et al., 1990). However, only one limited archaeological excavation has been conducted at the site, and no systematic archaeological assessment of the park grounds has been undertaken, leaving many questions about how much and what type of archaeological information exists at this location. Many gaps also exist in our understanding how extensively WPA reconstruction work changed the appearance of St. Cloud Hill and affected remnants of Civil War era features.

The objective of the excavation conducted in 1993 by Panamerican Consultants, Inc. (PCI) of Tuscaloosa, Alabama was to determine how much of the visible fort structure dates to the Civil War and how much was reconstructed by the WPA. While the PCI study concluded that the visible stone work most likely follows the shape and location of the 1864 plan drawing of Fort Negley, the precise location of the Civil War fortification was not conclusively established (PCI, 1994). Additionally, the PCI investigation focused on the interior of the fort and did not assess the nature of the archaeological record elsewhere on the site. Thus our understanding of the archaeological character of the fortification and surrounding land is incomplete.

.2 Archival Documentation

Military and other archival records which may be available for Fort Negley have not been thoroughly researched or synthesized. It is likely that extensive Civil War-era records exist for the construction of the fort and the location and layout of attendant installations such as refuse areas and troop encampments, but no compilation of this material is documented. Data contained in such records is critical to interpreting archaeological data and projecting where archaeological features are likely to be encountered. In addition, archaeological features which might be discovered but are not documented in written records can provide valuable insights into military activities at the fort beyond written accounts.

Records of the WPA reconstruction of Fort Negley are reported to exist, but no systematic compilation of these records has come to light. One possible reason is that the location of these records is problematic. According to Mr. Bill Creech of the Civil Reference Branch of the National Archives (personal communication, November 1995), WPA records were microfilmed in the 1940's and many of the original paper records were destroyed. The project number for Fort Negley is 65-44-1722, but the microfilmed records are not with this lot. Mr. Creech suggested that the Fort Negley records may be included with another lot of microfilms, but this has not been ascertained. If the microfilms of the WPA records can be located, they may clarify the nature and extent of the WPA reconstruction activity and its impact on the Civil War fortification. The Tennessee State Library and Archives may also contain some records pertaining to the WPA reconstruction, but, again, no systematic compilation of this material is known to exist.

2.1.2 Existing Conditions

Archival research supported by carefully constructed archaeological studies are greatly needed to construct a picture of what lies below the ground surface on St. Cloud Hill. Efforts to protect the archaeological integrity of this important site cannot be effective without a better understanding of the military occupation of Fort Negley and how the WPA reconstruction work may have affected Civil War archaeological features in the fort and park. Although the nature and extent of what exists archaeologically at Fort Negley is not thoroughly understood, the following conditions may be affecting the archaeological fabric of the site. (Specific details for architectural and site-related conditions are outlined in sections 3.0 and 4.0, respectively.)

.1 Deterioration of Stone Fortification Walls

The PCI study indicates that the visible stone walls may closely follow the location of the Civil War fortification. Deterioration and failure of the stone walls of the fortification can damage or destroy archaeological information which may be behind the walls. As the stone walls fail and eventually collapse, the soils behind the walls are loosened and erode through the destabilization destroying any potential archaeological features and contexts. (Results of the condition survey for the masonry walls are found in section 3.1.2 and Appendix B.)

.2 Vandalism and Relic Hunting

Vandalism and relic hunting diminish the potential for understanding the history of Fort Negley by removing artifacts and destroying fragile archaeological contexts. Mr. Fred Prouty of the Tennessee Historical Commission reported to the Master Planning team that relic hunters using metal detectors to identify where to dig often scour the top of St. Cloud Hill for Civil War artifacts. Mr. Prouty has seen Civil War artifacts identified as being from Fort Negley offered for sale in recent publications for Civil War enthusiasts.

The park is not open to the public, but pedestrian access is possible on the north, west and southwest sides of the park. Vehicles can also jump the curb on Fort Negley Blvd. west of the main gates and drive up to the fort (see .5, below). Unauthorized digging or removal of artifacts from land now owned by the state is trespassing and a misdemeanor under Tennessee State law (Tennessee Code Annotated 11-6-109). However, security patrolling currently occurs on an infrequent basis (see sec. 5.4.3), thus

relic hunting and vandalism of the fragile fort structure may not be detected until after the damage has occurred.

.3 Surface Erosion

Surface erosion of soils is common process that leads to the degradation of archaeological strata and ultimately the loss of archaeological data. The degree to which a site has been altered by surface erosion is a function of vegetation cover, ground slope, and age of the site. Wind and water are natural agents in the eroding of bare soil areas, but activities on the site that disrupt the soil or cause soil compaction can also result in impacts to the site from surface erosion. (An analysis of surface erosion at Fort Negley is detailed in 4.1.2.) While surface erosion is present at Fort Negley, the impacts to the archaeological integrity of this site are undetermined since the depth and extent of archaeological remains that may exist below the ground surface has not been determined.

.4 Vagrants

Housing structures created by vagrants in the interior of the fort structure may be damaging or destroying archaeological features and contexts by contributing to the destabilization of the fortification walls and causing erosion of topsoil and fill which may be protecting archaeological strata.

.5 Off-Road Vehicular Access

Vehicles driving over the curb near the intersection of Fort Negley Blvd. and Chestnut Street to avoid the locked gates may be destroying archaeological deposits. No archaeological studies have yet been conducted in this portion of the study area to determine if archaeological remains are present. Until further research establishes the nature and extent of what lies below the ground surface at Fort Negley, it must be assumed that tire track damage to topsoil any place within the park has the potential of disrupting and exposing archaeological materials to surface erosion.

.6 Burrowing Rodents and Vegetation

Displacement and contamination of archaeological materials can be caused by burrowing species such as gophers and ground hogs whose tunnels can undermine and allow intrusive materials into archaeological strata. The soils occupied by many burrowing species are "friable" or easily crumbled soils such as sands, silts and loams. No recent rodent burrows were observed on the surface of the fort's interior; however, the silty loam soils of this site (see 4.1.1.1) could be conducive to burrowers. Habitat evaluation and monitoring for burrowing species is important to protecting the archaeological integrity of this site.

The large trees in the interior of the fort also pose a threat to the integrity of the site's archaeological and architectural features. Falling limbs and blown-over trees can seriously damage the masonry walls and large sections of archaeological deposits can be uprooted and destroyed by overturned trees. (Vegetation and animal habitats are also discussed in 4.1.2.2.)

.7 Public Perceptions

The popular assumption that the visible stonework is of WPA vintage and that the WPA reconstruction work destroyed much of the Civil War fabric of the fort may have protected Fort Negley from some vandalism and relic collecting. A lack of awareness of the existence of the site on the part of the general public may also have protected it from casual relic hunters and vandalism. However, an increase in public visibility for this site may stimulate interest in relic collecting, especially on the part of younger people who may not be aware of the WPA reconstruction.

2.1.3 Uses of Archaeology and Archival Research

.1 History of the Fort

Archaeological investigations combined with systematic archival research can supply data to answer many questions about the construction history of this historical resource and its functioning during the Civil War. Archaeological and archival research can also increase our understanding of the episodes and activities that have shaped what we see today at the fort and park environs.

.2 Location of Historic Features and Activity Areas

Archaeological and archival data can potentially answer many questions about how much of the Civil War fortification may remain and the amount of WPA impact and modification to the original fort and associated archaeological contexts. Archaeological data can augment our understanding of the military and other activities in and around the fort and provide clues about other structures which may have been associated with the fort but are not well documented in archival sources.

.3 Prevention of Unintentional Damage to Historic Resource

Since so little is presently known about the archaeology at Fort Negley, archaeological investigations and archival research are extremely important in determining the extent, nature, and depth of archaeological deposits in the Fort Negley study area in order to avoid unintentional damage to the archaeological components as the park is developed.

.4 Development of Preservation Strategies

Archaeological data on the depth and extent of deposits can assist in assessing and designing protective measures for the archaeological resource. For example, the need for a layer of protective fill in trail locations can best be determined by knowing if archaeological materials exist in potential trail locations and how deeply they are buried.

.5 Historical Interpretation

Although many Civil War artifacts have been taken from this site over the years by relic collectors and souvenir hunters, artifacts and related data which may be recovered from future archaeological investigations and archival sources are important for interpreting historic Fort Negley to the public. Artifacts and archaeological vestiges of fort features such as a stockade trench provide a tangible link to history. But archival

sources and the archaeological record also furnish the raw data upon which to base accurate interpretations of the visible fort structure and environs. Internal fort features such as the powder magazine, winter troop quarters, or casements require archaeological and archival documentation for faithful reconstructions or other interpretive measures. The presentation of intangible aspects of Fort Negley such as the day-to-day life of the soldiers garrisoned at the fort can be enhanced by concrete historical and archaeological evidence.

.6 Visitor Experiences and Heritage Tourism

Archaeological investigations on the site can create visitor interest and offer opportunities for public involvement with the resource. With proper attention to safety measures, the opportunity to watch archaeological teams in action usually generates great public interest and enthusiasm at historic sites. Interpretation of the archaeological investigation by knowledgeable guides increases the public's understanding of the importance of the research and the significance of the historic resource. In research situations where interested parties are able to be involved in the investigation, such as Earthwatch investigations, the involvement with and appreciation of the historic resource is further enhanced.

2.2 GUIDELINES AND RECOMMENDATIONS

2.2.1 Guiding Principles

Many of the activities associated with stabilizing the fortification ruins and developing the park for public visitation may affect the archaeological record at Fort Negley. These projects will require an assessment of potential impact to the archaeological components of this site and mitigative action when necessary. Additionally, the Fort Negley Advisory Committee has stated that interpretation and reconstructions on the site are to be based on archaeologically documented data.

As archaeological investigations are considered and developed for Fort Negley, stewardship of this important historic resource should be the paramount objective. Archaeological investigations should be guided by the Society for American Archaeology's "Principles of Archaeological Ethics" (Kintigh, 1996; Lynott and Wylie, 1995). A summary of these ethical tenets as applied to future archaeological work at Fort Negley is summarized below.

.1 The extent of subsurface excavation should be limited to what is necessary to accomplish the research or mitigation objectives. Non-invasive techniques should be considered when appropriate.

.2 All archaeological investigations should be problem-oriented and designed to achieve specific research objectives. Research objectives for Fort Negley should be periodically reviewed with respect to what has been learned about the site.

.3 Written reports should be generated for all archaeological investigations conducted in the study area. Results of archaeological investigations should be disseminated

to a professional audience as well as be incorporated into public education and outreach products.

.4 The buying and selling of archaeological objects directly contributes to the destruction of archaeological sites. Archaeological investigations at Fort Negley should discourage and avoid activities that enhance the commercial value of archaeological objects. Public support for the stewardship of the archaeological record should be actively encouraged.

.5 Care and attention should be given to the long-term preservation of and access to the archaeological collections, records, and reports and other data associated with Fort Negley. The use of archaeological information from this site should be for the benefit of all people.

2.2.2 Definitions of Terms

Archaeologists use a variety of terms to describe levels of investigation and their purpose (e.g. regulatory compliance or academic research). The following terminology is used to describe archaeological research investigations discussed in this Master Plan.

.1 Archaeological Assessments

Archaeological assessments determine whether archaeological deposits are present in a given area. Archaeological assessments can employ a variety of subsurface investigation techniques including but not limited to block unit excavation, shovel tests or augering surveys, or non-invasive techniques such as ground- penetrating radar. The results of an assessment should provide data to determine the nature, extent in area and depth of archaeological deposits present in the specified location.

.2 Archaeological Data Recovery

Archaeological data recovery systematically excavates and records all archaeological information in a specific area. Excavation can be utilized for impact mitigation to recover archaeological data which would otherwise be destroyed by development activities or to collect information for specific research questions or interpretation needs.

.3 Archaeological Monitoring

Archaeological monitoring involves having a qualified archaeologist observe construction work, specifically that which involves earth moving, and noticing any archaeological features or artifacts which may be appearing. In monitoring, the archaeologist records the features, often halting construction work to inspect a potential feature or examine an artifact. Monitoring is done at the same time as the construction work whereas other types of archaeological investigations are conducted prior to construction.

2.2.3 Administration of Investigations

.1 Technical Guidance and Assistance

General Approach: The development of Fort Negley Park requires archaeological and archival research for mitigative and/or interpretive purposes in each phase of the

proposed development. In order to maintain high technical and professional standards, technical guidance and review should be provided by professional archaeological expertise.

.1 Archaeological and archival research at Fort Negley will be coordinated by the Metropolitan Historical Commission (MHC). Technical assistance for assessing the impact of projects on the archaeological components of Fort Negley and guidance on the development and administration of archaeological investigations are initially provided to MHC by an archaeological advisory committee (see 5.7.1).

.2 As development of Fort Negley Park progresses, technical guidance regarding archaeological impacts and oversight of archaeological investigations from the professional archaeological advisory committee continues.

.3 The responsibilities delegated to the archaeological advisory committee for the management of archaeology at Fort Negley should be periodically reviewed.

.2 Research Teams

General Approach: Archaeological and archival research at Fort Negley should be conducted by professional historic archaeologists who have a speciality in Civil War archaeology and documentation of successful completion of archaeological research on Civil War affiliated sites in the Southeastern United States.

Several types of research teams are available in the United States to conduct historical archaeological and archival research including field schools, university or agency-based research and consulting programs, and privately-owned archaeological consulting firms. Fields schools usually operate during the summer months and use students or volunteers under professional supervision, whereas university or agency-based programs and consulting firms operate year-round and have full-time professional staffs.

.1 The type of research team utilized for a particular investigation may depend on scheduling needs.

.2 The archaeological advisory committee should assist in the review and selection of research teams for archaeological and archival investigations.

.3 Research teams should have staffing and facilities sufficient to conduct the required investigation in a timely manner and to the highest technical standards.

.3 Information Management

General Approach: All professional archaeological investigations record the locations of archaeological features and subsurface investigations such that future investigators can reestablish these locations on the ground. It is very important at a site which is subject to repeated archaeological investigations to maintain accurate records of where archaeological work has been conducted and where archaeological features have been found. This information is cross-referenced to project materials including field notes, feature forms, photographs, and collections.

.1 A base map of Fort Negley Park should be maintained by MHC on which the locations of all subsurface investigations and known archaeological features are plotted and cross-referenced by project.

.2 Geographical Information System (GIS) computer technology may appropriately be used to store and display archaeological site data. resolutions. GIS "data layers" can also be used to store and graphically display other site information such as where fort walls have been repaired, vegetation maps, or the projected development of the site through time. GIS-assisted cartography has been used to relocate historic features at other fort sites (Scott et al., 1991), but exploration of the research and educational potential of GIS for archaeology, particularly historic archaeology, is in its infancy.

.3 All project location data and documents should be available to the archaeological advisory committee and archaeological researchers.

.4 Curation of Artifacts and Project Materials

General Approach: Archaeological and archival collections from Fort Negley should be conserved and curated according to accepted professional standards and made available for research. Curation standards for the state of Tennessee are outlined in "Archaeological Curation Requirements" in *Tennessee SHPO Standards for Archaeological Resource Management* (Tennessee Division of Archaeology, 1995).

.1 MHC should make arrangements for permanent curation and professional access to artifacts and project documents from archaeological and archival studies of Fort Negley.

.2 The Tennessee State Archaeologist should be informed of the curation arrangements for collections of artifacts and records made from Fort Negley.

.5 Public Outreach and Education

General Approach: Public education, outreach, and cooperation with other groups interested in the archaeological record of Fort Negley is a critical component of stewardship of this important site. What is known about Fort Negley from archaeological studies and archival research should be shared with the public in order to promote understanding and preservation of this history embodied in this site.

.1 Synthesize historical information into interpretive products such as booklets, brochures or Internet documents targeting specific audiences.

.2 Develop outreach programs for schools and adult education programs. Outreach programs can take a variety of forms and including traveling exhibits for schools, guided tours of the site, community education classes, or tie into national educational tourism programs such as "Earthwatch" or "Elderhostel."

.3 Public outreach and education programs should avoid activities that enhance the commercial value of Civil War objects.

2.2.4 Development of Investigations

.1 Archaeology and Project Planning

General Approach: All development at Fort Negley Park which involves any form of ground surface alteration should be reviewed by the Fort Negley archaeological advisory committee for the potential impact to the archaeological fabric of the site. Archaeological assessments or data recovery in proposed areas of development can prevent damage to archaeological deposits. Archaeological monitoring of projects can further protect against unintentional damage to the archaeological fabric of this site.

Consideration of archaeological impacts in the design phase of projects and building archaeology into project time frames and budgets can reduce costs and reduce project delays. If previously undiscovered archaeological deposits are found during earth-moving projects on municipal property, Tennessee Code Annotated 11-6-107 stipulates that the Tennessee Division of Archaeology should be notified so that efforts can be made to obtain the archaeological information before the context is disturbed or destroyed.

.1 Establish project review procedures for archaeological advisory committee. Project review should carefully consider the potential to recover archaeological data for understanding and interpreting the site. For example, the installation of fencing along the perimeter of the park may provide an opportunity to assess what type of archaeological remains are present on the outskirts of the park such as remnants of earthworks or troop encampments.

.2 Recommendations for the level and scope of archaeological investigation to address potential impacts are made by archaeological advisory committee and reviewed by overall technical advisory committee for Fort Negley.

.3 When an archaeological assessment reveals that a specific project will damage or destroy archaeological deposits, consideration should be given to the feasibility of modifying the project to avoid archaeological impacts.

.4 Project review by the archaeological advisory committee begins in Phase One. Recommendations for archaeological and archival investigations to be conducted in the Immediate Phase and Phase One are included in the Master Plan.

.2 Scopes of Work

General Approach: Scopes of work for archaeological investigations will vary according to the purpose of the study. Scopes of work should include general guidelines as well as specific research objectives.

.1 Scopes of work and requests for proposals for archaeological investigations should be developed by MHC in consultation with the Fort Negley archaeological advisory committee.

of the impact areas should take place before construction with monitoring during construction if necessary.

.1 Immediate Temporary Shoring (see 3.3.2.1)

.1 Since insufficient evidence presently exists regarding the location of the original fort structure and attendant features, the Master Plan recommends an archaeological investigation combining assessment and data recovery prior to construction in the areas where temporary bracing beams for shoring will be inserted into the ground.

.2 The proposed investigation will collect data on the nature and extent of archaeological deposits on the perimeter of the fort, the extent of reconstruction and the location of the original fort.

.3 Shovel test units, 50 cm square, should be excavated at single point shoring locations. Along continuous expanses of shoring, units may be spaced at two to four meter intervals with smaller intervals being utilized if archaeological features are encountered. Units should be excavated to steril subsoil.

.4 Since no temporary shoring is required on the northwest side of the fort, shovel test units along the perimeter of the northwest parapets at a suggested five meter interval should be conducted to complete the assay of the perimeter of the fort. A series of shovel test units at 30 and 60 feet from the fort perimeter are also suggested to assess the nature of site stratigraphy and presence of archaeological features within the immediate vicinity of the fort perimeter.

.5 Conduct archaeological monitoring during construction in areas where archaeological materials were encountered or in areas where construction plans are modified.

.2 Rebuilding and Repair (see 3.3.2.2)

.1 The location, size, and depth of construction excavation required at each rebuilding and repair location should be reviewed by the archaeological advisory committee prior to construction.

.2 Since insufficient evidence presently exists regarding the location of the original fort structure and how much the interior of the fort was modified by the WPA, the Master Plan recommends archaeological data recovery prior to construction at repair/rebuild locations requiring excavation of soil behind the walls with the scope of work being developed in consultation with the archaeological advisory committee.

.3 The proposed investigation will collect data on the nature and extent of fill material in the interior of the fort, the extent of reconstruction and the location of the original fort. Architectural evaluation of the archaeological stratigraphy may yield insights into conditions leading to deterioration of the fort.

.4 Conduct archaeological monitoring of the repair/rebuilding process to record data on construction techniques and other archaeological material which may be contained within the walls.

.2 Erosion Control on Site

General Approach: Surface erosion can result in significant data loss at archaeological sites. Wind and water are natural forces that erode areas of exposed soil, but activities on the site that disrupt the soil or cause soil compaction can contribute to soil erosion. The impact of surface erosion on a site is affected by ground slope and vegetation cover. Increasing vegetative cover and decreasing ground slope are methods commonly used to manage erosion at archaeological sites (MacDonald, 1990).

.1 To reduce the potential impact of surface erosion on the archaeological deposits at Fort Negley, locate all holes and areas of bare soil, fill with clean topsoil, and protect with stabilizing vegetation or other appropriate cover
.2 The addition of a level of culturally sterile (clean) fill may be considered as an option to provide protection of the archaeological resource and create a base for vegetation. Care should be taken to avoid compaction to the site from the overburden and weight of the additional soil, construction equipment or changes in runoff and soil chemistry (MacDonald, 1990).
.3 Conduct regular monitoring to detect erosion before significant damage occurs.

.2 Enhancement of Fort and Site (see 4.2.2.1)

.1 Drainage Improvements Within Fort

General Approach: The installation of subdrainage improvements to control hydrostatic pressure build-up behind the fort wall will potentially impact archaeological deposits in the interior of the fort. However, this project may decrease the damage to the site from unmanaged erosion and promote long-term preservation of the structure.

.1 The location, size, and depth of construction excavation for the drainage trenches should be reviewed by the archaeological advisory committee prior to construction.
.2 Since insufficient archaeological evidence exists regarding the interior of the fort structure and how much the interior of the fort was modified by the WPA, the Master Plan recommends combined archaeological assessment and data recovery at drainage trench locations prior to construction with the scope of work being developed in consultation with the archaeological advisory committee
.3 The proposed investigation will collect data on what exists archaeologically in the interior of the fort and provide valuable information for planning and interpretive purposes.
.4 Conduct archaeological monitoring of the installation of drainage improvements based on the results of the assessment/data recovery.

.2 Vegetation Management at Site (see 4.2.3 and 4.2.4)

General Approach: Vegetative ground cover can provide a protective cover for archaeological deposits and control damage caused by surface erosion. However,

vegetation supplementation and control measures should avoid creating a habitat for burrowing species whose tunnels can damage archaeological stratigraphy and disperse archaeological materials vertically and horizontially. Vegetation supplementation and control measures which involve subsurface or below grade activity should be reviewed for their potential impact on archaeological deposits.

.1 The Master Plan recommends review of the proposed location and subsurface disturbance for vegetation supplementation by the archaeological advisory committee.
.2 Soil profiles from planting holes can be used to interpret the extent of WPA landscaping in Fort Negley Park and the potential effects on the archaeological record of the Civil War.

.3 Physical Improvements

.1 Pedestrian Circulation (see 4.2.3.1)

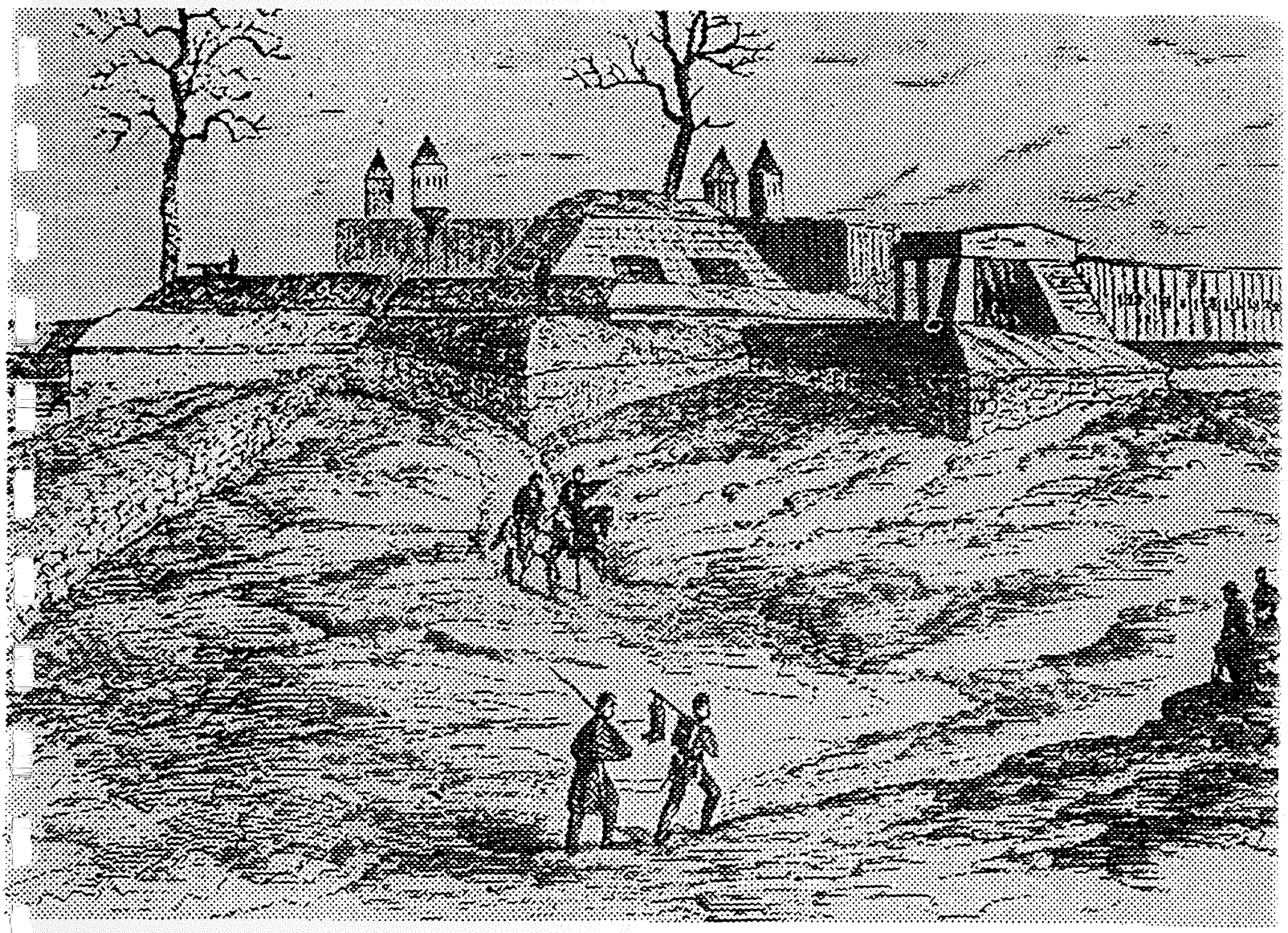
General Approach: Pedestrian traffic across unprotected areas has the potential of creating spots of exposed ground and soil compaction which can lead to erosion and damage to archaeological deposits.

.1 No pedestrians should be allowed on stone walls and earthen slopes within the fort to prevent damage to and deterioration of this fragile resource.
.2 Pedestrian pathways in the interior of the fort should be regularly monitored for the development of exposed ground within the path or along the margins of the path surfacing material.

2. Security

General Approach: Security at the site should be an integrated approach using regulatory signage, fencing, patrolling, ordinance enforcement, and public education. Security measures such as fencing which involve subsurface or below grade activity should be reviewed for their potential impact on archaeological deposits.

.1 Enforce city and state regulations prohibiting unauthorized excavation and removalof property in city parks (see 5.2.1). Investigate specifically prohibiting the use of metal detectors and relic collecting in municipal parks (see 5.2 and 5.2.1). Inform law enforcement officers and District Attorney of procedures and penalties.
.2 Nominate Fort Negley to the Tennessee Register of Archaeological Sites and enforce state laws against buying and selling of artifacts from Register-listed sites (see 5.2.2).
.3 Post restrictive signage (see 5.4.3) and implement security patrols (see 5.4.4).
.4 Public outreach should promote stewardship and long-term preservation of this unique and historic resource.
.5 Archaeological advisory committee reviews security measures which involve subsurface or below grade activity for their potential to impact archaeological deposits.



3.0 ARCHITECTURE

3.0 ARCHITECTURE

3.1 EXISTING CONDITIONS

Two levels of site survey were conducted as part of the initial architectural investigations of the fort. The first survey visually assessed the types of stone masonry construction and their locations within the various components of the fort. The second survey reviewed the existing condition and stability of the fort's stonework, using as a comparison the field notes developed in conjunction with local masonry expert Graham Reed in April 1992.

3.1.1 Types of Stone Masonry

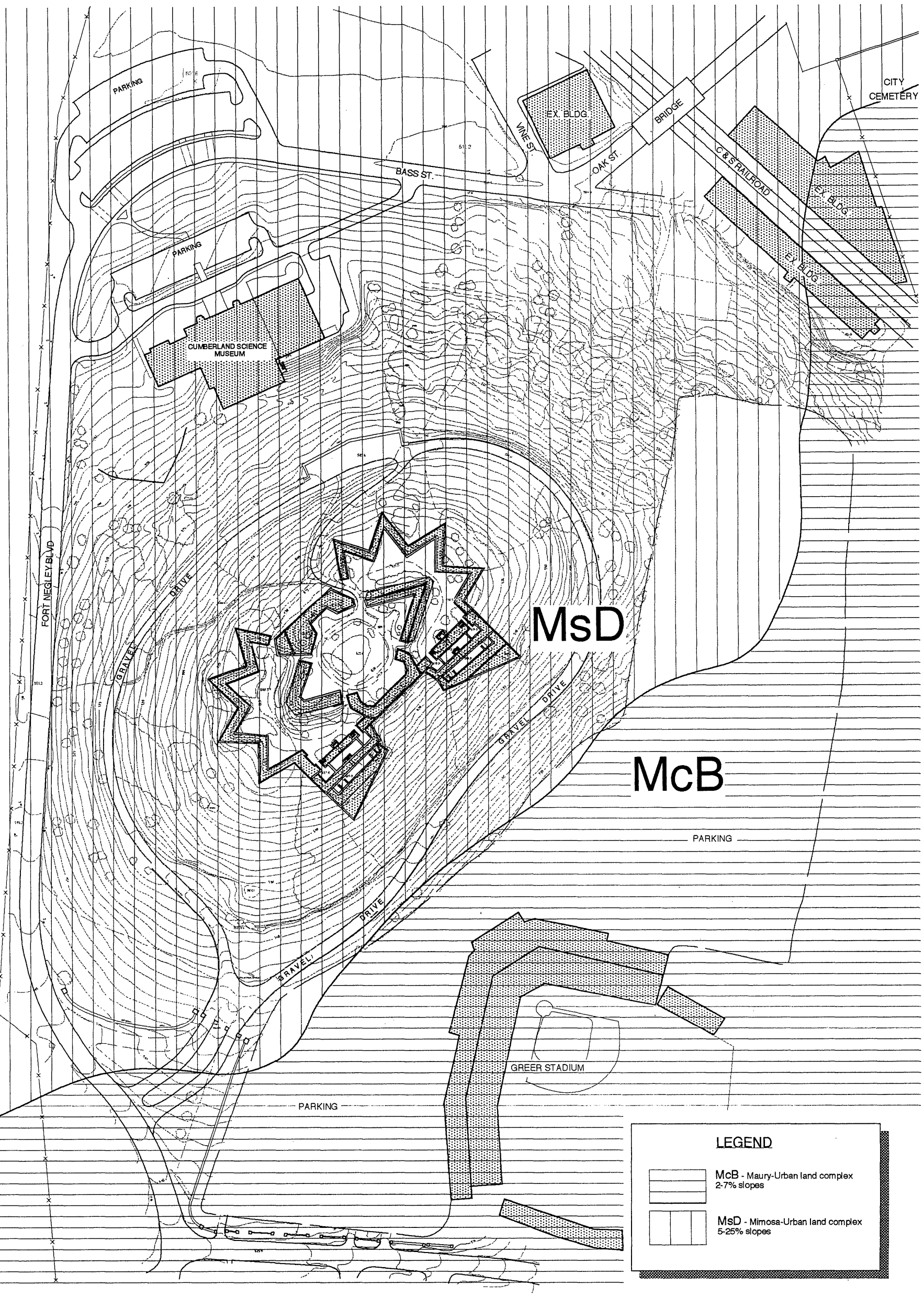
Two distinct types of stone masonry construction are noted in the fortifications: regular coursed stonework, similarly sized and cleanly dressed stone (although with a rough surface) and random coursed, less sharply dressed and randomly sized stonework. The former was found to be typically observed on the exterior of the south main wall and the east and west bastions. The latter is present everywhere else (ravelins, redans, etc.).

All opinions on the dating of the stonework are in agreement that the regular coursed stonework dates from the WPA-era reconstruction. Ample photographic evidence of WPA workers laying stonework on the east and west bastions as well as other off-site examples of this style of WPA stonework corroborate this conclusion. Archaeological excavations in 1993 by Panamerican Consultants, Inc. (PCI) in the powder magazine provide additional evidence to conclude that all regular coursed stonework on the fortifications dates to the WPA period (PCI, 1994:71).

Opinions diverge, however, on the dating of the random coursed stonework. A popular assumption is that all visible stonework was reconstructed by WPA workers, who attempted to match the Civil War-era masonry techniques and, in doing so, used largely original materials (taken from elsewhere on the site/fort). Further arguments for this position include the existence of the drill marks on the face of many of the irregular coursed stonework. Concealed original stonework uncovered for the first time since its construction during the 1988 restoration of the antebellum Tennessee State Capitol also contains these drill marks, thus refuting this position.

Another hypothesis has it that all visible irregular-coursed stonework dates to the Civil War and has not been reconstructed. A third theory suggests that, because of the steep angle of the south slope and general soil instability, the south main works and bastion areas deteriorated more quickly than the other parts of the fort (ref. 4.1.2.1.1). As a result, these areas were more completely reconstructed by the WPA using new stonework.

The third theory would go on to propose that the remainder of the fort was in varying degrees of deterioration resulting from the impact of both human (dismantling for reuse, malicious damage, etc.) and natural agents (vegetation overgrowth, moisture, erosion, etc.). The WPA workers would thus have repaired minor breakdowns in the walls or would have rebuilt missing or loose sections of the upper walls where needed. The WPA crews may also have reset large original stones into the irregular courses when possible or may also have broken up damaged large stones into smaller, more easily worked units



SOILS INVENTORY

FORT NEGLEY MASTER PLAN

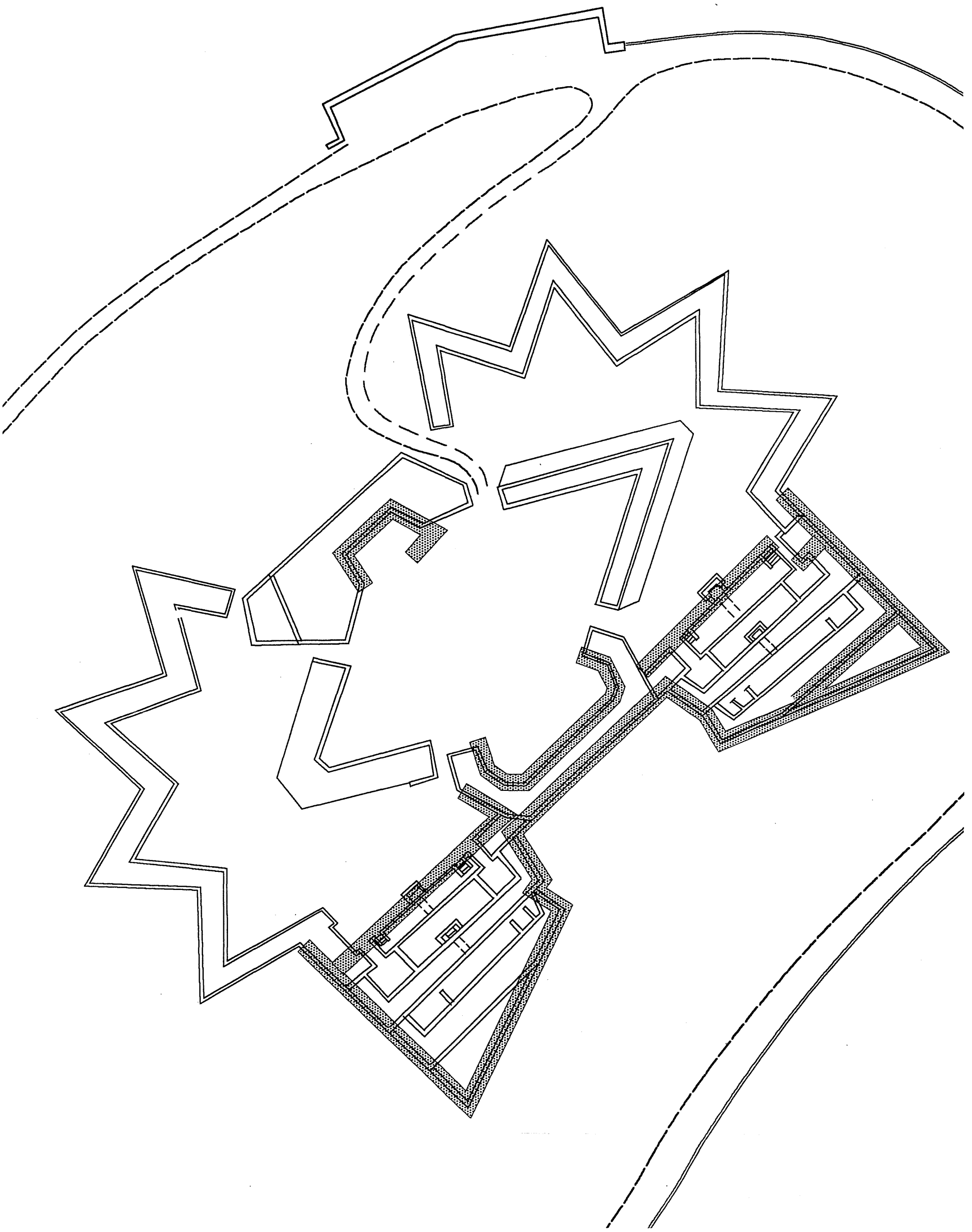
NASHVILLE, TENNESSEE

50 25 0 50 150
SCALE (in feet)

NORTH

HICKERSON FOWLKES ARCHITECTS • HAWKINS PARTNERS, INC. • OFFICE OF MICHAEL EMRICK • ZADA LAW ARCHAEOLOGY

DATE: 11-20-96 JOB NO. 95-661



STONEWORK TYPES

FORT NEGLEY MASTER PLAN

NASHVILLE, TENNESSEE

30 15 0 30 60

SCALE (in feet)

NORTH

HICKERSON FOWLKES ARCHITECTS • HAWKINS PARTNERS, INC. • OFFICE OF MICHAEL EMRICK • ZADA LAW ARCHAEOLOGY

DATE: 11-20-96

JOB NO. 95-661

27.2

for rebuilding into the walls. In both of these situations it appears that they followed the construction techniques utilized at the time of the Civil War construction period.

With respect to who actually is responsible for how much of the random coursed type of stonework, the answer is, most likely, a middle position which would accept Civil War-era stonework being retained where in sound condition and WPA-era repairs and finishing using original materials (possibly taken from the extensively rebuilt bastion area) and regular coursed stone laying techniques where more extensive repair/rebuilding was required due to deteriorated conditions. Unless additional WPA documentation turns up, we may never know the full extent of the WPA-era work.

These theories regarding the dating of the visible random coursed stonework have yet to be tested. The archaeological investigations confirmed that the random coursed stonework below ground is of 19th century origin; however, the PCI investigation did not test their working assumption that all of the above ground random coursed stonework was of WPA-era vintage.

3.1.2 Existing Condition Survey Comments

Fort Negley today is once again in an advanced state of deterioration. Having been closed to the public since the late 1940's, only recently has attention been given to the site, basically through the clearing of major trees and other vegetation growing on and adjacent to the stone walls and foundations. The condition problems faced by Fort Negley result from a variety of causes, which can be listed (in order of importance) as follows:

.1 The stone is laid in a dry stack manner (without mortar) and lacks a proper foundation
.2 The site is steep and the soils are less suitable for building (ref, 4.1.2.1.1 and 4.1.2.1.3)
.3 The past lack of repair and cyclical maintenance of the site and structure (relates to .4, below)
.4 Vegetation growing on, in and around open joints in the stonework and in the foundations (ref. 4.1.2.1.2)
.5 Lack of complete or appropriate site drainage within the fort proper (relates to .6, below; ref. 4.1.2.1.2)
.6 Hydrostatic pressure behind the dry stacked stone walls
.7 Vandalism (probably the most minimal cause of damage; ref. 2.1.2.2)

The Master Plan team recently completed preliminary condition survey followed the format of the earlier 1992 condition assessment by Graham Reed and its prioritization of stabilization/repair work. In a comparison with the earlier survey, some areas of the fort were found to be in worse condition than they were only a few years ago. In a few areas additional problems were either not addressed or had not yet developed at the time of the earlier survey. The priorities assigned in that survey were reviewed and a new series of levels of intervention leading from immediate stabilization to reconstruction were defined and charted.

Photographs of the areas keyed and referenced on the Existing Conditions drawing are included in Appendix B.

3.2 SUMMARY OF ARCHITECTURAL ISSUES

It is important to understand that Fort Negley was not built with permanence in mind. It was built quickly to provide a defensive position for troops 150 years ago. The basic issue related to the stabilization/repairs/reconstruction of Fort Negley is that this work will not arrest future deterioration. Maintenance will have to be an ongoing concern as the fort is a dry stack stone structure without traditional footings sitting on top of a steep hill that is composed of soils that should probably not be built on without going down to bedrock.

3.2.1 Basic Stabilization Concerns

With respect to stabilization, the initial concern is making a determination of the reasons for the various types of deterioration which are occurring at the fort. Once this has been done, it will be possible to develop sympathetic methods for the stabilization of earthen areas, the reconstruction of loose stone, and the prevention of further deterioration in areas which have the potential for failure (collapse, blow-out, etc.). Where failure has occured as the result of a blow-out, an approach to the reconstruction of these areas is necessary. Finally, it is important to coordinate through monitoring and excavation, the recording/preservation of any possible subsurface archaeological information.

3.2.2 Levels of Proposed Intervention

The following levels of intervention, in order of priority, are proposed:

.1 Level 1 - Stabilization: immediate but temporary
.2 Level 2 - Stabilization: selective rebuilding
.3 Level 3 - Repair: repair/replacement
.4 Level 4 - Restoration: clean-up and finishing
.5 Level 5 - Reconstruction

3.2.3 Preliminary Definitions

This section defines the various components or considerations necessary for each of the levels of intervention outlined above.

.1 Level 1 - Stabilization
  .1 Immediately needed and relates directly to bulges (pending "blow-outs")
  .2 This type of work should not wait for a full definition of Phase One stabilization plans
  .3 It should take the form of temporary shoring (wood bracing)
  .4 Archaeological assessment, excavation, and monitoring will be integral to the process of installing wood shoring

.2 Level 2 - Stabilization
  .1 This consists of the rebuilding/repair work defined in this Master Plan as part of the Phase One stabilization
  .2 Scope/method/location and construction documents to be completed through a contract separate from that of this Master Plan

.3 Work includes the selective rebuilding of existing "blow-outs," repair/rebuilding of potential "blow-out" areas, and repair of other areas defined as dangerous and in need of repair to prevent further significant masonry deterioration
.4 The current allocation of funds may not be sufficient to include all areas requiring this level of intervention (basically rebuilding, but include a concentration of this level of work with some lower priority work)
.5 Required would be related site work to correct existing site drainage problems within the fort
.6 Also required would be archaeological assessment and monitoring of all work areas

.3 Level 3 - Repair
.1 This is future phase work as prioritized in the Master Plan
.2 Additional architectural research is necessary to confirm the original design intent
.3 The development of archaeological research design/implementation is necessary to confirm features, construction, etc.
.4 This would include the remaining stabilization work (work not able to be completed under Phase One budget)
.5 Additional work would involve rebuilding of currently relatively secure tops of walls, replacing of odd missing or deteriorated stonework
.6 The work would incorporate archaeological assessment and monitoring of all work areas

.4 Level 4 - Restoration
.1 Future phase work
.2 Continuation of architectural and archaeological research
.3 This is basically "clean-up" work involving repair/minor rebuilding of tops of walls
.4 Related site work would include grading and other alterations to conform with original fort design intent or actual documentation
.5 Continued archaeological assessment and monitoring of all work

.5 Level 5 - Reconstruction
.1 Future phase work (based on available funding)
.2 Any workwould be based on completed architectural and archaeological research
.3 This would involve either selective or complete reconstruction of missing components (depending upon philosophical approach as developed for the interpretation of the fort structure) and could include one or more of the following components:
.1 Gate
.2 Stockade
.3 Powder magazine
.4 Two casements
.5 Earthworks examples related to the fort
.6 Examples of winter quarters
.7 Roofs to bomb-proof areas in bastions
.8 Installation of artillery pieces

.4 The degree to which reconstruction is completed will be based on the recommendations in this Master Plan and its updated successors (if any), available funding, adequacy of documentation, and the ability to maintain and operate an enhanced resource and necessary support buildings

.6 Stabilization/Restoration of WPA-era Components

Specific to the Fort Negley site are components built by the WPA for the purpose of opening the park to visitors. These are addressed in this Master Plan in conjunction with the phasing and priorities as presented. The components include the following:

.1 Entry gates
.2 Circular road system
.3 Site drainage system
.4 Parking area and retaining wall
.5 Stone paths and steps up to the fort from the parking area
.6 Other paths on the site

While these are an important and integral feature of the Fort Negley site, except for the retaining wall at the ring road parking area and for the purposes of planning for immediate stabilization, they are of secondary concern. Each of the components requires some degree of repair or restoration work and the extent to which they are repaired and/or restored will relate to the overall concept being developed for the entire site in this Master Plan.

3.3 DESIGN GUIDELINES AND RECOMMENDATIONS

3.3.1 Introduction

This fragile, dry stacked stone military structure has survived 130 years of war and neglect. Sixty years after the close of the Civil War, the fort was extensively repaired and portions largely rebuilt by the WPA. Sixty years after the WPA work the fort is again in desperate need of intervention to save this resource for future generations.

The reasons for the deterioration vary from one area to another: (1) original construction techniques, (2) steep topography, (3) unsuitable soil conditions, (4) uncontrolled vegetation growth, (5) inadequate site drainage, (6) hydrostatic pressure, and (7) vandalism. Of these reasons, only vegetation control, providing adequate site drainage, relief of hydrostatic pressure, and control of vandalism can be improved. The remaining issues are the legacy of the Civil War-era and a structure not intended to last for this length of time.

Design guidelines and recommendations have been developed for phased stabilization, restoration, and reconstruction of the fort. While these phases are specifically detailed below and in other sections of the Master Plan, certain elements may be moved from one phase to another depending on the support of the community and the ability to fund this work.

3.3.2 Stabilization Elements

Stabilization work includes: (1) immediate temporary shoring and (2) selective rebuilding of existing and potential "blow-outs."

.1 Immediate Temporary Shoring

General Approach: Stabilization should occur immediately to protect the fort construction and retaining wall at the WPA parking area on the north side of the ring road from additional deterioration and, therefore, increased repair cost. If left unchecked, this deterioration will continue at an accelerated pace as the exterior skin of the walls topple or have a "blow out," and the less stable inner cores of the walls are exposed. To accomplish this it will be necessary to:

.1 Inspect all walls to verify where they are out of plumb.
.2 Photograph and indicate on scaled drawings the locations of these deteriorated walls.
.3 Obtain structural engineer design services to calculate the loads behind the walls and design shoring to counteract those forces.
  .1 The shoring must be designed in a manner that will permit them to be in position for a number of years until the funding for the repairs can be obtained.
  .2 It is anticipated that the shoring can be constructed using pressure treated wood 4" x 4" or 6" x 6" components at approximately 4'-0" on center with cross bracing between the trusses for lateral support.
  .3 The shoring will probably require two holes in the round to anchor the trusses. It is recommended that archaeological assessment and data recovery be conducted at the locations where holes will be dug for the trusses.
  .4 No anchoring into the stone walls should be permitted.
.4 Require the structural engineer and archaeologist to monitor the installation of the trusses to ensure the quality of the work.

.2 Repair/Rebuild at "Blow Outs"

General Approach: Areas of stonework that are bowed out or bulging and are in danger of collapse, or areas that have already collapsed ("blow outs") should be rebuilt to match the existing adjacent (or original) construction as closely as possible. Solutions for the deterioration must be found to prevent future deterioration and repaired before the stone can be restored.

.1 Obtain architectural design services services to determine the reasons for the deterioration and detail design solutions for the problems.
.2 The extent of the fill behind the walls should be investigated to determine the roles gravity and hydrostatic pressure play on the deterioration.
.3 The condition of the wall and its alignment over any original foundation on the exterior face of the walls in these areas should be surveyed to understand the full extent of the current condition.
.4 Hydrostatic pressure build-up found to be occurring behind the walls may be prevented by excavating behind the walls to their footings (if any), installing a footing drain to collect water and a discharge through/below the wall. The excavation should be backfilled with crushed stone, covered with a thin layer of topsoil, and planted with grass.
  .1 This drastic solution will require archaeological assessment and/or data recovery prior to trench excavation since these areas inside the fort are not archaeologically cleared.

.2 Archaeological data on how much WPA and later fill material may be in the interior of the fort can help determine the roles gravity and hydrostatic pressure have played in the fort's deterioration.

.5 Those areas that are no longer plumb should be thoroughly photographed before any work begins.

.6 The Contractor should then remove the interior rubble of the wall as they take down one row of face stone at time laying them out in the same order on the ground.

.7 As this work is proceeding, an archaeologist should monitor the work to record archaeological information contained within the walls.

.8 After the wall has been taken down to sound structure and the penetrations for footing drains installed, the exterior stone facing should be reconstructed a course at a time using the original stone in its original position. Rubble removed earlier should again be used as backfill.

.9 Those areas of deterioration where "blow outs" have already occurred are more difficult to repair as the Contractor will have to rebuild the exterior face of the wall without any guidance or photographic documentation of pre-"blow-out" conditions.

.1 Interviews with an expert stone mason on-site during the investigative portion of this Master Plan determined that this work is twice as expensive as rebuilding a wall that has not yet collapsed.

.10 Footing drain lines should exit the exterior face of the walls underground wherever possible, terminating at grade well beyond the fort walls. If this is not possible, the end of the pipe can be terminated immediately inside the exterior face of the wall leaving a small hole for the water to leave the pipe.

3.3.3 Restoration/Reconstruction Elements

.1 Restoration

General Approach: Work includes cosmetic repairs to the walls to replace missing exposed stone in the face of the walls as well as rebuilding the tops of the walls to provide a safe level surface for the public to explore. This work must be completed before the park is reopened to the public.

.1 Collect all unused loose stone in and around the site. Separate into random coursed and regular coursed face stone and rubble.

.2 Replace all missing face stone to match adjacent existing stone. Use salvaged stone collected from the site whenever possible. Purchase new stone to match existing adjacent stone as required.

.3 Rebuild the tops of all walls where stone is missing using salvaged or matching new stone. Complete all courses to required wall elevation level.

.4 Fill the top of the core sections of the walls at all holes and depressions with stone rubble.

.5 Provide topsoil and grass on top of the walls.

.2 Reconstruction

Reconstruction here refers to those items known to have existed, but which are now missing from the fort. The completion of the items in this scope of work is not recommended or should be postponed until the appropriate research is completed and

sufficient funding is available to provide for the manned Interpretive Center (ref 5.6.1.2).

.1 In its current state, Fort Negley represents two very distinct layers of work: (1) the Civil War-era fort and (2) the WPA interpretation of that same Civil War fort. To what extent the two are actually the same cannot yet be determined as insufficient records have been found to determine what parts are original and what parts are reconstruction.

.2 Clearly, the regular coursed stonework is WPA. However, after sixty years the WPA stonework actually qualifies on its own right for eligibility on the National Register. Thus the dilemma: do you restore the fort to the Civil War configuration or to the WPA configuration (assuming it can be documented to be at variance with the Civil War configuration)?

The recommendations in this Master Plan are based on the assumption that the fort will be stabilized/restored to reflect its current configuration and that it will be interpreted with appropriate signage to explain both the Civil War and WPA history of the fort and surrounding areas.

Successful alternative interpretive methods used at other similar sites include historical photographs, renderings, models, interpretive signage, raised stone foundations for missing components, partially buried timber posts to indicate stockade walls, perimeter bollards with interconnecting chains, and massing outlines using perimeter interconnecting metal tubing (such as that used in Philadelphia at the Benjamin Franklin House). These approaches can suggest and visually demonstrate aspects of the missing components and ultimately cost less to construct and maintain. They cannot provide the same feeling actually experienced by walking around or inside of a fully reconstructed feature.

General Approach: Should archival and archaeological research adequately document the missing component(s), should the philosophical questions related to reconstruction be satisfactorily answered, and should funding be available for construction and maintenance of the reconstructed component(s), then the reconstruction of missing components may be accomplished with an appropriate level of accuracy.

.1 Use native materials and period techniques. Native trees in this area include pine, oak, cedar and poplar. Use traditional log notching and chinking for the winter quarters if archival research documents this type of construction.

.2 Alternative exposed materials such as pressure treated lumber must be evaluated as to the impact their appearance may provide in lieu of original techniques. (The Revolutionary War Fort Ligonier in Pennsylvania was reconstructed using several different preservative treatments on its logs. After more than 25 years, only four pressure treated pine logs have been replaced. Those treated with an applied wood preservative such as "Woodlife" are in need of replacement.)

.3 Consider gates or fencing for these elements requiring protection or having potential security and liability problem. These can be bar-type gates that permit viewing the interior but prevent access. Possible locations for such protection include:

.1 Main fort gate
.2 Gate at stockade
.3 Gate at powder magazine
.4 Gates and perimeter fencing at casement roof overhangs; fence at cannon portals
.5 Gates at entrances to winter quarters
.6 Gates at entrances to bomb proof areas

The degree to which these security measures are necessary depends greatly on the access given to the public. If public access to the fort is limited to guided tours, then these measures can be reduced somewhat.

.4 Install period or reproduction artillery pieces in the locations shown by the historical photographs.

4.0
SITE

4.0
SITE

4.10
SUMMARY OF SITE ISSUES

4.1.1
Existing Site Inventory .1 Landform/Topography

The site occupies the crest of St. Cloud Hill, the highest hill within a 1.5 mile radius of Nashville's State Capitol building. The stone fortification bench mark is 620 feet above Mean Sea Level, as identified by the U.S.G.S. (Nashville West 7.5 Quadrangle). The topographic slopes are relatively steep nearest the fort walls, sloping to more gentle gradients at the base of the hill. The ridge is over 100 feet higher than the surrounding landscape. Gradients are as follows:

Southeastern slope gradient 20%-25%
Southwestern slope gradient 15%-17%
Northeastern slope gradient 17%-20%
Northwestern slope gradient 15%-17%

.2 Soils

The two soil types on the Fort Negley site, mapped generally in the 1981 *Soil Survey of Davidson County, Tennessee*, are Maury-Urban land complex and Mimosa-Urban land complex. Both soils when undisturbed by man have a surface layer of seven inch deep silty loam. The latter of the two types has a depth to limestone bedrock within 40-60 inches and a shrink-swell potential ranked as "moderate."

.3 Drainage and erosion

On-site storm water run- off from the ridge on which the fort rests begins as sheet flow, i.e. the majority of rainfall hits the ground surface and follows across the sloping landform down the hill over the surface of the ground. Some of the run-off seeps into the ground and flows below grade more slowly down the slopes.

Along the uphill side of the WPA-constructed ring road, the normal above ground sheet flow is collected by a storm drainage culvert also constructed by the WPA. Stone box inlets are spaced regularly along the loop drive, approximately 55 feet apart, to capture and divert surface run-off into the linear stone-lined and capped culvert which travels around the hill to the lowermost inlet near the existing stone entrance gates. From there, the collected water is directed off-site towards the intersection of Chestnut and Fort Negley Blvd.

The storm water run-off that hits the gravel-surfaced ring road generally flows towards the outer boundary of the road and then over the shoulder and down the slope. There is one major erosion problem due to this pattern on the eastern side of the site where the road is edged by a mortared limestone curb. Erosion is evident where the curb is punctured to let water flow through; both the road and the slope beyond are rutted and gullied by the force of runoff.

Below the ring road, surface sheeting and infiltration are again the modes of travel for storm water run-off until it reaches Fort Negley Blvd., the pavements surrounding the Cumberland Science Museum or the Greer Stadium parking area.

.4 Circulation

.1 Vehicular Circulation

.1 Off-site

Present vehicular access to the site from the surrounding community to the south is via Chestnut Street. This is a roughly east-west corridor which connects to 2nd, 3rd and 4th Avenues South to the east and 8th and 12th Avenues South to the west. From downtown Nashville, the most direct vehicular route is via 6th Avenue South to Bass Street. Traveling westbound on Bass Street then routes the visitor to Fort Negley Blvd., which visually defines the western border of the Park. Fort Negley Blvd. also provides access to the nearby Cumberland Science Museum and Hershel Greer Stadium.

.2 On-site

On-site vehicular access to the top of the fort hill is via a looped gravel-surfaced 10 foot wide driveway. Parks and Recreation maintenance vehicles utilize the drive to deliver maintenance equipment closer to the summit. No unauthorized vehicular access to the park is presently permitted. Access is controlled by two tubular steel swing gates across the drive through openings in the WPA-era stone entrance structure now standing at the southwest corner of the property.

.2 Parking

.1 Off-site

The Cumberland Science Museum structure and off-street parking area abut the fort property to the north. There is no visually apparent pedestrian link to the fort site from the museum because of the dense woodland buffer and somewhat steeply sloping topography between the museum and the fort.

Parking for the Hershel Greer Stadium abuts the fort property to the south and east, but because of security issues, a six-foot tall chain link fence now separates the stadium and its parking lot from the fort site (although a short section of fencing has not yet been completed).

.2 On-site

At the highest point of the looped gravel-surfaced driveway, the loop widens into a small 19 car parking area, approximately 90 feet from the southern most wall of the Cumberland Science Museum and down slope from the fort's exterior walls. Some unauthorized parking occurs at the stone entrance gates at the southern tip of the property at Chestnut Street, along the 180 foot long "boulevard" of asphalt pavement that leads up to the gates.

.3 Pedestrian Circulation

Off-site pedestrian access is not presently permitted. However, with the exception of the eastern and southeastern boundaries of the site where chain link fence has been erected by the stadium owners, pedestrian access is not physically restricted.

Two primary on-site pedestrian pathways are of WPA-era construction and lead up to the fort from the loop driveway and the parking pull-off WPA-era construction). The most developed path, which starts at the pull-off, is constructed of limestone flat work, is approximately 220 feet long, and includes a number of deteriorated steps. Gradients on this major pedestrian walkway from the parking area exceed eight percent. A secondary pathway on the western side of the site starting at the loop driveway and climbs the hill towards the fort entrance. It is constructed of crushed aggregate with limestone curbing without steps.

Minor pedestrian foot paths have been developed over time across the site, some of which appear on the Metro topographic surveys compiled in 1960s, but their exact locations and levels of development remain undocumented.

.5 Existing Vegetation

The site vegetative landscape at Fort Negley Park consists of three varying cover types, definitions for which are found in a publication entitled *Earthworks Landscape Management Manual* (National Park Service). These types consist of (1) Forest Cover, which consists of dense tree canopy and woody understor; (2) Turf Cover, which is a stand of non-native hybrid variety lawn grass species; and (3) Rough Grass Cover, including patchily established mixture of lawn grasses, familiar lawn weeds, and occasionally native wildflowers.

.1 Forest Cover

Much of the perimeter of the site (approximately 11 acres) is currently in this type of cover. Tree species, combined with layered understory shrubs and ground covers make up the plant community in this cover type. The understory shrub layer, however, consists predominantly of invasive exotic species that are less desirable than a diverse indigenous woodland understory community.

.2 Turf Cover

The site immediately around the fort structure as well as the western and southwestern boundaries of the site (approximately 11acres) are covered by turf. Tall fescue is the predominant lawn grass in this cover community. It provides a rich, competitive, non-invasive cover for this portion of the site during all seasons of the year, though typically dormant during the hot and dry days of summer.

.3 Rough Grass Cover

The remainder of the site (approximately three acres) is covered by this somewhat weedy and discontinuous grassy cover. Its rough appearance is due to its composition of various annual and perennial weeds, and exposed soil in

combination with some fescue turfgrass. It is of little value to the long term stability to the resource.

.6 Views

Because of its height above the surrounding terrain, St. Cloud Hill was selected as the site for the construction of Fort Negley. It afforded unobstructed views of the open valley to the south as well as the lines of Union defenses protecting the southern perimeter of Nashville. Today, the hill site still affords scenic views toward the downtown to the north and the valley to the south. Some of the Civil War era sites, including Reservoir Park and Rose Park (then the Casino Blockhouse and Fort Morton respectively), can still be viewed today through gaps in the forest cover. Views to the southeast are of Hershel Greer Stadium's parking lot and baseball facility and the industrial land uses beyond.

.7 Security

.1 Physical Hazards

Current visitation to the site presents several real hazards that are addressed in this Master Plan. The deteriorated state of the fort's stone walls including loose stonework along the tops of the walls present a dangerous condition for the casual visitor. Many sloping earthen components of the fort are too steep to safely access. The sloping surfaces of approaching "walkways" to the fort are over 8% percent gradient and are gravel-covered. Vagrants also appear to frequent and even camp at the fort and could present a potential threat to the visitor.

.2 Exterior Lighting

Presently there is lighting for the Greer Stadium-evening games, street lighting along Fort Negley Blvd., and parking lot and building illumination at the Cumberland Science Museum. The Fort Negley steering committee has clearly expressed that the Fort Negley site will have only day time visitation permitted. Night time illumination will, therefore, be excluded from the interior of the park. However, levels of perimeter lighting on adjacent land, such as the stadium and the Cumberland Science Museum, must be adequately maintained for their evening uses.

.3 Fencing

The existing fencing on the property is generally contiguous with the shared boundary between Greer Stadium leased area of the site and the grounds surrounding the fort. This fencing, of which approximately 75% has been replaced, consists of six foot high chain link with the ability to add three strands of barbed wire above. This fence was erected by the stadium owner in order to restrict pedestrian movement between his parking lot and the fort site. Additional fencing may be required to protect visitors on the fort property from falling over a vertical rock cut along the northwestern edge of the stadium parking lot. Aside from limited chain link fencing around the Cumberland Science loading dock, there is no other appreciable fencing on the site that would be considered security fencing.

4.1.2
Existing Site Analysis .1 Stabilization - Site/Grounds

.1 Influence of Existing Soil Types on Site Stabilization

The type of soils found on a site can influence the amount of stability over time that the site will exhibit due to the processes of natural weathering, changes in volume due to shrink-swell capacity (clay content), and the actions of humans on the site. Sites with highly erodible soil types or soils that change a great deal with fluctuations in moisture content require more careful management so that protective layers of topsoil and historically important topographic signatures are not lost.

Of the two soil types mapped on the Fort Negley site, Maury-Urban land complex and Mimosa-Urban land complex, the latter is of moderate shrink-swell ranking which is of concern because the fort wall footings are not necessarily resting on bedrock. Instead, they may be resting on a soil material that is changing in shape and size as soil moisture is gained or lost. This may account, in part, for the collapse of many of the walls. As the soil dimensions change, this could be having adverse effects on the mechanical weathering of the stacked stones that make up the fort walls. Several of the walls that are presently bulging outward also appear to be sagging at the base of the bulge, as if the section of the wall is settling downwards.

Where repair work is undertaken to straighten or reconstruct wall sections, provisions must be made for establishing structurally sound footing conditions beneath the wall and adequate drainage features behind the wall to reduce the impacts of soil and moisture on the stability of the walls.

.2 Influence of Existing Vegetative Cover Types on Site Stabilization

The stability of the site is also dependent on the amounts and types of vegetative cover that are distributed over the site. Evidence indicates that many of the Civil War-era sites being managed in the National Parks system that have been overgrown by natural forest cover (tree canopy with shrub and ground cover understory) are in better states of preservation than the sites that were covered in turfgrass and "kept up" by the National Park Service. Under proper management, the presently wooded conditions of the site can help to protect perimeter areas of the resource. With regard to the actual stone fortification components of the Fort Negley site, however, the potential for structure damage from aggressive and powerful root systems twining their way beneath and between the spaces on the stacked stone wall would be too high. This portion of the resource has to be managed in a different manner.

It appears that wall structural failures have accelerated following the cosmetic vegetative clearing of the fort surroundings in the early 1990s. It seems that following the removal of shrub and tree cover, major structural failures in several wall sections have occurred for the first time in 60 years. If so, a more systematic analysis is required to ascertain the correlation between clearing efforts and accelerated destabilization of the walls. One hypothesis is that a more radical fluctuation level of soil moisture content (caused by the absence of vegetative

shading and less evapotranspiration) has resulted in increased dimensional instability by virtue of more pronounced shrinking and swelling. The stone walls would thus be resting on a structurally unstable soil foundation. This, combined with the age of the weathered stone, could account for the acceleration in structural deterioration.

A second theory considers that the stone walls are failing at a more rapid rate due to an increased build-up of soil moisture and, therefore, increased hydrostatic pressure in the soils held up by the walls. Theoretically, with less woody vegetation covering the soil, rates of surface run-off should be measurably increased with less water infiltrating into the ground. This would translate to *reduced* hydrostatic forces accumulating behind the walls. Because the walls were constructed with a combination of crushed stone and large dry stacked stones without mortar, water pressure should have only limited opportunity to build up behind the walls. Soil moisture should seep through the walls without building up pressures that could force the wall to blow out. Nevertheless, measures should be taken during repair and reconstruction efforts to ensure proper drainage paths for infiltrating soil water to prevent hydrostatic pressure increases from behind walls.

.3 Influence of Existing Topographic Conditions on Site Stabilization

The present slopes of St. Cloud Hill are in the range of 10%-30%, which is considered well within a stable range for the properties of soil types existing on this site. Steeper slopes are generally more susceptible to forces of gravity and erosion and are thus prone to instability. When piled up, materials have a natural angle of repose (rest). Slopes constructed of soil that exceed a 2:1 slope (extending two feet horizontally for every one foot rise) are predictably more subject to instability, unless special measures are taken to change the characteristics of the soil. Unfortunately, there are areas within the fortification that soil slopes were originally constructed in excess of this natural angle of repose. These embankments have settled toward a more stable angle and are now covered by a protective layer of turfgrass cover. If these embankments are to be reconstructed to their historically steeper gradients, special precautionary measures must be developed to reduce erosive forces to a minimum so that the resource remains stable and protected. (Note: These new embankment angles were created by the WPA. The WPA angles have also settled to some degree.)

.4 Influence of Existing Circulation on Site Stabilization

The minimal park maintenance vehicular traffic on the loop driveway does not appear to be degrading the resource. Vehicular traffic should not be allowed within the fort walls, since the potential negative impact of this weight on the resource is unknown. The repeated flow of vehicular traffic and pedestrian foot traffic across a given unprotected area of the site can cause compaction and impermeability of the soil. Where traffic volumes are predictably high or where low volumes of traffic are confined to a limited space, a protective wearing surface or tread must be provided that will not permit site degradation from compaction. In the case of turfgrass covered areas of the site, this material should have sufficient wearing capacity to tolerate light and periodic foot traffic. However, concentrated and intensive foot traffic may be too severe for the turf to regenerate after each occurrence of damage. This will result in bare, erodible soils. A more durable

solution in these areas must then be considered to maximize the stability of the resource.

.2 Existing Landscape Issues

.1 Analysis of Landscape Conditions

Of the three basic categories of vegetative cover found at Fort Negley (Forest Cover, Turf Cover, and (3) Rough Grass Cover), each has an impact on the stability of the soil strata, thefort walls, and the integrity of subsurface components of this site.

The Forest Cover type has been proven to be extremely effective at stabilizing Civil War earthen forts throughout the eastern temperate United States. This cover provides protection from the erosive forces of rain and runoff, and in many cases prevents foot traffic damage to the sometimes fragile resource. On the other hand, old tree windthrow could seriously damage the fort's masonry structure by falling onto a wall or by undermining a wall with a root system from a large overturning tree. Vines, such as the invasive exotic Japanese Honeysuckle *(Lonicera japonica)* or Winter Creeper (*Euonymous fortunei 'Coloradus'*) must be kept clear of the masonry portions of the fort because of the potential damage that their clinging root systems and vertical growth habits can cause to the stacked stone construction.

The Turf Cover type can do a satisfactory job of protecting the site from erosion, since its root system is dense and fine textured. The site immediately around the fort structure as well as the western and southwestern boundaries of the site are covered by turf. Turfgrass must be mowed, periodically fertilized, and treated for weeds, all of which involves maintenance staff and operations dollars. Turf also invites foot traffic which can degrade the resource. If the foot traffic compacts the soil, the turf will die and soil erosion can occur.

Portions of the site are in the Rough Grass Cover type. Though it is weedy and somewhat discontinuous grassy cover, it poses no direct threat to the resource. Its liability is that it can allow soil erosion in steeper areas of the site because it does not provide year round dense vegetative protection.

.2 Analysis of Vegetation Control Measures

In recent years, the tangle of understory vines and canopy trees that began to re-inhabit the site in the early 1940's was cleared away from the immediate fort environs. Stumps of trees are still evident in many parts of the site, several being imbedded in the stacked stone walls. Management has consisted of establishing and mowing rough turfgrass in cleared areas. Should this effort be halted, cleared areas would slowly revert from an open rough-grass covered hilltop surrounded by trees to a completely wooded site with a predominant canopy of Hackberry *(Celtis laevigata)* with Bush Honeysuckle *(Lonicera maackii)*, Privet (*Ligustrum*) and Japanese Honeysuckle (*Lonicera japonica*) understory. This process is termed *natural succession* and will continue, if left unchecked, to a climax forest type of vegetation.

In order to protect the existing resources from further deterioration, this natural process of vegetative reclamation of the site must be manipulated. Mechanical forces of woody root extension beneath and through the dry stack stone walls of the fort and into possible archaeological resources in the strata below the soil surface could destroy the integrity of the resource. Management must then be continued to maintain the desired balance of species over the proper site zones in a careful and systematic manner.

.3 Analysis of Erosion Potentials

Without the proper balance of ground protecting foliage and interwoven root systems, the erosive force of wind and water will result in the deterioration the resource. Water collecting on impermeable surfaces such as walkways and drive-ways must be managed and dispersed without creating soil erosion. All bare soil areas, especially those that are sloped, will continue to erode if left unchecked. Areas both inside and outside the walls of the fort, that have exposed soil must be identified and managed to eliminate continued erosion.

.4 Analysis of Storm Water System

As storm water falls onto the site an adequate, yet non-destructive drainage system must be available to safely remove run-off from the site's surface features. The WPA-era storm drainage system, which collects run off in an impressive stone inlet and culvert system alongside the loop driveway, appears to be successfully collecting and transporting surface storm water flow from the crown of the hill. Only one significant point of erosion is apparent on the downhill side of the loop drive, where storm water concentrates through a perforation in the 12" high stone curb on the eastern side of the site. Modification of this flow pattern or reinforcement of the channel over which the water flows will have to be installed in order to halt this erosion. Within the west ravelin of the fort one stone site drain was also identified. However, it is not clear at this time if this is an original Civil War-era feature or one added during the course of the WPA work.

.5 Analysis of Natural Habitats

Because of this site's protective tree cover and abundant food supply, it affords habitat to several species of birds and other wildlife during the year. The dense tree cover provides nesting opportunities for non-avian species, including field mice and gray squirrels, which can be found nesting and feeding in the understory and ground cover. Amonitoring program must be established to identify and eliminate any threat from burrowing species, such as gophers or ground hogs. These animals can inadvertently damage the archaeological integrity and stability of the resource as they tunnel through the ground, and must therefore be excluded from populating this fragile site.

.6 Analysis of Pedestrian Footpaths and Trails

The existing "trails" that lead into the fort from the ring road consist of either crushed stone sloped walkways, crushed stone vehicular access drives, or stepped trails constructed of rough limestone. None of the current paths is entirely safe or

surfaced with a desirable material. With the eventual introduction of increased numbers of visitors to the site, careful consideration must be given to both routing and to the selection of surface materials for trails across the site. If a protective surface tread material is not provided on heavily used routes, pedestrian foot traffic can compress the top layer of soil so that virtually all available air and moisture for root growth is eliminated, resulting in a soil surface which becomes impenetrable. And without the protective cover of vegetation, impenetrable soils are subject to erosion. Pedestrian footpaths must, therefore, be prepared in a way that allows for proposed site circulation without subjecting vegetative areas to extreme levels of compaction.

.3 Circulation and Parking

.1 Site Access-Vehicular/Pedestrian

Posted directions to the Fort Negley site from downtown are not yet in place. Arrival via Eighth Avenue South to Chestnut Street and then to Fort Negley Blvd. is how many visitors would probably travel to the park. One could also envision arrival from downtown (and from the arena site and planned development in this part of the Central Business District) using the planned Sixth Avenue South linkage to Bass and Fort Negley Blvd. For those who have learned this route, it is the more direct corridor to the Cumberland Science Museum. Pedestrian traffic is not encouraged as the Fort Negley portion of the park is closed at present. However, the route that a visitor would travel is not hard to imagine. Depending upon the point of entry, logic would direct the visitor through the main stone entrance gates, along the loop road that rings the fortification, then up the stone walkway or gravel drive that leads to the fort entrance proper and then into the fort. Once there, the route one would take over the open grass covered ground of the fort interior is not defined.

.2 Analysis of Vehicular/Pedestrian Conflicts

The primary conflicts between vehicular and pedestrian visitors will occur between arriving and departing vehicles at parking lots and for pedestrians as they approach the site from these parking lots. The vehicles could include automobiles, trolleys, buses, as well as bicycles (an alternative form of transportation that is being planned into Greenway linkage routes throughout the city of Nashville). Avoiding the danger and liability of these conflicts will be a central issue in the clear orientation and routing of visitors from the parking areas to the fortification/summit of the site.

.4 Security Issues

.1 Analysis of Exterior Lighting

Lighting presently consists of pole mounted fixtures around the western site perimeter, at the Cumberland Science Museum, and at Greer Stadium. The Fort Negley steering committee has clearly expressed the desire that the Fort Negley fortification permit day time visitation only. Supplemental night time illumination would not, therefore, be desirable on the interior of the park. However, levels of perimeter lighting on adjacent land, such as the stadium and the Cumberland

Science Museum, must be adequately maintained for their evening uses. This study must then include lighting recommendations that address the disparity in prohibiting night time access to a site that is *surrounded* by users that encourage evening visitation.

.2 Analysis of Physical Hazards

The stone wall deterioration, steeply sloping walkways, and the periodic habitation of the site by vagrants are of serious concern with regard to the safety of the visiting public. Visitation to the site by the pedestrian must be carefully designed to exclude undue exposure to physical harm from that experience, including falling from unstable walking surface conditions, slipping on excessively steep pathway grades, and harm from an ill-willed site vagrant.

.3 Analysis of Existing Fencing

The existing six foot tall chain link fencing along the property boundary between Greer Stadium and the grounds surrounding the fort is the only pedestrian barrier to entry from the east. It is not effective because it is not continuous. It appears that a fence designed to prohibit migration of people on foot from the railroad tracks to the site could be more effective at limiting vagrant populations that travel to this area by train. Careful consideration should be given to erecting continuous perimeter fencing on the eastern and northeastern site boundaries for this reason. Though there is an additional length of existing chain link fencing along the Interstate ROW to the west, it affords little control over access on foot, since topographic relief and the Interstate generally deter pedestrian traffic from the west.

.4 Analysis of Site Access

With regard to site access and security, the only on-road vehicular access to the interior of the fort site is controlled by padlocked swing gates at the stone entrance structure near the corner of Fort Negley Blvd. and Chestnut Street. However, by simply driving over the eastern curb on Fort Negley Boulevard, off-road access to the loop driveway and to the fortification is readily achieved. This route of engress means that this sensitive resource is presently vulnerable to damage or destruction by an off-road two or four wheel vehicle in a matter of minutes.

Site access by the pedestrian, though lawfully prohibited by some existing regulatory signage, is physically unrestricted from all but the Greer Stadium parking lot. Access to the site by playing children, vagrants from the nearby railway yards and light industrial neighborhood, and civil war souvenir hunters is a serious security issue that must be dealt with skillfully. The poor visibility into the sight from the surrounding streets and neighboring Cumberland Science Museum secludes the present visitor in a way that is dangerous. Visibility into and out of the site must be created in a way that improves the real and perceived security of the visiting public and reduces the incentive of inappropriate activities within the fort.

4.20 DESIGN GUIDELINES AND RECOMMENDATIONS

4.2.1 Site Stabilization and Preservation

.1 Erosion Control/Fill

General Approach: All eroding soil conditions will continue and will degrade the archaeological integrity of the site if left unchecked. Compacted soil and/or intensified volumes of water will allow run-off to scour protective vegetative cover from the existing soil, which can then result in ruts and gullies. This process perpetuates itself and can accelerate with more extensive soil loss and potential undermining of nearby structures. Not only can this process degrade the resource, it can also present hazardous walking conditions to the visiting public.

.1 Visually survey the site and identify eroded or sunken areas that need immediate attention.
.2 Fill with topsoil all areas that require repair to a level of the surrounding grade.
.3 Determine the appropriate material for a protective stabilizing covering, such as turfgrass, ground cover, or mulch.

4.2.2 Site Enhancement

.1 Drainage Improvements within Fort

General Approach: Subsurface water infiltrating into the soil within the areas retained by the fort's exterior walls can spell potential disaster should the water pressure, called *hydrostatic pressure*, behind the walls increase to a force great enough to cause wall failure. This potential build up of pressure must be alleviated so that the fragile stacked stone construction of the fort's walls is not pushed over by the force of hydrostatic pressure.

.1 Identify surface areas within the fort where storm water collects behind the stone wall.
.2 Provide or improve slope gradients of a minimum of 2% away from undamaged stone walls, where minor recontouring is feasible.
.3 With great care and subsequent to archaeological assessment/data recovery, install a shallow perforated subdrainage tile in low-lying areas to collect and direct storm water to areas beyond the outer walls.
.4 Where stone walls require repair or total reconstruction due to failure, subdrainage improvement options should include the following methods:
  .1 Introduce crushed aggregate drainage fill behind the retaining side of the walls, leading to footing drain tiles along the wall's base.
  .2 Construct *weep holes* in walls through which subsurface water can migrate without pressure increases behind the wall.
  .3 Re-contour surface grades and collect surface water in areas away from walls using subsurface drainage tubing routed though the wall to a position down slope from the wall's foundation.

.2 Drainage System Restoration

General Approach: The WPA-era storm drainage system that parallels the interior of the ring road seems to be functioning adequately to control storm water run-off from the areas above the ring road. This system should be carefully repaired as needed to remain in operation and be interpreted based on archival research.

.1 Survey the condition of the stone-lined culverts and inlets for deterioration to determine what sections or structures are in need of repair or reconstruction.
.2 Through archival research, establish proper reconstruction techniques that are sensitive to, and compatible with, the original construction.
.3 Repair inlets and culverts to their original condition.

.3 Vegetation Management at Fort

General Approach: The fort walls must be kept clear of vegetation in order to prevent further deterioration by mechanical forces, such as those caused by roots growing between stones or beneath footings, or by falling branches from nearby trees.

.1 Control measures should include establishment and maintenance of a 30-foot wide clear zone adjacent to any wall of the fort. All woody plant material within this clear zone shall be removed, including existing trees and climbing vines. Plant clearing should not include stump and root removal. Cut stumps off at a 30 degree angle at a height of six inches above the ground, and treat with approved herbicide to prohibit resprouting.
.2 Establish and maintain a high quality stand of cool season Turfgrass within the fort and in the clear zone, that can withstand moderate levels of concentrated visitor foot traffic. Revitalize existing rough grass areas that have little permanent value by overseeding and proper maintenance.
.3 Establish and maintain a preferred foot path alignment for visitors in the turfgrass by mowing a 4 foot wide pathway to a height of 2-1/2 to 4 inches. Mowing heights of surrounding non-pathway turfgrass should be 12 to 18 inches or higher to discourage visitors from wandering off the trail.

.4 Vegetation Management of Surrounding Forest

General Approach: The real and perceived security of the park, as well as its visibility, can be improved by selectively eliminating the understory plant material from the forest cover around the perimeter of the fort. Evergreen planting screens should be introduced to visually separate surrounding incongruous land uses and views from the fort experience. Also, native plant species should be encouraged to re-establish themselves in the park property to improve species diversity.

.1 A vertical clearing zone from 30 inches to 8 feet should be developed by thinning understory vegetation below the taller forest cover type. Clearing and eradication of non-native understory plant material should be accomplished within a systematic management plan involving mechanical means in combination with recommended herbicides. The existing understory groundcovers should be allowed to thrive in beneath the forest cover, but prohibited from climbing into trees or over low shrubs.

.2 Evergreen screen plantings should be added in specified areas to provide year-round visual screening of Greer Stadium parking lots and the southern facade of the Cumberland Science Museum from the fort..

.3 Species diversity should be encouraged by reintroducing native seedling shade trees, flowering trees and low shrubs that can be interpreted for visitors as well as provide improved habitat for wildlife.

.5 Vegetation Clearing for View Corridors

General Approach: Improve the visibility of specific off-site views from St. Cloud Hill in order to better interpret the Civil War-era site as it once visually connected to other nearby Federal defensive positions.

.1 From the highest areas of the fort interior, confirm the directions of selected view corridors toward Downtown Nashville and other Civil War-era sites, including Reservoir Park and Rose Park (Forts Casino and Morton respectively) and the battlefield to the southwest.

.2 Select tree canopy areas for selective pruning that, once removed, will provide better visual access to the surrounding sites of interest. The width of clearing zones shall be approved by the Technical Advisory Committee prior to commencement. Entire trees should be removed only as a last resort.

.3 Carefully prune trees according to standards set forth by the *International Society of Arboriculture*, and during a time of the year when trees are in full leaf so that the extent of selective canopy removal is obvious. Remove all pruned materials from the selected zones without damaging surrounding forest cover vegetation.

4.2.3
Physical Improvements .1 Circulation /Pedestrian

General Approach: Safe pedestrian walking paths must be provided from parked cars to the site features of interest. Visitors should find barrier free access up to the highest area of the ring road. Assisted access would be required beyond this point into the fortification trails.

.1 Barrier free accessibility into the site is only problematic nearest the fort because of existing slope constraints. The topography would require extreme modification that would alter the historic fabric of the site to an unacceptable extent.

.2 Materials used on footpaths may vary according to the location found on site. New walkways and plazas leading up to the site should be hard-surfaced and meet standards outlined in the American Disability Act Design Guidelines (ADA).

.3 Early efforts should be focused on stabilizing the two primary WPA-era walkways that presently lead from the ring road parking area towards the fort entrance. Stabilization involves the careful repair/replacement of loose limestones along the walkway and steps of the main entrance walk, and the replacement of limestone curbing and crushed limestone on the sloped walkway that begins on the west side of the site.

.4 The ring road should be carefully surveyed for repairs and stabilization, and repairs undertaken prior to opening to the public. In a subsequent phase and

creatively interpret the Civil War-era and WPA-era conditions of this nationally significant resource.

.2 Regulatory signs, initially posted in Phase One at the main stone entrance gates, should prohibit access to the site and warn of dangerous conditions. On the ring road, regulatory signs should remind the intruder that the site is closed and that metal detection devices and souvenir hunting are strictly prohibited. Violators should be prosecuted and fined.

.1 Signs of a regulatory nature should include park rules, times of operation, and messages to remind the visitor of the site's vulnerability to disturbance. These signs should be implemented prior to opening the site to the public.

.3 Directional signs should be positioned first along the ring road and then at key trail intersections to help unfamiliar visitors find their way to the fort and across the network of trails proposed.

.5 Recreational Uses

General Approach: The site should only be used for passive recreational activities. Activities that could degrade the resource should be expressly excluded. Normal levels of public visitation, strolling over the site on designated pathways, and nature watching are acceptable passive recreational uses, for example. The designation of nature trails is encouraged to expand the levels of visitor enjoyment.

.1 Passive recreation can include simply resting on-site in the beautiful surroundings of the park. Benches should be added at selected locations, primarily on the ring road for seating opportunities.

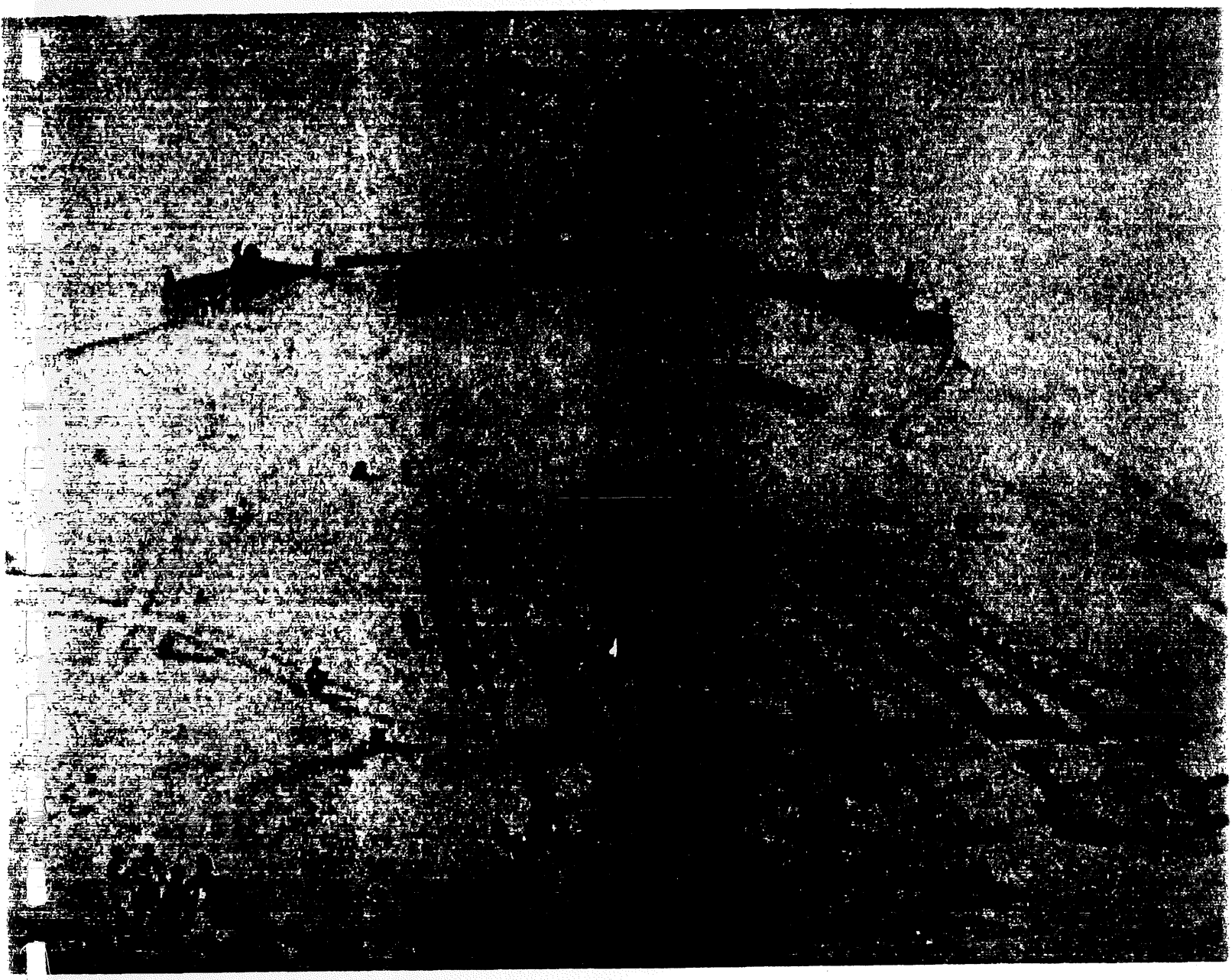
.2 Nature trails can add an important level of interest to this historic site. Native plant species, as well as non-native exotic species, should be carefully tagged with durable name tags for those who would enjoy learning more about the middle Tennessee natives as they stroll across the throughout the park.

.6 Greenway Connection

General Approach: The Fort Negley park should be considered a prominent destination in all greenway corridor planning efforts.

.1 Current plans being developed by the Greenways Commission will link this site to the City Cemetery (along Bass Street improvements), and to the arena site in downtown Nashville via a Sixth Avenue South corridor.

.2 Corridors should provide safe pedestrian and bicycle transit from place to place, along existing and improved sidewalks and bike lanes.



5.0
ADMINISTRATIVE ISSUES

5.0 ADMINISTRATIVE ISSUES

5.1 SUMMARY

In addition to the scope of work identified and discussed above in the sections on architecture, archaeology and site, a number of specific administrative issues have been identified. These issues relate to the protection, enhancement and development of the Fort Negley resource.

- .1 Regulatory Protection
  - .1 Metro Ordinance
  - .2 Tennessee Archaeological Registration
  - .3 Restrictive Signage
- .2 Lease Agreement Revisions
- .3 Site
  - .1 Survey
  - .2 Stone Monitoring
  - .3 Security Patrolling
  - .4 Perimeter Fencing
  - .5 Gates and Road Closure
  - .6 Land Acquisition
- .4 Archival Research
  - .1 Status
  - .2 Recommendations
- .5 Interpretation
  - .1 Site Interpretation
  - .2 Interpretive Center
- .6 Administration and Support
  - .1 Technical Advisory Committee
  - .2 Non-profit "Friends" Support Group
  - .3 Grants
  - .4 Internet Visibility

5.2 REGULATORY PROTECTION

Vandalism and relic hunting diminish the potential for understanding the history of Fort Negley by destroying fragile archaeological deposits and removing artifacts from the site. Mr. Fred Prouty, a Military Historian with the Tennessee Historical Commission, reported to the Master Planning team that relic hunters using metal detectors often search the Fort Negley site for Civil War artifacts. The use of a metal detector is not, in and of itself, damaging to an archaeological site; however, the purpose of using such a device on an historical archaeological site such as Fort Negley is primarily to identify where to dig for artifacts such as uniform buttons, coins or other artifacts. Once unauthorized excavation has occurred, punishment for this activity cannot restore the archaeological strata or context. Ideally, banning metal detector usage at Fort Negley could discourage the resulting digging for relics and thus prevent damage to the site from ever taking place.

The Master Plan recommends that MBPR determine if the use of metal detectors can be statutorily prohibited at Fort Negley with civil penalties for such use and prepare or revise an ordinance accordingly.

5.2.1
Metro Ordinance

Unauthorized digging or removal of artifacts from land not owned by the state is trespassing and a misdemeanor under Tennessee State Law (Tennessee Code Annotated [T.C.A.] 11-6-109). While relic hunting is not expressly prohibited by municipal regulations, city ordinances make it unlawful to deface municipal property, remove or destroy property in city parks, or make any type of unauthorized excavation in city parks (codes § 11.24.030 and 13.24.490). A maximum fine not to exceed $500 applies to unauthorized excavation and removal of property from city parks (code § 1.01.030).

Studies of vandalism and other depreciative behaviors at archaeological sites (Nickens, 1993) suggest that in order to deter violators of regulatory controls, it must be clear which behaviors are violations and subject to punishment. Furthermore, the potential violators must perceive that program administrators do care about compliance with the rules, that administrators have the capability of observing and apprehending violators of the rules, and that rule violators will be consistently prosecuted.

The Master Plan recommends that the Metro Board of Parks and Recreation (MBPR) security patrols and city police be informed of and enforce existing state and municipal statutes. MBPR may consider obtaining a legal opinion regarding the need to modify existing regulatory language to specifically address relic collecting and prohibit unauthorized collecting and removal of historic and prehistoric artifacts from city property.

5.2.2
Tennessee Archaeological Registration

In Tennessee, it is a misdemeanor to buy, sell, offer to sell or purchase, or exchange artifacts removed illegally from archaeological sites (T.C.A. 11-6-109). Fort Negley is not currently listed on this register. The procedure for recommending a site to this register of is to write a letter to the state archaeological advisory council outlining why the site is important to public knowledge and appreciation of history or the scientific study of Tennessee's prehistory. In consultation with the state archaeologist, the recommendation and appropriate supporting data will be submitted to the commissioner of conservation for approval subject to landowner permission.

Mr. Prouty reported to the Master Planning team that he has seen Civil War artifacts identified as being from Fort Negley offered for sale in recent publications for Civil War enthusiasts. Research on destructive behaviors at archaeological sites (Nickens, 1993) suggests that obtaining artifacts for commercial purposes or to augment a prized private collection motivates many willful violations of regulations against unauthorized excavation at archaeological sites.

Since there is considerable commercial traffic in Civil War artifacts and memorabilia, the Master Plan recommends that the Metropolitan Historical Commission and MBPR recommend Fort Negley for inclusion in the Tennessee register of archaeological sites

in an effort to deter commercial interest in the site and augment the public's perception of the site's status and regulatory protection. If this recommendation is pursued, MHC, in consultation with the state archaeologist, should monitor Civil War publications for Fort Negley artifacts and inform vendors that they are in violation of state law.

It should be noted that for Tennessee register sites on state-owned land where the commercial or archaeological value of the artifacts or damage to the site exceeds $5,000, unauthorized excavation is a Class E felony rather than a misdemeanor. If development activities at Fort Negley park lead to an increase in relic hunting which cannot be deterred by regulatory signage (Sec. 4.2.3.4) and up-stepping security patrolling (Sec. 5.4.3), MHC may consider proposing an amendment to state law which affords Tennessee register sites on municipal land the same protection as now enjoyed by state-owned sites. Nickens (1993) suggests that to deter relic collectors with commercial interests, the penalties and punishments must be severe enough to make compliance with regulations more attractive than non-compliance.

5.2.3 Restrictive Signage

Restrictive signs are frequently used to protect historical sites from detrimental visitor behaviors, yet the efficacy of protective signs is often debated. One argument is that signage calls attention to the presence of a fragile historical resource and thus encourages destructive behaviors. The other side of the debate suggests that individuals who would intentionally vandalize or take relics from historic resources already know where the sites are. Signs pointing out the importance of the historic resource and indicating the penalties for damaging the property may deter some individuals or make others aware of how their behavior might cause damage. Enforcing ordinances against damaging or looting historic properties is supported by marking the site with appropriate warning signs.

A nationwide survey of the effectiveness of protective signs for cultural resources was conducted by the U.S. Army Corps of Engineers (Nickens, 1993). This study concluded that while few guidelines are available for designing effective signage, protective signs can effectively reduce vandalism and other damaging behaviors at historic properties. The study also concludes that protective signage should be integrated with other resource protection strategies such as patrolling, and that signs having an interpretive aspect as well as a clearly worded warning were the most useful.

.1 The Master Plan recommends restrictive signage incorporating both an interpretive message and a clearly worded warning specifying regulations and penalties for Fort Negley Park.

.2 A necessary precedent to the development of such protective signage is the development of municipal regulations and the completion of paperwork so that regulations such as those pertaining to properties listed on the Tennessee Register of Archaeological sites may be enforced.

.3 Protective signage should be integrated with a program of security patrolling, enforcement of existing regulations, and regular monitoring of the Fort Negley study area for evidence of relic hunting.

5.3 LEASE AGREEMENT REVISIONS

In order to protect the future of this important resource, modifications to the Metro leases with Cumberland Science Museum and Greer Stadium should occur. These modifications provide restrictions on the future development of these sites.

5.3.1 Greer Lease

.1 This revision proposes to modify the Greer lease in order to reacquire property across from the WPA-era gates. Given to the Greer Stadium in a 1987 lease modification, the unused 1.07 acres across from the WPA gates should be reclaimed for the park. This property is necessary to establish the perimeter visual boundary of the park property and which may later be used for the new Interpretive Center/Visitor Center.

.2 A second revision to the Greer lease proposes to protect the Fort Negley park site by reacquiring an undeveloped portion of the Greer lease site. The portion of the Greer lease between their fence and the bluff at their parking should be obtained to establish a visual buffer between the fort and stadium. This property would be very difficult and expensive for the stadium to develop as more parking and should be planted with additional evergreen trees to help screen the stadium.

5.3.2 Cumberland Museum Lease

.1 The current Cumberland Science Museum lease includes a total of 41.45 acres of which the Museum uses approximately 20 - 25 percent for the Museum building and parking. As the Museum no longer includes a focus on natural sciences and history, their lease should be modified to delete the area immediately to the east of their building to protect the fort.

.2 A second recommended modification to the Cumberland Musem lease would provide for a review of and height limit for any future expansion of the museum. The Cumberland Science Museum lease should be modified to require approval by Metro of any exterior modifications or additions to their facility. This will ensure that the additions do not encroach on the view corridors from the fort to downtown.

5.4 SITE

5.4.1 Survey

In an early phase of planning, a complete property survey should be undertaken for the Fort Negley site, including all boundaries, legal easements, alleys, site utilities, setbacks, and existing rights of way. Topographic mapping of the fort area at a contour interval of one foot is required. Features which should also be recorded include buildings, retaining walls, roads, parking areas, sidewalks, storm drainage system, etc. Copies of this map can be used to record the location of archaeological investigations and stabilization and repair work (ref. 2.2.3.3).

5.4.2
Stone Monitoring

The fort should be extensively photographed to document the existing conditions and those photographs keyed to a scaled fort plan. Regular periodic inspections should then occur to observe any new deterioration and alert MBPR before it becomes a problem.

5.4.3
Security Patrolling

Currently, security patrolling occurs on an infrequent basis and therefore the site is considered unsafe. Evidence of vagrants camping within the structure, relic hunting, vandalism, drug use, and other undesirable activities have been encountered. In order to protect the resource, security patrolling must be increased to remove this element.

Patrols by Park Security should be at an increased frequency as visitors are invited on-site. Automobile, bicycle and/or foot patrols should become routine throughout the day along the ring road, with foot patrols entering the fort periodically. No equestrian patrols should be allowed beyond the ring road. Emergency telephones may be added on-site as required.

5.4.4
Perimeter Fencing

The existing Greer Stadium fence along the southeastern portion of the property should be relocated to the bluff at the Greer parking (if the Greer lease can be modified to reclaim that portion of the park property). Once in place, the perimeter fence should be supplemented with additional fencing to fill in any gaps and to extend the fence to the exit from the parking lot in front of the Cumberland Museum. Although this approach does not completely surround the site, it provides a level of security from the side of the property from which most of the vagrant population accesses the site.

At the time gates are constructed and Fort Negley Blvd. is closed (see below), the perimeter fence can be extended to the gate and then onto the I-65 fence on the southwest corner of the property and the Oak Street bridge and railroad lines on the northeast corner of the property. At the completion of this work, the site perimeter will basically be encircled by fencing.

5.4.5
Gates and
Road Closure

Under the Long Range Phase of the work, it is recommended that Fort Negley Boulevard be closed and the property added to the park land to both control access to the site and to protect the resource. This closure will discourage speeding thru-traffic during the day, eliminate traffic at night through the use of gates, and make it easier for patrols to secure the site from vagrants and relic hunters.

The gates can be largely ceremonial side posts at first (prior to closing the street to public traffic), becoming a visual park property boundary. Metal gates can be added later, when an Interpretive Center is constructed and the street is finally closed as a public right-of-way. Public access would be unimpeded during the day, but the gates could then be closed after hours to prevent unauthorized access onto the site. In the event Cumberland Museum decides to remain in its current location, after hours access could be arranged to facilitate their activities.

5.4.6
Land Acquisition

Adjacent privately owned land between the park and railroad at the northeast corner of the park should be acquired under the Long Range Phase of the Master Plan to extend the park property to the natural physical barrier of the railroad. Two commercial parcels lie within the I-65, railroad, and Chestnut Street boundaries that surround the park and detract from the visitor's experience of the fort. These two commercial parcels surrounding the Oak Street bridge are shown on the phased drawings included in this plan.

With respect to the 1.07 acre Metro parcel across from the gates, any "developable" land to the west of this parcel and part of the I-65 ROW (owned by TDOT) should also be obtained to protect the resource and permit a larger contiguous parcel for the Interpretive Center/Visitor Center.

General Approach: Acquisition of non-park property west of the railroad ROW would be advisable in order to visually and physically control this extent of park land. The MBPR would take control of the newly acquired parcels of land and add them to the present acreage for management purposes

.1 Existing buildings on this property would be accessed for usefulness and demolished if possible to a create a more appealing entrance way into the Fort Negley park property.

.2 Entrance columns, gates and perimeter fencing would identify the extremities of the park. (In the Long Term phase of this park's development, controlled access to the entire park is desirable. This should extend from the west side of the railroad overpass bridge at Bass Street to the intersection of Fort Negley Blvd. and Chestnut Street.)

5.5 ARCHIVAL RESEARCH

5.5.1
Status

The military records related to the construction of Fort Negley and archival sources documenting the WPA reconstruction have not been inventoried, researched or synthesized. The data contained in these sources is critical to understanding the nature, age, and associations of the visible ruins and archaeological deposits. The understanding of the historic resource provided by archival research suggests avenues for further investigation and is invaluable to assessing the impact of development projects on potential archaeological deposits. As such, the following items should be sought: military documents, blueprints, maps, personnel rosters, and purchase orders for supplies .

Archival research can guide archaeological investigations at Fort Negley by suggesting the types and locations of features that have been and changes that have occurred at the site through time. Additionally, the information contained in archival sources is crucial for reliably interpreting archaeological features and projecting where archaeological deposits are likely to be encountered.

5.5.2
Recommendations

.1 The Master Plan recommends thorough archival research of the Civil War and WPA records to produce a history of Fort Negley. An inventory and assessment of available archival sources is the first step in conducting archival research for the site followed by compilation and synthesis of the archival data.

.2 Inventory of archival sources should begin as soon as possible. A history of the site based on archival research should be completed before the park is opened for public visitation.

.3 Archaeological investigations should use archival sources in interpreting the results of the investigations.

.4 As additional archaeological investigations are developed to answer specific research questions or for developing interpretive displays, additional archival research may be warranted.

.5 Typical types of materials to be collected include:
- .1 Books, research papers, newspaper and magazine articles
- .2 Historical inventories
- .3 Maps and drawings
- .4 Historical photographs and sketches
- .5 Artifacts
- .6 Personal accounts

5.6
INTERPRETATION

5.6.1
Site Interpretation

.1 Themes

Fort Negley focuses on the cultural, intellectual and physical aspects of Nashville during the Civil War, emphasizing the role of Fort Negley in the defense of the city. In addition, interpretation of the site should also highlight the reconstruction of the fort by the WPA. There are a variety of potential themes which could be developed as part of the interpretation of Fort Negley. Some are possible to do within the fort, without the benefit of a visitor or interpretive center, and others will require this type of facility if they are to be adequately presented and displayed. The following themes are outlined, together with some of the research questions to be addressed.

- .1 The Union Occupation
  - .1 What was the garrison size; from where did they come (units)?
  - .2 What were living conditions like for the average citizen?
  - .3 The Union occupation of major buildings and residences
  - .4 Utilize Lovett article (THS Quarterly), historic photos and other sources to develop this material

.2 The Battle of Nashville
  .1 The fort contained eleven pieces of artillery with approximately 77 resident soldiers to man the guns at all times. The firing range for these guns was approximately 2-1/2 miles. During the war, two of the cannons were housed in covered casements in the west ravelin and south main work.
  .2 Utilize references such as Stanley Horn to develop this material
  .3 Issues of sight lines from Fort Negley to other strategic defense positions.

.3 The Western Theater of the Civil War
  .1 Linkages with Other Related Area/Regional Sites: The obvious linkages of the Fort Negley site and other significant battlefield sites is to the south along Franklin Road to the towns of Spring Hill and Franklin, as well as the immediate area in Davidson County where the December 15-16, 1864 Battle of Nashville was fought.
  .2 The "Historical Overview of the Civil War in Middle Tennessee" section of the publication A Survey of Civil War Period Military Sites in Middle Tennessee, 1990, provides a thorough account of the significance of Fort Negley in the Western Theater of the Civil War.

.4 Special Design Characteristics of the Nation's Largest Inland Masonry Fortification of the Civil War
  .1 The centerpiece of the Federal defenses of Nashville was Fort Negley, intended to serve as the military planning and administrative headquarters for the "domination of the Trans-Appalachian Confederacy and as springboard for the final Union assault in Georgia and the Carolinas."
  .2 Designed to withstand lengthy sieges and massive assaults, no information is yet available to explain why the decision was made to construct the fort largely of stone. Its sister defensive position, Fort Rosencrans, in Murfreesboro, Tennessee, as with many military fortifications in the 19th century, was constructed of dirt excavated at the site.

.5 African American Involvement With the Nashville Fortifications
  .1 Role of African Americans during the war
    .1 Involved in construction
    .2 Members of Federal army (13,000 of the 43,000 troops under General Thomas were black)
  .2 Refer to Lovett article in the Tennessee Historical Society's Quarterly Journal
  .3 Refer to information in the PCI archaeology report

.6 WPA-Era Reconstruction of Fort Negley
  .1 The WPA, or Works Progress Administration, was created by the Federal government under the Roosevelt Administration following the Great Depression to provide work for unemployed laborers. The effects of this program can be seen all over the United States: park shelters and infrastructure, public buildings, bridges, etc. At the Fort Negley site, their work includes the reconstruction of the fort, the ring service road, parking

areas, drainage system, and entrance gate.

.2 One of the most important aspects for interpretation of the Fort Negley site is the impact of WPA involvement as (arguably) most of what can be seen today above ground was reconstructed or rebuilt by the WPA based on available records and onsite investigation.

.2 Fort Interpretation and the Reconstruction of Missing Fort Components

In their *1994 Report to Mayor Phil Bredesen,* the Fort Negley Advisory Committee (a panel of appointed local historians, community leaders, and other interested individuals) recommended that many of the elements listed below should be reconstructed at Fort Negley. In pursuing this opinion, the planning team for this Master Plan explored the possibilities relevant to their reconstruction. The following advantages were noted:

.1 Increased tourism with an expanded visitor experience level
.2 Increased ability to charge admission

The following problems associated with this approach include the following:

.1 Increased staffing and security costs
.2 Increased maintenance costs
.3 Increased Metro liability
.4 Lack of Civil War documentation of the original construction
.5 Lack of archaeological evidence of the original construction
.6 Lack of documentation of the current grades as they pertain to the elevation of the missing features

Buried or missing features at Fort Negley include those features known to have existed, but not currently readily apparent or which have ceased to survive. The features known to date include the following:

.1 Gate
.2 Stockade
.3 Powder Magazine
.4 Casements 1 and 2
.5 Earthworks
.6 Winter quarters
.7 Roofs to bombproof areas in the bastions
.8 Cannons (11 pieces requiring 75 men to operate)

Reconstruction of the historic elements of Fort Negley is an issue that must be given careful consideration. The decision of whether or not to reconstruct must take into consideration the philosophical issues surrounding historic reconstructions as well as practical matters such as funding, security, and long term maintenance. Three articles discussing reconstruction are included in Appendix C. Issues relevate to Fort Negley are summarized below.

.1 Philosophical Issues

Since the purpose of reconstruction is to provide an educational tool, reconstructions should be based on extensive and thorough historic and archaeological data. However, archaeological excavations to produce data also destroy parts of the resource. One argument is that public understanding of the resource outweighs preservation of pieces of the resource. The other side of the argument is that reconstructions, however accurate, can never be authentic historical features. Furthermore, reconstruction of only selected features places them out of context amidst unreconstructed elements and adds one more layer of activity to the site. Finally, one item omitted from discussions of reconstructions is the "virtual reality" technology potential for the site. Physical reconstructions are designed to help the visitor experience the past, but future computer technology may be able to provide a much more elaborate experience.

.2 Practical Issues

Construction is expensive and the necessary background research to develop reconstructions adds to the cost. If funding is available for research and reconstructions, maintenance and protection of these structures becomes a long term committment or the structures can become a liability to the city. For example, some of the WPA reconstructions at Fort Negley were torn down because they could not be maintained and fell into disrepair within a few short years. If the features are designed with modern construction materials that reduce maintenance needs, historic accuracy becomes an issue. The design of reconstructed features must also take into account public safety and security. Other municipally-operated reconstructions have funding, security, and long term maintenance problems. For example, the city of Fort Wayne, Indiana's reconstruction of Fort Wayne complete with living history actors was closed less than 20 years after it was opened, and Nashville can point to a similar experience with Fort Nashboro.

The Master Plan recommends that Metro and the Technical Advisory Committee take a careful look at the issue of reconstruction and consider how the mission of public understanding can be accomplished in the context of stewardship of this important site for the benefit and enjoyment of future generations.

.3 Features and Display Materials

The primary axiom guiding displays and features on the history of the site is that they are to be accurately based on thorough archaeological and historical documentation. Secondly, education of the visitor is important, but displays can be used to enhance the interaction with the resource itself rather than attract the visitor's attention from the resource.

Proposed display materials should concentrate on depicting "what happened where the visitor is standing." Photographs of the fort from the Civil War and WPA-eras provide excellent views of what a visitor would be seeing from various points on the fort if they could transport themselves back in time to either the Civil War or WPA-eras. Signage

can be used to denote visual linkages to other Civil War-era military sites, the historic location of rail lines, and contraband camp and their significance.

Many fort visitors would be interested in seeing artillery and full scale replicas of structures that once existed on the site; however, the resource, not the interpretive features and displays, should be the primary focus of the visitor's attention. Minimal interruption by display features preserves the natural setting of the site and reinforces a historical "sense of place" - the stonework standing in mute testimony to two extremely difficult and significant periods of our nation's history. This is not to say that a full size artillery piece such as a cannon would be inappropriate to place on the site. Such a display provides a real sense of physical scale and serves as a tactile counterpoint to the roughness of the surrounding masonry. An ordnance display also provides an educational opportunity for visually impaired visitors to augment their experience of the Civil War-era Fort Negley.

Artifacts from the 1993 and subsequent archaeological excavations can be displayed in the interpretive center once it is established. Artifacts and excavation data from the 1993 excavations offer numerous possibilities for displays relating to the day-to-day life of the soldiers garrisoned at Fort Negley, construction techniques of the Civil War and WPA- eras, and the detective work of establishing where the Civil War foundations exist. As future archaeological work at the site is contemplated, additional opportunities will exist to plan for expanding display materials and broadening the scope of displays.

.4 Regional Interpretation, Relationships, and Linkages with Surrounding Battlefields and Interpretive Centers

With the increased interest in historic tourism that was observed throughout the late 1980s and the early 1990s, county partnering efforts on the regional scale are becoming more important. Cooperative efforts, such as the *Tennessee Antebellum Trail Guide* , a guidebook to antebellum homes and Civil War sites, have come about to develop interpretive linkages to many of the historically significant sites in the middle Tennessee region. Continued efforts to link Murfreesboro sites such as Fortress Rosecrans and the Stones River National Battlefield to the Columbia Pike Corridor and the Battle of Nashville sites will dramatically improve the visitors' understanding of the significance of the Fort Negley site.

Other farther reaching regional linkages include Fort Pillow in Memphis, Lookout Mountain in Chattanooga, and the Natchez Trace to the sites of Vicksburg and Port Hudson on the Mississippi River. To the north and northeast, Civil War sites in Kentucky and Virginia are easily accessible from a visitor based in Nashville. Only the state of Virginia has more Civil War battlefields than Tennessee. Likewise the proximity of earlier military sites such as Fort Blount or Fort Loudon in east Tennessee offer the student of military science ample opportunity for additional exploration from a starting point in Nashville. With the potential for an on-site Civil War interpretive center/museum at the Cumberland Science museum complex, the linkage and sharing of information with other interpretive and teaching facilities in the region has great potential for growth.

Though perhaps less important to Civil War enthusiasts, the monumental efforts of recreating this stone fortification by the WPA in the mid-1930's is clearly an important consideration. Linkages to other significant built works in the Nashville area, such as WPA stonework at Warner Park in Nashville, could be strengthen at the Fort Negley site, as well as WPA-era projects in the region such as TVA dams and the numerous examples of Tennessee's state park cottages constructed by WPA stone masons.

5.6.2
Interpretive Center

General Approach: A small manned free-standing interpretive center would be constructed to serve as an information center for visitors and as an off-site parking area near the main WPA entry gates. The center would provide restroom facilities and specific interpretive information about the park site.

.1 The preferred location (Location No. 1 on the Phase Three Site Plan in Section 6.0) is southwest of the WPA entrance gates. This site would provide off-street parking for 20 automobiles and heightened visibility for visitors arriving from the interstate via the Wedgewood Exit on I-65. Additionally, this location affords space for exterior picnic tables for visitors would might choose to eat at the site (without visually cluttering the historically significant part of the park with these facilities).

.2 However, in considering the development of an interpretive center for the site, several concepts or formats were developed for consideration in the Master Plan.

.1 A Manned, Small, Free-standing Structure

This approach offers Fort Negley control of its own stewardship, a separate identity, and an enhanced visitor experience. It is anticipated that initially the Interpretive Center would start out small, on the scale of an Interstate welcome center, expanding as demand dictated. Three areas for such a center have been identified (reference the Phase Three Site Plan in Section 6.0):

.1 Across from the WPA gates on Metro property currently leased by Greer Stadium. This is the preferred location based on the minimal site impact it presents to the fort and its proximity to the WPA gates. The site is relatively small, but flat. It would provide an important axial relationship to the gates and offers a visual connection to and control point for the fort.

.2 The cleared area northwest of the WPA gates. This sloped location provides a direct link with the proposed pedestrian plaza at the WPA gates and is on park property. If this site is developed, however, it would eliminate the only existing cleared area near the fort as well as any possible use for passive activities or Civil War re-enactments or encampments.

.3 A cleared area north of Bass Street across from the Cumberland Museum. If developed, this large and relatively flat site could easily be connected with the activities of the Cumberland Museum to provide an enhanced visitor experience in this area. The drawback for this site is the distance and steep terrain the visitor would have to climb in order to reach the fort.

.2 Utilizing Space in the Existing Cumberland Museum

The Cumberland Museum has outgrown its current location, therefore, it is unlikely that any space would be available from which tours could be conducted or interpretive displays presented. If available, Metro should expect only a small quantity of wall or floor space for displays on Fort Negley in areas the musem does not need.

.3 Sharing Space with an Expanded Cumberland Museum

Should Cumberland Museum decide to stay, indications from the museum are that they will construct an addition. If this opportunity does occur, Metro should work together with the museum to construct an addition with enough space for an Interpretive Center for Fort Negley as a part of the addition. By doing so, it will reduce the cost of constructing a separate facility by sharing buidling components of a shared facility such as toilets, elevators, lobby areas and parking. A component of this work should include creating general and handicap access from the roof level of the museum over to the WPA-era parking area and the fort via an elevated walkway.

.4 Conversion of the Cumberland Museum to a Regional Civil War Museum and Research Facility

If the Cumberland Museum decides to leave its existing facility, the structure will revert to Metro. With over 70,000 SF, this facility and its proximity to Fort Negley presents a tremendous opportunity for Nashville to create a nationally recognized Civil War Museum and research center. The museum's facility is dramatically visible from downtown and I-65 and should quickly become an important Nashville resource. The existing facility contains extensive display areas, administrative space, collections storage areas, conference and meeting rooms and a planetarium which could be converted into a theater. Other minor modifications would include creating general and handicap access from the roof level over to the WPA-era parking area and fort via an elevated walkway.

.5 Design Guidelines

The design of a new free-standing interpretive center should follow the recommendations of the Secretary of Interior's Standards for new structures on historic sites. It should be contemporary in appearance and sympathetic to the stonework of the Civil War and WPA-era fort components.

.6 Staffing

The size of the staff required to operate an interpretive center with guided tours of the fort will largely depend on the size of the facility and the degree to which a non-profit organization ("Friends," see 5.7.2, below) will assist with volunteers.

The proposed free-standing interpretive center across from the WPA gates can anticipate requiring four full-time employees and four to six part-time employees. Ten to twenty volunteers should be found to assist with the activities of the interpretive center.

The following staffing can be anticipated:

.1 Director: The director will be responsible for the activities of the interpretive center and fort and to carry out Metro Parks regulations or those of a non-profit organization. The director will also be responsible for fund-raising and setting up events to bring in visitors.

.2 Curator: The curator will be responsible for maintaining the permanent and special event displays at the interpretive center and fort. The curator should also establish special exhibits or displays for school children in the interpretive center or fort if archaeological investigations are underway. A final, and significant responsibility of the curator is the maintenance of the collections, including accessioning, display, storage, and preservation.

.3 Secretary: The secretary performs the clerical activities necessary for the day-to-day operation of the interpretive center, such as letters, minutes, advertisements, mailings, etc. The secretary could also help to set up special events such as fund raisers and re-enactments.

.4 Interpretive Center Receptionist: The receptionist will sell tickets, answer visitor questions, assist in setting up group tours and answer telephones.

.5 Volunteers: Volunteers will assist the staff by performing tours of the interpretive center and fort, or in other activities related to special events and functions.

Volunteers should be sought to help alleviate the financial burden of staffing the interpretive center and fort as well as to help establish a wide base of community involvement. As many active volunteers as possible should be recruited to allow for ease in rotating duties around the volunteer's personal schedules.

Should Cumberland Museum become available as an interpretive center for Fort Negley, staffing requirements could well increase to six to eight full-time and 10-15 part-time employees. Twenty to thirty volunteers should be recruited to assist with an operation of this scale.

In 1988 when Fort Nashborough was open to the public, it had four Metro employees with a combined annual salary of approximately $50,000 (equivalent to $65,000-75,000 today). It also spent $2,000 annually on grounds maintenance and $10,000 on utilities.

With an expanded facility utilizing the Cumberland Museum building, the combined annual salaries may average $150,000-200,000. The total annual operating budget for this facility, if operated by a non-profit organization should be in the $350,000-400,000 range (including salaries). From this annual operating budget, utilities and insurance may average $35,000-50,000 a year. If a gift store is included in the interpretive center, it will cost approximately $35,000-50,000 to stock, but return approximately $75,000-100,000 each year in revenue. Advertisements may range from $15,000-20,000 per year. Standard general repairs may range from $5,000-10,000 per year.

.7 Collections

The collections of the interpretive center, along with the fort, will be the heart of the entire operation. Once an interpretive center can be funded, Metro should turn to the public for donations of Civil War memorabilia and artifacts to display in the center. In addition, Metro should develop cooperative agreements with other institutions to borrow items required for displays and special exhibits. An additional component of the collections will be archival materials - books, manuscripts, various papers, maps, historic photographs, etc. These should be carefully housed for supervised research use.

.8 Operations

The proposed small free-standing interpretive center would be operated by Metro Board of Parks and Recreation, with staffing by Metro employees such as was formerly done at Fort Nashborough and currently at the Parthenon. An alternative management form would be contracting with an established non-profit organization to operate the facility, thus removing the labor burden from Metro.

5.7 ADMINISTRATION AND SUPPORT

5.7.1 Technical Advisory Committee

Professional architectural, landscaping, and archaeological advisers should be utilized to oversee and review plans for stabilization and maintenance of the fort and development of the park.

.1 Create overall Technical Advisory Committee (TAC) for review and guidance of the on-going stabilization, maintenance, and development of the site.

.2 TAC includes an archaeological advisory (sub)committee which will assist the MBPR and MHC staff in (1) reviewing the effects of development activities at Fort Negley on archaeological deposits and making recommendations for archaeological investigations, (2) developing of scopes of work for archaeological and archival research, (3) overseeing the contracts and review of the investigations, (r)

reviewing interpretation for the site, and (5) maintaining continuity in the research conducted at the site.

.3 Procedures which will be followed to provide for project impact review and oversight of archaeological investigations should be agreed upon by all parties.

.4 The archaeological subcommittee should have expertise in historical and Civil War archaeology and include the State Archaeologist.

5.7.2 Nonprofit "Friends" Support Group

Many historical sites have an associated non-profit group which is dedicated to stewardship of the resource, promoting awareness of the resource, and fund-raising for general purposes or special projects.

.1 A nonprofit support group such as the "Friends of Warner Park" should be established to assist Metro monitor and protect the fort and park. Later, this organization can help with volunteers to run the interpretive center, conduct living history tours of the fort, and raise funds to support the operational requirements.

.2 Participants could include interested historians, Civil War enthusiasts, archaeologists, bird watchers, environmentalists, etc. With this broad range of volunteers, the many aspects of the park can be protected and enhanced.

.3 Both MHC and MBPH should function in an advisory capacity to a "Friends" group.

.4 MBPR would continue to provide basic maintenance such as grass cutting, road repairs, vegetation control and tree trimming.

5.7.3 Grants

Grant money may be available for the conservation of endangered sites and research on preservation and conservation techniques from a variety of agencies, programs and foundations (Appendix A). Information on several specific programs has been forwarded to the Metropolitan Historical Commission. Grants may be an important source of funding for research, conservation and interpretation at Fort Negley.

.1 MHC should immediately begin compiling information on funding sources for archival and archaeological research at Fort Negley. Grants to restore the fort, develop the site, construct an interpretive center and create interpretive signage and displays should also be pursued. The agencies and programs listed in Appendix A provide a starting point for this search. In addition, the Internet might prove to be a valuable tool for locating funding sources.

.2 Proposal development should be incorporated into agency program goals and work cycles. The MBPR, MHC and the TAC should regularly evaluate funding needs for research, conservation, restoration, interpretation and development at Fort Negley.

5.7.4 Internet Visibility

The "Internet" and "World Wide Web" contain many sources of information about the Civil War (see Appendix A). The World Wide Web is quickly becoming an important tool for researching everything from tourist destinations to scientific papers.

.1 MHC should establish a "home page" on the World Wide Web for Fort Negley. A home page can serve a number of functions including providing general historical information to the public, increasing tourism opportunities, providing "links" to other Civil War sites, fund-raising, and disseminating the results of archaeological research.

.2 A home page for Fort Negley may include information on other Civil War sites in Davidson County and can evolve in scope and function as the park is developed and opened for visitation.

SUMMARY:

IMMEDIATE PHASE The Immediate Phase can be considered "triage" to arrest the on-going deterioration of and damage to the fort by natural and man-made forces until repairs can be made in the next phase. Although the fort cannot be immediately rendered safe for open public visitation following the completion of work for this phase, the phase does lay the groundwork for developing safe public access and interpretation. The work accomplished in the Immediate Phase allows flexibility in the time frame for initiating the next phase of work while preventing further deterioration of the site.

Temporary shoring will prevent further collapse of the fort walls and parking area retaining wall. This measure will save money in the long run, since a wall that has collapsed is almost six times as expensive to repair than one that is simply bulging or leaning. Temporary shoring also buys time to study the causes of the wall failures and allows prioritizing of the wall repairs as well as the development of intervention strategies in the following phase. Threats to the fort walls from damage by falling tree limbs will also be removed, and threats of damage from vandalism and relic collecting will be curbed by signage, regular patrolling rounds, and regulatory enforcement.

Very little is known archaeologically about Fort Negley going into the Immediate Phase, except near the center of the fort's interior, where previous test excavations were conducted. No archaeological information is available for the fort's exterior, where the holes for the bracing will be dug. The archaeological work in this phase makes sure that no archaeological data are destroyed when the bracing holes for temporary shoring are dug. In the process, the exterior of the fort will be explored to learn what types of archaeological features and information are in the ground immediately adjacent to the exterior of the fort. The results of this work should assist in: (1) locating the footprint of the Civil War fort, (2) understanding how much and what type of landscaping and reconstruction work was done by the WPA (and how that work might have affected Civil War archaeological features), and (3) assessing how much of the visible fort may be original Civil War-era construction.

Archival research will be necessary to interpret the archaeological data and to interpret the site. No history of Fort Negley has been written, but the most immediate need is to assess what types of archival sources and how much archival material is available for the site and where this information is located. This information will be used to draw up the budget and scope of work and priorities for the archival research and synthesis.

Finally, created as a result of the Immediate Phase work is the framework for developing the scope of future development work and research at Fort Negley as well as for locating additional funding sources for such work and reviewing the effects on the work of the archaeological components of the site.

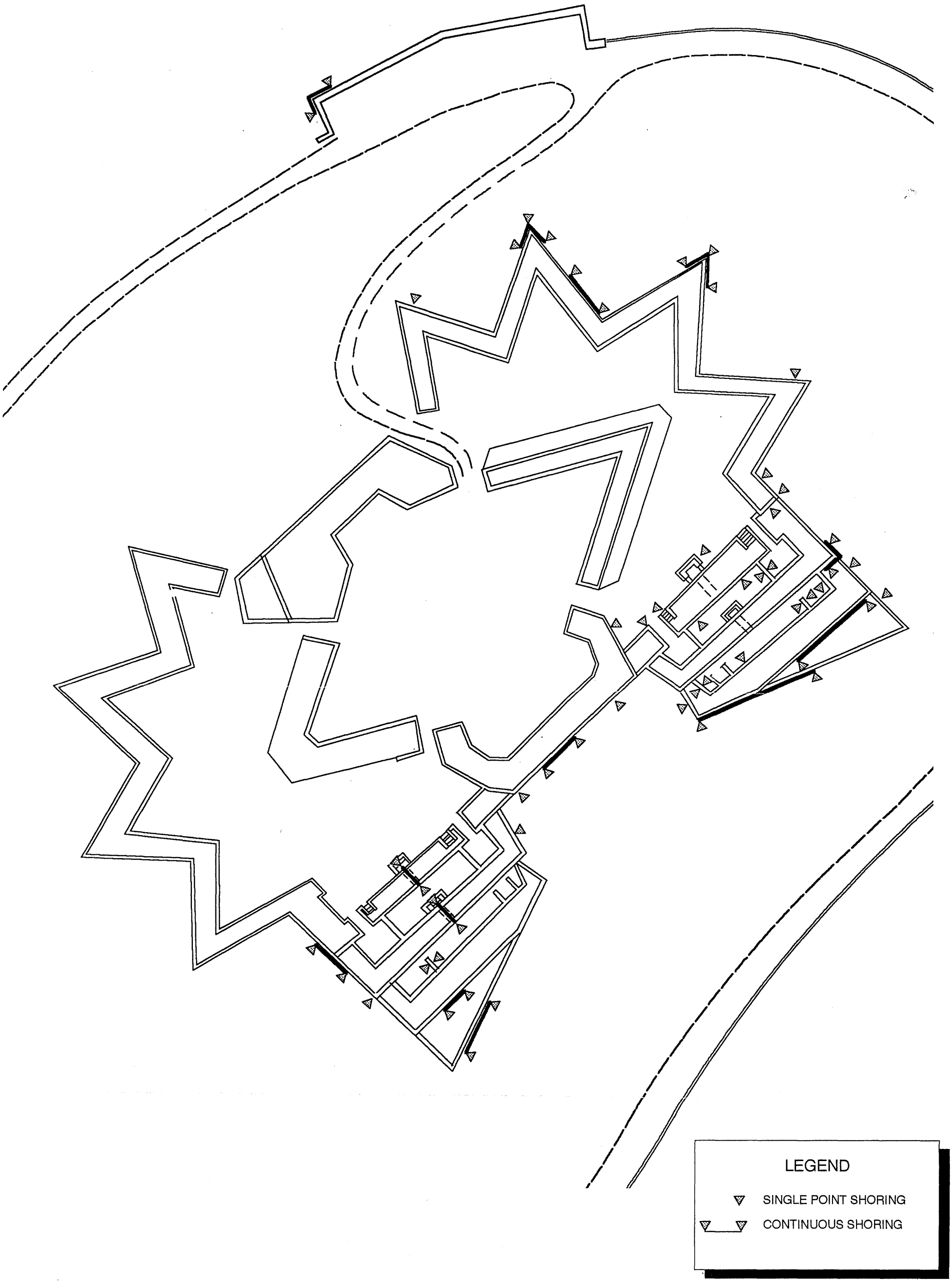
FORT NEGLEY MASTER PLAN
RECOMMENDATIONS

NO.	ITEM	REF. NO.	DESCRIPTION	COST
IMMEDIATE PHASE				
ARCHAEOLOGY				
0.1.1	Assessment/Data Recovery	2.2.1 2.2.2 2.2.3 2.2.4.1 2.2.5.1.1.1	Testing/excavation in locations of subsurface disturbance from temporary shoring and assessment of fort perimeter. Includes monitoring if needed.	$75,000 Allowance
ARCHITECTURE				
0.2.1	Temporary Shoring	3.3.2.1	Install temporary shoring to prevent further deterioration of fort and parking area retaining wall.	$62,800
SITE				
0.3.1	Enhancement: Trees	4.2.2.3.1	Begin selective removal of trees within 30 foot safe zone of fort walls to protect from root penetration and windthrow damage.	Provided by MBPR
ADMINISTRATIVE				
0.4.1	Archival Research	2.1.2 2.1.3 5.5.2.2	Inventory archival resources. Focus on Civil War and WPA sources.	$10,000 Allowance
0.4.2	Regulatory Protection: Registration	2.2.5.2.3.2 5.2.2	Nominate Fort Negley to the Tennessee Register of Archaeological Sites.	Provided by MHC

6.0
RECOMMENDATIONS/ PROJECT PHASING

FORT NEGLEY MASTER PLAN
RECOMMENDATIONS

NO.	ITEM	REF. NO.	DESCRIPTION	COST
IMMEDIATE PHASE - CONT.				
ADMINISTRATIVE - CONT.				
0.4.3	Regulatory Protection: Ordinances	2.2.5 2.3.1 5.2. 5.2.1	Begin enforcement and proseacution for unauthorized digging and removal of public property. Investigate specifically prohibiting metal detector usage and relic collecting in parks.	Provided by MBPR, MBPR security and Metro Police
0.4.4	Technical Advisory Committee	2.2.3.1 5.1.6.1 5.7.1	Establish overall Technical Advisory Committee (TAC) and archaeological advisory subcommittee. Establish review procedures for archaeological subcommittee and TAC.	Provided by MBPR and MHC
0.4.5	Security Patrolling	2.2.5.2.3.2 5.4.3	Begin regularly scheduled patrols into the fort site to reduce incidents of habitation and to discourage relic hunters.	Provided by MBPR Security and Metro Police
04.6	Grants	5.7.3	Begin compiling sources of funding for conservation, research and interpretation.	Provided by MHC
0.4.7	Regulatory Signage	2.2.5.2.3.2 4.2.3.4.2 5.2.3 5.2.4	Post prohibitive signage at entrance gates and warnings against use of metal detection devices and souvenir hunting on fort property.	$ 2,500 Allowance
TOTAL IMMEDIATE PHASE				**$150,300**



IMMEDIATE PHASE - TEMPORARY SHORING

FORT NEGLEY MASTER PLAN

NASHVILLE, TENNESSEE

30 15 0 30 60

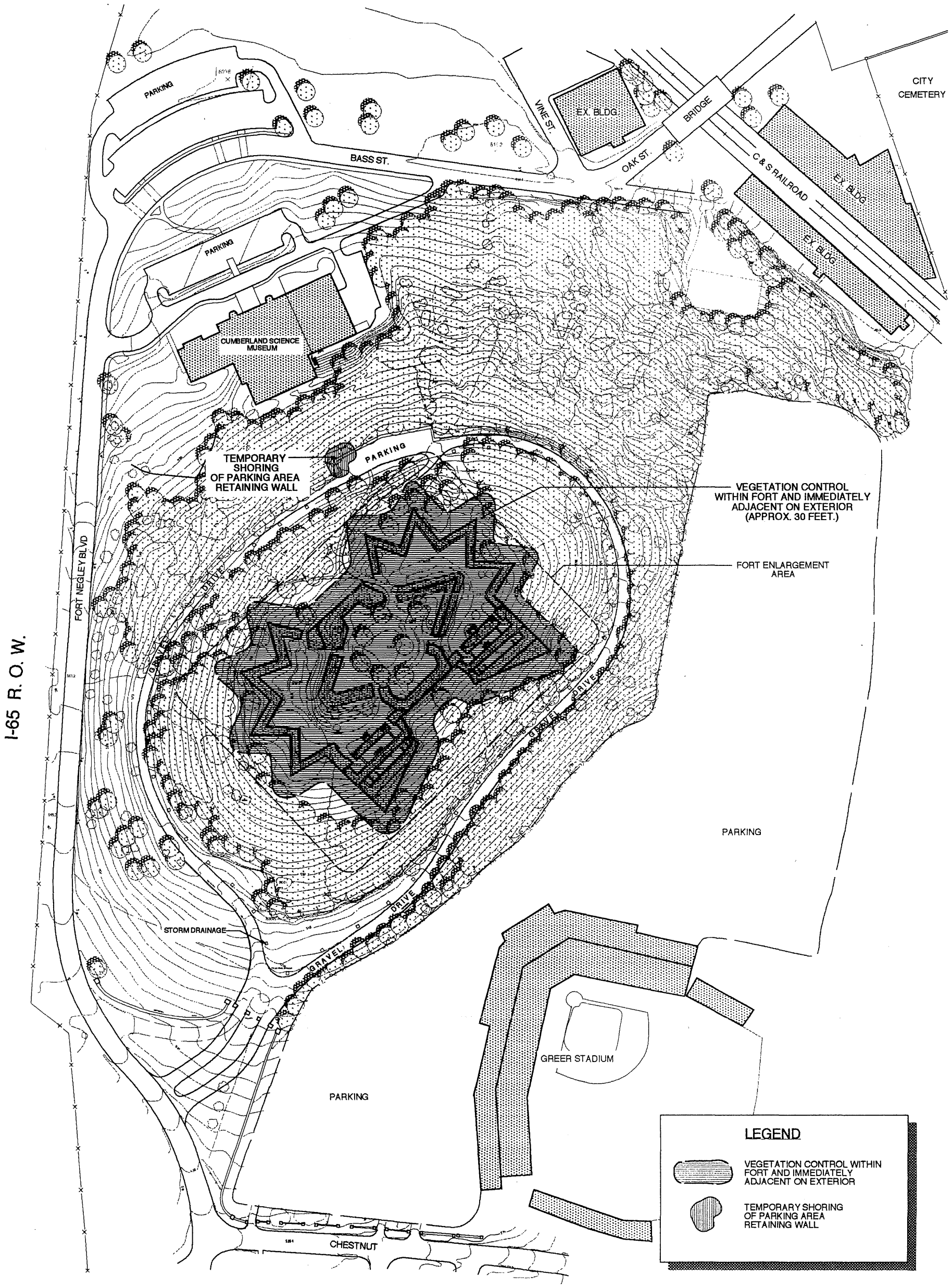
SCALE (in feet)

NORTH

HICKERSON FOWLKES ARCHITECTS • HAWKINS PARTNERS, INC. • OFFICE OF MICHAEL EMRICK • ZADA LAW ARCHAEOLOGY

DATE: 11-20-96

JOB NO. 95-661



IMMEDIATE PHASE

FORT NEGLEY MASTER PLAN

NASHVILLE, TENNESSEE

HICKERSON FOWLKES ARCHITECTS • HAWKINS PARTNERS, INC. • OFFICE OF MICHAEL EMRICK • ZADA LAW ARCHAEOLOGY

DATE: 11-20-96 JOB NO. 95-661

71.2

SUMMARY:
PHASE ONE

In this phase, repairs of the bulges and blowouts in the fort walls are completed (after appropriate archaeological investigation) and strategies to stop future deterioration are developed and implemented. Research for interpretation of the site continues at an intensified level and archaeological investigations are conducted prior to all site-altering work. Physical construction and administrative details necessary for public access and safety to open the park to the general public are initiated. Concentration on repairing and preventing future serious damage to the fort structure in Phase One allows for the development of public access facilities in the following phase.

Shoring of the bulges and blowouts in the previous phase allows for phased repair of the walls and studies of what type of intervention is needed to prevent future blowouts and destabilziations. Drainage within the fort is improved, and damage to the site caused by erosion is repaired. A program of regular monitoring of the stone walls is initiated, and security patrols are increased for increased public safety and prevention of relic collecting and other deprecative behaviors. Better viewing of the fort structure is created by selective clearing of understory growth beneath the tree canopy. The character of the site as an urban plant and wildlife habitat is enhanced by planting native tree species, and the development of pathways from the ring road up to the fort is initiated.

Based on the budget and priorities developed in the previous phase, the research questions or themes to be studied are developed and material at national and local archives is examined. The archival research should provide data for a history of Fort Negley, information for interpretive themes and public education materials, and augment archaeological findings.

The archaeological work in this phase ensures that no archaeolgical data are destroyed when the fort walls are repaired and drainage systems are installed. In those areas where footing drains will be installed, archaeolgical investigations on either side of the walls will determine the extent of original remaining Civil War-era stonework, the degree to which the WPA reconstructed those features, and an additional understanding of the causes of the physical deterioration of the fort. The data collected during this process will help to guide all future work.

An important aspect of this phase of the work also includes legal modifications to the Metro leases with both the Cumberland Science Museum and Greer Stadium. These modifications will restrict the developmental impact of those activities on the park and return to the park undeveloped portions of property currently included in those leases.

The establishment of a non-profit support organization to help protect, monitor and interpret the fort site and to assist with raising funds for the development of the park is another crucial element. This organization, along with the technical advisory committee established in the Immediate Phase, will be instrumental in striving toward the goals of the subsequent phases of this plan.

A new topographic/boundary survey is recommended under this phase of the work. It will be crucial in resolving conflicting property descriptions and will provide an accurate base map for future archaeological investigations, stone monitoring and other park development.

FORT NEGLEY MASTER PLAN RECOMMENDATIONS

NO.	ITEM	REF. NO.	DESCRIPTION	COST
PHASE ONE				
ARCHAEOLOGY				
1.1.1	Assessment/Data Recovery: Fort Repair	2.2.1-4 2.2.5.1.1.2 2.2.5.2.1	Submit plans for subsurface disturbance associated with wall repairs to archaeological advisers for impact review. Develop scope of work per TAC recommendations.	$100,000 Allowance
1.1.2	Assessment/Data Recovery: Site Drainage	2.2.1-4	Submit plans for construction of subdrainage system within fort to archaeological advisers for impact review. Develop scope of work per committee recommendations.	$46,000 Allowance
1.1.3	Assessment/ Monitoring: Tree Planting	2.2.1-4 2.2.5.2.2	Submit locations of subsurface disturbances for supplemental tree planting to archaeological advisers for impact review. Scope of work per committee recommendations.	$5,000 Allowance
1.1.4	Evaluation	2.2.4.4	Assess what is known about site based on results of archival and archaeological research; establish priorities for continuing research.	Provided by MHC and TAC
ARCHITECTURE				
1.2.1	Repair/Rebuild Blowouts/Bulges	3.3.2.2	Remove portions of walls that bow or lean out. Reconstruct the areas of the exterior wall that have failed ("blowout"). See detailed break down in appendices.	$337,000

FORT NEGLEY MASTER PLAN
RECOMMENDATIONS

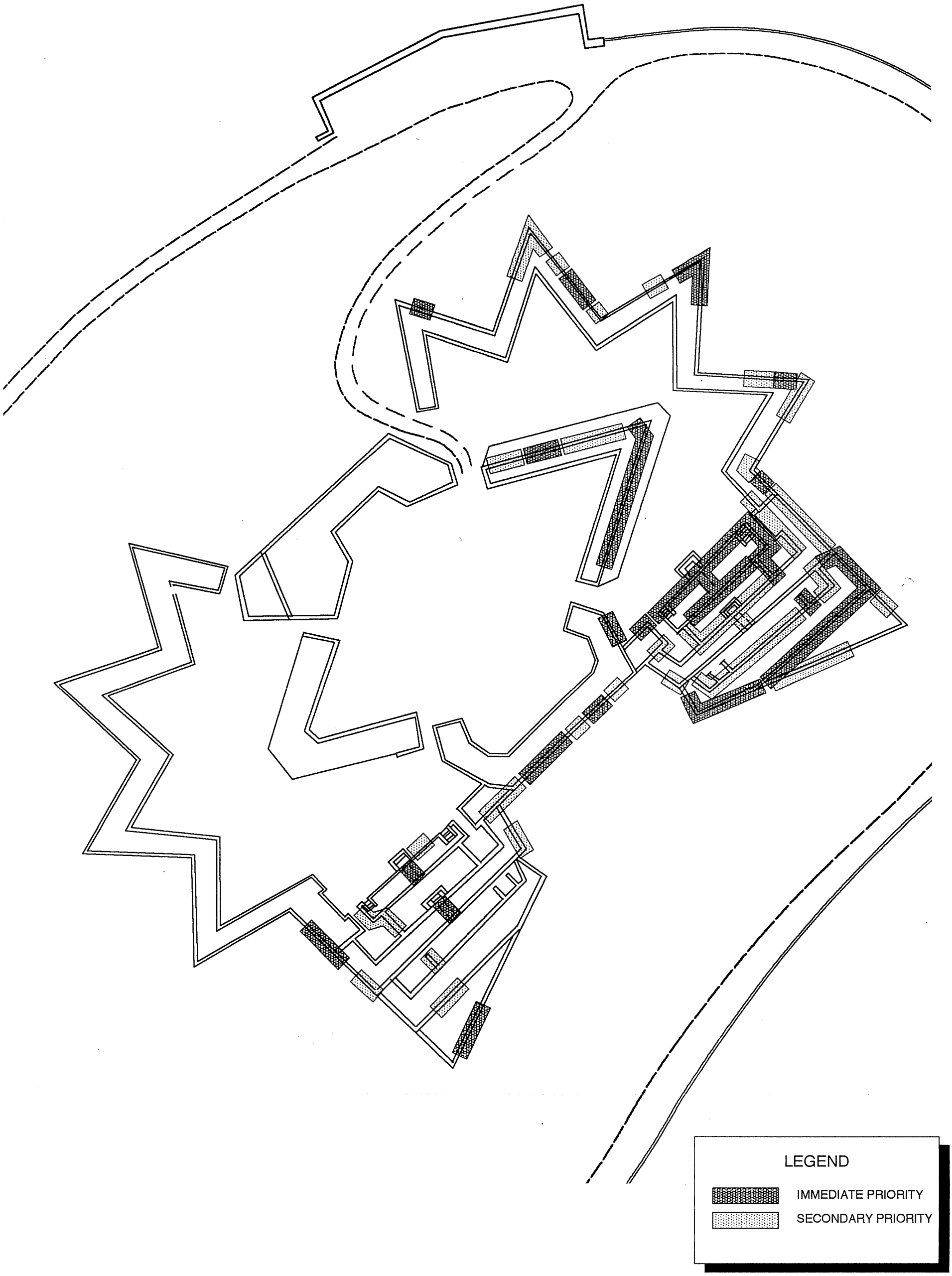
NO.	ITEM	REF. NO.	DESCRIPTION	COST
PHASE ONE - CONT.				
SITE				
1.3.1	Erosion Control	2.2.5.1.2 4.2.1.1	Repair all bare soil areas with sod or ground cover. Fill all ruts and holes to level of surrounding grade and replant with ground cover or seed.	Provided by MBPR
1.3.2	Site Drainage	4.2.2.1.3	Establish subdrainage French drains in low lying areas within fort to prevent hydrostatic pressure build-up behind fort walls.	$6,400 Allowance
1.3.3	Vegetation Control	4.2.2.4.1	Selectively clear all understory vegetation from beneath tree canopies from a height of 30 inches to 8 feet above the ground, for area within the ring road.	Provided by MBPR
1.3.4	Supplemental Planting	4.2.2.3	Plant native species of understory trees in wooded areas and reestablish quality turfgrass for all non-wooded areas of the site; steep banks planted with ground cover to prevent erosion.	Provided by MBPR
1.3.5	Pedestrian Circulation	2.2.5.2.3.1 4.2.3.1.4	Stabilization and minor repairs of ring road for pedestrian walk path.	$4,000 Allowance
1.3.6	Security Fencing: Vehicular	4.2.3.3.2.1	Build stone wall extension along Fort Negley Blvd. to prohibit vehicular access over curb from the street.	$32,000 Allowance

FORT NEGLEY MASTER PLAN
RECOMMENDATIONS

NO.	ITEM	REF. NO.	DESCRIPTION	COST
PHASE ONE - CONT.				
ADMINISTRATIVE - CONT.				
1.4.1	Archival Research	2.1.3 5.5.1 5.5.2.2	Research and synthesize archival information to write history of Fort Negley.	$70,000 Allowance
1.4.2	Security Patrolling	2.2.5.2.3.2 5.4.3	Increase the number of regular patrol teams to raise the perceived and real levels of safety for the public.	Provided by MBPR Security and Metro Police
1.4.3	Stone Monitoring	5.4.2	Inspect stone on a monthly basis to see if their condition has changed.	$8,500/yr
1.4.4	New Site Topographic/ Boundary Survey	5.4.1	Provide new site survey of total site with contours, property lines and physical improvements using GPS technology.	$30,000 Allowance
1.4.5	Modify Greer Lease Agreement to Reacquire Property Across From Gates	5.3.1.1	Begin process to modify Greer lease to reacquire property across from gates.	Provided by MBPR
1.4.6	Modify Greer Lease Agreement to Protect/ Reacquire Undeveloped Portions of Site	5.3.1.2	Begin process to modify Greer lease to reacquire undeveloped property between Greer fence and edge of Greer parking.	Provided by MBPR
1.4.7	Amend Lease With Cumberland Museum for New East Lease Line	5.3.2.1	Begin process to modify Cumberland lease to separate undeveloped areas not used by Cumberland Science Museum.	Provided by MBPR

FORT NEGLEY MASTER PLAN
RECOMMENDATIONS

NO.	ITEM	REF. NO.	DESCRIPTION	COST
PHASE ONE - CONT.				
ADMINISTRATIVE - CONT.				
1.4.8	Modify Cumberland Lease to Review/Limit Height for All Future Development	5.3.2.2	Begin process to modify Cumberland lease to require Metro approval of all new exterior modifications and to limit/restrict height of all additions.	Provided by MBPR
1 4.9	Establish Organization of Nonprofit Support Group	5.7.2	Draw up charter and by-laws, incorporate as nonprofit organization, begin fund-raising efforts for improvements to site.	Provided by MBPR and MHC
1.4.10	Grants	5.7.3.2	Identify specific funding needs: target funding sources, prepare and submit proposals. Incorporate grant writing and identifying funding needs into yearly cycles of activity and priorities.	Provided by MHC
1.4.11	Internet Visibility	5.7.4	Begin development of Fort Negley home page for World Wide Web. Create links to other Civil War pages.	$1000 allowance
TOTAL PHASE ONE				**$639,900**



PHASE ONE- REPAIR/REBUILD BLOWOUTS/ BULGES

FORT NEGLEY MASTER PLAN

NASHVILLE, TENNESSEE

30 15 0 30 60

SCALE (in feet)

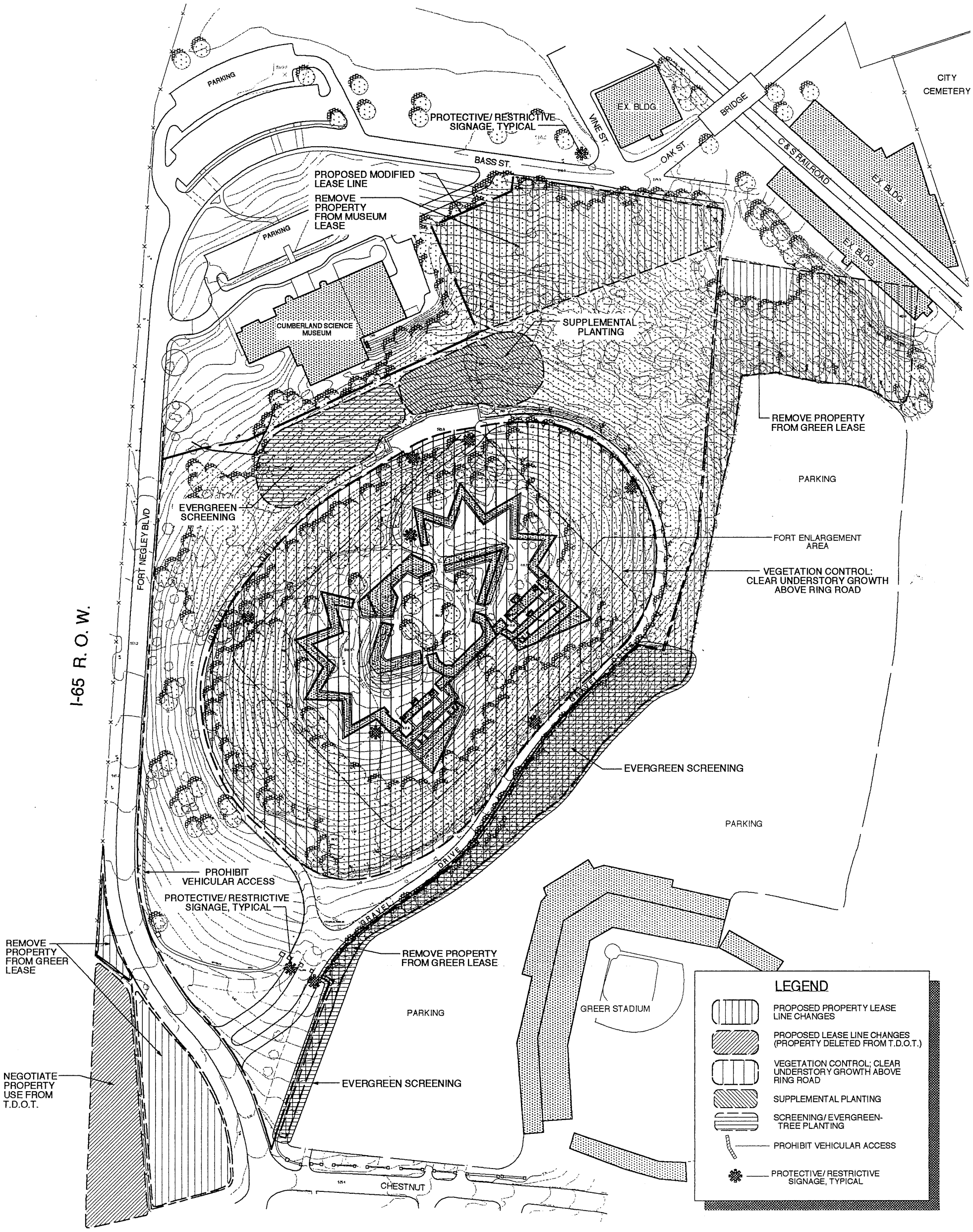
NORTH

HICKERSON FOWLKES ARCHITECTS • HAWKINS PARTNERS, INC. • OFFICE OF MICHAEL EMRICK • ZADA LAW ARCHAEOLOGY

DATE: 11-20-96

JOB NO. 95-661

76.1



PHASE ONE

FORT NEGLEY MASTER PLAN

NASHVILLE, TENNESSEE

50 25 0 50 150

SCALE (in feet)

NORTH

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DATE: 11-20-96 JOB NO. 95-661

76.2

SUMMARY: PHASE TWO

In this phase, cosmetic repairs to the stonework will be completed, archaeological priorities will be established for future work, interpretive information will be generated from previous archival and archaeological investigations, selective tree removal will be completed around the fort, view corridors will be created to adjoining historic sites, and the site will be prepared for public access at the end of the phase.

Stonework repairs are necessary to replace missing individual stone components and to level the tops of the stone walls in order to provide a safer environment for the public. Although the visitor will be discouraged from accessing the tops of the walls of the fort through restrictive signage, it should be anticipated that the unauthorized access will occur on a frequent basis until later phases, when the site is manned and guided tours are provided. Frequent monitoring of the stonework and grounds for continued deterioration or erosion will be necessary to protect the resource as a result of this access.

Visibility to and from the fort will be enhanced by selectively removing understory vegetation. View corridors will be created to establish linkages to the adjoining Civil War sites by the careful thinning of trees and removal of tree canopies. This will enhance the safety of the public and provide a better understanding of the military defense planning for Nashville during the Civil War. Other site development will include the repair of the pathway system and ring road established by the WPA, the creation of a pedestrian plaza at the entry gates, and the installation of benches in selected areas.

As a result of the archival and archaeological research conducted in earlier phases, this information can be used to generate interpretive signage and low profile monuments keyed to self-guided tour brochures for the public's understanding of the Civil War period in Nashville and the significance of this site.

FORT NEGLEY MASTER PLAN
RECOMMENDATIONS

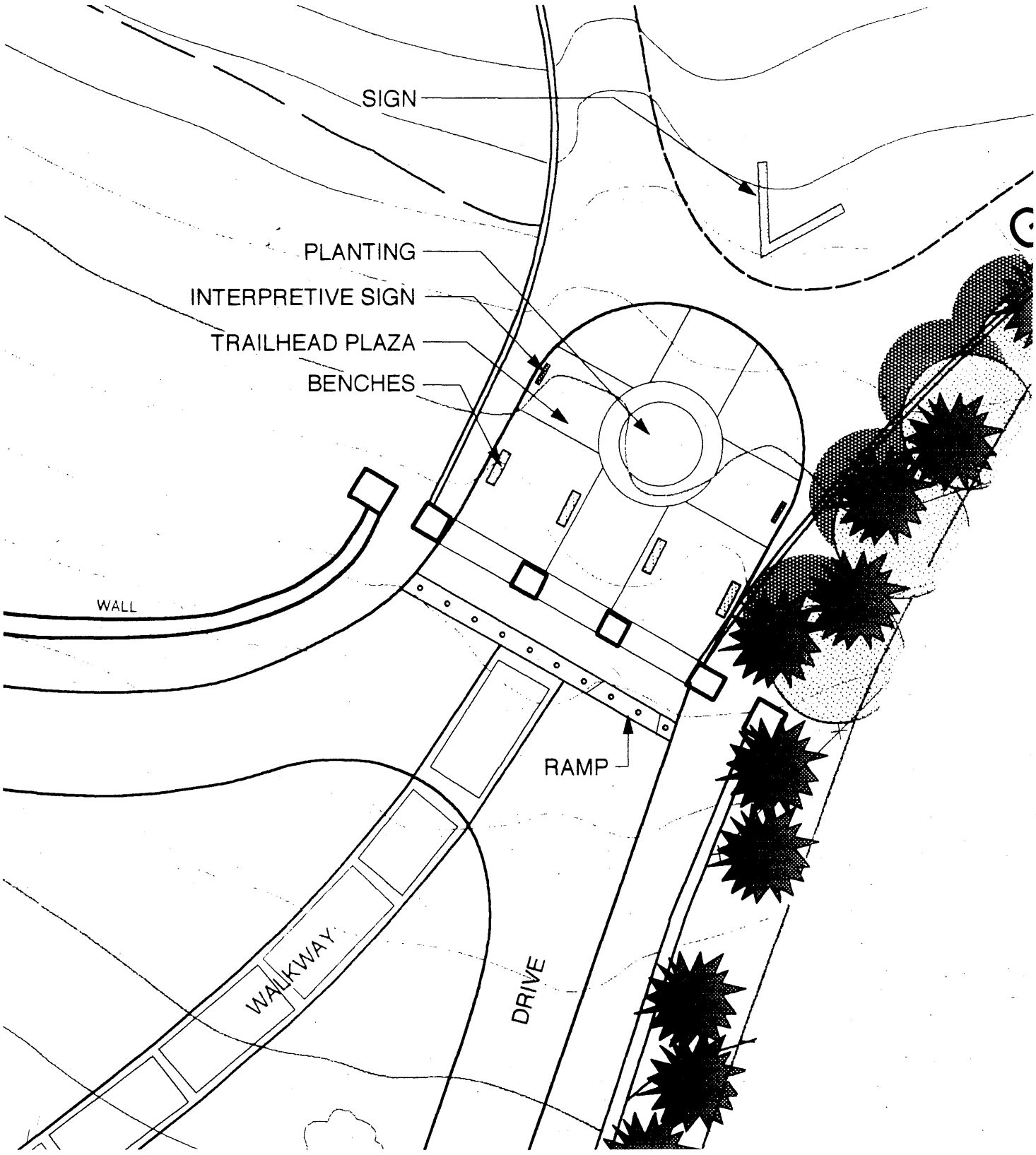
NO.	ITEM	REF. NO.	DESCRIPTION	COST
PHASE TWO				
ARCHAEOLOGY				
2.1.1	Assessment/Data Recovery/Monitoring: Fort and Site Repairs, Development of Pedestrian Plaza	2.2.1-.4	Submit plans for repairs and construction locations to archaeological advisers for impact review. Develop scopes of work per TAC recommendations.	$12,000 allowance
2.1.2	Evaluation/Research Project Development	2.2.4.4	Assess current archaeological research needs and priorities. Develop research projects in consultation with archaeological advisers.	Provided by MHC and TAC
2.1.3	Public Outreach and Education	2.2.3.5 2.2.5.2.3.2	Synthesize results of archival and archaeological research for public outreach and education. Develop interpretive products such as booklets and brochures.	Provided by MHC and non-profit group
ARCHITECTURE				
2.2.1	Finish Dressing Stone (Neatened Appearance)	3.3.3.1	Complete cosmetic repairs to the stone work to make the fort safe for public access and to enhance the visitor experience. Assume 6,700 lin. ft. of wall at $30/cu. ft.	$201,000
SITE				
2.3.1	Vegetation Control: Trees		Continue process of tree removal within 30 foot safe zone of fort walls.	Provided by MBPR

FORT NEGLEY MASTER PLAN
RECOMMENDATIONS

NO.	ITEM	REF. NO.	DESCRIPTION	COST
PHASE TWO - CONT.				
SITE - CONT.				
2.3.2	Vegetation Control: Understory Vegetation Control	4.2.2.4	Selectively clear all understory vegetation from beneath tree canopies from a height of 30 inches to 8 feet above the ground, for area outside/below the ring road.	Provided by MBPR
2.3.3	Vegetation Improvements	4.2.2.5	Improve the visibility of noted historic view corridors by selective thinning and removal of tree canopies.	Provided by MBPR
2.3.4	Circulation: Pedestrian	2.2.5.2.3.1 4.2.3.1.3	Repair and refurbish WPA-era walk paths within (above) the ring road for safe travel by site visitors.	$53,000 Allowance
2.3.5	Access Gates: Vehicular	4.2.3.2.1	Implement newly proposed vehicular access driveway and pedestrian plaza pavements at the main stone entrance gates.	$115,000 Allowance
2.3.6	Redefine Ring Road Width	4.2.3.1.4	Reduce width of hard surface ring road to accommodate pedestrian scale and infrequent vehicular traffic. Residual space to be landscaped with groundcover.	$55,000 Allowance
2.3.7	Passive Recreation	4.2.3.5	Add seating/benches in designated areas along the ring road for resting and passive enjoyment of the surroundings.	$12,000 Allowance

FORT NEGLEY MASTER PLAN
RECOMMENDATIONS

NO.	ITEM	REF. NO.	DESCRIPTION	COST
PHASE TWO - CONT.				
ADMINISTRATIVE3				
2.4.1	Archival Research	2.1.3 2.2.4.4.2 5.5.2.4	Additional archival research as needed for interpretive signage or other research questions identified in consultation with TAC.	$3,000 allowance
2.4.2	Security Patrolling	2.2.5.2.3.2 5.2.1 5.4.3	Patrol site on regular basis.	Provided byMBPR Security and Metro Police
2.4.3	Stone Monitoring	5.4.2	Inspect stone on a monthly basis to see if its condition has changed.	$8,500/yr.
2.4.4	Interpretation	5.6	Determine themes to be interpreted within park and fort.	Provided by MHC
2.4.5	Interpretive Signage	2.2.4.1 4.2.3.4	Introduce low profile pedestrian-type monuments that are keyed to self-guided tour brochures about the fort site.	Unknown
2.4.6	Grants	5.7.3	Continue to identify specific funding needs; target funding sources and prepare proposals.	Provided by MHC
2.4.7	Internet Visibility	5.7.4.2	Incorporate summaries of what has been discovered about the site and what has been developed at the site on the Fort Negley home page.	$2,000 allowance
TOTAL PHASE TWO				**$441,500**



PHASE TWO - ENTRANCE ENHANCEMENT

FORT NEGLEY MASTER PLAN

NASHVILLE, TENNESSEE

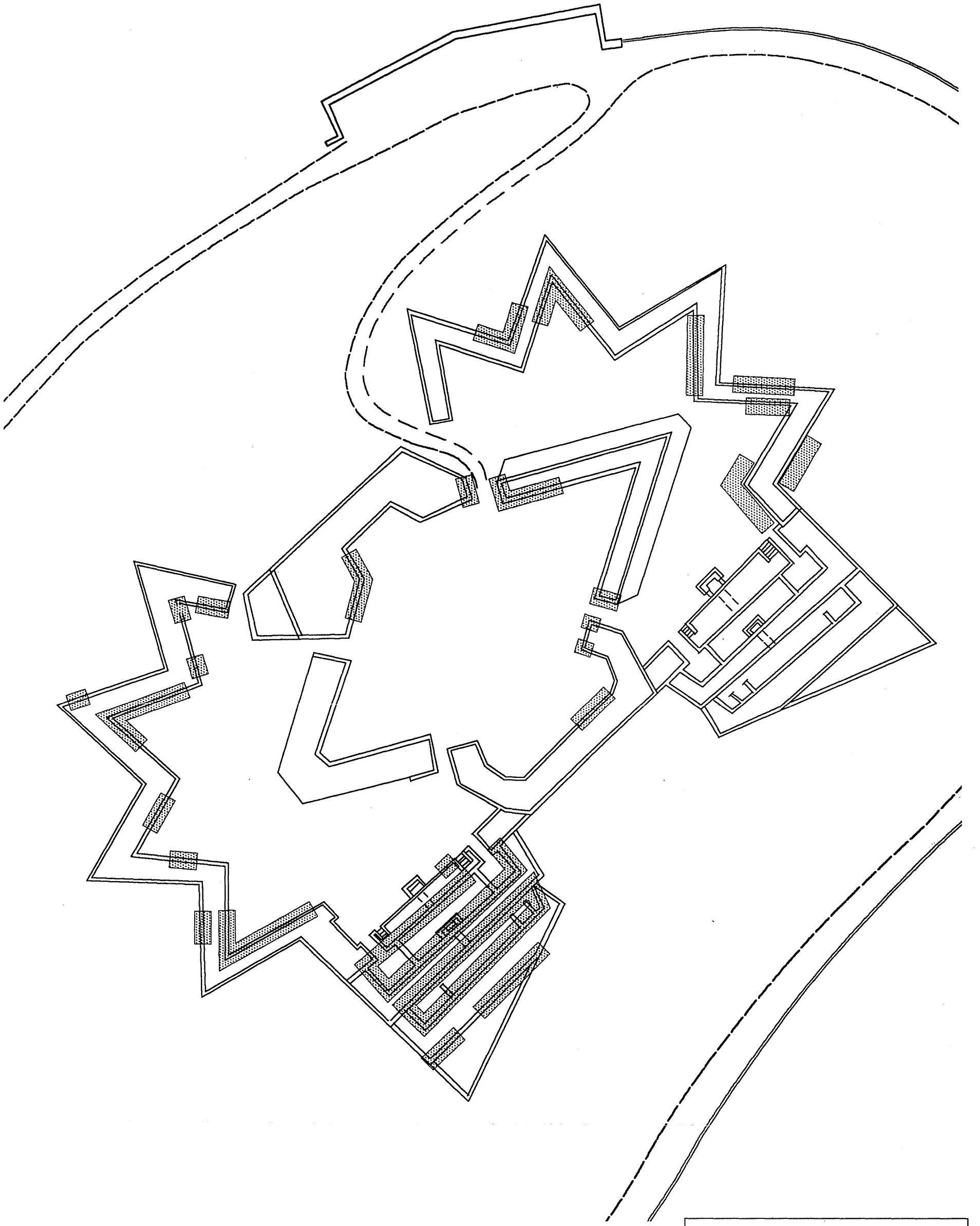
30 15 0 30

SCALE (in feet)

NORTH

HICKERSON FOWLKES ARCHITECTS • HAWKINS PARTNERS, INC • OFFICE OF MICHAEL EMRICK • ZADA LAW ARCHAEOLOGY DATE 11-20 9- JOB NO 95-661

80.1



LEGEND

FINISH DRESSING/ RESTORATION HIGH LEVEL

OTHER AREAS REQUIRE MINIMAL RESTORATION

PHASE TWO- FINISH DRESSING/ STONEWORK RESTORATION

FORT NEGLEY MASTER PLAN

NASHVILLE, TENNESSEE

30 15 0 30 60

SCALE (in feet)

NORTH

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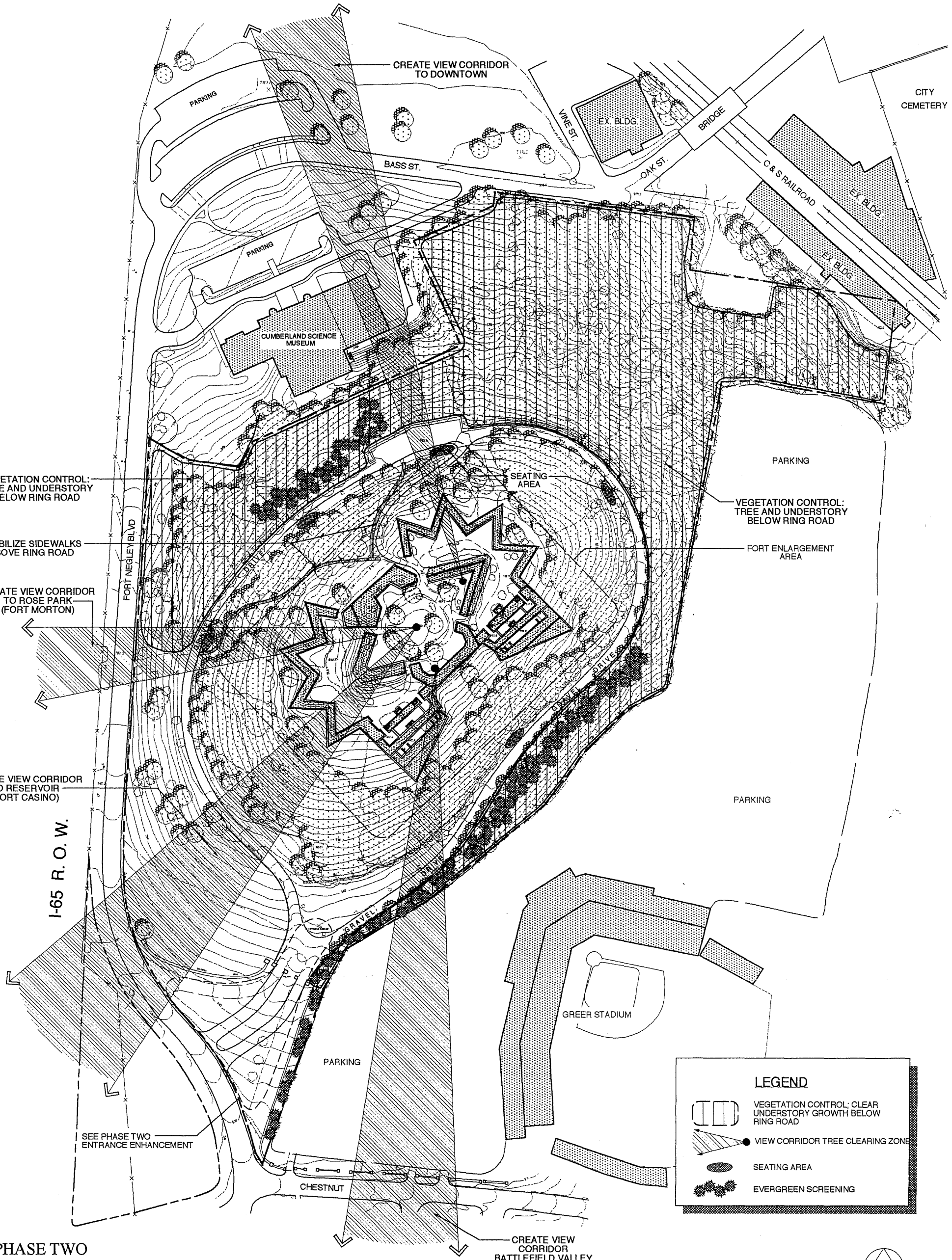
DATE: 11-20 96

JOB NO. 95-661

80.2



PHASE TWO

FORT NEGLEY MASTER PLAN

NASHVILLE, TENNESSEE

HICKERSON FOWLKES ARCHITECTS • HAWKINS PARTNERS, INC. • OFFICE OF MICHAEL EMRICK • ZADA LAW ARCHAEOLOGY

DATE: 11-20-96 JOB NO. 95-661

80.3

SUMMARY:
PHASE THREE

Prior to this phase, the minimal work necessary to get the fort and site prepared for public access has been completed. The scope of work in Phase Three is designed to improve the visitor's experience and understanding through further development of the park site and the construction of an interpretive center.

Site improvements under this phase include the creation of evergreen screening of the rear of the Cumberland Science Museum and Greer Stadium, repairs to the WPA drainage system at the ring road and secondary pathways, the creation of dedicated off-site visitor parking, installation of security lights along Fort Negley Blvd. and entry gates, installation of security fencing at the northeast corner of the site near the railroad, and the development of passive recreational activities such as nature trails and picnic tables.

The interpretation of the site will be enhanced by constructing improved signage or site exhibits as well as living history demonstrations and guided tours. The most dramatic improvement comes from the creation of a modest interpretive/visitor center. Several potential locations have been noted both on and off-site as well as through a possible relationship with the Cumberland Science Museum. It is with the development of the interpretive center that Fort Negley establishes its own unique identity as a major tourist destination.

It is also in this phase that the Master Plan recommends beginning negotiations to close Fort Negley Blvd. as a public road to help control the site. This closure is viewed as necessary to create a site boundary/identity and to restrict unauthorized site access after hours.

FORT NEGLEY MASTER PLAN
RECOMMENDATIONS

NO.	ITEM	REF. NO.	DESCRIPTION	COST
			PHASE THREE	
ARCHAEOLOGY				
3.1.1	Assessment/Data Recovery/Monitoring: Drainage System, Path Repairs, Fencing, Interpretive Center	2.2.1-.4	Submit plans for repairs and construction locations to archaeological advisers for impact review. Develop scopes of work per TAC recommendations.	Provided by MHC and TAC
3.1.2	Evaluation/Research Project Development	2.2.4.4	Continuing assessment of current archaeological research needs and priorities. Develop research projects in consultation with archaeological advisory committee.	Provided by MHC and TAC
3.1.3	Public Outreach and Education	2.2.5.2.3.2 2.2.3.5	Continue development and updating of public outreach/ education programs and products.	Provided by MNC and non-profit group
SITE				
3.3.1	Vegetation Control	4.2.2.4.1	Maintain vegetative cover as high canopy trees and low ground covers, with selective stands of understory natives. Manage for long term habitat stability without sacrificing clear views through understory.	Provided by MBPR
3.3.2	Visual Screening	4.2.2.4 4.2.2.5	Establish additional native evergreen tree and shrub screening of Museum back-of-house without viewshed degradation of downtown vista.	Provided by MBPR

FORT NEGLEY MASTER PLAN
RECOMMENDATIONS

NO.	ITEM	REF. NO.	DESCRIPTION	COST
PHASE THREE - CONT.				
SITE - CONT.				
3.3.3	Site Drainage Enhancement	4.2.2.2	Access functionality and provide necessary repairs for the stone storm drainage culvert constructed by WPA along the ring road.	Unknown
3.3.4	Circulation: Pedestrian Improvements	2.2.5.2.3.1 4.2.3.1.5 4.2.3.1.6	Redefine, stabilize and renovate WPA established primary and secondary footpaths above the ring road to provide more thorough access to natural variety of site.	Unknown
3.3.5	Circulation: Vehicular Improvements	4.2.3.2	Introduce off-street vehicular parking at selected site for visitors center. Establish strong visual and physical link to main entrance gates for safe pedestrian travel from parking area.	Unknown
3.3.6	Security: Lighting at Site	4.2.3.3.1.1	Review levels and quality of lighting along Fort Negley Blvd. to meet applicable vehicular and pedestrian safety standards. No internal site lighting is to be permitted.	Unknown
3.3.7	Security: Lighting at Gates	4.2.3.3.1.2	Add dramatic site lighting to main entrance stone gates and pedestrian plaza for enhanced park identity. No internal site lighting is to be permitted.	Unknown
3.3.8	Security: Fencing	2.2.4.1 4.2.3.3.2.2	Introduce chain link fence to serve as further pedestrian access barrier from railroad ROW on the northeast and eastern sides of the site.	$29,000

FORT NEGLEY MASTER PLAN
RECOMMENDATIONS

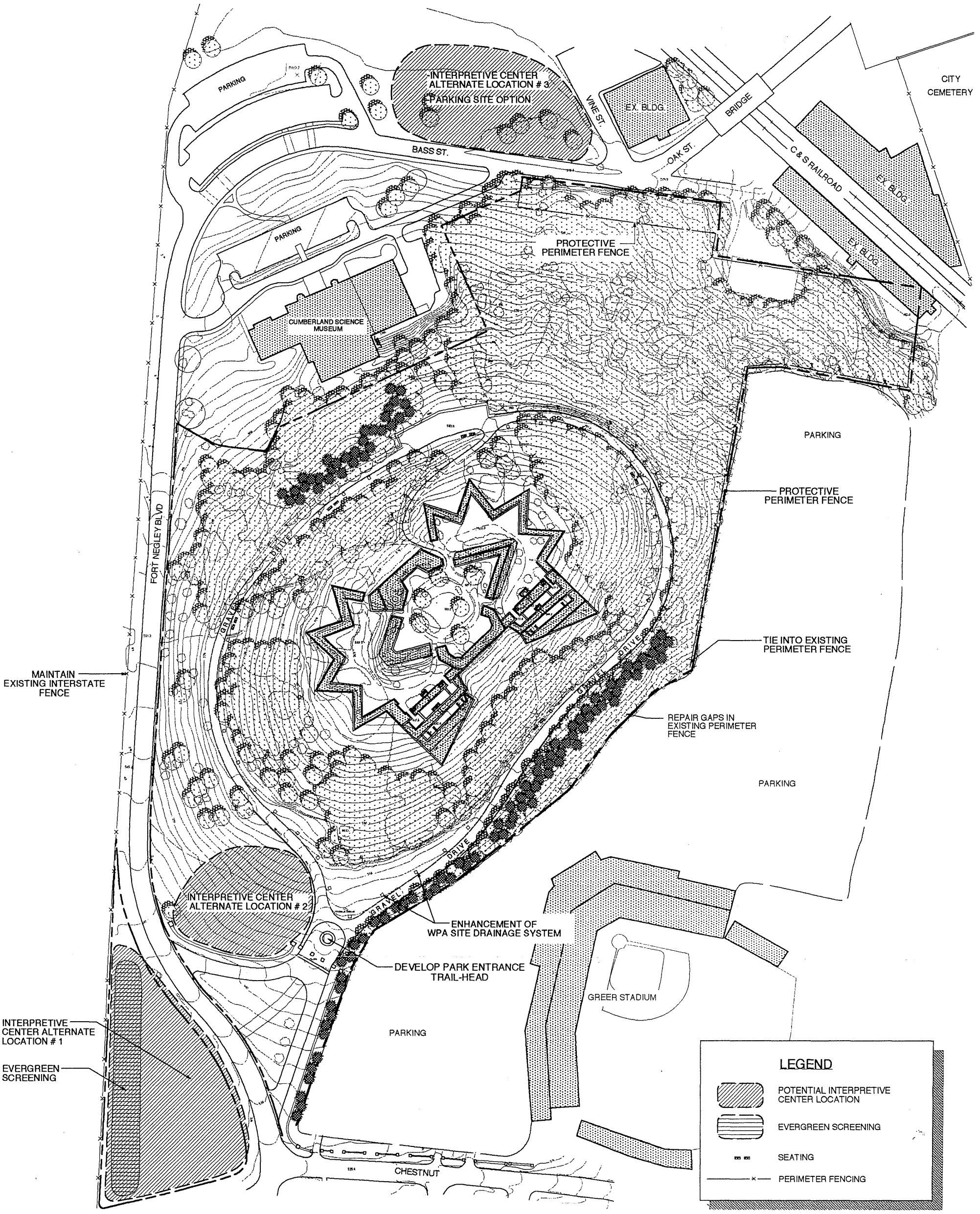
NO.	ITEM	REF. NO.	DESCRIPTION	COST
PHASE THREE - CONT.				
SITE - CONT.				
3.3.9	Passive Recreation: Picnic Tables	4.2.3.5	Provide outdoor picnic tables and benches adjacent to visitor center for safe and comfortable family and small group picnics, that is not otherwise available on the fort property.	$ Allowance
3.3.10	Passive Recreation: Nature Trails	4.2.3.5.2	Define with mulch paths, enhanced landscape planting and plant labeling of specific footpaths around the site that can be enjoyed as nature trails (not necessarily related to the historical context of the site).	$ Allowance
ADMINISTRATIVE				
3.4.1	Archival Research	2.2.4.4.2 5.5	Additional archival research as needed for interpretive signage or other research questions identified in consultation with TAC.	#3,000 Allowance
3.4.2	Stone Monitoring	5.4.2	Inspect stone on a monthly basis to see if its condition has changed.	$ 8,500/yr.
3.4.3	Interpretive/Visitors Center: Alternate A: Manned Small Free-Standing Structure	2.2.4.1 5.6.2.1 5.6.2.2	Select site for new Interpretive/Visitor Center. Construct new manned free-standing structure including staff and off-street parking and restroom (assumes 2,500 SF)	$375,000

FORT NEGLEY MASTER PLAN
RECOMMENDATIONS

NO.	ITEM	REF. NO.	DESCRIPTION	COST
PHASE THREE - CONT.				
ADMINISTRATIVE - CONT.				
3.4.4	Interpretive/Visitors Center: Alternate B: Utilizing Small Space in Existing Cumberland Museum	5.6.2.2	Should space become available for use, utilize available square footage inside the existing Cumberland Science Museum for interpretive displays, an information center on the Fort Negley site, and as trail head for guided tours. (Assumes 100 SF)	$ 10,000
3.4.5	Interpretive/Visitors Center: Alternate C: Sharing Space Within Expanded Cumberland	5.6.2.3	Develop separate Interpretive/Visitors Center within an addition to Cumberland Museum for interpretive displays and an information center on the Fort Negley site. (Assumes 2,500 SF)	$375,000
3.4.6	Interpretive Signage Enhancement	4.2.3.4.1.2	Enhance the visitor experience with photo-realistic interpretive site exhibits as well as living history/guided tours through the fortification/sit by volunteers (non-profit group).	Unknown
3.4.7	Begin Discussions to Close Ft. Negley Blvd.	5.4.5	Begin negotiations to close Ft. Negley Blvd. to control site.	Unknown
3.4.8	Grants	5.7.3.2	Continue to identify specific funding needs; target funding sources and prepare proposals	Provided by MHC

FORT NEGLEY MASTER PLAN
RECOMMENDATIONS

NO.	ITEM	REF. NO.	DESCRIPTION	COST
PHASE THREE - CONT.				
ADMINISTRATIVE - CONT.				
3.4.9	Internet Visibility	5.7.4.2	Incorporate summaries of what has been discovered about the site and facilities that have been developed for the park on the Fort Negley home page. Begin using Internet to increase visitation to the site and for fund raising.	$2,000 Allowance
TOTAL PHASE THREE				**TO BE DETERMINED**



PHASE THREE

FORT NEGLEY MASTER PLAN

NASHVILLE, TENNESSEE

HICKERSON FOWLKES ARCHITECTS • HAWKINS PARTNERS, INC. • OFFICE OF MICHAEL EMRICK • ZADA LAW ARCHAEOLOGY

DATE: 11-20-96 JOB NO. 95-661

86.1

SUMMARY: LONG RANGE PHASE

The purpose of this phase is to complete the development of the park site by defining the park boundaries and enhancing the visitor's experience. Work includes the purchase of adjacent property to establish a stronger visual park boundary south of the railroad at the Oak Street bridge, the closure of Fort Negley Blvd., the construction of new entry gates at either end for controlling vehicular access, completion of the perimeter fencing for improved site control, and the development of directional, trail head and trail side signage.

Other possible development includes the reconstruction of missing Civil War elements (see Administrative Issues section, Item 5.6.2) and the conversion of the Cumberland Science Museum building into a regional Civil War museum/research facility.

FORT NEGLEY MASTER PLAN
RECOMMENDATIONS

NO.	ITEM	REF. NO.	DESCRIPTION	COST
LONG RANGE PHASE				
ARCHAEOLOGY				
4.1.1	Assessment/Data Recovery/Monitoring: Perimeter Fencing, Reconstructions	2.2.1-.4	Submit construction plans to archaeological advisers for impact review. Develop scopes of work per TAC recommendations.	Provided by MHC and TAC
4.1.2	Evaluation/Research Project Development	2.2.2.4	Continuing assessment of current archaeological research needs and priorities. Develop research projects in consultation with archaeological advisery.	Provided by MHC and TAC
4.1.3	Public Outreach and Education	2.2.3.5.2	Continue development and updating of public outreach/ education programs and products. Develop special events and educational programs to mark the Civil War Sesquicentennial (2011-2015).	Provided by MHC and non-profit group
ARCHITECTURE				
4.2.1	Reconstructions	3.3.3.2	Possible reconstructions of the fort gate, stockade, powder magazine, casements, earthworks and winter quarters after archival and archaeological research is completed.	Unknown

FORT NEGLEY MASTER PLAN
RECOMMENDATIONS

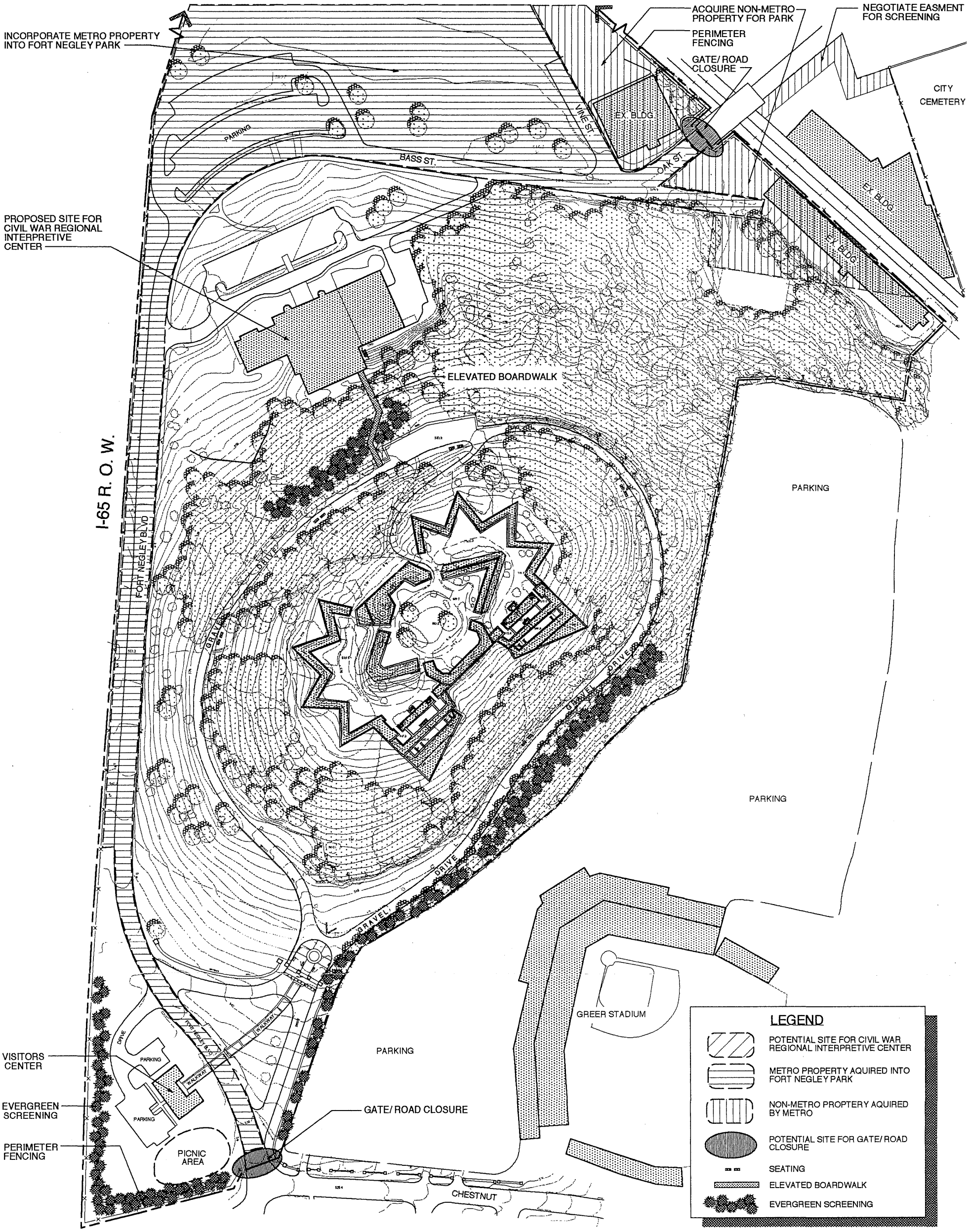
NO.	ITEM	REF. NO.	DESCRIPTION	COST
LONG RANGE PHASE - CONT.				
SITE				
4.3.1	Security: Perimeter Fencing	2.2.4.1 4.2.3.3.2	Finalize extent of chain link fencing to encircle entire park property.	$14,200
4.3.2	Security: Gates and Road Closure	4.2.3.3.2.3	Develop formal ornate iron and stone column entry gates at north and south ends of Fort Negley Blvd. Make Fort Negley Blvd. into a closable street after park hours.	$62,000
4.3.3	Physical Improvements: Interpretive Signage	4.2.3.4.1	All directional, trail head and trail side signage and living history interpretation staff components should be fully functional for an improved learning experience for the site visitor.	Unknown
ADMINISTRATIVE				
4.4.1	Stone Monitoring	5.4.2	Inspect stone on a monthly basis to see if its condition has changed.	$ 8,500/yr.
4.4.2	Security Patrolling	2.2.5.2.3.2 5.2.1 5.4.3	Patrol site on regular basis.	Provided by MBPR Security and Metro Police

FORT NEGLEY MASTER PLAN
RECOMMENDATIONS

NO.	ITEM	REF. NO.	DESCRIPTION	COST
LONG RANGE PHASE - CONT.				
ADMINISTRATIVE - CONT.				
4.4.3	Interpretive Center: Conversion of Cumberland Museum into Regional Civil War Museum/ Research Facility	5.6.2.2	Should circumstances allow, fully convert the facilities of the Cumberland Science Museum to a regional Civil War Museum and Research Center for the Fort Negley site and the Western Theater. Approximately 70,000 SF.	$700,000
4.4.4	City Cemetery Linkages	4.2.3.6	Establish tours to nearby City Cemetery. Improve sidewalks and provide interpretive signage.	Conc. Sidewalks: $15,000 Signage: Allowance: $5,000
4.4.5	Acquire Adjacent Non-Park Lands This Side of Railroad	5.4.6	Purchase privately owned property south of railroad at Oak Street bridge to control development and protect resource.	Unknown
4.4.6	Close Ft. Negley Blvd.	5.4.5	Close Ft. Negley Blvd. Deed property to park. Prohibit thru-traffic after dark.	Provided by MBPR
4.4.7	Grants	5.7.3.2	Continue to identify specific funding needs; target funding sources and prepare proposals.	Unknown

FORT NEGLEY MASTER PLAN
RECOMMENDATIONS

NO.	ITEM	REF. NO.	DESCRIPTION	COST
LONG RANGE PHASE - CONT.				
ADMINISTRATIVE - CONT.				
4.4.8	Internet Visibility	5.7.4.2	Update with new research data and site facility information. Continue using Internet to increase visitation to the site and for fund raising.	$2,000 Allowance
TOTAL LONG RANGE PHASE				**TO BE DETERMINED**



LONG RANGE PHASE

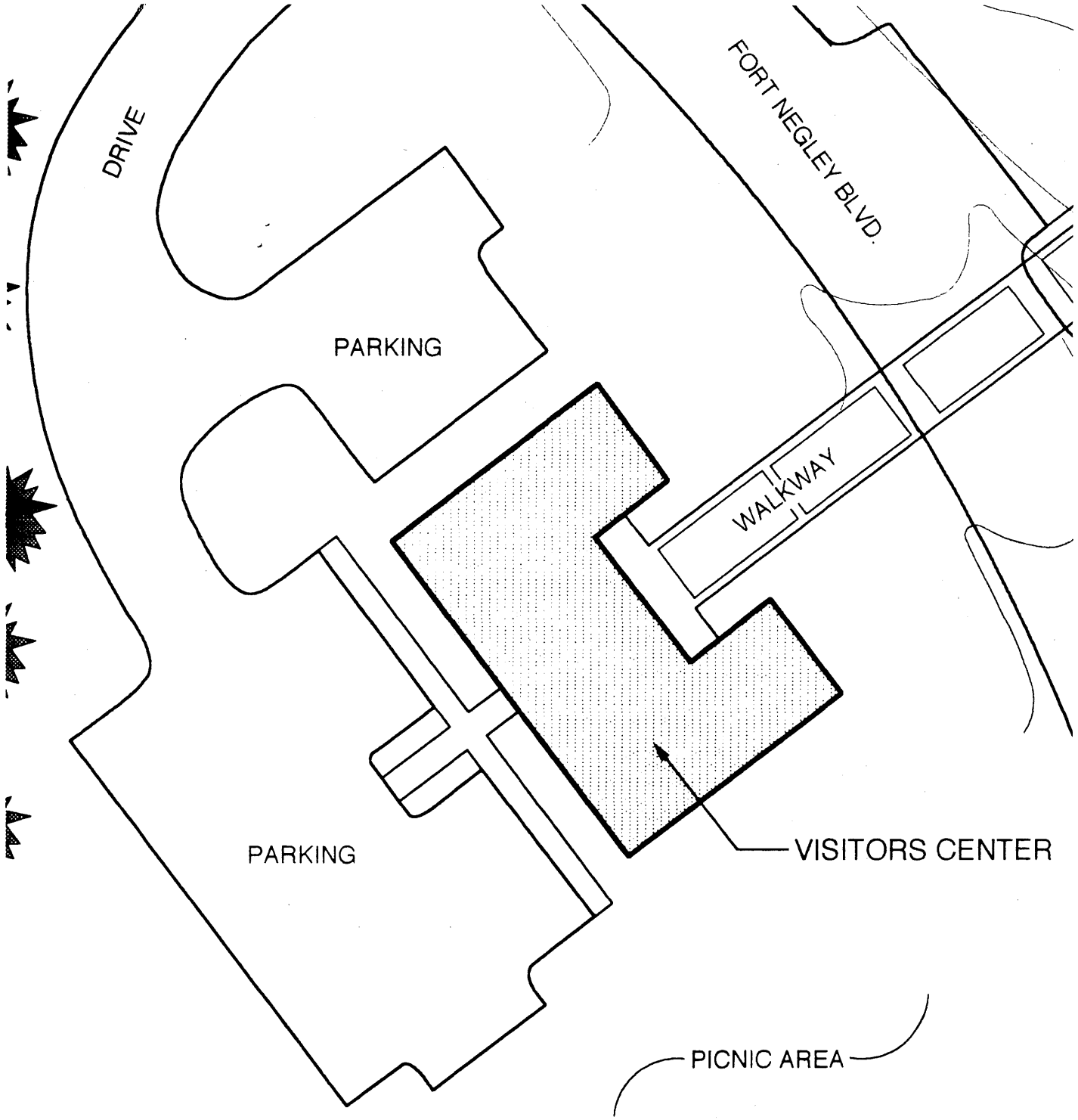
FORT NEGLEY MASTER PLAN

NASHVILLE, TENNESSEE

HICKERSON FOWLKES ARCHITECTS • HAWKINS PARTNERS, INC. • OFFICE OF MICHAEL EMRICK • ZADA LAW ARCHAEOLOGY

DATE: 11-20-96 JOB NO. 95-661

91.1



LONG RANGE PHASE - VISITORS CENTER

FORT NEGLEY MASTER PLAN

NASHVILLE, TENNESSEE

30 15 0 30

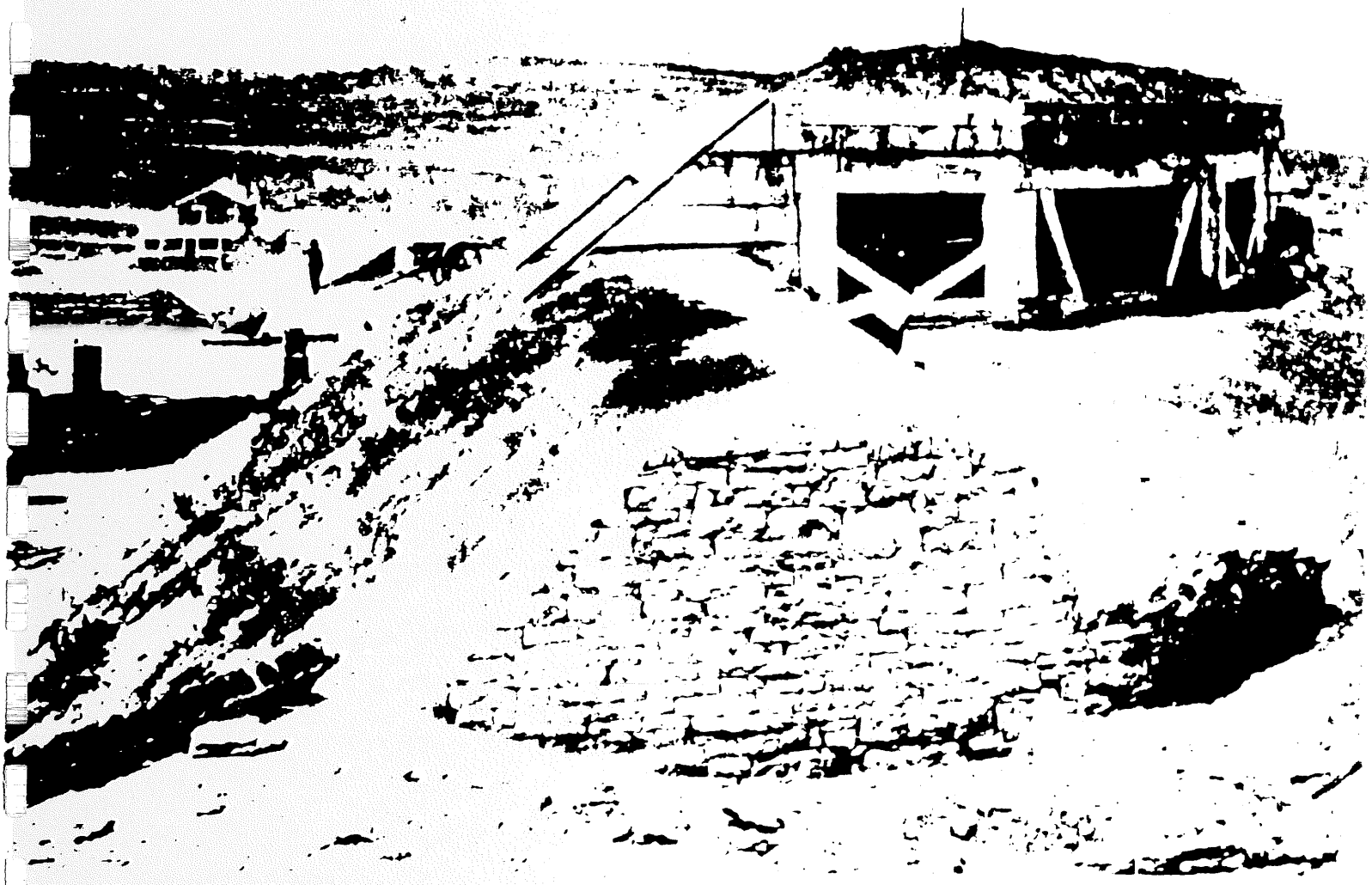
SCALE (in feet)

NORTH

HICKERSON FOWLKES ARCHITECTS • HAWKINS PARTNERS INC • OFFICE OF MICHAEL EMRICK • ZADA LAW ARCHAEOLOGY

DATE 11-20-96

JOB NO. 95-661



APPENDICES

Appendix A:
List of Resources

1.00 CONTACTS

1.10 Individuals

.1	Brandt, Judge Robert S. Tenn. Chancery Court, 20th Judicial Dist. (developed proposal & map for driving tour of Middle Tenn. 1863 Campaign sites)	862-5700
.2	Cumberland Science Museum, Bob Sullivan	862-5160
.3	Massey, Ross: Battle of Nashville Preservation Society	352-6384
.4	McKee, Dr. Larry: Historical Archaeologist, the Hermitage	889-2941
.5	McKissack & McKissack, Lennie Solera	327-0455
.6	Miller Wihry Lee (alumni) Tom Martin (Metro Planning Commission) Nicholas Young (Gresham Smith & Partners)	 862-7150 385-3310
.7	National Archives, Washington DC Bill Creech, Civil Reference Branch Michael Musick, Mike Myers, Civil War Military Records	 202/501-5395 202/501-5385
.8	Panamerican Consultants, Inc., Tim Mistovich, Principal	205/556-3096
.9	Prouty, Fred: Military Historian, Tennessee Historical Commission	532-1563
.10	Reed, Graham: Graham Reed Masonry Restoration	871-4068
.11	Reynolds, Ann: Executive Director, Metro Historical Commission	862-7970
.12	Richter, Lallie and Larry Cockerham; Metro Board of Parks and Recreation	862-8400
.13	Schmittou, Larry (Greer Stadium)	242-4371
.14	Schofner, William E. local Civil War expert & attorney	244-6380
.15	Smith, Dr. Kevin: archaeologist , Middle Tennessee State University	898-5958
.16	Smith, Steven D; Historic Archaeologist specializing in military history South Carolina Institute of Archaeology and Anthropology	 803/734-0567
.17	Tennessee Dept. of Environment and Conservation, Division of Archaeology Nick Fielder: State Archaeologist Sam Smith, Ben Nance: Historical Archaeologists	741-1588
.18	Tennessee State Museum, Dan Pomeroy	741-2692

1.20 Agencies/Programs

.1 American Association of State and Local History
530 Church Street
Nashville, TN 37219

.2 American Battlefield Protection Program
Interagency Resources Division
National Park Service
P.O. Box 37127, Suite 250
Washington, DC 20013-7127
newsletter: *Battlefield Update*
http://www.cr.nps.gov/abpp/html/abpp.html

.3 American Express World Monuments Fund
949 Park Avenue
New York, NY 10028
212/517-9367
o grants to protect monuments and sites from immediate threats

.4 Association for the Preservation of Civil War Sites
613 Caroline Street, Suite B
Fredericksburg, VA 22401
703-525-6300

.5 The Battle of Nashville Preservation Society, Inc.
The Civil War Roundtable
P.O. Box 121796
Nashville, TN 37212

.6 The Civil War Trust
1225 Eye Street, NW, Suite 401
Washington, DC 20005
202-326-8420

.7 The Conservation Fund
1800 North Kent, Suite 1120
Arlington, VA 22203
703/525-6300
o involved in preservation of Civil War sites

.8 Earthwatch
680 Mt. Auburn St.
P.O. Box 403
Watertown, Massachusetts 02272
800/776-0188
http://www.earthwatch.org
o archaeological expeditions

.9 National Center for Preservation Technology and Training (NCPTT)
LSU Box 5682
Natchitoches, LA 71497
Telephone: 318/357-6464
FAX: 318/357-6421 E-mail: ncptt@alpha.nsula.edu
http://www.cr.nps.gov/ncptt
- o preservation grants
- o guide to Internet resources for preservation

.10 The U.S. Civil War Center
Louisiana State University
Baton Rouge, LA 70803
504/388-3151 http://www.cwc.lsu.edu/
Director, David Madden
The purposes of the Civil War Center are "to locate, index, and / or make available all appropriate private and public data regarding the Civil War" and "to promote the study of the Civil war from the perspectives of all academic disciplines, professions, and occupations." The U.S. Civil War Center was funded by a grant from Frank Magill, a California philanthropist.

2.00 REFERENCES

2.10 Archaeology - selected works

.1 Bentz, Charles and Yong W. Kim
1996 *The Sevierville Hill Site: A Civil War Union Encampment on the Southern Heights of Knoxville, Tennessee.* Tennessee Anthropological Association, Knoxville, Tennessee.

.2 Bergstresser, Jack R. Sr., Shari D. Moore, and Susan L. Nielsen
1994 *Fort Negley 130 Years Later: An Archaeological Assessment.* Prepared for the Government of Nashville and Davidson County. Panamerican Consultants, Inc., Tuscaloosa, Alabama.

.3 Chittenden, Betsy
1990 GIS Technology used in American Battlefield Protection Program. *CRM Bulletin* 13(5):4.

.4 Geier, Clarence R. and Susan E. Winter
1994 *Look to the Earth: Historical Archaeology and the American Civil War.* University of Tennessee Press, Knoxville.

.5 Holland, Dana
1992 Interpretation and the Historical Archeology of the Civil War. *CRM* 15(5):34.

.6 Kintigh, Keith
1996 SSA Principles of Archaeological Ethics. *SAA Bulletin* 14(3):5,17.

.7 Logan, George C.
1992 African-American Archeology, Public Education, and Community Outreach. *CRM* 15(7):9-11.

.8 Lynott, Mark J. And Alison Wylie
1995 Stewardship: The Central Principle of Archaeological Ethics. *In Ethics in American Archaeology: Challenges for the 1990s*, edited by Mark J. Lynott and Alison Wylie, pp. 28-32. Society for American Archaeology.

.9 MacDonald, Anne
1990 Surface Erosion and Disturbance at Archaeological Sites: Implications for Site Preservation. Miscellaneous Paper EL-90-6, US Army Engineer Waterways Experiment Station, Vicksburg, MS.

.10 Miller, Wihry, and Lee, Inc.
1980 *Fort Negley Park: A Study for the Metropolitan Historical Commission.* Miller, Wihry, and Lee, Inc., Nashville.

.11 Prouty, Fred
1996 *The Preservation and Interpretation of Fort Negley Historic Civil War Site*, Abstracts of the 1996 Society for Historical Archaeology 1996 Meetings, January 1996, Cincinnati, Ohio.

.12 Scott, Stuart D., Patricia Kay Scott, James W. F. Smith, James MacLeay
1991 Reorientation of Historical Maps of Old Fort Niagara Using Computer-Assisted Cartography. *Journal of Field Archaeology* 18:319-343.

.13 Smith, Steven D.
1994 Archaeological Perspectives on the Civil War: The Challenge to Achieve Relevance. In *Look to the Earth: Historical Archaeology and the American Civil War*, pp. 3-20. University of Tennessee Press, Knoxville.

.14 Smith, Samuel D.
1994 Excavation Data for Civil War Era Military Sites in Middle Tennessee. In *Look to the Earth: Historical Archaeology and the American Civil War*, pp. 60-75. University of Tennessee Press, Knoxville.

.15 Smith, Samuel D., Fred M. Prouty, and Benjamin C. Nance
1990 A Survey of Civil War Period Military Sites in Middle Tennessee. *Report of Investigations* 7. Tennessee Dept. of Conservation, Division of Archaeology, Nashville.

.16 Tennessee Division of Archaeology
1995 *Tennessee SHPO Standards and Guidelines for Archaeological Resource Management Studies*, Tennessee Division of Archaeology, Nashville.

.17 Thorne, R.M., Fay, P.M. and Hester, J.J.
1987 Archaeological Site Preservation Techniques: A Preliminary Review. Technical Report E-87-3, US Army Engineer Waterways Experiment Station, Vicksburg, MS.

.18 Wright, William C.
1982 *The Confederate Magazine at Fort Wade: Grand Gulf, Mississippi.* Archaeological Report No. 8. Mississippi Department of Archives and History, Jackson, Mississippi.

2.20 Restoration / Stabilization / Security / Interpretation / Fort Negley History

.1 Adams, George Rollie, and Ralph Jerry Christian
1980 *Nashville: A Pictorial History*. Donning, Virginia Beach.

.2 Andrus, Patrick W.
1992 *Guidelines for Identifying, Evaluating, and Registering America's Historic Battlefields*. National Register Bulletin 40. U.S. Department of the Interior, National Park Service. Interagency Resources Division.

.3 Board of Park Commissioners Minutes
1918-28 Vol. 3, pp. 237, 352ff. Centenial Park Office, Nashville.
1934-36 Vol. 5, p. 286.
1940-42 Vol. 7, pp. 13, 197.
1942-45 Vol. 8, pp 220ff, 321.
1945-47 Vol. 9, pp. 69, 388, 483.

.4 Cronenberger, Richard J.
1992 Reconstruction of Fort Union. A Multi-disciplinary Approach. *CRM* 15(6): 63-65.

.5 Department of the Interior
1983 Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines. *Federal Register*. Vol. 48, No. 190, September 29, 1983, pp. 44716-44742.

.6 Duran, Miguel
1992 To Reconstruct or Not to Reconstruct ... the Debate Continues. *CRM* 15(1):16.

.7 Ferguson, James N.
1992 Fort Sumter -- Preserving its Crumbling Walls. *CRM* 15(5):32-33.

.6 Fort Negley Advisory Committee
1994 Report to Mayor Philip Bredesen. Ms. on file.

.7 Fry, Bruce W.
1992 My Life is in Ruins: The Limitations of Stabilization as a Preservation Technique. *CRM* 15(8):7-8.

.8 Greene, A. Wilson
1990 The Association for the Preservation of Civil War *Sites*. *CRM Bulletin* 13(5):3-4.

.9 Hawkins Partners, Inc.
1994 *Fort Granger Civil War Earthworks: A Vegetation Management Manual*. Nashville.

.10 Historic Preservation Education Foundation
1995 *Preserving the Recent Past*. Historic Preservation Education Foundation, P.O. Box 77160, Washington, DC 20013-7160.

.11 Holland, Dana
1992 Interpretation and the Historical Archeology of the Civil War. *CRM* 15(5):34.

.12 Johnson, Leland R.
1986 The Parks of Nashville: A History of the Board of Parks and Recreation. Nashville and Davidson County Board of Parks and Recreation.

.13 Jones, Kevin L.
1996 Ecological Approaches to the Stabilization of Civil War Earthworks. *CRM* 19(1):15-19.

.14 Mackintosh, Barry
1992 The Case Against Reconstruction. *CRM* 15(1):17-18.

.15 Montagna, Dennis R.
1995 Public Monuments and Outdoor Sculpture. *CRM* 18(1):3-4.

.16 Montagna, Dennis R.
1995 NPS Cares for Gettysburg's Monuments. *CRM* 18(1):41-44.

.17 National Park Service
1990 American Battlefield Protection Program. *CRM Bulletin* 13(5):1-2.

.18 National Park Service
1996 Interpreting African-American History in the National Parks. *CRM* 19(2):31-35.

.19 Nickens, Paul R.
1993 *Use of Signs as a Protective Measure for Cultural Resource Sites*. Environmental Impact Research Program Technical Report EL-93-6, Waterways Experiment Station, US Army Corps of Engineers, Vicksburg, MS.

.20 Park Historic Architecture Division
1989 *Earthworks Landscape Management Manual*. National Park Service, Department of the Interior, Washington, DC

.21 Slaughter, Connie
1996 African Americans in the Civil War. *CRM* 19(2):20-22.

.22 Wheaton, Rodd L.
1992 Considering Reconstruction as an Educational Tool. *CRM* 15(1):16-18.

2.30 Architecture

.1 Engle, Reed L. (Chief, Cultural Resource Management, Gettysburg National Military Park)
1992 Trip Report: Fort Negley, Nashville, TN (Letter containing Mr. Engle's observations regarding Fort Negley).

.2 Ripley, Warren
1970 *Artillery and Ammunition of the Civil War*. Van Nostrand Reinhold, New York (pp. 246-251 - description of fortifications and their components).

2.40 Civil War

.1 Boatner III, Mark Mayo
1959 *The Civil War Dictionary*. David McKay Company, Inc.

.2 Durham, Walter T.
1985 Nashville: The Occupied City, The First Seveenteen Months - February 16, 1862 to June 30, 1863. *Tennessee Historical Quarterly*, Tennessee Historical Society, Nashville.

.3 Durham, Walter T.
1987 Reluctant Partners: Nashville and the Union, July 1, 1863 to June 30, 1965. *Tennessee Historical Quarterly*, Tennessee Historical Society, Nashville.

.4 Hoobler, James
1986 *Cities Under the Gun: Images of Occupied Nashville and Chattanooga*. Rutledge Hill Press, Nashville, TN.

.5 Horn, Stanley F.
1984 *The Decisive Battle of Nashville*. Louisiana State University Press, Baton Rouge, LA.

.6 Horn, Stanley F.
1962 Chronology of Battles, Skirmishes, and Events of the Civil War Occurring in Tennessee. Civil War Centennial Commission, Tennesse State Library and Archives, Nashville.

.7 Humphrey, William J.
1992 *Hood's Tennessee Campaign of 1864*. (Paper written for an American History course at Draughons Junior College).

.8 Kershaw, Jack
n.d. *Federal Nashville: 1862-1865*.

.9 Lovett, Bobby L.
1982 Nashville's Fort Negley: A Symbol of Blacks' Involvement with the Union Army. *Tennessee Historical Quarterly*, Vol. XLI, No. 1, pp.3-22.

.10 McPherson, James M.
1988 *Battle Cry of Freedom: The Civil War Era*. The Oxford History of the United States. Oxford University Press, New York.

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1911 *The Photographic History of the Civil War in Ten Volumes*. Trow Press, New York.

.12 Scott, Lieut. Col. Robert N. (Editor)
1886-92 *The War of Rebellion: A Compilation of the Official Records of the Union and Confederate Armies*. Series I, Vols. 16, 20, 30, 32, 39, 40, 45, 49. Government Printing Office, Washington, D.C.

.13 Sword, Wiley
1992 *The Confederacy's Last Hurrah*. Nashville, University of Kansas Press.

.14 Tennessee 200
1996 *Tennessee: The Civil War Years*. Nashville, Tennessee 200.

.15 Wright, David R.
1982 Civil War Field Fortifications: An Analysis of Theory and Practical Application. M.A. Thesis, Middle Tennessee State University, Murfreesboro.

.17 Wills, Ridley
1996 *Old Enough to Die*. Providence House Publishers, Franklin, Tennessee.

2.50 Newspaper Accounts

.1 Beasley, Kay
1988 "Fort Negley Nashville's Hidden Treasure." *Tennessean*, March 8.

.2 Chapman, Jim and Patrick Connolly
1995 "New Life for an Old Fort," *Tennessean*, November 7.

.3 Elder, Renee
1992 "Expert Dates Fort Negley Stone." *Tennessean*, April 10.

.4 Elder, Renee
1994 "City Divided Over the Future of Fort Negley," *Tennessean*, February 18.

.5 Johnson, Dixon
1946 Silent-Gunned Fort. *Nashville Tennessean Magazine*, May, pp. 6-7.

.6 *Nashville Banner*
1935 Workmen Unearth Original Fort Negley Walls. May 12.
600 Will Work on Fort Negley. April 9.
1,150 Men to Rebuild Fort Negley Breastworks. June 14.

.7 Wilkinson, Jeff
1994 "Debate Swirls Around How to Preserve Fort Negley," *Nashville Banner*, February 18.

2.60 Historical Inventories

.1 National Register of Historic Places Nomination for Fort Negley, 1975. On file at Tennessee Historical Commission, Nashville.

.2 Tennessee State Archaeological Site Record for Fort Negley, 40DV189. On file at Tennessee Division of Archaeology, Nashville.

2.70 Brochures

.1 A Path Divided, Tennessee's Civil War Years (produced for the 1996 Bicentennial of the state of Tennessee by Tennessee 200, 1996).

.2 Tennessee Antebellum Trail Guide, Antebellum Homes and Civil War Sites.

3.00 MAPS and DRAWINGS

3.10 Brush, Hutchinson & Gwinn (on file at Metro Historical Commission)
- .1 1"=40', 2' contour map dated 1/16/1968
- .2 1"=80' 10' contour map

3.20 Engineering drawings
- .1 Magazine Granger 11/1864 for Col. William E. Merrill - magazine plans
- .2 Bombproof casemate for guns, April 1863
- .3 Fort Negley and Fort Morton contour maps, 1864
- .4 Plan of Fort Negley, 1"=25' (July 1864, Merrill, archived at the National Archives, Cartographic Division, Alexandria, VA

3.30 Miller, Wihry, & Lee 1980 transparencies (on file at Metro Historical Commission)
- .1 site analysis
- .2 vegetation analysis
- .3 environmental study
- .4 base map - 10' contour levels

3.40 Panamerican Consultants, Inc.
- .1 Plan drawing of Fort Negley site (1993)
  - o locations of excavation trenches
  - o locations of wall destabilizations in 1993
  - o scaled to overlay 1864 plan drawing of Fort Negley

3.50 Other Sources

- .1 Condition and Priorities Map
  - o source: Nick Fielder & Graham Reed, 1994
  - o notes condition of stone walls and priorities for stabilization
  - o keyed to stabilization estimates from Graham Reed

- .2 View of encampment below the west side of the fort, looking up towards the fort (Civil War era sketch)

- .3 Ground Plot & Quarters for Fort Harker (?source, probably 1865, at renaming of the fort); plate 31 on page 104 .

- .4 View of Fort Negley from the southwest (Harper's Pictorial History of the Civil War)

- .5 Sanborn Fire Insurance Maps

- .6 Battle of Nashville, December 15-16, 1864: A Guide Map to the Battlefield and Other Points of Interest (Rsearch and Compilation by Paul H. Beasley and Buford Gotto, Published by the Davidson County Civil War Centennial Committee)

- .7 Metro Archives: Plan view of City Reservoir, J.A. Jowett, Chief Engineer, Whitset and Adams, Contractors (vertical file), n.d.

4.00 PHOTOS/SKETCHES/NEGATIVES

4.10 Historical Depictions

.1 Battle of Nashville Preservation Society
- o Ross Massey, has photos of fort foundations (Fred Prouty, personal communication, 1996)
- o Kenneth Marcom, Battle of Nashville Preservation Society, photo archivist

.2 Tennessee State Museum: Ft. Negley sketch, (F.Prouty, personal communication 1996.)

.3 Tennessee Historical Society: Frontispiece of Ft. Negley, *Tennessee Historical Quarterly*, Spring 1982

4.20 General Civil War photos

.1 Miller, Francis Trevelyan
1911 *The Photographic History of the Civil War in Ten Volumes.* Trow Press, New York.
.2 "Fort on St. Cloud Hill, Nashville, TN" (view from below the hill, southeast)
.3 View of stockade, south main works and out over east bastion to the southeast
.4 View of casement on west ravelin
.5 View up of fort from railroad yards to southeast

4.30 WPA Era Photos (National Archives)

.1 69-N-531 Workmen reconstructing bastions (from above)
.2 69-N-533 Workmen reconstruction bastions (from below)
.3 69-N-534 Workmen repairing northeast redans (view toward downtown)
.4 69-N-535 Workmen reconstructing west bastion (side view)
.5 69-N-536 Workmen reconstructing west bastion (similar side view)
.6 69-N-537 Workmen reconstructing bastion (from below)
.7 69-N-538 Workmen reconstructing bastion (from below)
.8 69-N-539 Workmen repairing redans (view towards town)
.9 69-N-540 Workmen repairing redans (view towards town)
.10 69-N-541 Workmen reconstructing bastions (corner detail from above)

4.40 Contemporary Photos

.1 Aerial view of the fort

4.50 Panamerican Consultants, Inc. Archaeological Excavations (1993)

.1 Nick Fielder, State Archaeologist
- o color slides of 1993 PCI excavation
- o color slides of 1993 PCI excavation of winter quarters.

.2 Metro Historical Commission
- o color prints & negatives of excavation
- o BW contact prints & negatives of excavation and archival sources
- o field photo logs

5.00 INTERNET RESOURCES

5.10 Civil War Groups

.1 The U.S. Civil War Center http://www.cwc.lsu.edu/

.2 Civil War Battlefield and Site Preservation Groups Home Page
http://www.access.digex.net/~bdboyle/preserv.html

.3 American Civil War Homepage points to other American Civil War internet sites
http://gnn.com/gnn/wic/wics/hist.12.html

.4 American Civil War (articles) http://www.serve.com/ephemera/library/refeivil.html

.5 American Civil War Regimental Information System
http://www.swcp.com/civil-war/cwris.html

5.20 National Register of Historic Places. Access National Register information about Ft. Negley
http://www.cr.nps.gov/ncptt or telnet 165.83.212.245 login: "natreg" without the quotes

5.30 Newsgroups:

.1 alt.war.civil.usa.
A UseNet Usergroup. Those on Internet can access it directly if computer service carries News.
Or, TELNET history.cc.ukans.edu login: history password: none. Jump to Scholarly Exchange, then to Usenet News, and then to U.S. Civil War.

.2 soc.history.war.us-civil-war.
A UseNet Usergroup. Those on Internet can access it directly if computer service carries News.

5.40 American Civil War reading list

A list of books about the Civil War in the United States (1861-1865) which have been recommended by the members of alt.war.civil.usa and soc.history.war.us-civil-war.
The list is divided into 13 topic areas:

1. General Histories of the War
2. Causes of the War and History to 1861
3. Slavery and Southern Society
4. Reconstruction
5. Biographies
6. Memoirs
7. Reference Works
8. Unit Histories and Soldier's Reminiscences
9. Fiction
10. Specific Battles and Campaigns (chronological)
11. Strategies, Tactics, and General Military Aspects
12. The Experience of Soldiers
13. Civil War Periodicals (popular press)

5.50 Tennessee Archaeology Home Page http://www.mtsu.edu:80/~kesmith/TNARCHNET/archpage.html

6.00 MISCELLANEOUS RESOURCES

6.10 Agencies

.1 Metro Historical Commission Fort Negley File
- .1 public hearing proceedings
- .2 correspondence from Nashville Sounds
- .3 public correspondence & sentiments
- .4 clipping file on Fort Negley
- .5 Advisory Committee proceedings and recommendations
- .6 Subarea 11 plan

6.20 Brochures

.1 "A Path Divided: Tennessee's Civil War Years". Published by Tennessee 200, Nashville, 1996.
- o Driving tour showing locations of important Civil War sites in Tennessee.
- o Reading list on Civil War in Tennessee
- o Time line for the Civil War in Tennessee
- o Brief synopses of the Civil War in East, West, and Middle Tennessee

.2 "Tennessee Antebellum Trail Guide: Antebellum Homes and Civil War Sites"

.3 "Battle of Nashville: December 15-16, 1864, A Guide Map to the Battlefield and Other Points of Interest": Research and compilation by Paul H. Beasley and C. Buford Gotto; published by Davidson County Civil War Centennial Committee.

.4 "Tennessee Civil War Events: 1996". Published by Tennessee 200, Nashville, 1996.

6.30 Conferences

.1 "Americans Remember the Civil War: Scholarship, Preservation, and Public Memory" Conference: April 4-5, 1997, Murray State University, Murray, Kentucky.

6.40 Databases

.1 Civil War Veterans Data Base, National Park Service
- o *GOVERNMENT COMPUTER NEWS*, 9/13/93, p. 10.

6.50 Legislation / Regulatory Guidance

.1 TCA 11-6-107 Discovery of sites, artifacts, or human remains --Notice to division, contractors, and authorities
- o indicates that Metro must notify the Tennessee Division of Archaeology prior to doing any type of earth moving activity on the archaeological property of Fort Negley and allow the Division to prevent the destruction of the archaeological resource and/ or obtain information and data from the site before the locations are disturbed.

.2 Subarea 11 Plan, Metropolitan Davidson County Government Planning Commission

6.60 Posters

.1 "A Path Divided: Tennessee's Civil War Years" Commemorative poster created by Tennessee artist Arden von Haeger in honor of Tennessee's Civil War Heritage Trail. $10.00 from Tennessee 200 commission 1-800-200-TENN

7.00 ARTIFACTS/INTERPRETIVE DISPLAY RESOURCES

7.10 Artifacts

.1 Letter from Mayor Philip Bredesen dated 1/23/95 re: loan of cannons from Shiloh National Military Park. On file at Metro Historical Commission.

7.20 Photos and Graphics -- see Section 4.00

8.00 GAPS IDENTIFIED IN RESOURCE INVENTORY

.1 Masonry structures not addressed in National Park Service's guide to stabilizing military structures.

.2 Stabilization references for masonry walls primarily address mortared walls rather than dry laid stone.

.3 References for stabilization of dry laid masonry archaeological sites in the US primarily address masonry structures in the West (i.e. cliff dwellings) which are subject to different environmental conditions than the Southeast US.

.4 Gen. James St. Cloud Morton papers noted to be in Pennsylvania (report from Dr. James Huhta, MWL plan, 1980.

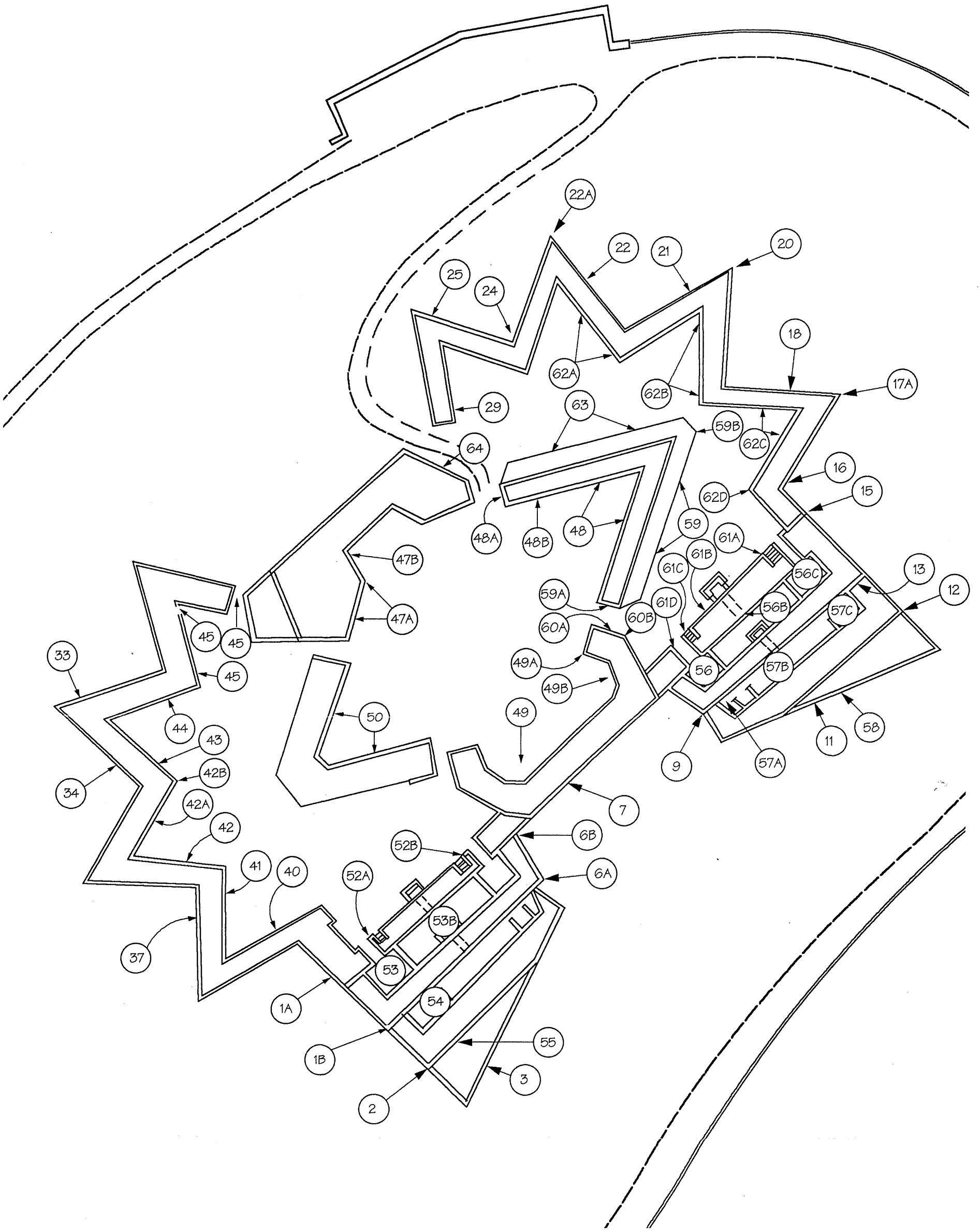
.5 No HABS/HAER documentation of site

.6 No infrared aerial photographs of the site (useful for archaeological investigations)

Appendix B:
Photo Survey of Existing Conditions

The following is a list of locations and existing condition survey numbers (as referenced in the photo captions) related to that location:

East Ravelin: 48, 59, 63
West Ravelin: 50
North Main Work: 30, 47, 64
South Main Work: 6-8, 10, 49, 51,1 60
East Bastion: 9:, 11-13, 56-58. 61
West Bastion: 1-5, 52-55
East Redans and Outer Parapets: 14-29, 62
West Redans and Outer Parapets: 31-48



EXISTING CONDITIONS INVENTORY

FORT NEGLEY MASTER PLAN

NASHVILLE, TENNESSEE

30 15 0 30 60

SCALE (in feet)

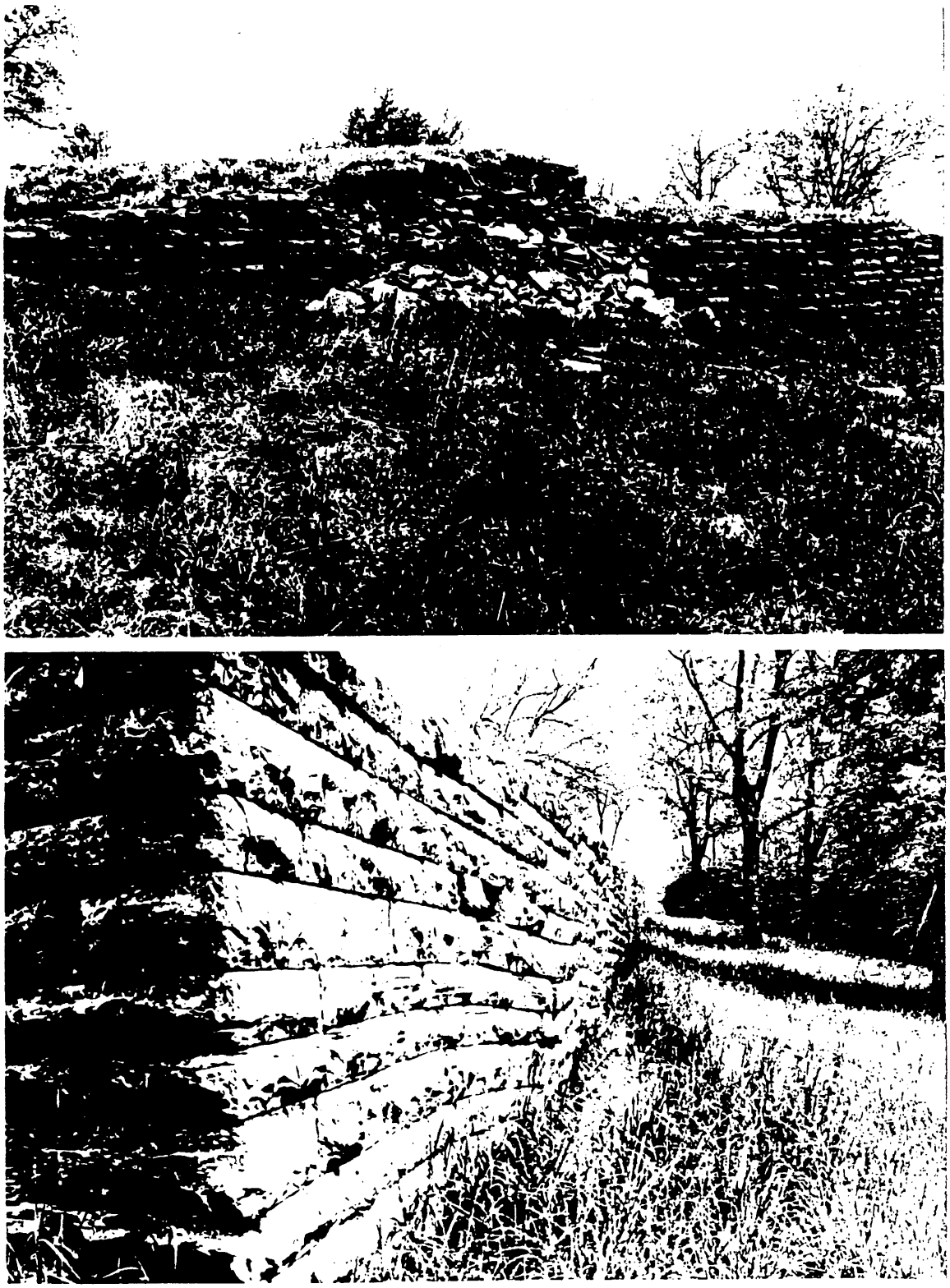
NORTH

HICKERSON FOWLKES ARCHITECTS • HAWKINS PARTNERS, INC. • OFFICE OF MICHAEL EMRICK • ZADA LAW ARCHAEOLOGY

DATE: 11-20-96

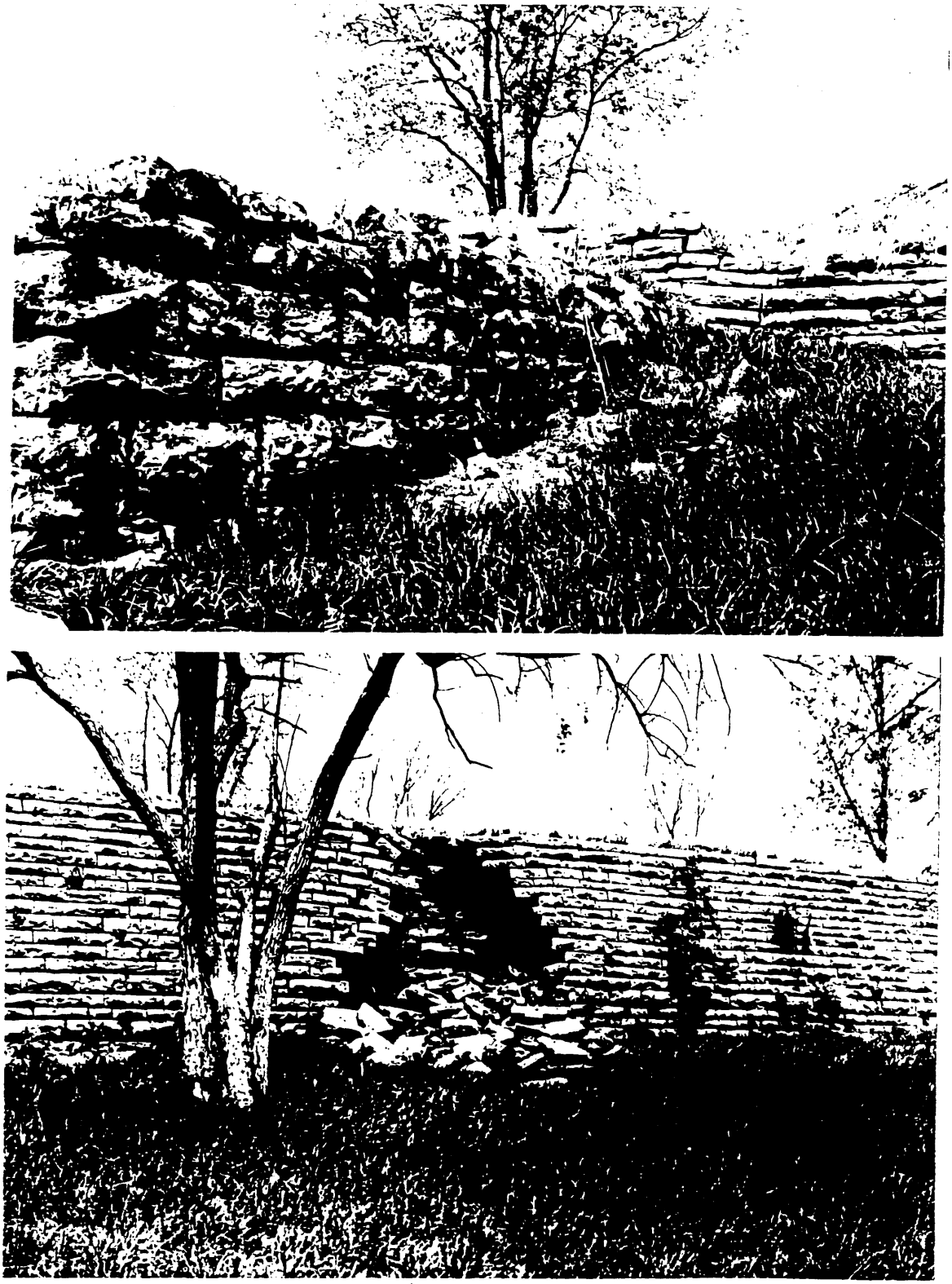
JOB NO. 95-661

AP. B. Pg 1

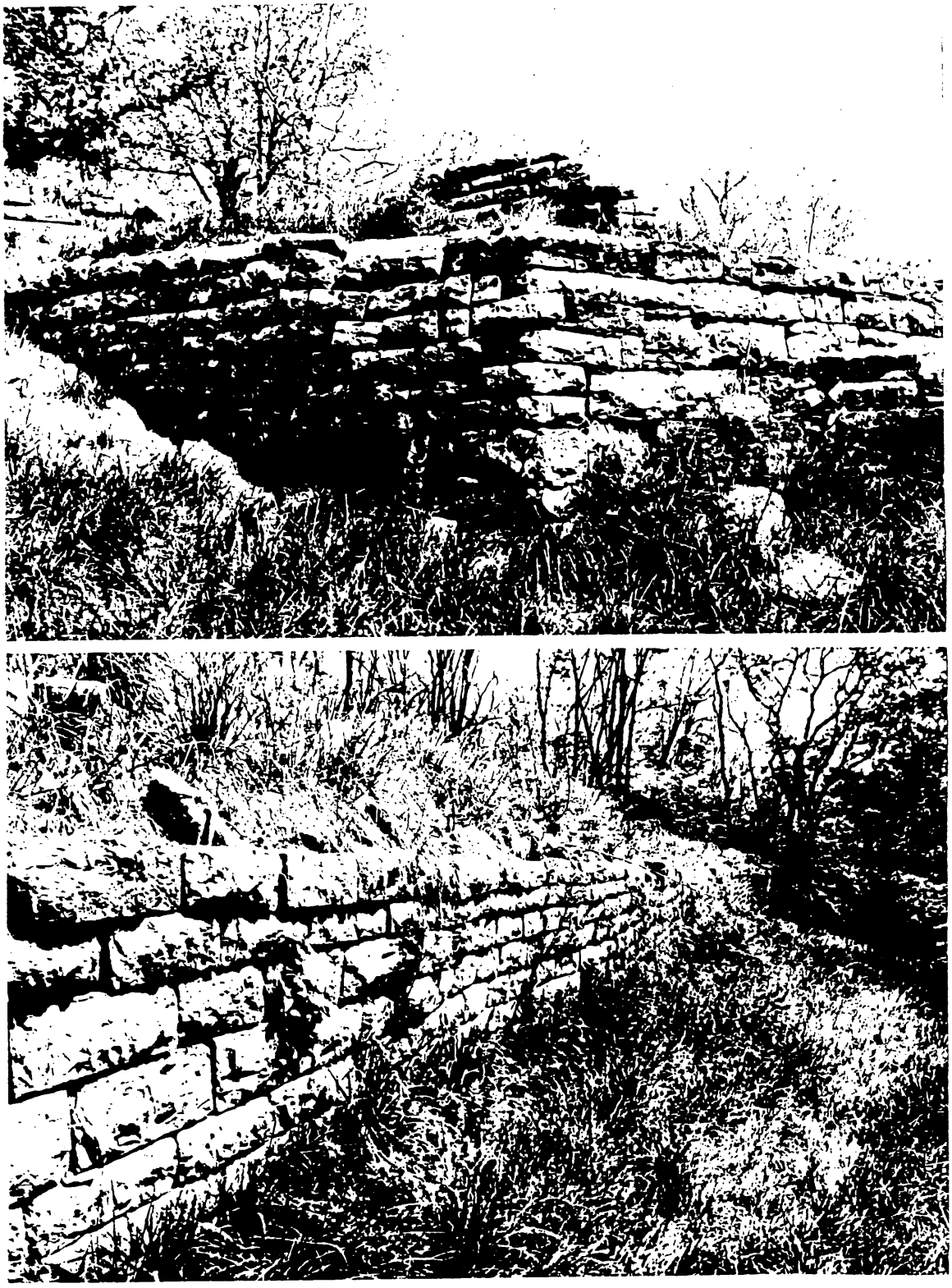


1 *Top:* Location 1A: blow-out. *Bottom:* Location 3: various bulges.

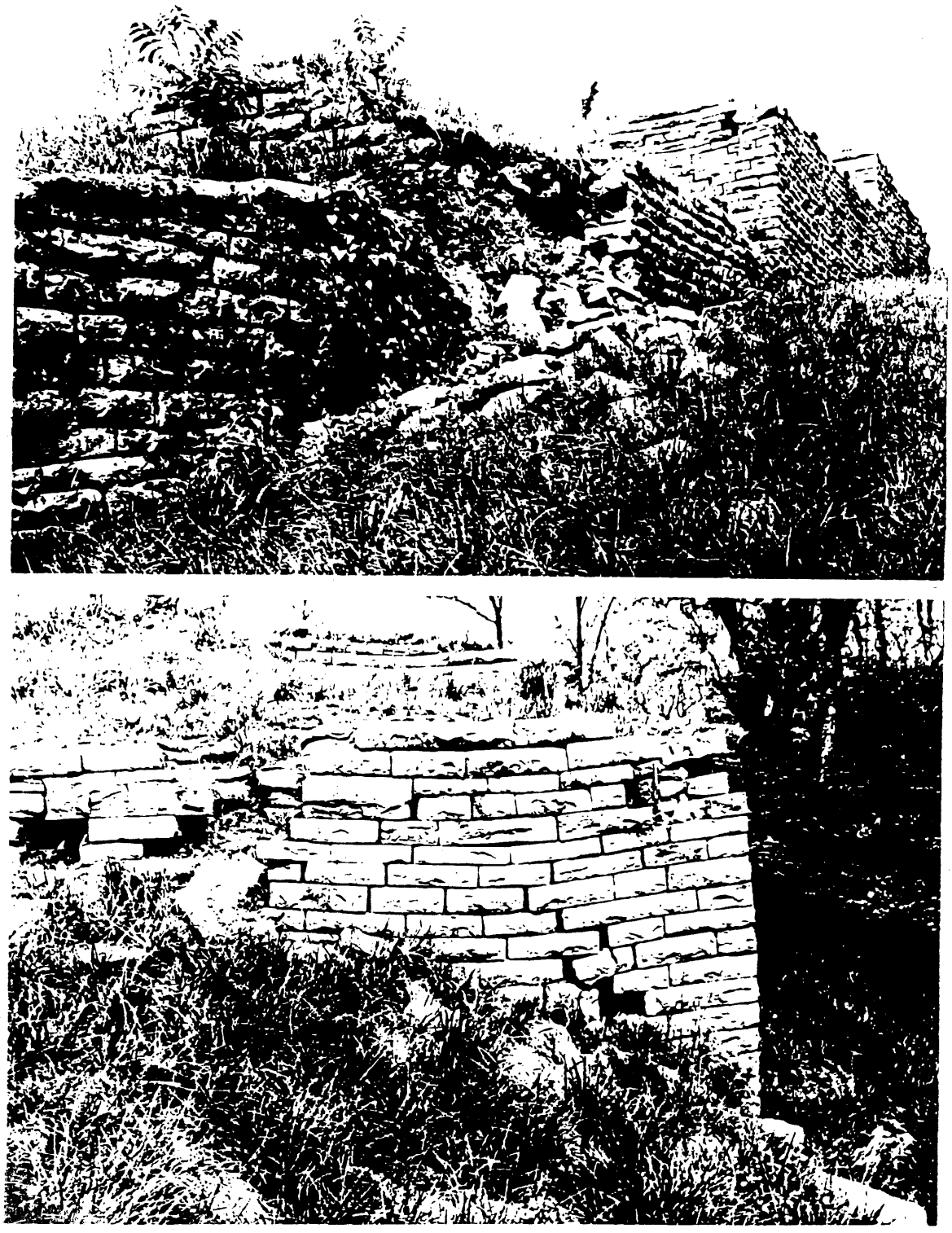
2 *Left:* Location 1B. *Right:* Location 2: bulges (at Location 55 on south face).



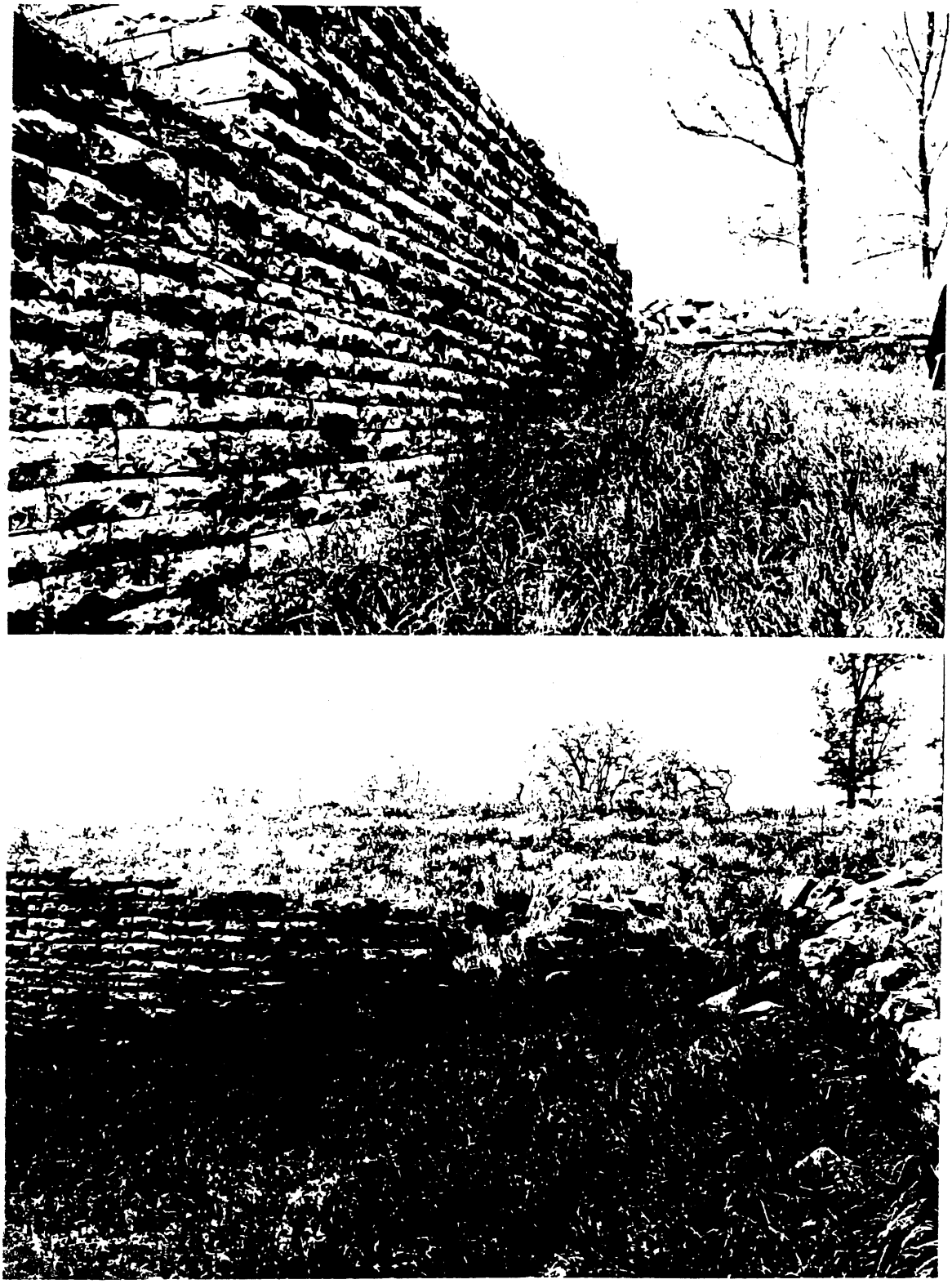
3 *Top:* Location 6A: bulge (dip at 6B). *Bottom:* Location 7: major blow-out.



4 *Top:* Bulge at location 9. *Bottom:* Location 11. Both areas requiring temporary bracing.

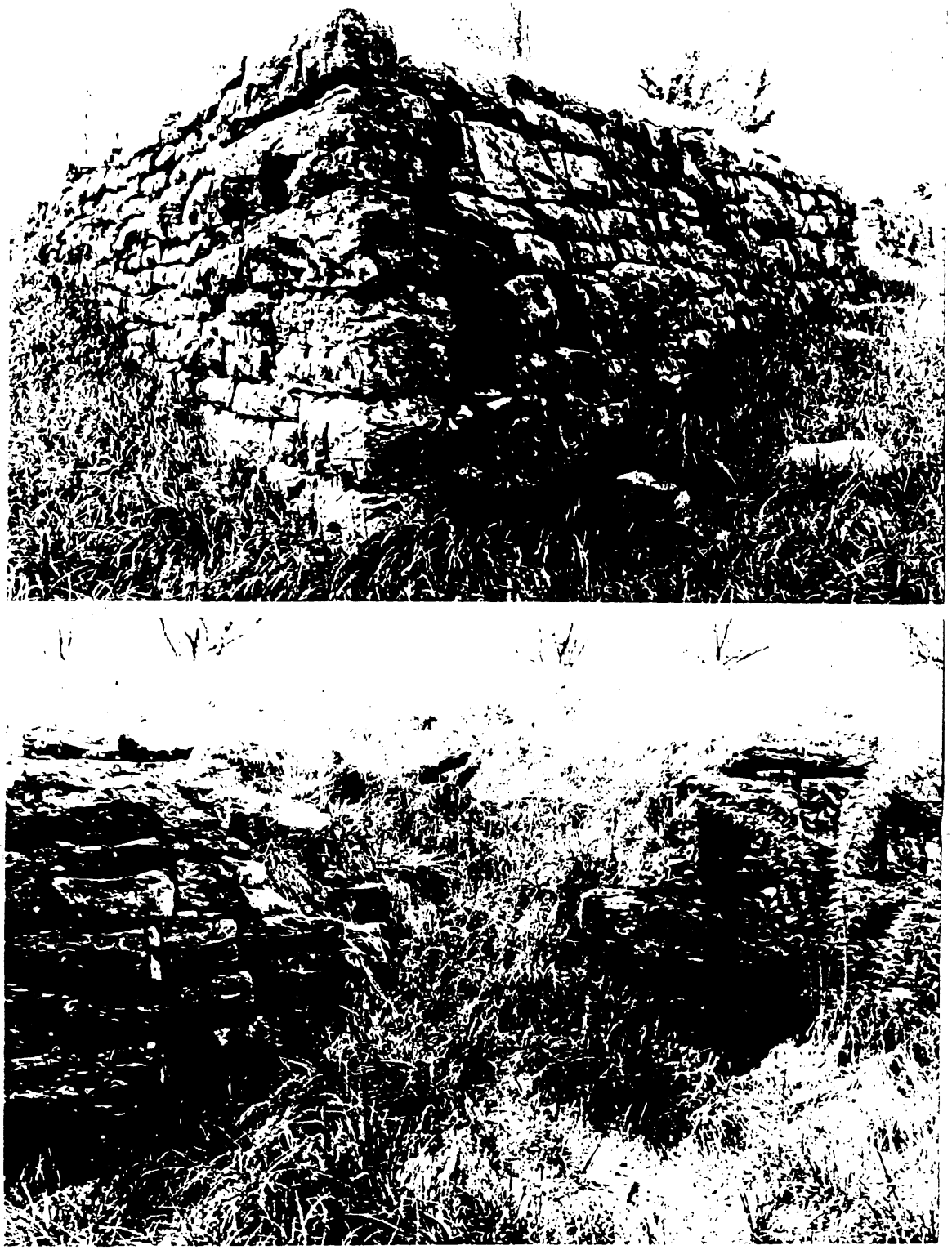


5 *Top:* Location 12: Blow-out. *Bottom:* Location 13: Major settlement crack requiring temporary bracing.

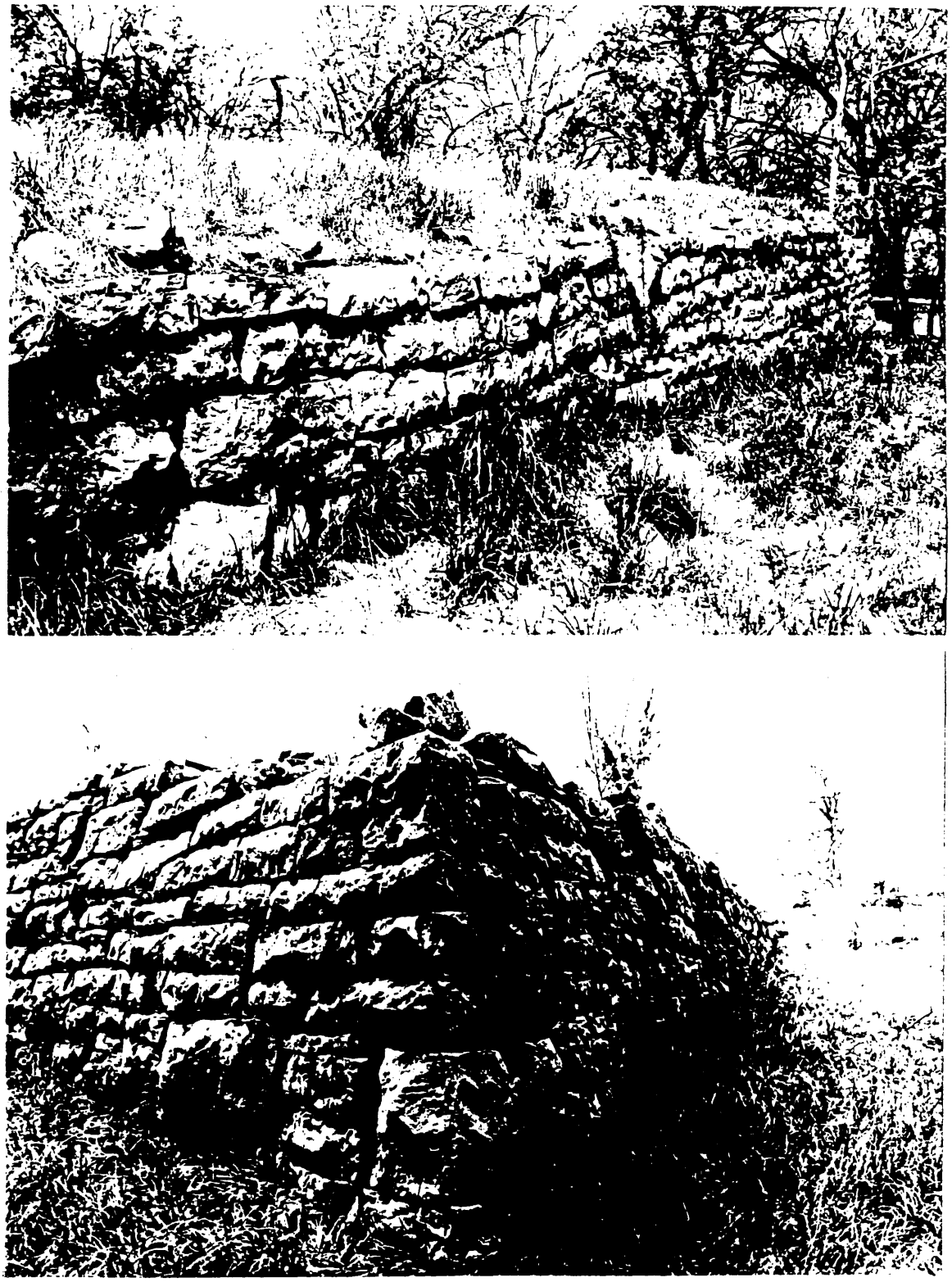


Top: Bulge at location 15; brace. *Bottom:* Location 16. Wall collapse.

7 *Top:* Location 17A: bulge and movement. *Bottom:* Location 18.

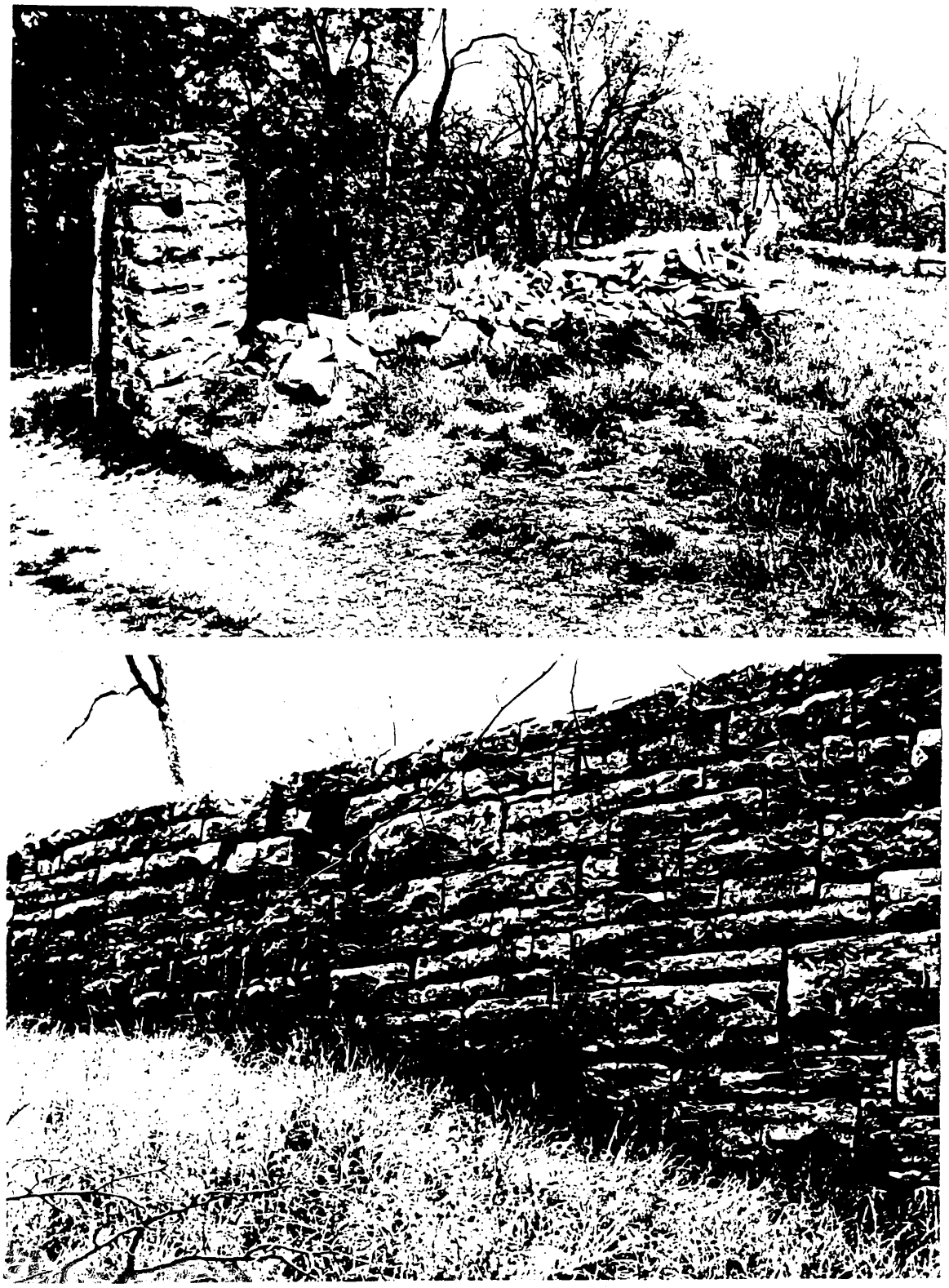


8 *Top:* Location 20: movement and bulge at corner requiring temporary bracing. *Bottom:* Location 21: small blow-out.



9 *Top:* Location 22. *Bottom:* Location 22A; brace.

10 *Top:* Location 24: rebuild height, correct erosion. *Bottom:* Location 25: bulge near corner.

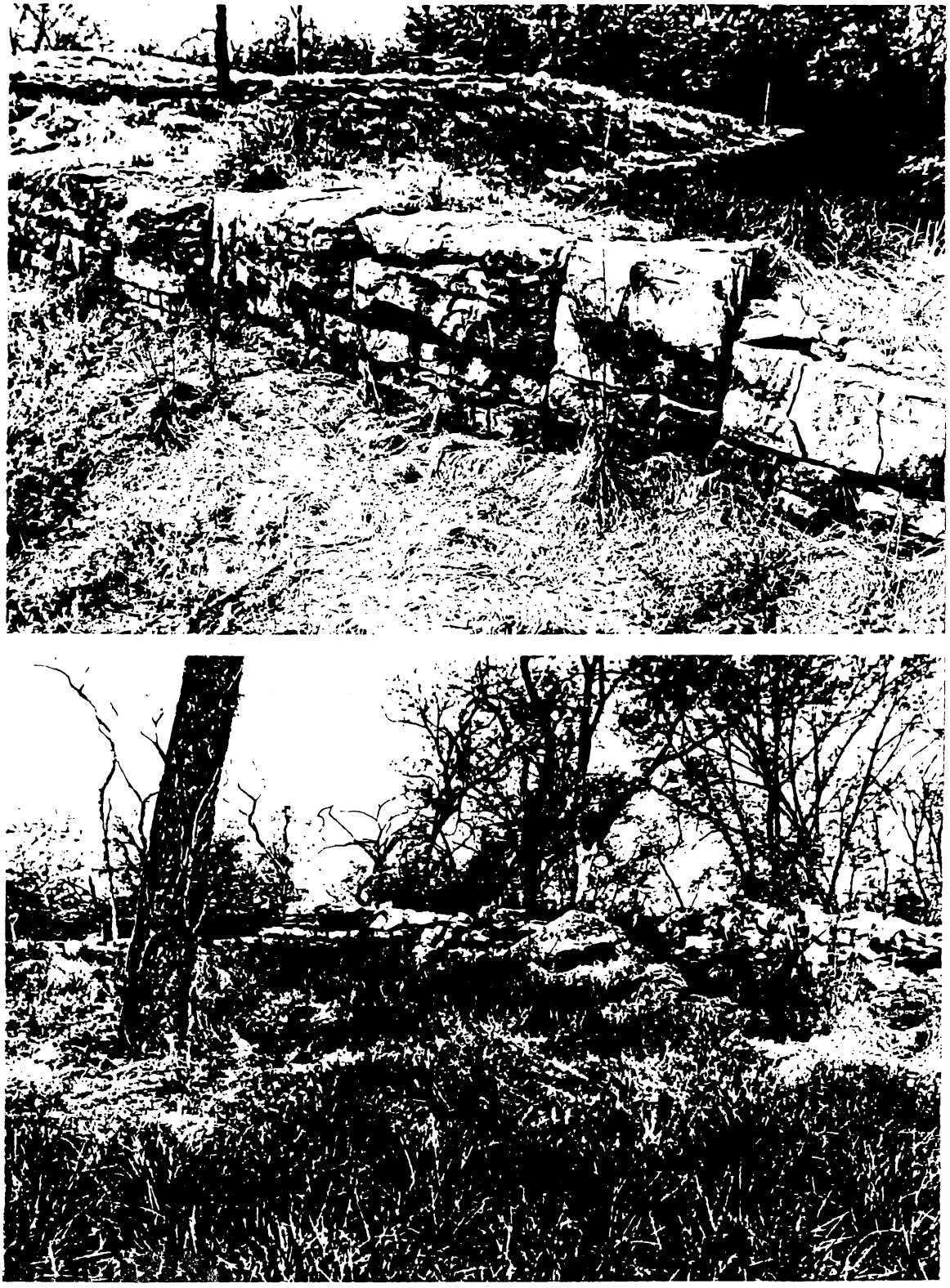


11 *Top:* Location 29: area around original gate. *Bottom:* Location 33: settlement near corner.

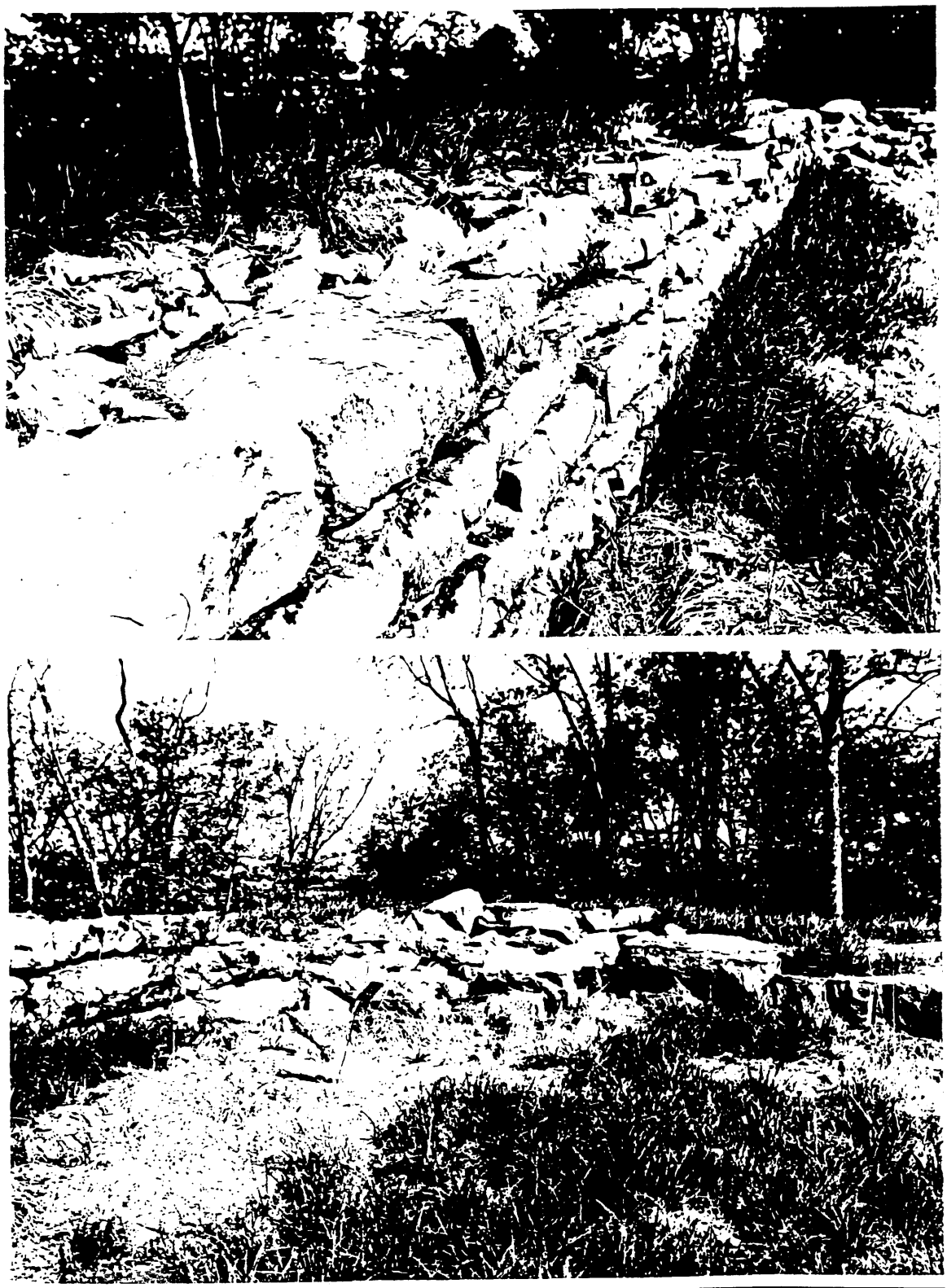
12 *Top:* Location 34. *Bottom:* Location 37.

13 *Top:* Location 40-41; need to rebuild missing height. *Bottom:* Location 42.

14 *Top:* Location 42A. *Bottom:* Location 42B.



15 *Top:* Location 43: bulge, large fractured stone. *Bottom:* Location 44.



16 *Top:* Location 45: movement in low wall. *Bottom:* Location 45A: correct breakdown at corner.

17 *Top:* Location 46: question of what to do with the breakdown at the corner as well as ground drainage and the existing ground drain. *Bottom:* Location 47A.

18 *Top:* Location 47B. *Bottom:* Location 48: general view.

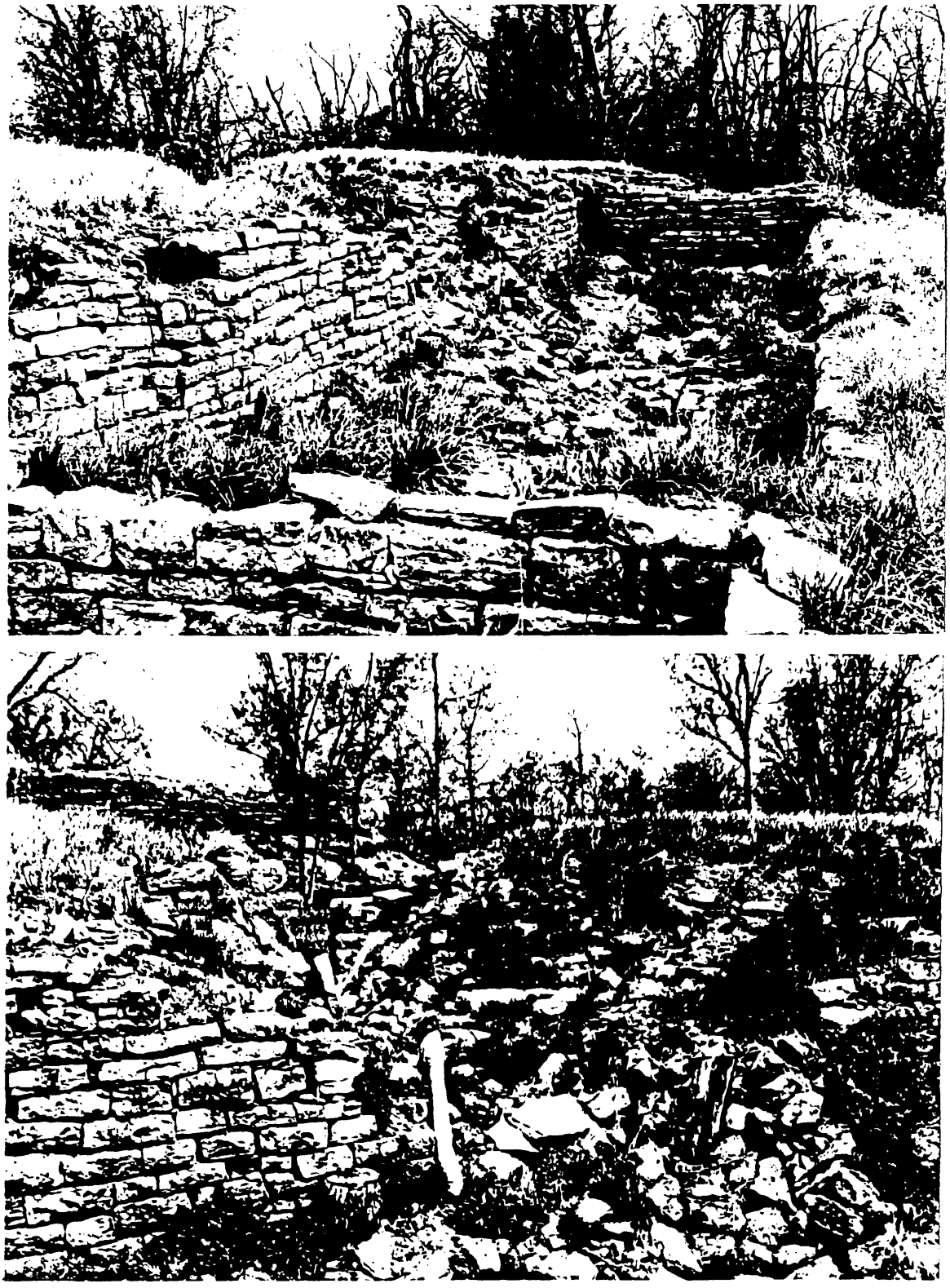
19 *Top:* Location 48A: rebuild missing part of outer wall. *Bottom:* Location 48B: correct breakdown at top of interior face of wall.

20 *Top:* Location 49A. *Bottom:* Location 49B. Correct breakdown at top of wall.

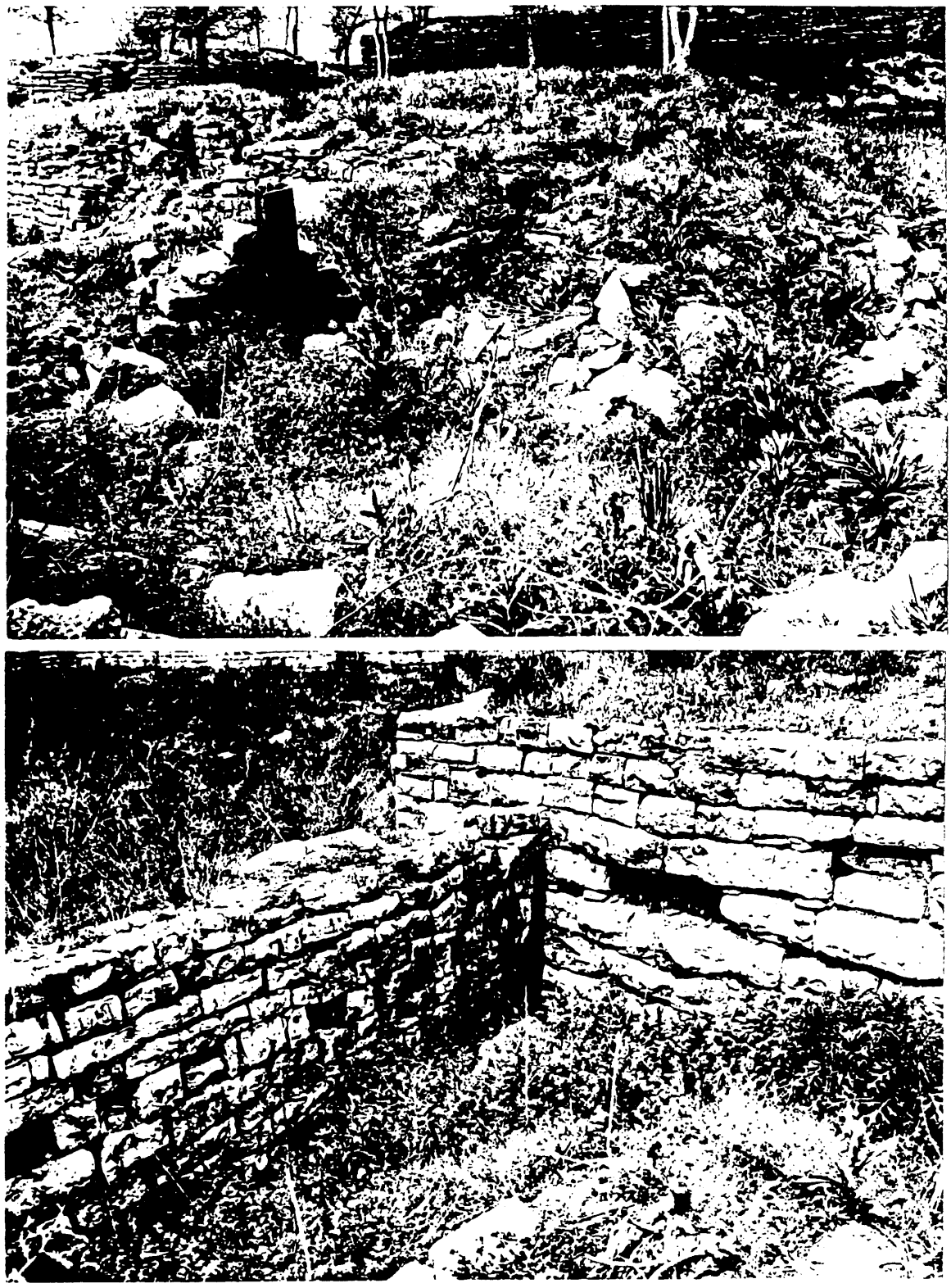
21 *Top:* Location 50. *Bottom:* Location 52A.

22 *Top:* Location 52B. *Bottom:* Location 53.

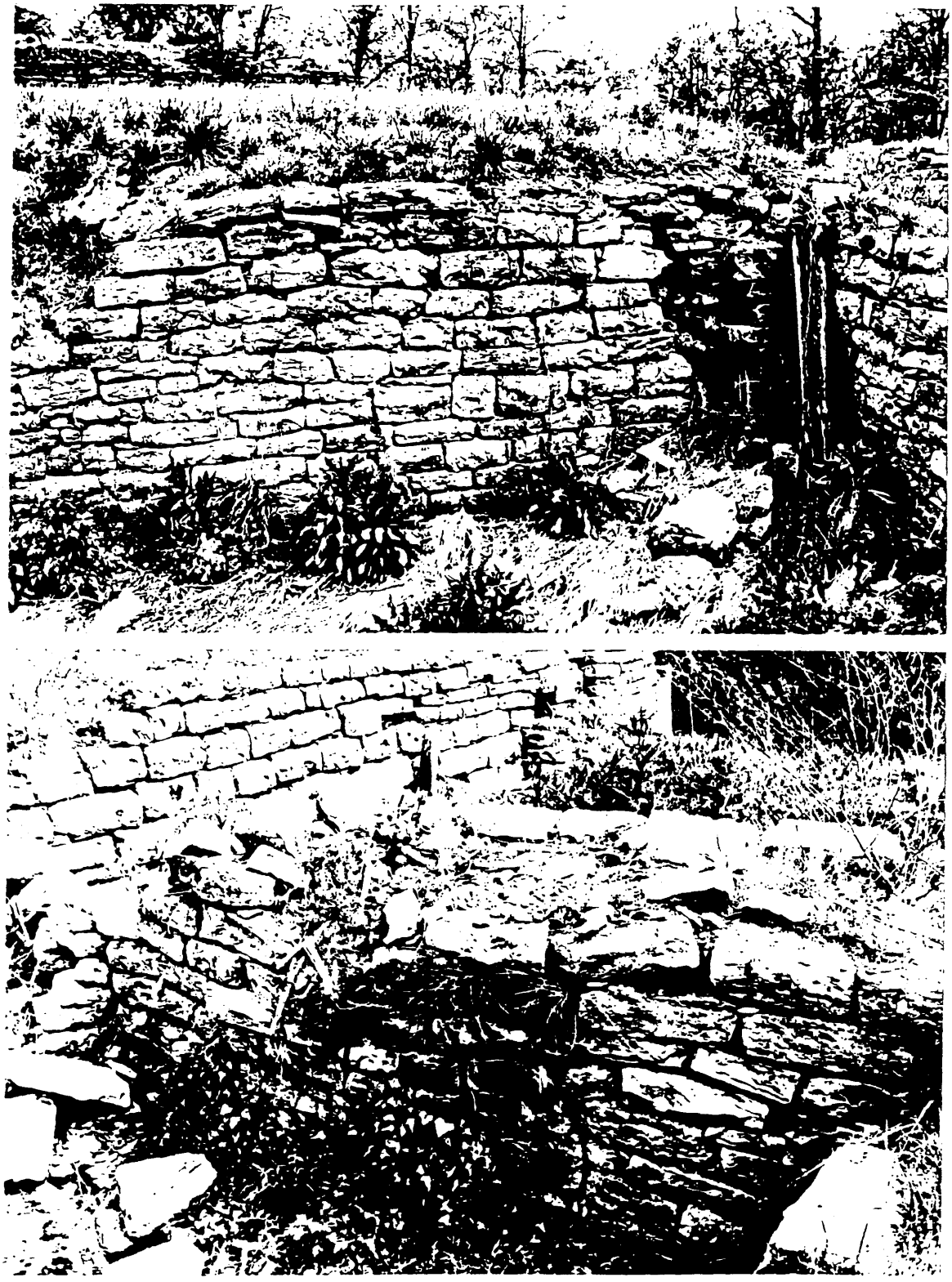
23 *Top:* Location 53B: tunnel. *Bottom:* Location 54: general view, brace 54B/C east/west wall bulge.



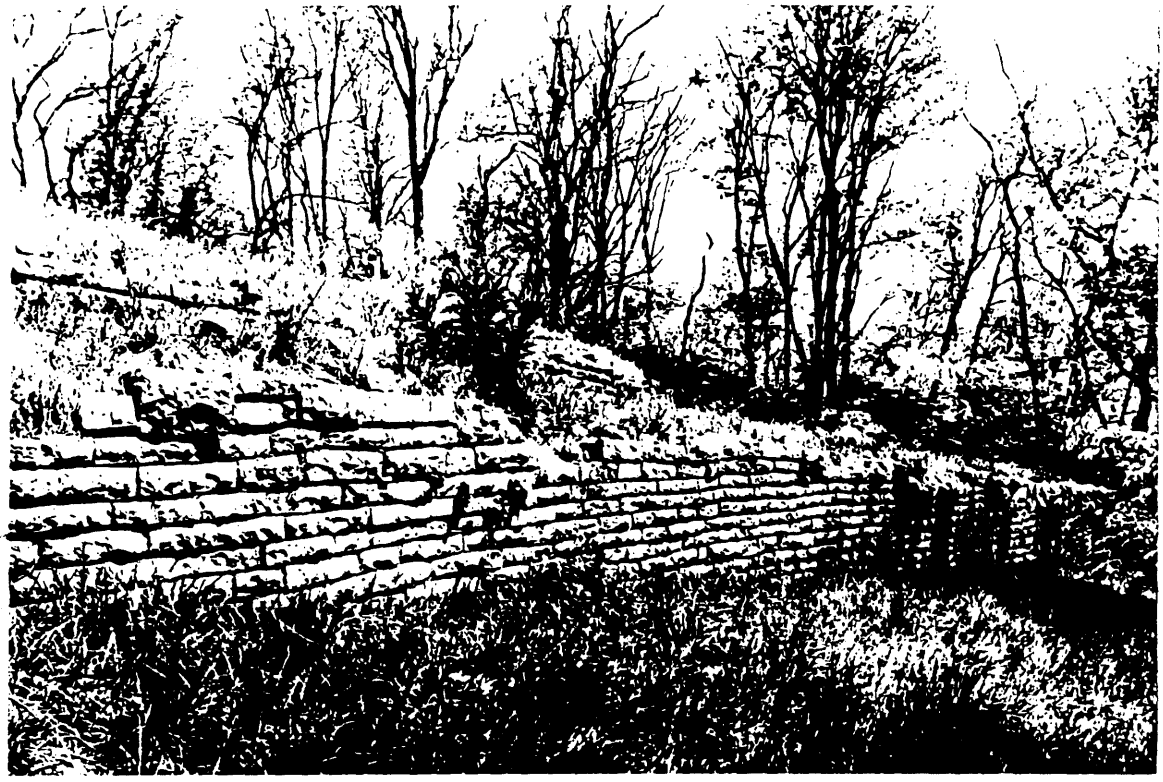
24 *Top:* Location 56, between B and C. *Bottom:* Location 56B, tunnel collapse.



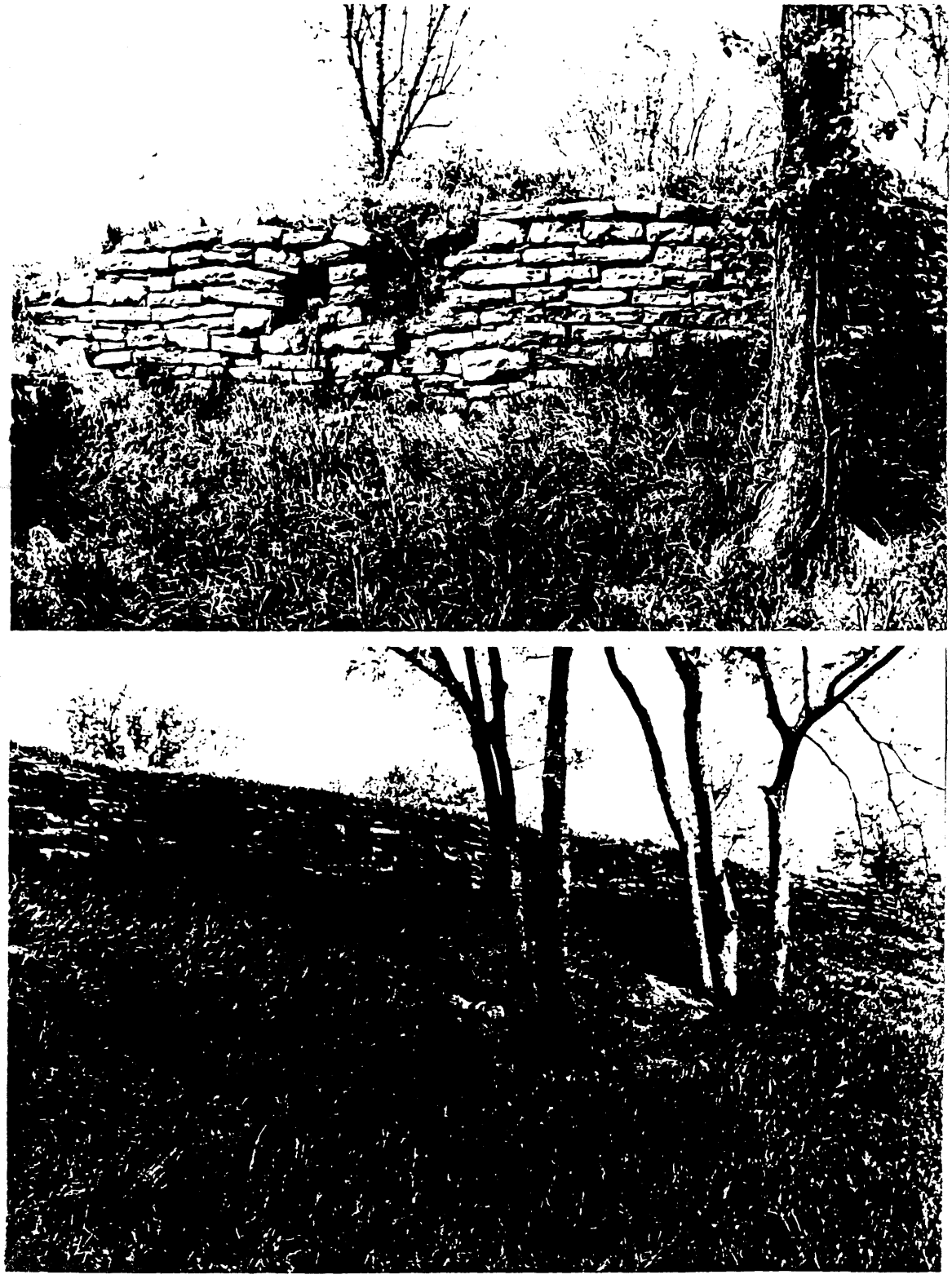
25 *Top:* Location 56C. *Bottom:* Location 57A.



26 *Top:* Location 57C. *Bottom:* Location 57: between B and C.



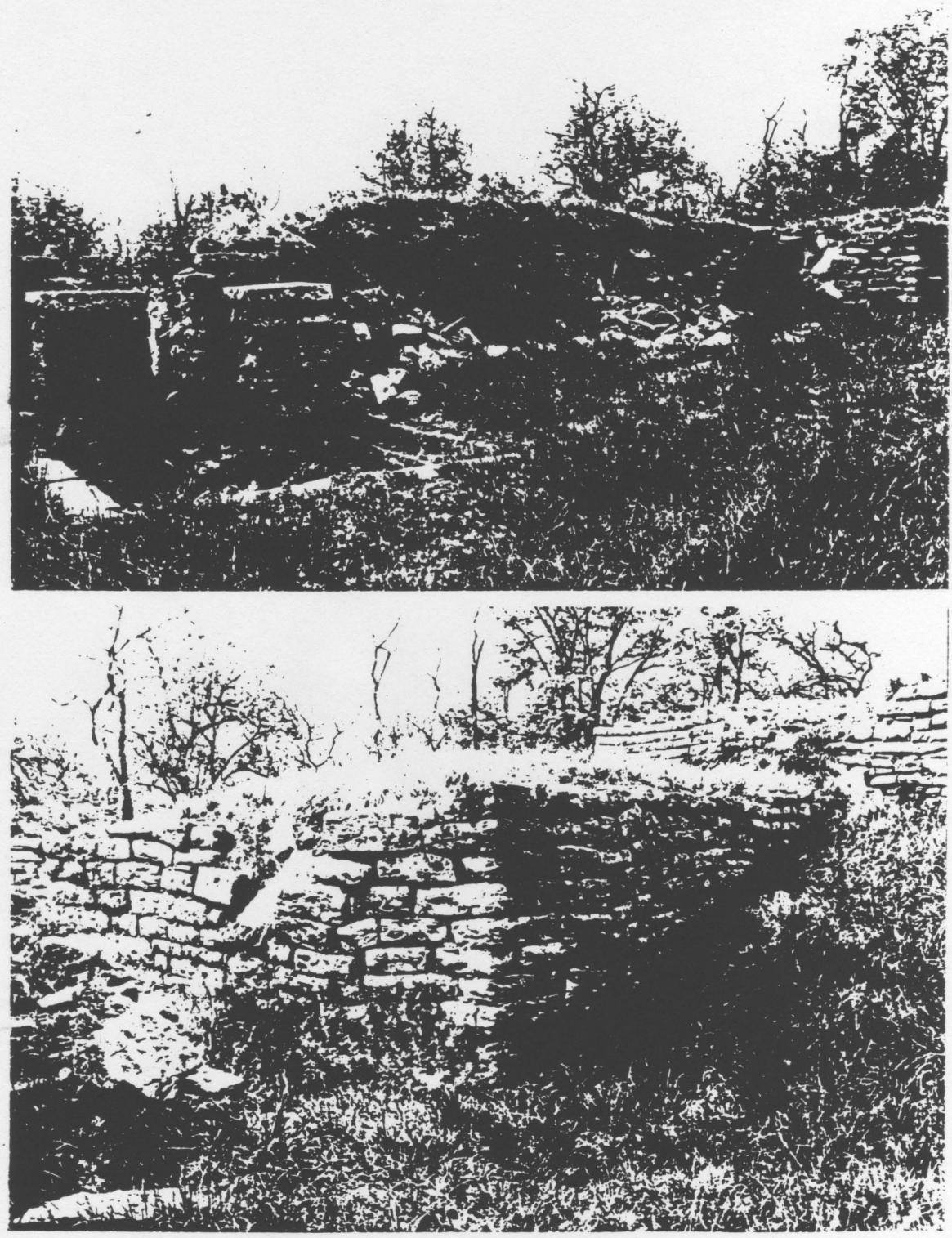
27 *Top:* Location 58. *Bottom:* Location 59A.



28 *Top:* Location 60B. *Bottom:* Location 59.

29 *Top:* Location 49. *Bottom:* Location 60A.

30 *Top:* Location 61C. *Bottom:* Location 61A.



31 *Top:* Location 61B. *Bottom:* Location 61D.

32 *Top:* Location 61A. *Bottom:* Location 62B.

Appendix C:
Stonework Cost Estimates

STONE REPAIR:
IMMEDIATE PHASE - BRACING COST ESTIMATES

High Priority

Item	Description	Priority	Work Needed	Cost
1A	Blow Out/Corner Collapse	High	Brace	$3,100
3	Wall Bulge	High	Brace	3,300
7	Blow Out/Wall Collapse	High	Brace	3,500
9	Corner Bulge	High	Brace	1,000
12	Corner Collapse	High	Brace	2,300
13	Wall Settlement	High	Brace	1,900
15	Wall Bulge	High	Brace	750
20	Corner Bulge	High	Brace	2,600
25	Wall Bulge	High	Brace	900
53B	Broken Lintel	High	Brace	1,200
54B	Broken Lintel	High	Brace	1,200
55	Wall	High	Brace	1,200
56	Wall	High	Brace	2,100
56B/C	Wall Bulge	High	Brace	2,100
57B/C	Wall Bulge	High	Brace	1,000
60B	Wall Collapse	High	Brace	850
61A	Wall	High	Brace	1,200
61B	Wall	High	Brace	450
61C	Corner Collapse	High	Brace	650
61D	Corner Bulge	High	Brace	650
63	Wall Bulge	High	Brace	450
Parking Area Retaining Wall		High	Brace	2,300
High Priority Subtotal				**$34,800**

STONE REPAIR:
IMMEDIATE PHASE - BRACING COST ESTIMATES

Moderate Priority

Item	Description	Priority	Work Needed	Cost
1B	Wall Bulge	Moderate	Brace	$1,700
6A	Wall Bulge	Moderate	Brace	650
6B	Wall Bulge	Moderate	Brace	650
8	Wall Bulge	Moderate	Brace	1,700
11	Wall Lean	Moderate	Brace	4,400
14	Wall	Moderate	Brace	650
16	Collapse	Moderate	Brace	550
17A	Corner Bulge	Moderate	Brace	1,100
22	Wall	Moderate	Brace	1,450
22A	Corner Bulge	Moderate	Brace	4,350
52A	Wall	Moderate	Brace	650
52A/B	Wall	Moderate	Brace	650
53	Wall	Moderate	Brace	1,250
54	Wall	Moderate	Brace	1,250
57A	Wall Bulge	Moderate	Brace	1,300
57B	Wall	Moderate	Brace	650
57C	Wall	Moderate	Brace	1,200
58	Wall Lean	Moderate	Brace	3,250
Moderate Priority Subtotal				**$27,400**
Bracing Grand Total				**$62,200**

STONE REPAIR:
PHASE ONE - REPAIR/REBUILD BLOWOUT/BULGES COST ESTIMATES
(See Notes 1 and 2)

High Priority

Item	Description	Priority	Work Needed	Cost
High Priority				
1A	Blow Out/Corner Bulge	High	Rebuild	$12,000
3	Wall Bulge	High	Rebuild	1,500
7	Blow Out/Wall Collapse	High	Rebuild	12,000
9	Corner Bulge	High	Rebuild	5,500
12	Corner Collapse	High	Rebuild	12,000
13	Wall Settlement	High	Rebuild	6,000
15	Wall Bulge	High	Rebuild	6,000
20	Corner Bulge	High	Rebuild	5,000
25	Wall Bulge	High	Rebuild	4,500
29	Gate/Wall	High	Rebuild	3,000
53B	Broken Lintel	High	Rebuild	4,000
55	Wall	High	Rebuild	3,500
56B	Lintel Collapse	High	Rebuild	15,000
56B/C	Wall Bulge	High	Rebuild	3,000
57B/C	Wall Bulge	High	Rebuild	2,500
59	Wall Collapse	High	Rebuild	16,500
59B	Corner Collapse	High	Rebuild	4,000
60B	Wall Collapse	High	Rebuild	3,500
61A	Wall Collapse	High	Rebuild	6,000
61B	Wall Collapse	High	Rebuild	10,000
61C	Corner Collapse	High	Rebuild	3,500
61D	Corner Bulge	High	Rebuild	4,500
63	Wall Bulge	High	Rebuild	12,000
Parking Area Retaining Wall		High	Rebuild	6,000
High Priority Subtotal				**$161,500**

STONE REPAIR:
PHASE ONE - REPAIR/REBUILD BLOWOUT/BULGES COST ESTIMATES
(See Notes 1 and 2)

Moderate Priority

Item	Description	Priority	Work Needed	Cost
1B	Wall Bulge	Moderate	Brace/Rebuild	$8,000
6A	Wall Bulge	Moderate	Brace/Rebuild	1,500
6B	Wall Bulge	Moderate	Brace/Rebuild	2,000
8	Wall Bulge	Moderate	Brace/Rebuild	4,000
11	Wall Lean	Moderate	Brace/Rebuild	15,000
14	Corner	Moderate	Brace/Rebuild	6,000
16	Collapse	Moderate	Brace/Rebuild	3,500
17A	Corner Bulge	Moderate	Brace/Rebuild	5,000
21	Wall Collapse	Moderate	Rebuild	1,000
22	Wall Settlement	Moderate	Brace/Rebuild	1,000
22A	Corner Bulge	Moderate	Brace/Rebuild	3,000
52A	Wall	Moderate	Brace/Repair	1,500
52A/B	Wall	Moderate	Brace/Rebuild	3,000
53	Wall	Moderate	Brace/Rebuild	2,000
54	Wall	Moderate	Brace/Rebuild	2,500
56	Wall	Moderate	Brace/Rebuild	4,000
56C	Wall	Moderate	Rebuild	8,000
57A	Wall Bulge	Moderate	Brace/Rebuild	3,500
57B	Wall	Moderate	Brace/Rebuild	3,000
57C	Wall Collapse	Moderate	Brace/Rebuild	1,500
58	Wall Lean	Moderate	Brace/Rebuild	12,000

Moderate Priority Subtotal **$91,000**

STONE REPAIR:
PHASE ONE - REPAIR/REBUILD BLOWOUT/BULGES COST ESTIMATES
(See Notes 1 and 2)

Low Priority

Item	Description	Priority	Work Needed	Cost
Low Priority				
2	Coping	Low	Repair	$1,000
18	Wall Collapse	Low	Rebuild	1,000
24	Wall	Low	Rebuild	3,000
33	Wall	Low	Replace Missing Stone	500
34	Wall	Low	Repair	1,000
37	Wall Settlement	Low	Rebuild	1,000
40/41	Wall	Low	Rebuild/Repair	6,500
42	Wall Collapse	Low	Repair	1,500
42A	Wall	Low	Rebuild	2,000
42B	Corner	Low	Repair	1,000
43	Wall	Low	Repair	1,000
44	Wall	Low	Rebuild	4,000
45	Wall	Low	Repair	2,500
45A	Corner	Low	Rebuild	1,000
46	Wall	Low	Rebuild	4,000
47A	Wall Collapse	Low	Rebuild	1,500
47B	Wall Collapse	Low	Rebuild	2,000
48	Wall	Low	Rebuild	5,500
48A	Wall	Low	Repair	1,000
48B	Wall Collapse	Low	Rebuild	3,000
49	Wall	Low	Repair	8,000
49A	Wall Collapse	Low	Rebuild	2,000
49B	Wall Collapse	Low	Rebuild	2,000
50	Wall	Low	Repair	5,500
52B	Wall	Low	Repair	1,000
59A	Wall	Low	Repair	1,000
60A	Wall	Low	Repair	2,000
62A	Wall	Low	Rebuild	4,000
62B	Wall	Low	Rebuild	5,000
62C	Wall	Low	Rebuild	4,000
62D	Wall	Low	Rebuild	3,500
64	Wall	Low	Repair	2,500
Low Priority Subtotal				**$84,500**
Stone Repair @ Blowouts & Bulges Total				**$337,000**

Notes:

1. Costs noted above DO NOT include bracing. Bracing calculated as a separate cost. See Immediate Phase Recommendations schedule for bracing allowance based on the conditions noted above.

2. Costs above relate to the stabilization and repair of those specific areas only. General restoration repairs of the remaining areas are calculated as a separate cost. See Phase Two Recommendations schedule for restoration repair allowance based on conditions of stonework at other locations.

Appendix D:
Restoration/Reconstruction Philosophy Articles

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1. "Reconstruction of Fort Union: A Multi-disciplinary Approach," Richard J. Cronenberger
   CRM, Vol. 15, No. 6 (1992). U.S. Department of the Interior, National Park Service.

2. "Considering Reconstruction as an Educational Tool," Rodd L. Wheaton
   CRM, Vol. 15, No. 1 (1992). U.S. Department of the Interior, National Park Service.

3. "The Case Against Reconstruction," Barry Mackintosh
   CRM, Vol. 15, No. 1 (1992). U.S. Department of the Interior, National Park Service.

Reconstruction of Fort Union
A Multi-disciplinary Approach

Richard J. Cronenberger

Mention the word **reconstruction** around National Park Service cultural resources professionals, and more likely than not, you will hear, "It doesn't work!" And while these specialists disagree on the desirability, aesthetics, and ethics of the Service undertaking such projects, park visitors love them. Rarely does the public question the accuracy of these reconstructed buildings and sites.

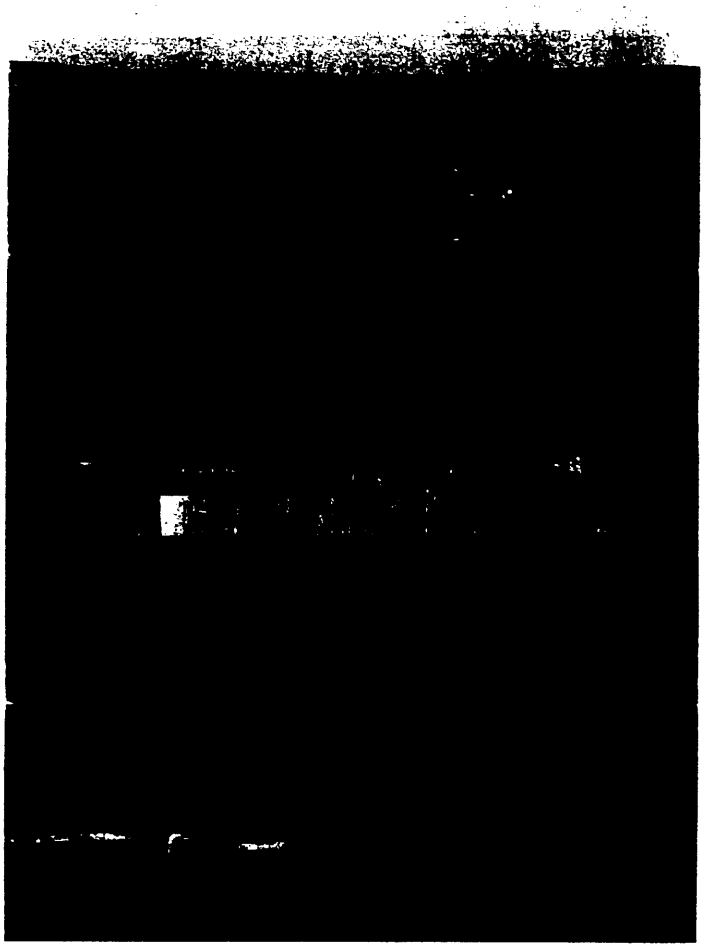
While reconstructions are not inappropriate for interpreting history, the inherent nature of an incomplete historical record inevitably results in inaccuracies and compromises to the original structures or sites. The National Park Service (NPS), unfortunately, has more than its share of such problems—problems further compounded by maintenance nightmares.

Inaccurate reconstructions partly result from the way the NPS conducts business—funding and planning. More often than not, these span several years during which minimum coordination takes place between archeologists, historians, historical architects, planners, architects, and engineers. However, the Fort Union reconstruction benefitted from a compressed research, design, and construction timetable, a phenomenon that resulted in an accurate reconstruction with minimal conflicts between the historical record and contemporary design requirements.

Fort Union was the American Fur Company's principle trading post on the upper Missouri River. An active trading center from 1829 to 1865, the elaborate installation (at least, by 19th century frontier standards) sheltered and entertained many important people of the day. The measure of the fort's importance to the region is embodied in the extensive historical record—diaries, sketches, paintings, articles, letters, and the like. The fort was even photographed two years before being torn down.

Extensive historical research, including a Historic Structure Report, had been done prior to its becoming part of the national park system in 1966. The Historic Structure Report, however, was primarily a history overview and did not include archeological or architectural data.

Then in 1979, the Rocky Mountain Region produced "The Fort Union Reconstruction Analysis," a report to Congress recommending a partial reconstruction for those fort structures that were adequately documented by archeological excavations, written records, photographs, drawings and sketches. The report recommended additional historical research and archeological excavations to complete a comprehensive database in support of the Service's reconstruction design effort.



Fort Union Trading Post. Photo by Orville C. Loomer, Aerial Photography, Williston, ND.

In 1985, reconstruction of Fort Union became reality. An election year Congress appropriated the first of four years of funding, thus requiring the politically-driven project to be completed as quickly as possible. This meant that additional historical research and archeological excavations necessary to the project would have to be done during the design phase; and while the reconstruction analysis and associated research provided a good database, there were many assumptions and decisions that needed further study.

Although the resulting compressed research phase created many challenges, it turned out to be a blessing in disguise. All the research specialists involved in the project had the rare opportunity to work closely with each other, in contrast to the usual scenario in which historical research is completed several years in advance of project design. Because the Fort Union project was fortunate to have most of the original reconstruction analysis team available for participation in the final design process, "institutional memory" ensured that initial thinking, assumptions, and ideas were addressed during design and that misinterpretation of the historical research was minimized.

The author, though not part of the original 1979 reconstruction analysis team, served as primary designer for

(continued on page 64)

(continued from page 63)

the reconstruction project and brought to it a technical perspective involving long-term maintenance design criteria that did not jeopardize the fort's historic appearance. Interaction with the original team worked well in verifying or questioning many aspects of the original research.

It was important to involve as many interested and supporting parties as possible in order to keep the project within budget and on schedule while reducing long-term maintenance but still avoiding any compromises in historic accuracy. During the design phase, everyone who had an interest in the project, from the archeologist to the contractor and sub-contractors, was involved. By closely coordinating with historians, archeologists, curators, interpreters, park staff, and the contractor, important and critical historical information was addressed in a timely manner while not delaying the project.

When the 1986 archeological phase began, it soon became evident that previous excavations had not been comprehensive. Since these earlier excavations had not included the entire fort nor had they reached down to sterile soil, it was uncertain as to what would be found and to what extent this new information would affect the fort's reconstruction design. The situation offered a unique opportunity for the historical architect to work closely with the historical archeologist during excavation work.

Since only watercolors, sketches, and photographs were available for recreating the fort's design, it was important to get as much information as possible to verify type, locations, and size of buildings. Therefore, the historical archeologist was given three objectives by the historical architect: 1) verifying the locations of those structures shown on the many historic drawings and sketches of the fort; 2) verifying assumptions made about various aspects of the fort's original construction, but which had no clear supporting documentation; and 3) locating as much historical fabric as possible since as-built drawings did not exist.

While designing the buildings, the author noted questionable reconstruction analysis design decisions that possibly could be verified through ongoing archeological excavations. These questions were posed to the historical archeologist who then would alter the work plan in order to deal with the issue. Such interaction worked extremely well in resolving several important issues and in averting potential conflicts with the historical record. This daily interaction helped the field archeologist focus on research aspects of the excavations and concentrate excavations in those areas that would yield the most information in support of the design.

For example, the only known historical reference to the size of the palisade pickets indicated that they "were about 1 foot square." While numerous drawings and sketches were descriptive, none included dimensions. A scale model of the palisade cross-bracing was constructed using 12"square timbers. However, the model didn't look proportionally correct. Then during excavations of the north palisade, the original palisade sills, measuring approximately 9" in width, were found intact on the foundation stones. Allowing for minor shrinkage, this suggested about a 10"-wide timber that appears to be about "one-foot wide." Besides a more accurate design, this finding resulted in substantial savings in material costs.

While undertaking research related to Fort Union, the project historian found an 1843 watercolor folded in a book. No one had seen it before. It verified colors of the fort's building materials, general appearance of the buildings, and modifications to the buildings described in numerous diaries and journals. The watercolor was the key piece of evidence that tied most of the historic records together, and would not have been found if the original research historian had not been involved with the reconstruction project.

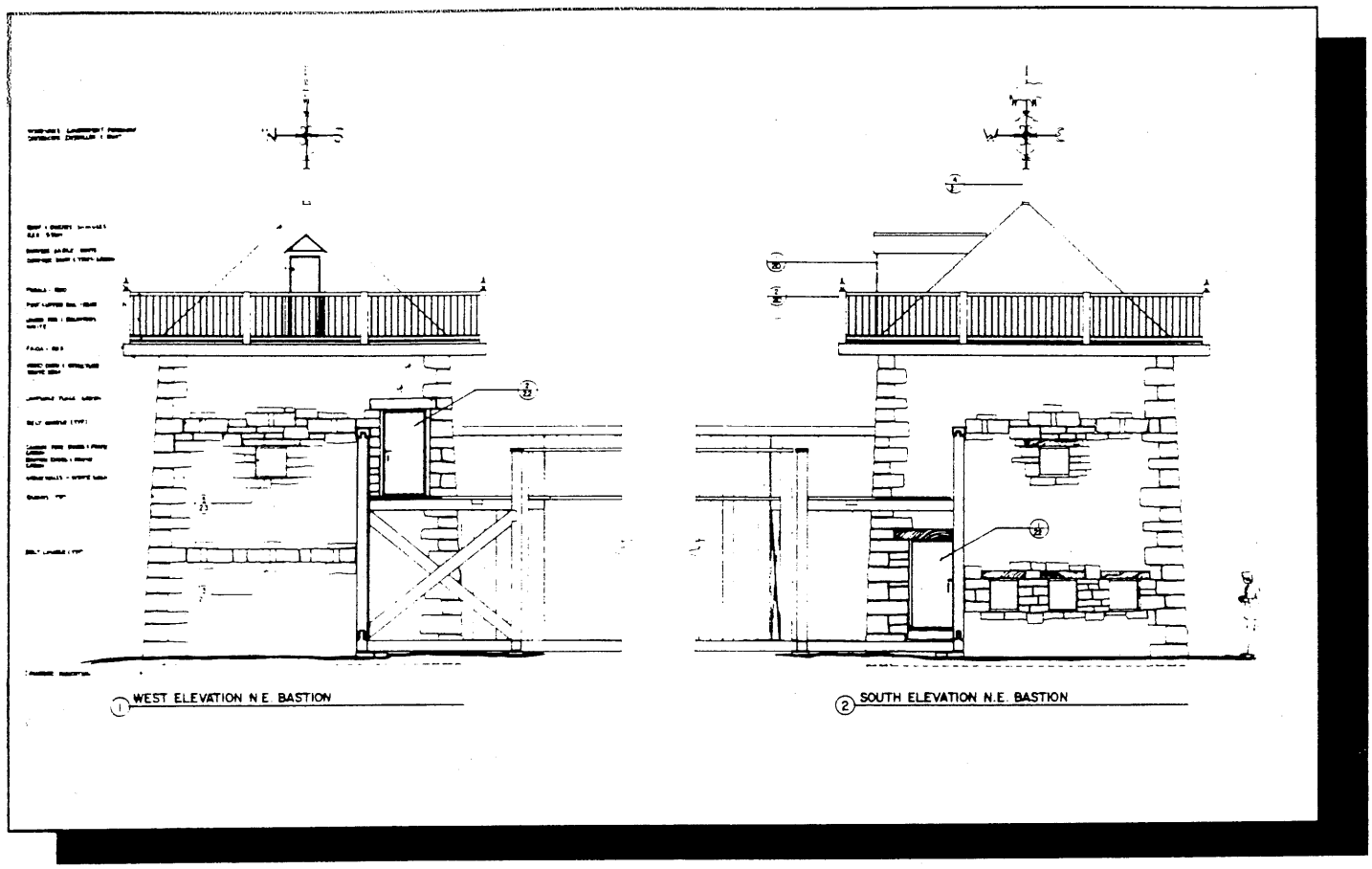
The park staff provided valuable assistance throughout the design process. Several were members of the Muzzelloaders Association, a group of historic re-enactors, familiar with the history and lifestyles of the fort's inhabitants. Well acquainted with historic documents, books, and journals about the fort, their participation and enthusiasm provided valuable interpretive and factual input into the design. Park employees reviewed plans throughout the design process, and also were involved during the construction phase, providing invaluable historical interpretation to the contractor.

It is one thing to produce accurate reconstruction documents, and another to get the project built to reflect the aesthetic intent of those drawings. It is the contractor who provides one of the most important roles in executing this aspect of a project. If the structures cannot be built the way the drawings intended them to be built, the final result will be less than desired. The contractor's input is critical to controlling costs, and to building an efficient and accurate structure. Working closely on-site with stone masons, timber experts, foresters, plasterers, and blacksmiths on construction details, techniques, and hardware, resulted in the production of a design characterized by efficient fabrication methods that did not compromise the historical character of the site.

It is important to be open to fabrication and construction suggestions made by the contractor. A give-and-take relationship encourages that individual to offer valuable suggestions for fulfilling project requirements. Fabrication can be altered during construction to address long-term maintenance considerations while producing better detailing that doesn't compromise final appearance.

Historic fabrication methods can cause problems and confusion with modern contractors. This was overcome at Fort Union by providing training to the contractor on historic construction methods—historic hardware fabrication and installation, log hewing and fabrication, and plaster and stone work. The contractor was encouraged to read historical accounts about the fort and to understand the historical significance of the project. In making this effort, the contractor realized that this project was not just another building. He appreciated the intent of the reconstruction and developed a greater appreciation for the construction skills of the original builders. He became emotionally involved with the project.

Unusual and challenging projects such as the reconstruction of Fort Union can be highly successful. However, no single person or organization has all the skills or knowledge needed to make it a success. The his-



Northeast Bastion, west and south elevations. Drawing by Richard Cronenberger, Rocky Mountain Region, National Park Service.

torical architect understands the overall intent of the project through research and preparation of the construction documents. He or she is probably the only person who is involved with and understands the total relationship and integration of the wealth of historic, archeological, and fabric information that contributes to the implementation of the final design.

It is critical that all potential contributing resources be involved during the design and construction phases. Coordinating all this can be difficult at times, but the final results speak for themselves. The Fort Union project provides an excellent example of how direct interaction between the historical architect, historian, historical archeologist, park staff and contractor can produce a more accurate reconstruction.

Richard J. Cronenberger is the regional historical architect, Rocky Mountain Region, U.S. National Park Service. He was project designer, supervisor and manager for the Fort Union reconstruction.

To Reconstruct or Not to Reconstruct...the Debate Continues

It seemed appropriate in the NPS' 75th year and for an anniversary program given at Bent's Old Fort, CO, on August 24, 1991, to ruminate on just how we protect the past, manage the present and invest in the future—specifically, to discuss the aberrant park unit termed a "reconstruction" and the machinations and thought processes we apply when making such decisions. It in part was to defend Bent's Old Fort because it is forever under siege as a reconstruction—something William Bent never had to concern himself with when the fort reigned supreme on the frontier.

Glen T. Bean, former Rocky Mountain Regional Director, captured the essence of the issue when he wrote to the park in July of 1991. In his letter, Bean said that a very important policy question to be settled on reconstructions comes from the conflict between the philosophy of those who believe that reconstructions, such as the one at Bent's Old Fort, are at cross purposes with our obligation to carefully preserve invaluable historical resources and those who feel that the interpretive story for the visitors that develops from such a reconstruction makes it worth while and compensates for the loss of the few original remnants at the fort.

Thus, the debate was on and the park called upon Barry Mackintosh, NPS bureau historian, Washington Office, for the case against reconstruction; and Rodd L. Wheaton, historical architect, who is chief of the Division of Cultural Resources in the NPS Rocky Mountain Region, Denver, to speak in support of reconstructions. Their remarks follow.

Miguel Duran, Park Historian, Bent's Old Fort

Considering Reconstruction as an Educational Tool

Rodd L. Wheaton

The question of reconstruction has always centered around the issue of being accurate and authentic, but what has been consistently ignored is that the National Park Service is challenged to provide, particularly at our historic sites, education in the form of interpretation. Therefore, it is incumbent on the Service to provide, as deemed appropriate, reconstructed resources that meet the interpetative needs of the park visitor, not solely the preservation concerns of cultural resource specialists. These works are for the enjoyment of the visitor and to be instructive of past lifeways and the purpose for a park's establishment. Indeed, chief historian Ed Bearss recently wrote of Fort Union Trading Post after visiting the site, that "as an interpetative feature, the reconstruction of Fort Union is in a class by itself, a masterpiece. What was an important archeological site before 1985, has become a world class educational site."

However, reconstructions remain a difficult undertaking. First, some sites are so ephemeral and were so single-purposed that they were very short lived, which was the story at Bent's Old Fort and Fort Union Trading Post. But, since these were nationally significant moments in history, we at the Natinal Park Service often have been given the challenge to reconstruct that moment. That challenge has and will center around how to make temporary structures permanent and resolve long-range maintenance management problems as well as be accurate and authentic.

Second, preservation of foundation ruins is not necessarily the most desirable in terms of visitor satisfaction. While architects and others can visualize a three-dimensional structure from a two-dimensional form, the average person cannot make the transition and experience the scale, texture, and continuity. Further, at Bent's Old Fort the full-size floor plan on the ground was also so severely eroded that it would have to have been reconstructed to interpret.

Third, we often do not have a choice as to whether or not to reconstruct. In 1978, Congress did not ask "Should we reconstruct Fort Union Trading Post?"; they asked "Could we reconstruct?" The Rocky Mountain Region provided a "Reconstruction Analysis" and said yes we could, but only partially. This has worked at Fort Union where original archeological sites remain within the enceinte of the palisade and hearth stones were reused as appropriate in recreated spaces. Excavated artifacts also became the basis for museum interpretation. However, at Bent's Old Fort, the structure is monolithic and it would have been exceedingly difficult to only partially reconstruct though the excavated artifacts are to be used as part of the proposed museum.

As a fourth consideration, looking at alternatives to reconstruction is also part of this process, but is not always successful. Ghost buildings are an interesting concept. This works at Franklin Court in Philadelphia but the visitor probably identifies most with the below grade "Disney-esque" exhibit hall. A ghost kitchen behind the Bourgeois House at Fort Union is fortunately now hidden within the palisade walls which mask its-

(continued on page 18)

Articles on reconstruction have appeared in the following earlier issues of CRM: Vol. 2, No. 4; Vol. 12, No. 1; and Vol. 13, No. 1.

(continued from page 16)

jarring intrusion and keeps visitors from thinking it is a picnic pavilion. Like other ghost buildings, the kitchen has scale but lacks texture and has a very transparent continuity.

Alternatives, besides interpretating the two-dimensional foundations, can also include the construction of a visitor center with, or without, a large scale model. While this is a desirable alternative in any case, in our experience this is not a suitable substitute for an actual reconstruction for those who are legislating funding. A visitor center is not as exciting as the replica of the real thing and, to date, the Service has made little effort to thwart this mind set. In addition, the construction of a visitor center on or near the historical site can endanger archeological sites such as at Cahokia Mounds in Illinois. Conversely, a center too far away from the site assures that the visitor may not actually visit the resource.

Fifth, we can consider constructing off site. This concept conflicts with the desire to be accurate and authentic. The park visitor has a desire to walk on hallowed ground; they want to walk the actual site. A reconstructed structure in view of the original site becomes an ambiguous interpretive story; and a reconstructed structure too far removed loses its impact and psychologically becomes fiction no matter how authentic or accurate. It is also a concern that land forms may have been a factor in original site location which would be lost by off site reconstruction.

As a sixth note, an aspect of reconstruction is that we are also providing a tangible means of preserving a culture. The reconstruction of Bent's Old Fort has much to say about the influences of Hispanic architecture on Anglo traders. The assimilation of cultures is readily apparent. The French and Anglo frontiers on the upper Missouri are equally revealed at Fort Union Trading Post. These cultural traditions, which cannot necessarily be interpretated with a foundation or a detailed visitor center exhibit, are an important part of simply experiencing the story. In addition, the research gleaned from the archeological excavations has benefitted that interpretive story.

In conclusion, in order to insure that reconstructions are accurate and authentic, it is imperative to be just that—accurate and authentic. The reconstruction must be documented to the visitor as well as to the cultural resource professional.

This must include the knowns, the assumptions, and the unknowns. It is the intent at Fort Union to document for the future that while the dimensions of the 1851 Bourgeois House are from the archeological investigations and the facade is from an 1866 [illegible] the detailing of the doors and windows are [illegible] Bedlam at Fort Laramie and the 1865 Ranchhouse at Grant-Kohrs. Should additional historical documentation turn up in the future, these details which are assumptions, can be corrected or those details that were omitted from the reconstruction as unknowns can be added. Reconstructions are for the visitors and their education about our past national history. It is incumbent on the National Park Service to consider the best possible opportunities for that interpretation.

The Case Against Reconstruction
(continued from page 17)

eloquently put it, "the faint shadow of the genuine often makes more intelligent appeal to the imagination than the crass and visionary replica."

The third has to do with priorities. With all of the research and hand work that goes into them, reconstructions are typically very expensive. Once built, they have to be maintained in perpetuity. Meanwhile, the parks contain numerous original historic structures that are badly in need of preservation treatment. How can the Service justify spending millions to recreate vanished structures while so many of the genuine old structures it is charged with preserving are crumbling?

When I came to Washington in 1970 to work for Chief Historian Robert M. Utley, I received much valuable on-the-job training in good writing and proper word usage. Among the distinctions Bob impressed upon his staff was that between "accurate" and "authentic." A reconstruction, like a modern copy of an old painting, could conceivably be accurate. But it could never be authentic—the genuine article. To me, and I suspect to many others, this distinction is of more than semantic importance.

The Case Against Reconstruction

Barry Mackintosh

My personal experience with reconstructions goes back to the beginning of my National Park Service career. I began work as a park historian in 1965 at Fort Caroline National Memorial, which commemorates a 1564 French settlement that prompted Spain to found St. Augustine a year later. Before I arrived, the local congressman had prevailed upon the Service to reconstruct the earthen fort for the quadricentennial of Fort Caroline in 1964. The fort site had been lost to the St. Johns River long before, so the replica was executed on riprapped fill at the river's edge. Major compromises were made with what was known about the original: the reconstruction was smaller and contained none of the buildings that had been present. The difficulty of maintaining an earthen parapet forced the substitution of cinderblock, which remained visible despite efforts to cultivate a grassy veneer from sod layered between the blocks. After heavy rains, portions of the sloping ramparts would slump down into the moat. The reconstruction was such an obvious fake that no one could mistake it for the original—perhaps its only virtue.

My next assignment sent me to Booker T. Washington National Monument in Virginia. Because nothing remained of the tobacco farm where Washington had been born in slavery, the Service had reconstructed his supposed birthplace cabin and a log tobacco barn. Just before I arrived it was decided to build more structures of a "typical" sort and develop a complete living historical farm. While conducting research for this project, I concluded that Washington had probably not been born or lived in the cabin that had been reconstructed. I also became concerned that the picturesque log structures and farming activities were receiving more attention than Washington himself—the subject that the park had been established to commemorate.

As might be guessed, I left these assignments with negative feelings about reconstructions. Clearly, those at Fort Caroline and Booker T. Washington violate the criteria that the Service has developed for such things. They are not essential to permit public understanding of the cultural associations of their parks. They were not based on sufficient data to permit reconstruction on original sites with minimal conjecture. And the farm buildings at Booker T. Washington flout the present rule against "generalized representations of typical structures."

At the same time, some reconstructions in the national park system seem to me worthy. I think particularly of Appomattox Court House National Historical Park, where the Service has reconstructed the McLean House and the courthouse. The McLean House, site of Lee's surrender to Grant, is the village's historical centerpiece. The courthouse, its physical centerpiece, was reconstructed to house the park's visitor center, obviating a modern intrusion on the historic landscape. Both reconstructions were based on ample evidence.

What helps justify the Appomattox reconstructions, I think, is that they are not stand-alone attractions; rather, they fill key gaps in a historic complex, like the Capitol and Governor's Palace at Colonial Williamsburg. Most of the village's other structures are original, so visitors can still feel that they are among authentic historic surroundings. Considering the complex as a whole, what has been done is not reconstruction but restoration (defined in part as the replacement of missing elements).

But how often is reconstruction truly "essential to permit public understanding of the cultural associations of a park established for that purpose," as the Service's first reconstruction criterion requires? This test can be met only in historical parks so lacking in historical ingredients or integrity that no other interpretive media—models, diagrams, films, or whatever—can serve to convey their stories to the public. No such parks should have been established to begin with, because they would not meet the requisite level of integrity.

In reality, some such parks do get established through the political process, sometimes with reconstruction in mind at the outset. Once the goal of reconstruction is accepted, attention turns to whether there is sufficient historical and archeological evidence to do the job accurately. Regardless of how complete the record is, a good deal of conjecture is usually required to translate the outline found on the ground and whatever pictorial and written descriptions exist into a full-scale three-dimensional structure.

Sometimes sufficient accuracy can be achieved. But even when this and the other reconstruction criteria can be met, there remain three fundamental arguments against reconstruction in the national park system.

The first relates to the Service's role and image as a public institution. The Service is basically in the preservation business. It is also in the interpretation business, but it is supposed to be interpreting original, genuine things that it is preserving, not its own handiwork. People can go elsewhere—to theme parks, frontier villages, and Hollywood productions—for re-creations of history. To the extent that the Service gets into the re-creation business, it risks diluting its special role as custodian of the authentic.

The second has to do with how people feel about and interact with historic places. Speaking personally, I know that I get more sense of communion with the past from a real remnant of a historic structure, even if only a foundation outline, than from a modern rendition of it. As Albert Good, a Service architect in the 1930s,

continued on page 18

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