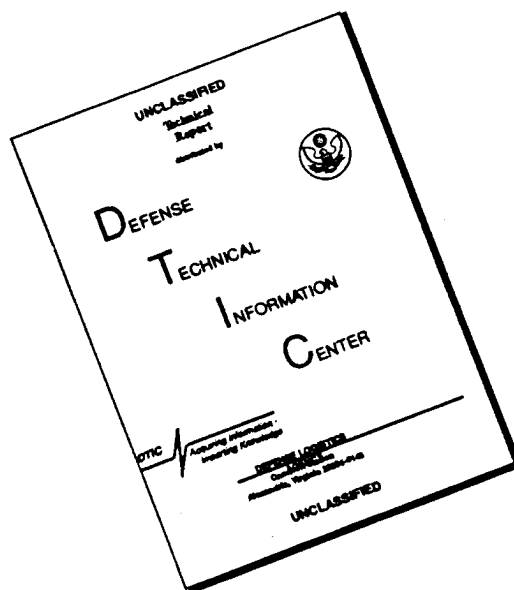


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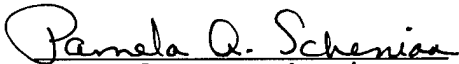
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A Phase I Archaeological Survey
of 1996 Rehab Areas 6, 7, and 8, in Training Area 10,
Fort Knox, Meade County, Kentucky

Prepared by:

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and
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July 1996


Pamela A. Schenian
Project Principal Investigator

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ABSTRACT

In April-June 1996, the Fort Knox contract archaeologists conducted a Phase I survey of 33.7 ha (83.3 acres) and reexamined 14.0 ha (34.6 acres) in Rehabilitation Area 7, Fort Knox, Meade County, Kentucky. In or near Rehab Area 7, the survey recorded 15Md383-15Md386 and revisited 15Md178-15Md180, 15Md184, and 15Md362. Rehab Areas 6 and 8 were previously surveyed. Site 15Md382 was recorded in or near Rehab Area 6. No sites were recorded in Rehab Area 8.

Sites 15Md178-15Md180, 15Md362, 15Md382, 15Md383, 15Md385, and 15Md386 have indeterminate prehistoric components. Sites 15Md362 and 15Md386 also have ca. 1800-1925 historic components. Sites 15Md184 and 15Md384 are ca. 1850-1940 historic sites.

No evidence was found of 15Md178-15Md180, presumed to be destroyed. Due to their poor condition, 15Md362, and 15Md382-15Md385 are ineligible for the National Register. The rehab portion of 15Md386 is heavily disturbed, but the wooded portion contains intact deposits potentially eligible for the National Register. Site 15Md184 has intact cultural deposits, is potentially eligible for the National Register, and is outside any rehab area.

If wooded areas of 15Md386 are avoided, rehab activities will not affect National Register eligible resources. No further archaeological work is recommended for the sites in conjunction with this project, but work is needed for 15Md184 and 15Md386 if future earthmoving activities will affect them.

MANAGEMENT SUMMARY

In accordance with Executive Order 11593 and other federal laws and regulations, a Phase I archaeological study was conducted of scheduled Rehabilitation Areas 6, 7, and 8 areas, totalling 33.7 ha (83.3 acres), in Training Area 10, Fort Knox, Meade County, Kentucky, in April-June 1996. Sites 15Md362 and 15Md382-15Md385, are not eligible for the National Register. No evidence was found of 15Md178-15Md180 which are presumed to have been destroyed by tank training and erosion. No additional archaeological investigations are recommended for 15Md178-15Md180, 15Md362, and 15Md383-15Md385.

The rehab area portion of 15Md386 is heavily disturbed but the wooded portion is potentially eligible for the National Register. Site 15Md184 is potentially eligible for the National Register, but lies outside the scheduled rehab area. If the wooded portion of 15Md386 is avoided, no further archaeological investigation of 15Md386 and 15Md184 is recommended in conjunction with the current project. Additional research is recommended if 15Md386 or 15Md184 will be affected by future earthmoving activities.

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INTRODUCTION

Seventeen rehabilitation (rehab) areas, some containing more than one tract, have been defined as project areas for 1996 by the Integrated Training Area Management (ITAM) coordinator, Gail Pollock. In previous years the archaeological survey of the rehab areas scheduled for that season or year have been summarized in a single report (Schenian 1994; Schenian and Mocas 1993, 1994a). Because an unusually rainy spring delayed the completion of fieldwork this year, the Fort Knox contract archaeology staff has opted to split the rehab survey into several reports to allow the description and recommendations for some rehab areas to be reviewed by the State Historic Preservation Officer (SHPO) while artifact analysis and report writing continue for other areas. This report summarizes the survey of Rehab Areas 6-8. The other areas will be discussed in two or more reports, based on geographical clustering of the rehab tracts.

In April-June 1996, the Fort Knox contract archaeology staff conducted a Phase I archaeological survey of proposed rehabilitation areas (Rehab Areas) in Training Area (TA) 10 at Fort Knox, Meade County, Kentucky (Figure 1). Rehab areas 6-8 comprise a total of approximately 33.7 ha (83.3 acres). Rehab Area 6 is in the floodplain on the west side of Otter Creek and to the east of Twin Bridge Road. Rehab Area 7 has two disjoint areas, both located north of Twin Bridge Road, east of Basham Corner Road, south of Highway 1638 and west of Otter Creek. Both Rehab Areas 6 and 7 are in Hunting Area (HA) 10. Rehab Area 8 consists of two small areas south of Twin Bridge Road, which had been surveyed previously (Schenian and Mocas 1994a). This project area is in HA 10, near the boundary with HA 11. Besides surveying the proposed rehab areas, previously recorded site 15Md184 was reexamined to confirm its location, which was well outside the proposed rehab area. Previously recorded sites 15Md178-15Md180, 15Md362, and 15Md382 were reinspected to observe their present condition.

The scheduled rehab areas are in tank training areas. The goals of land rehab are to control erosion and sedimentation, to restore natural landscape and terrain suitable for further tank training, and to create noise and dust barriers. Along eroded road cuts and tank trails, rehab will consist of grading the path to remove gullies and planting the cutbank in erosion controlling vegetation. In broader maneuver areas, the deep gullies on ridge slopes will be filled in by grading the adjoining slopes. The ridge tops and upper slopes will be plowed or disked, and the entire rehab area will be seeded in erosion controlling plants. Where possible, rehab activities avoid the removal of existing large trees. Rehab projects require contractors to avoid impact to vegetated areas in and around specified sinkholes.

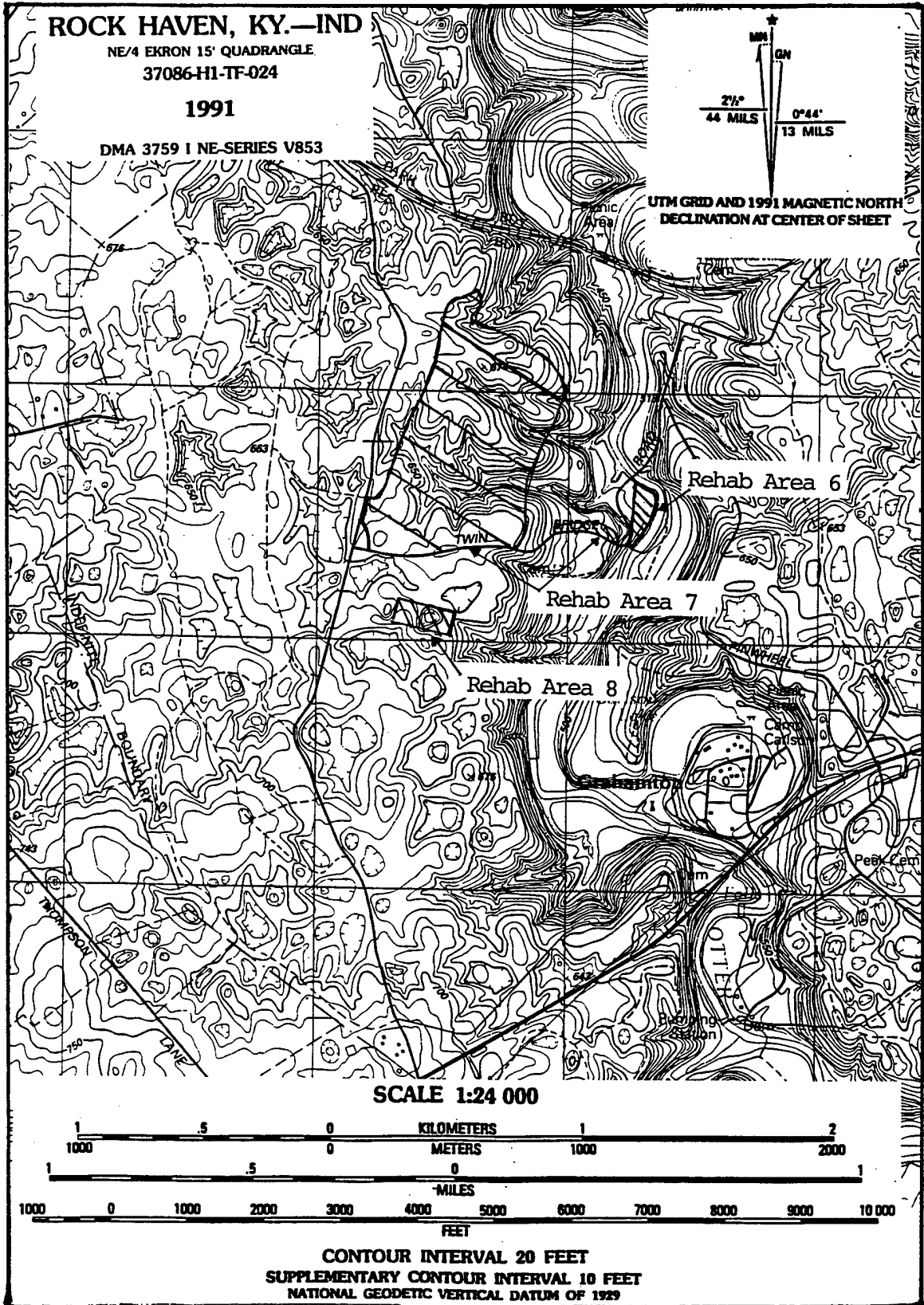


Figure 1. Location of Project Areas.

The rehab work for the current project is scheduled to be performed in the summer of 1996.

The archaeological survey and literature review conducted in preparation for the rehab activities were required to comply with the National Environmental Policy Act, or NEPA (Public Law 91-190), the Historic Preservation Act of 1966, as amended (Public Law 89-665), the Archaeological Resources Protection Act of 1979 (Public Law 96-95), Presidential Executive Order 11593, and Army Regulation 420-40. In 1993, Schenian obtained all the documents necessary to perform Phase I literature searches for the installation (e.g., site forms, reports of previous investigations, historic maps). These are on file at the Cultural Resource Management office of the Environmental Management Division (EMD) of the Directorate of Public Works (DPW), Fort Knox, and are updated regularly. No file check was made with the Office of State Archaeology and the Kentucky Heritage Council specifically for this project.

A literature search revealed that the north half of the project area had been previously surveyed by O'Malley et al. (1980), who recorded 15Md178 through 15Md180 within the current survey area and 15Md183 and 15Md184 outside the project area. The south half had not been surveyed, except the very southwest corner, which was examined in the investigation of 15Md362 (Schenian and Mocas 1994a). Rehab Area 6 had been previously surveyed, resulting in the recording of 15Md382 which is not eligible for the National Register (Schenian and Mocas 1994b). Rehab Area 8 was previously surveyed, with negative results (Schenian and Mocas 1994a). The south half of Rehab Area 7 was field inspected in its entirety in the current study, but the survey in the north half consisted of the spot inspection of the previously recorded site locations and some additional high potential areas. The north half of the project area was severely eroded, with all topsoil missing and subsoil missing to a depth of over 2 m in some areas, so a thorough survey of the remaining areas was not needed.

The scheduled rehab areas lie in the Plain section of the Pennyrile cultural landscape. The area is primarily on the tops and slopes of dissected ridges and on the karst plain. Elevations in the project area range from 460 to 690 feet. Soils in the rehab area are classified as Crider-Vertrees soil association (U.S.D.A. 1975). The upland area and higher slopes have Nicholson silt loam soils, while the lower slopes have Baxter or Hammack-Baxter soils. Drainage on the east-trending slopes in the rehab area flows eastward into unnamed tributaries of Otter Creek. Drainage in other portions of the rehab area is into sinkholes.

Gail Pollock provided maps and photocopies of aerial photographs that delineated the project boundaries, as well as a written description of the rehab work to be conducted

in each area. The surface reconnaissance of the scheduled rehab area was performed by the Cultural Resource Management office staff on April 25, May 14, and June 14, 1996. A total of 18 person hours were spent in the survey of the rehab area and 15Mdl84. Pamela Schenian, Stephen Mocas, and Michael Siefring participated in the study.

The artifacts from the survey were washed and catalogued by student assistants at the University of Louisville Program of Archaeology. The prehistoric artifacts were analyzed by Mocas. The historic artifacts were analyzed by Schenian. The artifacts and the documentation for this project will be curated at the Program of Archaeology, University of Louisville, on a "permanent loan" basis, under contract number DABT 23-95-C-0102, for curatorial and technical support (copy of contract on file, DPW, Fort Knox, Kentucky). Duplicate copies of the documentation will be stored at DPW.

SETTING AND ENVIRONMENTAL BACKGROUND

O'Malley et al. (1980) prepared a detailed description of the setting and environmental background of the Fort Knox base as a whole. This section will concentrate on the topographic characteristics of the rehab areas inspected in the current study.

The rehab areas lie in the Mississippian Plateau physiographic region of Kentucky (McGrain and Currens 1978:35). The proposed rehab areas consist of a karst upland area, narrow, dissected ridges above Otter Creek, and a portion of the floodplain of Otter Creek.

Rehab Area 6 is located in the floodplain west of Otter Creek and east of Twin Bridge Road directly south of the Twin Bridges. The floodplain area has a few scattered trees and bushes, but most of the floodplain adjacent to the road is scraped and covered with gravel. A barrier will be placed in this area to create a berm to prevent water undercutting the concrete crossing. Vegetation will be planted behind the berm. The project area is 0.7 acres (0.3 ha) in size.

Rehab Area 7 is located north of Twin Bridge Road (also known as Cemetery Road), east of Basham Corner Road, south of Highway 1638 and west of Otter Creek. The project area comprises a portion of the sinkhole plain and eastern slope that has been used for tank training. The larger portion of Rehab Area 7 essentially forms a triangle approximately 0.9 km long north to south and 0.7 km wide east to west. The northwest end of the training area and the portion that had not been disturbed by training were not surveyed, but the previously recorded sites and areas of high potential for

habitation were examined. The ground surface is somewhat level, sloping gradually to the east and undulating less than 10 m in elevation throughout most of the project area; however, some sinkholes are as much as 15 m deep. The sinkhole plain and the shallow sides of sinkholes are largely devoid of vegetation, except for sparse weeds and grass, because of intensive use for tank training and military maneuvers. The steep sides and submerged bottoms of the sinkholes generally have dense concentrations of trees, bushes, and weeds. This area is to be leveled and tank crossings constructed. In addition to the upland sinkhole plain and ridges, a strip along the north shoulder of Twin Bridge Road and an adjoining small, narrow toeslope midway down the slope to Otter Creek was surveyed.

Rehab Area 8 consists of two small rises south of Twin Bridge Road between which a hardened crossing is to be constructed. This area was previously surveyed (Schenian and Mocas 1994a) and was not re-examined in the current survey. No sites were recorded within this project area in the previous survey.

PREVIOUS RESEARCH

Approximately 26,534 acres of the Fort Knox installation have been surveyed, primarily in cultural resource management (CRM) studies. There are 112 Hunting Areas (HA) on the Fort Knox installation. Schenian and Mocas (1994a) summarize the archaeological studies conducted on or near the installation through August 1994. This section focuses on the previous research conducted within a 2 km radius of the current project areas, and discusses the sites recorded within this 2 km radius.

Of greatest relevance to the current project are the O'Malley et al. (1980) survey of portions of HAs 8-13, adjoining or near the current project areas, Schenian and Mocas' (1994a) survey of southern TA 10, and Hale's (1981) survey of Otter Creek Park, which recorded a very high density of sites in the uplands near Otter Creek. Hale's survey recorded sites 15Md243, 15Md252-15Md253, 15Md269-15Md270, 15Md272-15Md275, 15Md278-15Md279, 15Md283-15Md286, 15Md292, and 15Md295-15Md300. The O'Malley et al. (1980) survey in HA 8 recorded sites 15Md171-15Md175, 15Md177, and 15Md182, and the survey of HA 9 discovered no sites. The O'Malley et al. (1980) study of HA 10 recorded sites 15Md178-15Md180 and 15Md184, which were revisited during the present project, and nearby sites 15Md181, 15Md183, and 15Md185 were not reexamined. The O'Malley et al. (1980) survey in HA 11 recorded sites 15Md186-15Md199 and 15Md216-15Md220. The Schenian and Mocas (1994a) survey recorded sites 15Md362-15Md376 and 15Md380-15Md381.

Webb and Brockington (1986) recorded site 15Md307 in their survey of Highway 1638. McGraw (1976) failed to record any sites in her survey of Highway 60. Schenian and Mocas (1992) recorded no sites within a 2 km radius of the project area during their timber harvest survey. Schenian and Mocas (1993) recorded 15Md342 during their rehab survey in HA 9. Schenian and Mocas (1994b) recorded site 15Md382 in their survey of bridge replacements, and 15Md378 and 15Md379 were identified in the Schenian and Mocas (1996) study at Camp Carlson.

Holmberg (1991) prepared an archival study on the four mill sites (15Md164, 15Md176, 15Md185, and the Grahamton mill [part of the town of Grahamton--15Md378] recorded by O'Malley et al. (1980) in the Meade County section of the base. O'Malley (1996) reports the results of testing of the Garnettsville mill.

No sites had been recorded in the current project areas prior to the fieldwork, however. No standing structures listed on or eligible for listing on the National Register of Historic Places are located in or immediately adjacent to the current project area. No archaeological sites listed on the National Register are located in or immediately adjacent to the current project area, although many of the sites recorded near the current project area must be considered potentially eligible for the National Register because they have not been adequately assessed by the current standards of the profession.

SURVEY PREDICTIONS

Based on previous archaeological research in the area, the history of settlement, and the environmental setting of the project area, the following results were expected:

- 1) The scheduled rehab areas consist of former privately owned properties which were acquired by the Army in the early 1940s. A 1940 Army map depicts four large buildings (e.g., houses, barns, etc.) in or near the project area. One appears to have been previously recorded as 15Md184 (O'Malley et al. 1980), and another was recorded as 15Md362 (Schenian and Mocas 1994a). The two remaining buildings are located near each other on a single property. Evidence of these latter two buildings has a high probability for existing as a single archaeological site. It is possible that additional historic sites which were already in ruins by the time of Army acquisition exist as archaeological sites.

- 2) Some former property owners opted to relocate their structures to their new properties off the installation, and the Army removed most pre-installation standing structures for liability reasons. Therefore, few historic structural ruins are expected.
- 3) Portions of the survey area consist of steep ridge slopes and sinkhole sides that are unlikely habitation or activity loci.
- 4) The rehab areas on the tops and upper slopes of ridges have high potential for habitation in areas where water was readily accessible.
- 5) There is a high probability of habitation sites near Otter Creek and its drainages.
- 6) Studies elsewhere indicate frequent occupation and activity areas around sinkholes, but the presence of abundant flowing surface water in the vicinity lessens the importance of sinkholes as habitation loci.
- 7) Historic sites frequently also have prehistoric components, suggesting that some environmental characteristics made the location desirable to both prehistoric and historic inhabitants.
- 8) The proposed rehab areas have been used for tank training for decades. Sites found in the tank training areas are likely to be wholly or partially disturbed.
- 9) Previous archaeological research in the Otter Creek drainage has demonstrated a very high density of sites in the uplands near Otter Creek. Approximately one site or isolated find was expected for each 10 acres of project area, based on these previous studies.

FIELD METHODS

In general, proposed Rehab Area 7 was systematically walked in transects at paced 10 m intervals. Most of the project area had been used for tank training and the ground surface is eroded well into the subsoil. Visibility in the majority of both parts of the rehab area was very good. In most of the rehab area ground surface visibility was 100 percent, and only very limited areas, mostly near sinkholes and on steep slopes, had surface visibility of less than 50 percent.

If the ground surface had been obscured by vegetation for greater than 10 m within a transect, then a shovel probe would have been excavated. No areas were encountered in the rehab area, however, that could not be adequately inspected via walkover at the site discovery level either through inspection of the ground surface or of exposed cut banks adjoining tank trails or gullies. A wooded area to the west of the eroded portion of 15Md386 was shovel tested, although this wooded area is not scheduled for land rehab. No cultural materials were recovered from the shovel probes; however, a sheet midden of early nineteenth century refuse was found on the steep hillside at the north side of the site. The majority of the vegetated areas that will be avoided by the contractors conducting the rehab work in the project areas were not systematically inspected because they are sinkholes with deep standing water.

Upon the discovery of archaeological materials, the ground surface of the area around the find was walked in transects spaced at intervals of 5 m or less, until no additional materials were recovered for a distance of at least 20 m within a transect. Figures B-1 through B-6 in Appendix B show the locations and plans of the cultural resources encountered in the proposed rehab area. The plan view of 15Md362 is Figure C-19 in Schenian and Mocas (1994a) and the plan view of 15Md382 is Figure B-7 in Schenian and Mocas (1994b). The site plans show the inspection methods and salient features of these sites in greater detail.

No features or potential features were observed during the walkover of sites 15Md385 or 15Md178. These sites were eroded or deflated to subsoil. In view of the absence of evidence of features, it was not necessary to excavate shovel probes. Sites 15Md383 and 15Md384 had small patches of topsoil but these were so small that they had no potential to contain features that would not be exposed on the adjoining eroded ground surface or erosional cut banks.

No intact structural features were evident on site 15Md386, although bulldozer piles contained bricks and limestone slabs and blocks. No cultural materials were recovered from the shovel probes at 15Md386, although in some areas dense tree roots prohibited excavation more than a few centimeters below the ground surface. The wooded portion of 15Md386 had an intact topsoil zone. Examination of the steep slope to the drainage below revealed a sheet midden of historic materials.

The reported locations of 15Md179 and 15Md180 were walked, but no materials were found. Because the original site form plan views show modern cultural features (a shelter, a trail, and an overhead utility line) which still exist, the archaeological crew is certain that they were in the correct location. The site areas were eroded to more than 1 m below topsoil, and there was no evidence of poten-

tial cultural features. It was assumed that sites 15Md179 and 15Md180 have been totally destroyed and the search for them was discontinued.

After completing the survey of the area which will be rehabbed, the archaeological crew walked to the location of 15Md184 to verify its location in relation to the rehab east boundary and to ascertain its current condition. The access route to 15Md184 was not inspected once the crew left the area to be rehabbed, since ground surface visibility was poor and the crew was more concerned with quickly getting through the dense, tick-infested, flesh-rending weeds and briars comprising the vegetation in the powerline easement used to approach the site. Having had no need for the shovels previously, and now being more than a kilometer from the field vehicle, the crew did not shovel test site 15Md184. The crew did not make a special trip back there to shovel test 15Md184 for this report because the site was completely outside the proposed rehab area and because it was obvious from surface evidence that the site was in good condition and had intact below and above ground cultural features.

In summary, the archaeological investigation of the proposed rehab area resulted in the recording of four new sites and the relocation of 15Md178 and 15Md184. No cultural materials were found at the reported locations of 15Md179 and 15Md180.

ARTIFACT TYPOLOGY AND MATERIALS RECOVERED

The following paragraphs summarize the artifact typologies used in the sorting and analysis of the artifacts recovered during this project, and describe specific artifacts recovered in greater detail. The artifacts counts are summarized in Table 1.

Prehistoric Artifact Typology

Biface

A biface is a chipped stone tool which has had flakes removed from two opposite sides along one or more edges. There is considerable variety in the size, shape, and precision of chipping of bifaces, depending upon the stage of manufacture and intended use. These implements may be quarry blanks or tool blanks, preforms for projectile points or other tools, or cutting or chopping tools. A large biface fragment broken early in manufacture was found on site 15Md385.

TABLE 1. Artifacts Collected from the Project Sites.

	15Md 184	15Md 362	15Md 383	15Md 384	15Md 385	15Md 386	Total
PREHISTORIC ARTIFACTS							
Biface	0	0	0	0	1	0	1
Utilized secondary flake	0	0	1	0	0	0	1
Unutilized debitage							
primary flake	0	0	1	0	0	0	1
secondary flake	0	1	1	0	1	2	5
tertiary flake	0	0	5	0	2	2	9
chert shatter	0	0	1	0	0	0	1
Prehistoric Artifact Total	0	1	9	0	4	4	18
HISTORIC ARTIFACTS							
KITCHEN GROUP							
Ceramics							
whiteware	1	5	0	7	0	2	15
pearlware	0	0	0	0	0	13	13
stoneware							
brown	0	0	0	0	0	1	1
buff	2	1	0	27	0	0	30
gray	0	0	0	0	0	1	1
ironstone	0	1	0	8	0	1	11
semi-porcelain	0	0	0	3	0	0	3
porcelain	0	0	0	4	0	0	4
Bottle glass							
amber	1	0	0	1	0	0	2
amethyst, solarized	0	0	0	4	0	0	4
aqua	0	0	0	4	0	1	5
clear	0	0	0	5	0	0	5
cobalt	0	0	0	2	0	0	2
green	0	0	0	3	0	2	5
yellowish	0	0	0	2	0	0	2
Dish glass							
amethyst	0	1	0	0	0	0	1
milk glass	0	0	0	7	0	1	8
yellowish	0	0	0	1	0	0	1
Milk glass lid liner	0	0	0	1	0	0	1
Zinc canning jar lid	0	0	0	5	0	0	5
ARCHITECTURE GROUP							
Flat glass (window)	0	0	0	1	0	2	3
Roofing tile, clay	0	0	0	0	0	1	1
CLOTHING GROUP							
Buckle	0	0	0	1	0	0	1
Leather boot	1	0	0	0	0	0	1
Milk glass button	0	0	0	0	0	1	1
Rubber boot heel	0	0	0	1	0	0	1
ACTIVITIES GROUP							
Metal hardware	0	0	0	2	0	0	2
Historic Artifact Total	5	8	0	89	0	26	128
ARTIFACT TOTAL	5	9	9	89	4	30	146

Chert Debitage

Chert debitage is a category used to describe the material generally created as a by-product in the manufacture of more formally defined chipped stone tools. Chert debitage may be further divided into the categories of flakes, blocky chert pieces, microflakes, and chert shatter. It may also be classified by stage of manufacture and by evidence for use as an informal, or expedient, tool. The following criteria have been applied to sort the chert debitage collected in this study:

- 1) Flakes are defined by the presence of a striking platform and bulb of percussion. Concentric rings or ripple marks on the ventral surface, and feather terminations may also be present. Flakes are classified as primary flakes if 90 percent or more of the dorsal surface (the side opposite the bulb of percussion) is covered by cortex or rind; as secondary flakes if one to 90 percent of the dorsal surface is covered by cortex; and as tertiary flakes if no cortex is present on the dorsal surface.
- 2) A chert piece is classified as shatter if it exhibits flake-like characteristics, but is insufficiently complete to classify the piece as a primary, secondary or tertiary flake. Usually, the striking platform is missing.
- 3) A blocky chert piece is an angular chert piece lacking flake-like characteristics, and lacking evidence of having served as a core.
- 4) A microflake is a complete flake that is less than 6 mm in length and is, generally, the product of fine retouch or resharpening of tools.
- 5) A piece of chert debitage is classified as utilized if at least three contiguous small flakes have been removed from one or more edges by use rather than retouch. A secondary flake with lateral use wear was found on 15Md383.
- 6) A piece of chert debitage is classified as unutilized if it exhibits no evidence of the removal of small flakes through use.

One utilized secondary flake was recovered from 15Md383. Unutilized debitage was collected from 15Md362, 15Md383, 15Md385, and 15Md386.

Historic Artifact Typology

South (1977:95-95) defined a system of artifact classification based on function. Under South's system, for example, ceramics and curved glass are kitchen group artifacts, flat glass less than 4 mm thick and nails are architectural group artifacts, and horseshoes are transportation group artifacts.

KITCHEN GROUP

Ceramics

Historic ceramics are divided into coarse earthenware, stoneware, ironstone, refined earthenware, semi-porcelain, and porcelain. Coarse and refined earthenware have the most porous paste, stoneware and ironstone have less porous paste, and semi-porcelain and porcelain have the least porous paste. Each of these broad categories is further divided into more specific types based on paste texture and color, glaze characteristics, and decoration (Maples 1991).

Refined Earthenware. The refined earthenware collected in this project includes whiteware (earthenware with a white paste) and pearlware (earthenware with a white paste and a clear lead glaze with a small amount of cobalt that causes a blue or green opalescent cast). Unless decoration is mentioned, the sherd has white glaze on the exterior and interior surface, but no other decoration. Pearlware dates from 1780 to 1830 (Smith 1983:171; South 1977:212). Whiteware dates from 1830 to 1890 (Smith 1983:171). Transfer print on whiteware was most popular between 1830 and 1860 (Price 1979:31).

One whiteware sherd was recovered from 15Md184. It is a base to rim section of a saucer.

Five whiteware sherds were collected from 15Md362. One is a body sherd with remnants of transfer print, and one is a body sherd with relief decoration. The other three are undecorated sherds, and consist of one rim and two body sherds.

Seven whiteware sherds were recovered from 15Md384. These consist of two base sherds, one rim, one body sherd with a floral transfer print, and three plain body sherds.

Thirteen pearlware sherds and two whiteware sherds were recovered from 15Md386. The thirteen pearlware sherds include one flow blue rim sherd, two rim sherds with cobalt broad leaf painted decoration, one body sherd from near a

plate rim with rococco shell edge embossed floral design with green glaze, two cobalt painted body sherds, one basal chip with a small area of cobalt paint, one body sherd, two base sherds, and three chips. The two whiteware sherds consist of one rim and one body sherd. Rococo shell edge dates from 1780 to 1820 (Miller 1989). Flow blue dates from 1840 to 1865, and blue painted florals date from 1830 to 1870 (Price 1979:31).

Stoneware. Stoneware cannot be dated to a more accurate range than nineteenth to twentieth century and vessels frequently lacked makers marks. Stoneware usually is divided into gray stoneware and buff stoneware on the basis of paste color. A dark brown paste is found with some frequency on Fort Knox historic sites, and may be the work of a local pottery. Other color pastes are also found occasionally. Two buff stoneware sherds were collected from 15Md184, one from 15Md362, and 27 from 15Md384. The two sherds from 15Md184 are from large crocks, and one from 15Md384 is from a jug. The rest are from storage vessels of some kind. One brown stoneware sherd and one gray stoneware sherd were collected from 15Md386.

Ironstone. Ironstone most commonly has white paste, but brown and ivory paste variants are known. Ironstone dates from 1860 to 1920 (Ketchum 1983:201). Ironstone with scalloped rims and/or impressed and/or relief decoration date from ca. 1895 to 1920 (Montgomery Ward & Co. 1969; Sears, Roebuck & Co. 1920).

One ironstone body sherd was collected from each 15Md362 and 15Md386. The sherd from 15Md362 has traces of transfer print. The sherd from 15Md386 is a basal sherd from a plate. A fragment of a maker's mark is present, but it could not be identified.

Eight ironstone sherds were collected from 15Md384. The sherds include two refit from the body of a vessel with relief decoration, one molded body with relief decoration, one rim with relief decoration and floral transfer print, one rim from an oddly shaped vessel (perhaps a pitcher), one base, and one body sherd.

Semi-porcelain. Semi-porcelain dates from 1880 to present (Worthy 1983:337). Three semi-porcelain sherds were collected from 15Md384. These are two rims and one base.

Porcelain. Four porcelain sherds were recovered from 15Md384. These include one rim from a molded vessel with a painted band, one body with a floral transfer print, one plain body, and one saucer base.

Glass

Glass kitchen artifacts are divided into three main categories. These are bottles, dishware, and canning jar lid liners.

Bottle glass. Amethyst bottle glass dates from ca. 1880 to 1914 (Newman 1970:70-75). Amber glass dates from 1860 to present, green glass from 1865 to present, clear glass from 1875 to present and cobalt and milk glass from 1890 to present (Fike 1987:13). Yellowish glass dates from 1916 to 1930 (Baugher-Perlin 1982:261), and is the result of the solarization of clear glass containing selenium as a clarifying agent.

One amber bottle base from a large (one-half gallon to one gallon) jug was recovered from 15Md184. The base has a maker's mark consisting of a diamond with a dot in the center.

Three bottle glass pieces, two green and one aqua, were collected from 15Md386. The aqua piece is from a panel bottle.

Twenty-one bottle glass fragments were recovered from 15Md384. These include one amber, one solarized amethyst, one aqua, five clear, two cobalt, three green, and two yellowish glass pieces.

Dish glass. Dish glass colors are dated the same as bottle glass colors, although dish glass often has recognizable pressed or cut patterns which permit more specific identification of manufacturing dates. One milk glass dish sherd was recovered from 15Md386.

One dish glass rim sherd was recovered from 15Md362. It has a basket weave pattern on the interior surface. Its deep amethyst tone suggests that amethyst was the original color, rather than the result of solarization of an originally clear piece. The pattern could not be identified as to manufacturer or date.

Eight dish glass pieces were recovered from 15Md384. Seven are milk glass and one is yellowish. One of the milk glass pieces is in the "Triple Shell" pattern, manufactured by Eagle Glass and Manufacturing Company in 1898 (McCain 1982:444).

Lid liner. Milk glass lid liners date from 1869 to 1915 (Toulouse 1969:499). One milk glass lid liner was found inside a nearly complete zinc canning jar lid.

Zinc Canning Jar Lid

Zinc canning jar lids date from 1869 to the 1940's. One nearly complete lid and four fragments were collected from 15Md384. The complete lid contained a nearly complete milk glass lid liner. The liner was cracked when found, and has been glued back together; only small chips are missing.

ARCHITECTURAL GROUP

Flat (window) glass

Two green flat glass pieces were recovered from 15Md386. One flat glass piece was recovered from 15Md384.

Clay Roofing Tile

One fragment of a clay roofing tile was recovered from 15Md386. This is from a flat clay tile.

CLOTHING GROUP

Boot Heel

One rubber boot heel was recovered from 15Md384. It has nail holes in it, but the nails are missing.

Buckle

One buckle was collected from 15Md384. It is made of iron.

Button

One four hole milk glass button was collected from 15Md386. Plain milk glass buttons date from 1850-1920 (Luscomb n.d.: 156).

Leather Boot

The side of a leather boot was collected from 15Md184. It has brass eyelets at the shoelace holes.

ACTIVITIES GROUP

Miscellaneous Hardware

One long, thick metal wire and one metal band were collected from 15Md384. The band is possibly a barrel stave.

CULTURAL RESOURCES

The UTM coordinates of the cultural resources inspected are listed in Table B-1 in Appendix B. The site locations and plan views are shown in Figures B-1 through B-6. No plan views are provided for 15Md178-15Md180 and 15Md382 because no materials were found at these sites in the current survey. No plan view is provided for 15Md362 because the current survey did not add any new information regarding the site.

Previously Recorded Archaeological Sites

15Md178

O'Malley et al. (1980:80-81) described 15Md178 as a prehistoric lithic scatter of indeterminate cultural-temporal affiliation. The site was located on a low ridge crest in a karstic region at an elevation of 660 feet (Figure B-1). O'Malley et al. (1980:81) recovered eight pieces of lithic debitage from a 20 m by 20 m, or 400 m², area.

During the current survey, the site 15Md178 vicinity was missing all topsoil and had many erosional gullies up to 1 m deep. Inspection of the ground surface at 5 m intervals yielded no evidence of additional artifacts or of potential subsurface features.

It is assumed that 15Md178 has been totally destroyed by severe erosion and tank training. The site is not eligible for the National Register. No additional archaeological research is recommended for 15Md178.

15Md179

O'Malley et al. (1980:81) describe 15Md179 as a light prehistoric lithic scatter of indeterminate cultural-temporal affiliation. The site was located on a low ridge crest in a karstic region (O'Malley et al. 1980:81) (Figure B-1). O'Malley et al. (1980:81) recovered 12 pieces of lithic debitage from a 30 m by 45 m, or 1350 m², area.

The 15Md179 site form (Jobe 1979a) includes a plan view that shows the site as located near a metal structure standing on a gravel knoll. This metal structure (actually an open waiting shelter consisting of a metal roof held up by wooden pillars set into a concrete base) is still present, but gravel is only present for less than 1 m beyond the concrete. The knoll is heavily eroded, with more than 1 m of soil missing. No artifacts were found in the site area, and no evidence was found of potential intact cultural deposits.

It is assumed that 15Md179 has been destroyed by erosion. The site is not eligible for the National Register. No further archaeological research is recommended for 15Md179.

15Md180

O'Malley et al. (1980:81-82) describe 15Md180 as a very light prehistoric lithic scatter of indeterminate cultural-affiliation. Site 15Md180 was located on a low ridge crest in a karstic region (O'Malley et al. 1980: 81-82) (Figure B-1). O'Malley et al. (1980:82) recovered only two artifacts, found 40 m apart, from this site (one stem and shoulder fragment of a projectile point and one endscraper). The site form (Grant 1979:3) suggests that 15Md180 may be part of 15Md178, which lies to the north, but that considerable disturbance of the surface from tank training prevented determination of whether two sites or one was represented.

The vicinity of 15Md180 was inspected in the current study. No artifacts were found and no evidence was observed of potential intact cultural deposits. The entire 15Md180 area is missing at least 1 m of soil and some gullies are 2 m deep. It is assumed that 15Md180 has been destroyed by tank training and severe erosion. The site is not eligible for the National Register. No additional archaeological research is recommended for 15Md180.

15Md184

O'Malley et al. (1980:84-85) describe 15Md184 as an early twentieth century historic homestead located on a ridge slope in a karstic region (O'Malley et al. 1980: 84-85) (Figures B-1 and B-2). O'Malley et al. collected 51 historic artifacts from the site, including clear, amethyst, aqua, and milk glass bottle glass; green window glass; "common white glazed earthenware" or whiteware, both undecorated and decorated (gilt, transfer print, and decal); porcelain with handpainted decoration; a zinc canning jar lid fragment; wire nails; and other materials. O'Malley et al. noted that the limestone foundations of two structures were present, including a single-room springhouse and another structure which was "virtually destroyed" (O'Malley et al

1980:84). The site was thought to encompass a 20 m by 20 m, or 400 m², area.

The current survey recorded evidence of four structures on the site -- the springhouse, which is still standing but roofless; a smaller collapsed limestone chamber built over a spring; the foundation fall pile from a house; and the foundations of a small building behind the house which may have been a detached kitchen. None of the structures could be described as "virtually destroyed" as an archaeological entity. One cistern and another possible cistern were also noted. Large beds of Bells of Scotland bordered the house along its north and east walls, and a bed of another kind of bulb or rhizome plant which was not in bloom were located on a slight rise immediately adjacent to the probable detached kitchen.

Site 15Hd184 lies near a historic property boundary, and it could not be determined on which property the site had been located. It was either on a 33.28 acre property acquired by the Army from Joe E. Seelye and wife or it was on a 1072 acre tract acquired by the Army from the Department of the Interior in the early 1940s. The Department of the Interior acquired a number of adjoining tracts from private landowners in the 1920s and transferred the combined tracts to the Army in the 1940s.

The architectural characteristics of the springhouse and other structures suggest a much earlier beginning date for the 15Md184 than suggested by O'Malley et al. The site form includes the statement that "this was probably a fairly early homestead" (Jobe 1979b:3) and ascribed a nineteenth-probable twentieth century date to the site (Jobe 1979b:4), so there seems to be a problem with the reinterpretation of field data during the O'Malley et al. report preparation. During the current survey, the ground surface was densely vegetated, so few artifacts were recovered in the current project. The combined artifact assemblage of the 1979 and current collections certainly supports a early twentieth century occupation, but the presence of whiteware and a shell button (Jobe 1979b:4) suggests a nineteenth century starting date.

No shovel testing was conducted at 15Md184 during the current study, because it was obvious from surface observation that the site had little or no disturbance and contained intact cultural features. Site 15Md184 is potentially eligible for the National Register. It is located outside the proposed rehab area, however, and in dense woods, so there is no potential for accidental disturbance to the site during the rehab activities. No additional archaeological work is recommended for the site in conjunction with the currently proposed rehab activities, but additional archaeological work will be needed at the site eventually to fully assess its National Register potential.

This research should include both archival and field research.

15Md362

Schenian and Mocas (1994a:57) describe site 15Md362 as a multicomponent site with a lithic scatter of indeterminate prehistoric cultural-temporal affiliation and a historic component (Figure B-1). The historic component represents the mid nineteenth to early twentieth century farmstead of J.A. Bill. The site lies on both side of Twin Bridge Road on a knoll on a karstic plain. The site has been disturbed by road construction, borrowing, and tank training. Schenian and Mocas (1994:57) recommended that the site was not eligible for the National Register.

The portion of the site north of Twin Bridge Road was only briefly inspected in the 1994 study, because it lay outside that project area and because a tank unit moved into the area for a training activity, making it dangerous to work north of the road. Since the area north of Twin Bridge Road was available for inspection in the current study, the ground surface was examined with the hope that diagnostics would be recovered that would enable the dating of the prehistoric component. Most of the site area was heavily rutted and the ruts were filled with water, however. Only a few artifacts were recovered, all in disturbed contexts. The current study supports the recommendation that 15Md362 is not eligible for the National Register. No further archaeological work is recommended for 15Md362.

15Md382

Schenian and Mocas (1994b:18) describe site 15Md382 as located on a slight rise on the Otter Creek floodplain, approximately 30 m from the creek (Figure B-1). Two biface fragments and six pieces of debitage were found in a 20 m by 30 m area. Ground surface visibility was 100 percent in the tank trails and 50 percent in the spindly weeds, and approximately 25 percent in the two small, wooded areas. The wooded areas had some topsoil, but had been disturbed by vehicle training, so possible intact deposits were small and disjoint. Schenian and Mocas (1994b:18) recommended that the site was not eligible for the National Register because most of the site has been deflated to subsoil by wheeled vehicles, tanks, and bulldozers. Examination of the cut-banks of the vehicles trails and shovel probes in the wooded areas indicate that there was little or no potential for buried deposits. Site 15Md382 was reexamined in the current study, but no additional materials were recovered. The site is not eligible for the National Register and no additional archaeological research is recommended for the site.

Newly Recorded Archaeological Sites

15Md383

Site 15Md383 is a lithic scatter of indeterminate pre-historic cultural-temporal affiliation. It is located about 65 m north of Twin Bridge Road at an elevation of 660 feet (Figures B-1 and B-3). It lies on a narrow strip of land bordered by two sinkholes to the south and a drainage to the north that flows into Otter Creek. The surface was severely eroded, and ground surface visibility was 80 to 100 percent. Only one small area of intact topsoil was observed, but it was less than 1 m in diameter. A few small, isolated areas of less heavily eroded soil contained nine chert flakes. The cultural material was scattered over a 65 m (northeast-southwest) by 10 m, or 650 m², area.

Site 15Md383 is not eligible for the National Register due to severe erosion. Much of the site vicinity had been eroded to several feet below the original ground surface, as a result of tank training. There is no potential for subsurface features. No additional archaeological work is recommended for 15Md383.

15Md384

Site 15Md384 represents the remnants of a late eighteenth to early twentieth century historic farmstead located 90 m east of Basham Road (Figures B-1 and B-4). It lies at an elevation of 670 feet on the south slope of a ridge in the dissected uplands at the edge of the karst plain. The site covers a 100 m (north-south) by 40 m, 4000 m², area. The area has been used for tank training. The trails that cut through the site are eroded up to 2 m below the original ground surface. All artifacts were found in the trails, primarily because the narrow (1-3 m wide) vegetated areas between the trails offered limited visibility. No evidence of potential features was observed in the tank trail cut-banks. A few bricks were observed, but no evidence was found of intact or relatively intact building foundations.

The site is on property acquired by the Army from the Department of the Interior in the early 1940s. The department of the Interior probably acquired the land from private landowners sometime in the 1920s. Two buildings are shown in the site location on a 1940 Army map which only indicates the location of larger buildings. The two buildings were probably a house and barn, which would no longer have been in use at the time of Army acquisition. The site is considered not eligible for the National Register because of heavy erosion and disturbance resulting from tank training. There

was no evidence of potential intact cultural features. No additional archaeological work is recommended for 15Md384.

15Md385

Site 15Md385 is a lithic scatter of indeterminate pre-historic cultural-temporal affiliation. It is located approximately 80 m east of Basham Road at an elevation of 670 feet (Figures B-1 and B-5). The site lies on the south slope of a ridge between two drainages that flow into Otter Creek. The surface was severely eroded and visibility was approximately 80 percent. Four chert flakes were recovered from a 20 m (east-west) by 10 m, or 200 m². No intact cultural deposits remain.

Site 15Md385 is not eligible for the National Register due to previous disturbance. Much of the site vicinity had been eroded to 1 m or more below the original ground surface, and heavily rutted by tank training. No areas of intact topsoil were observed, and there is no potential for intact subsurface features. No additional archaeological work is recommended for 15Md385.

15Md386

Site 15Md386 is a multicomponent site encompassing a lithic scatter of indeterminate prehistoric cultural-temporal affiliation and one or more historic components. The site is located approximately 30 m north of Twin Bridge Road at an elevation of 560 feet on a level area on a toe slope descending from a ridge above Otter Creek (Figures B-1 and B-6). There is a steep slope downward to an intermittent drainage immediately north of the site, and there is a steep slope to Otter Creek to the east. The site consists of a scatter of historic debris found over a 35 m (north-east-southwest) by 25 m, or 875 m², area along a bulldozer cut and in a small trail to the east of the borrowed area. The prehistoric component consisted of four chert flakes scattered over 30 m by 10 m area.

Except for these eroded and scraped areas, visibility was limited to less than 10 percent by scrub growth, trees, and leaves. The surface was scraped and eroded to subsoil, except for a wooded area to the east of the dozer cut. This area had topsoil, but shovel probes did not produce cultural material. Most of the five shovel probes attempted hit tree roots which prevented excavation below the topsoil zone. There were no historic structures evident in the area, although a large number of bricks and foundation stones were observed in the dozer piles which formed a rim around an area which had been dozed only to the top of the subsoil zone. A sheet midden of historic debris was encountered

north of this dozer pile rim. The midden extended downslope from the site all the way to the streambed of the intermittent drainage. Several pieces of pearlware were collected from the surface of the midden, and an iron wagon wheel was observed in the stream bed. The upper, more level, slope is only about 3 m wide beyond the dozer pile rim. The hill side then drops off steeply. Artifacts appear to be deposited among the rocks and vegetation on the steep slope. The steepness of the slope and the wet conditions produced by water seeping from the limestone bedrock beneath the vegetation made examination of portions of the lower slope inadvisable without rock climbing gear.

The prehistoric component of site 15Md386 is not eligible for the National Register due to the small sample and the fact that all of the prehistoric materials were found in the most disturbed areas of the site. No further archaeological research is recommended for the prehistoric component of 15Md386.

The historic artifacts collected from 15Md386 suggest that there may have been two disjoint historic components --one in the early nineteenth century and one in the late nineteenth to early twentieth century. Site 15Md386 is located on a 319.20 acre tract acquired by the Army from Katherine G. McCord. McCord owned several tracts acquired by the Army, including the Grahamton Mill, and it is unlikely that she resided at 15Md386. No structures appear at the location of 15Md386 on either a 1929 oil and gas map (Briggs 1929) or a 1940 Army map, suggesting that the structures at 15Md386 were already in ruin by the late 1920's. Although McCord is unlikely to have lived at 15Md386, it is possible that an earlier owner of the Grahamton mill, or perhaps the closer Garnettsville mill, resided at the site. Despite the disturbance caused by earthmoving for road construction and by erosion from tank training, the historic component of 15Md386 is considered potentially eligible for the National Register. The house area has been bulldozed but a sheet midden, and possibly other features, exist in the wooded portions of the site and may be capped by the bulldozer piles.

Rehab projects concentrate on repairing heavily disturbed and eroded areas, and avoid large stands of trees. The rehab work in the 15Md386 area will not effect the intact sheet midden, and will primarily impact the previously heavily disturbed portions of the site. If the rehab work will disturb the bulldozer piles which border the wooded portion of the site, the archaeological staff should be present to monitor the earthmoving activities. If the rehab work will not disturb the bulldozer piles and takes place only in the previously borrowed and heavily disturbed portions of the site, then no monitoring is recommended. Site 15Md386 will need further archaeological investigation if future earthmoving activities are proposed for the wooded

portion of the site. This investigation should include both field investigation and archival research.

CONCLUSIONS AND RECOMMENDATIONS

The Phase I archaeological investigation of 1996 rehab tracts 6, 7, and 8 of the 1996 rehab area along Twin Bridge Road and in the north portion of TA 10 resulted in the recording of sites 15Md383-15Md386 and reexamination of sites 15Md178-15Md180, 15Md184, 15Md362, and 15Md382.

Sites 15Md178-15Md180, 15Md362, and 15Md382 were previously reported to have prehistoric components of indeterminate cultural-temporal affiliation. Sites 15Md383, 15Md385, and 15Md386 have prehistoric components of indeterminate cultural-temporal affiliation, 15Md384 is a mid-19th to mid-20th century historic site, and 15Md362 and 15Md386 have early-19th century to early-20th century historic component. Site 15Md184 is a nineteenth to mid-twentieth century site.

Reinvestigation of sites 15Md178-15Md180 revealed that these sites are completely destroyed. The area in which the three sites are located is missing more than 1 m of soil and has erosional gullies 2 m deep. These three sites are not eligible for the National Register, and no future archaeological work is recommended for 15Md178-15Md180.

Reexamination of sites 15Md362 and 15Md382 yielded few and no artifacts, respectively, and no information that would warrant changing the previous recommendations that these sites are not eligible for the National Register. No additional archaeological research is recommended for 15Md362 and 15Md382.

Sites 15Md383-15Md385 are not eligible for the National Register primarily due to the lack of evidence of intact cultural deposits and evidence of prior disturbance due to tank training and erosion. Low artifact densities and counts and lack of evidence for identifiable activity areas also were contributing factors for the recommendation that these sites are not eligible for the National Register. No additional archaeological investigations are recommended for sites 15Md383-15Md385.

Site 15Md184 was determined to be in an excellent state of preservation and potentially eligible for the National Register. The site is completely outside any proposed rehab project area, and no archaeological investigation is recommended for the site in conjunction with the rehab project. Should future construction activities threaten the site, additional archaeological work is recommended. This archaeo-

logical investigation should include both fieldwork and archival research.

The prehistoric component of 15Md386 is not eligible for the National Register due to its small size and previous disturbance. Despite disturbance to the house area of the historic component of 15Md386, the historic component of 15Md386 is potentially eligible for the National Register due to the presence of an intact sheet midden of early nineteenth century materials in the undisturbed wooded portion of the site. The site may also be associated with an early owner of the Grahamton or Garnettsville mills, and therefore may have local significance.

The rehab work in the 15Md386 area will not effect the intact sheet midden and will primarily impact the previously heavily disturbed portions of the site. If the rehab work will disturb the bulldozer piles which border the wooded portion of the site, the archaeological staff should be present to monitor the earthmoving activities, both to recover artifacts in the bulldozer piles and to document features, if any are currently capped and hidden by the bulldozer piles. If the rehab work will not disturb the bulldozer piles and takes place only in the previously borrowed and heavily disturbed portions of the site, then no monitoring is recommended. Site 15Md386 will need further archaeological investigation if future earthmoving activities are proposed for the wooded portion of the site. This investigation should include both field investigation and archival research.

If archaeological materials are discovered during the rehab activities, all work in the vicinity of the finds must cease and the SHPO (502-564-7005) and the DPW staff archaeologist (502-624-6581) should be contacted, so a representative of those agencies may evaluate the materials. Also, if human remains, regardless of age or cultural affiliation, are discovered, all work in the vicinity of the remains must cease immediately, and the state medical examiner (502-564-4545) and the appropriate local law enforcement agency (Fort Knox Law Enforcement Command, 502-624-6852) must be contacted, as stipulated in KRS 72.020.

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APPENDIX A.
RESUMES OF KEY PERSONNEL

Pamela A. Schenian
Staff Archaeologist and Project Principal Investigator

Office Address: Directorate of Public Works
ATTN: ATZK-DPW (Schenian)
U.S. Army Armor Center and Fort Knox
Fort Knox, Kentucky 40121-5000
Phone: (502) 624-6581

Date and Place of Birth: January 1, 1959; Waukesha, WI.

Present Position: J.M. Waller & Associates/Fort Knox Contract Staff Archaeologist

Education:

A.B.D. in Anthropology, Northwestern University, 1984.
M.A. in Anthropology, Northwestern University, 1982.
A.B. in Anthropology, Bryn Mawr College, 1980.

Previous Employment:

Senior Staff Archeologist, Archeology Service Center,
Department of Sociology, Anthropology, and Social Work, Murray State University, Murray, KY, November 1991-June 1993;
Staff Archeologist, November 1983-November 1991.

Southern Illinois University, Carbondale, IL: Field Technician, November-December 1985, September-October 1984.

Illinois State Museum Society, Springfield, IL: Field Assistant II (Supervisor), summer 1983; Field Technician, summer 1981.

Center for American Archeology, Kampsville, IL: Field Technician, summer 1982.

Department of Anthropology, Northwestern University, Evanston, IL: Teaching Assistant, 1981-82 academic year.

Great Lakes Archeological Research Center, Milwaukee, WI: Field Technician, summer 1979.

Field Research Experience:

Field experience on prehistoric and historic archaeological projects in Illinois, Indiana, Kentucky, New Jersey, South Dakota, Tennessee, and Wisconsin, 1979-present.

Professional Publications, Reports, Papers and Manuscripts:
108 CRM contract reports on projects in Indiana, Kentucky, and Tennessee.

1 Homicide site excavation contract report prepared in lieu of court testimony in Illinois.

7 Papers presented at professional conferences.

6 Publications.

Doctoral candidacy qualifying paper: "A Theory of Individual Style Variation for Archeological Studies".

Ms. submitted in partial fulfillment of the M.A. requirements: "Models of Environmental-Cultural Relationships: Testing with Archeological Evidence".

Stephen T. Mocas
Contract Assistant Staff Archaeologist

Office Address: Directorate of Public Works
ATTN: ATZK-DPW (Mocas)
U.S. Army Armor Center and Fort Knox
Fort Knox, Kentucky 40121-5000
Phone: (502) 624-6581

Present Position: University of Louisville Program of
Archaeology/Fort Knox Contract Assistant Staff Archeologist

Education:

Completed one year of doctoral program, Southern Illinois University, Carbondale, Illinois, 1972.

B.A. in Anthropology, University of Louisville, 1971.

Previous Employment:

Indiana University, Bloomington, Indiana: Staff Archaeologist, Part-time September 1991-Present.

Fort Knox/University of Louisville: Contract Assistant Staff Archaeologist, November 1993-December 1994.

Murray State University, Murray Kentucky: Staff Archaeologist, November 1991-November 1993.

Jefferson Community College, Louisville, Kentucky. Anthropology Instructor, August 1981-December 1982.

Louisville School of Art, Louisville, Kentucky: Anthropology Instructor, January-May 1976.

University of Louisville Archaeological Survey, Louisville, Kentucky. Project Director, Field Supervisor, or Research Assistant on various projects, July 1969-January 1977.

State University of New York of Buffalo, Buffalo, New York. Senior Field Worker, June-August 1970.

Field Research Experience:

Field experience, Phase I-III, prehistoric and historic archaeological projects in the states of Illinois, Indiana, Kentucky, New York, and Tennessee, 1969-present.

Research Grants:

Six grants for fieldwork and research.

Professional Publications, Reports, Papers and Manuscripts:

2 Non-contract site reports on projects.

33 CRM contract reports on projects.

6 Chapters in additional site reports.

5 Publications.

APPENDIX B.
LOCATION OF CULTURAL RESOURCES
AND SITE PLANS