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**PHASE I ARCHAEOLOGICAL SURVEY, TVA CLINCH RIVER
SITE CHARACTERIZATION PROJECT, ROANE COUNTY,
TENNESSEE**

DRAFT REPORT

February 2011

**PHASE I ARCHAEOLOGICAL SURVEY, TVA CLINCH RIVER
SITE CHARACTERIZATION PROJECT, ROANE COUNTY,
TENNESSEE**

LEAD FEDERAL AGENCY: TENNESSEE VALLEY AUTHORITY

DRAFT REPORT

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February 2011

MANAGEMENT SUMMARY

In January and February of 2011, TRC Environmental Corporation (TRC) conducted a Phase I archaeological survey of the Clinch River Site (CRS) in Roane County, Tennessee. The site, owned by the Tennessee Valley Authority (TVA), is on a peninsula defined by a large bend in the Clinch River between approximately River Miles 15 to 18. As part of the planning for possible construction of power-generating small module reactors on the property, TVA proposes to carry out various site characterization investigations across the entire parcel. Among other tasks, these investigations will include geological core borings and installation of observation wells. In advance of the ground disturbance expected during these investigations, TVA contracted with TRC to carry out a Phase I archaeological survey of the project area, in compliance with Section 106 of the National Historic Preservation Act (as amended) and its implementing regulations at 36 CFR 800.

This survey was designed to document and assess archaeological resources located within the Area of Potential Effects (APE) of the planned project. Archaeologically, the APE consisted of approximately 310.2 acres including and surrounding the previously disturbed "power block" area on the property which totals 153.4 acres. A total area of approximately 156.7 acres (0.25 square miles or 0.63 square km) was subjected to an archaeological survey.

The study involved a preliminary records search at the Tennessee Division of Archaeology (TDOA) in December of 2010, the Tennessee Historical Commission (THC), located in Nashville, Tennessee, and TVA property acquisition maps and files. Based on TDOA files, 12 archaeological sites have been previously recorded within the APE.

The property has seen four distinct phases of previous archaeological assessments at various levels, starting in the late nineteenth century and concluding with extensive work in the 1970s and early 1980s. The current survey was designed to help fill in the coverage gaps of this previous work, in terms of unsurveyed or undersurveyed areas within the APE. Most of these gaps are in the uplands in the central portion of the property, where slope and heavy vegetation discouraged previous work. The current investigation also revisited all previously recorded sites within the APE. Previous documentation on these sites includes a variety of discrepancies, in particular in regard to mapped locations and boundaries. The revisits were done in order to check the current conditions of each site, to reassess the deposits in terms of integrity and NRHP eligibility of each using currently accepted standards, and to redelineate and record the boundaries of remaining definable cultural deposits at the sites using sub-meter GPS technology.

A TRC field crew under the direction of Principal Investigator Jared Barrett surveyed the project APE on foot from January 3 to February 2, 2011. Much of the work focused on redelination and reassessment of previously recorded archaeological resources within the

APE along with intensive survey of the project area outside of the recorded sites. Shovel testing and visual examination of exposed ground surfaces within the APE identified five previously unrecorded archaeological sites (40RE585–589). The survey also re-evaluated 12 previously identified archaeological sites (40RE106–108, 40RE120, 40RE129, 40RE152–154, 40RE159, 40RE163, 40RE165, and 40RE166).

Previously recorded archaeological site 40RE106 consists of a prehistoric open habitation dating to the Middle and Late Woodland periods (see Figure 1). Discrepancies in the site location of 40RE106 existed between the TDOA record and TVA information. The survey examined both recorded locations for 40RE106 and confirmed that TDOA location information on the site is correct. A total of 31 shovel tests were excavated within 40RE106 with 12 positive for cultural material. Visual examination of [

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] 0RE106 also observed a light scatter of lithic debitage. Shovel tests revealed intact subsurface deposits at 40RE106. TRC recommends 40RE106 as eligible for listing on the NRHP under Criterion D of 36 CFR 60.4 as it contains intact subsurface archaeological deposits dating to the Middle and Late Woodland period. TRC recommends TVA avoid this site during the current project. If the site can not be avoided during the current project, TRC recommends a data recovery plan be established for the site.

Previously recorded archaeological site 40RE107 consists of a prehistoric open habitation dating to the Early Archaic and Woodland periods (see Figure 1). A total of 161 shovel tests were excavated within 40RE107 with 61 positive for cultural material. Visual examination of [

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] did not observe any cultural material. Shovel tests revealed intact subsurface deposits at 40RE107 which extend to over 90 cm (2.6 feet) in depth. TRC recommends 40RE107 as eligible for listing on the NRHP under Criterion D of 36 CFR 60.4 as it contains intact subsurface archaeological deposits dating to the Early and Late Archaic and Woodland periods. TRC recommends TVA avoid this site during the current project. If the site can not be avoided during the current project, TRC recommends a data recovery plan be established for the site.

Previously recorded archaeological site 40RE108 consists of a prehistoric open habitation dating to the Late Archaic, Woodland, and Mississippian periods (see Figure 1). A total of 63 shovel tests were excavated within 40RE108 with 17 positive for cultural material. Visual examination of [

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] observed three subsurface shell middens [

Exempted from Disclosure by Statute

] and a light scatter of FCR, lithic debitage, and prehistoric ceramic [

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1. Shovel tests revealed intact subsurface deposits at 40RE108 which extend to over 1 m (3.3 feet) in depth. TRC recommends 40RE108 as eligible for listing on the NRHP under Criterion D of 36 CFR 60.4 as it contains intact subsurface archaeological deposits dating to the Late Archaic, Woodland, and Mississippian periods. TRC recommends TVA avoid this site during the current project. If the site can not be avoided during the current project, TRC recommends a data recovery plan be established for the site.

Previously recorded archaeological site 40RE120 consists of the structural debris of a twentieth century farmstead and a scatter of historic artifacts (see Figure 1). TRC recommends 40RE120 as ineligible for listing on the NRHP due to a lack of research potential and lack of intact archaeological deposits. No further archaeological work is recommended for 40RE120.

Previously recorded site 40RE129 was investigated in 1974 by Gerald Schroedl with the University of Tennessee. Schroedl's work determined the main feature at the site, a mound to be a recent historic soil disturbance. Tennessee site records indicate the site number was vacated and is no longer in use as an official state site number. No further archaeological work is recommended for 40RE129.

Previously recorded sites 40RE152, 40RE154, and 40RE163 consist of prehistoric open habitation lithic scatters of undetermined cultural affiliation. TRC work at these sites confirmed these characterizations. TRC recommends 40RE152, 40RE154, and 40RE163 as ineligible for listing on the NRHP due to a lack of research potential and lack of intact archaeological deposits. No further archaeological work is recommended for 40RE152, 40RE154, and 40RE163.

Previously recorded site 40RE153 was resurveyed in order to determine its relationship to the boundary of the APE. Survey determined the site is located outside the current APE. No further archaeological work is recommended for 40RE153.

The current project also attempted to relocate previously recorded site 40RE159 in order to determine its exact relationship to the current APE. Site 40RE159 could not be relocated within the APE during the current archaeological survey. It appears the site was destroyed during grading operations within the "power block" area in the early 1980s. No further archaeological work is recommended for this site in respect to this project.

Previously recorded archaeological site 40RE165 consists of a prehistoric open habitation dating to the Early and Late Archaic periods and a historic fish weir (see Figure 1). A total of 17 shovel tests were excavated within 40RE165 with 11 positive for cultural material. Visual examination of [

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] uncovered a light scatter of FCR and lithic debitage. Shovel tests revealed intact subsurface deposits at 40RE165 which extend to over 1 m (3.3 feet) in depth. TRC recommends 40RE165 as eligible for listing on the NRHP under Criterion D of 36 CFR 60.4 as it contains intact subsurface archaeological deposits dating to the Early and Late Archaic periods. TRC recommends TVA avoid this site during the current project. If the site can not be avoided during the current project, TRC recommends a data recovery plan be established for the site.

Previously recorded archaeological site 40RE166 consists of a prehistoric open habitation dating to the Middle and Late Archaic and Early and Middle Woodland periods (see Figure 1). A total of 30 shovel tests were excavated within 40RE166 with five positive

for cultural material. Visual examination of [

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] well as a light scatter of FCR, lithic debitage, and prehistoric ceramic. Shovel tests revealed intact subsurface deposits at 40RE166 which extend to over 1 m (3.3 feet) in depth. TRC recommends 40RE166 as eligible for listing on the NRHP under Criterion D of 36 CFR 60.4 as it contains intact subsurface archaeological deposits dating to the Archaic and Woodland periods. TRC recommends TVA avoid this site during the current project. If the site can not be avoided during the current project, TRC recommends a data recovery plan be established for the site.

Five newly recorded archaeological sites (40RE585–589) were documented within the proposed APE (see Figures 1). 40RE585 consists of a light surface scatter of lithic debitage collected [
 Exempted from Disclosure by Statute] . 40RE586 and 450RE587 consist of late nineteenth to mid twentieth century farmsteads. 40RE589 consists of a prehistoric lithic scatter of undetermined cultural affiliation. TRC recommends all four of these sites as ineligible for listing on the NRHP due to a lack of research potential and lack of intact archaeological deposits. No further archaeological work is recommended in regards to 40RE585–587, and 40RE589.

The fifth newly recorded archaeological site, 40RE588, consists of the Hensley Cemetery. Graves in the cemetery date to the early to mid twentieth century. The NRHP employs a fairly rigorous policy regarding the listing of cemeteries. Ordinarily cemeteries are not considered eligible for the National Register, unless the site in question derives its primary significance from graves of persons of particular transcending importance, from age, from distinctive design features, or from association with historic events. Based on TRC's investigation, 40RE588 does not fulfill any of these criteria, and therefore is recommended ineligible for inclusion in the NRHP. Although 40RE588 has been recommended ineligible for the NRHP, TRC recommends TVA avoid this cemetery during the current project due to the presence of human burials. If the site can not be avoided during the current project, TRC recommends TVA refer to Tennessee law in regards to the treatment of cemeteries.

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At TRC, Principal Investigator Jared Barrett coordinated all aspects of the project, directed the archaeological fieldwork, and served as senior author of this report. Kelly Hockersmith served as co-director of the field work and is a co-author on the report. Amanda Garvin, Jeremy Galbraith, Hannah Guidry, Meghan Cook, Matt Spice, Tim Copeland, Sterling Howard, Bill Duckworth, Thomas Garrow, Dave Mallet, Zach Stanyard, and Emily Laird served as archaeological technicians during the field work. In Nashville, Josh Tuschl directed the laboratory analysis of the materials recovered during the investigation. TRC Senior Preservation Planner Ted Karpynec conducted historical research on the project area and was another co-author of the report. Also in the Nashville office, Larry McKee served as project manager and an additional co-author of the report and conducted a technical edit of the draft.

I. INTRODUCTION

In January and February of 2011, TRC Environmental Corporation (TRC) conducted a Phase I archaeological survey of the Clinch River Site (CRS) in Roane County, Tennessee (Figures 1–2). The site, owned by the Tennessee Valley Authority (TVA), is on a peninsula defined by a large bend in the Clinch River from approximately River Miles 15 to 18. As part of the planning for possible construction of power-generating small module reactors on the property, TVA proposes to carry out various site characterization investigations across the entire parcel. These investigations will include geological core borings and installation of observation wells, requiring extensive clearing and construction of new access roads, parking areas, and fencing. TVA will employ equipment such as bulldozers, backhoes, forklifts, tree harvesters, and hauling trucks during the characterization investigations. In advance of the ground disturbance expected during these investigations, TVA contracted with TRC to carry out a Phase I archaeological survey of the project area, in compliance with Section 106 of the National Historic Preservation Act (as amended) and its implementing regulations at 36 CFR 800 (CFR 2010b).

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Figure 1. Excerpt of the Elverton and Bethel Valley, TN 7.5-minute USGS quadrangles, showing the location of the project area and investigated archaeological sites.

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I. Shovel tests revealed intact subsurface deposits at 40RE107 which extend to over 90 cm (2.6 feet) in depth. TRC recommends 40RE107 as eligible for listing on the NRHP under Criterion D of 36 CFR 60.4 as it contains intact subsurface archaeological deposits dating to the Early and Late Archaic and Woodland periods. TRC recommends TVA avoid this site during the current project. If the site can not be avoided during the current project, TRC recommends a data recovery plan be established for the site.

Previously recorded archaeological site 40RE108 consists of a prehistoric open habitation dating to the Late Archaic, Woodland, and Mississippian periods (see Figure 1). A total of 63 shovel tests were excavated within 40RE108 with 17 positive for cultural material.

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Visual examination [

] uncovered three subsurface shell middens within the riverbank and a light scatter of FCR, lithic debitage, and prehistoric ceramic. Shovel tests revealed intact subsurface deposits at 40RE108 which extend to over 1 m (3.3 feet) in depth. TRC recommends 40RE108 as eligible for listing on the NRHP under Criterion D of 36 CFR 60.4 as it contains intact subsurface archaeological deposits dating to the Late Archaic, Woodland, and Mississippian periods. TRC recommends TVA avoid this site during the current project.

If the site can not be avoided during the current project, TRC recommends a data recovery plan be established for the site.

Previously recorded archaeological site 40RE120 consists of the structural debris of a twentieth century farmstead and a scatter of historic artifacts (see Figure 1). TRC recommends 40RE120 as ineligible for listing on the NRHP due to a lack of research potential and lack of intact archaeological deposits. No further archaeological work is recommended for 40RE120.

Previously recorded site 40RE129 was investigated in 1974 by Gerald Schroedl with the University of Tennessee. Schroedl's work determined the mound to be a recent historic soil disturbance. Tennessee site records indicate the site number was vacated and is no longer in use as an official state site number. No further archaeological work is recommended for 40RE129.

Previously recorded sites 40RE152, 40RE154, and 40RE163 consist of prehistoric open habitation lithic scatters of undetermined cultural affiliation. TRC recommends 40RE152, 40RE154, and 40RE163 as ineligible for listing on the NRHP due to a lack of research potential and lack of intact archaeological deposits. No further archaeological work is recommended for 40RE152, 40RE154, and 40RE163.

Previously recorded site 40RE153 was resurveyed in order to determine its relationship to the boundary of the APE. Survey in the recorded location of 40RE153 determined the site is located outside the current APE. No further archaeological work is recommended for 40RE153.

The current project also attempted to relocate previously recorded site 40RE159 in order to determine its exact relationship to the current APE. Site 40RE159 could not be relocated within the APE during the current archaeological survey. It appears the site was destroyed when the "power block" area was constructed on the property in the early 1980s. No further archaeological work is recommended for this site in respect to this project.

Previously recorded archaeological site 40RE165 consists of a prehistoric open habitation dating to the Early and Late Archaic periods and a historic fish weir (see Figure 1). A total of 17 shovel tests were excavated within 40RE165 with 11 positive for cultural material. Visual examination [

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] uncovered a light scatter of FCR and lithic debitage. Shovel tests revealed intact subsurface deposits at 40RE165 which extend to over 1 m (3.3 feet) in depth. TRC recommends 40RE165 as eligible for listing on the NRHP under Criterion D of 36 CFR 60.4 as it contains intact subsurface archaeological deposits dating to the Early and Late Archaic periods. TRC recommends TVA avoid this site during the current project. If the site can not be avoided during the current project, TRC recommends a data recovery plan be established for the site.

Previously recorded archaeological site 40RE166 consists of a prehistoric open habitation dating to the Middle and Late Archaic and Early and Middle Woodland periods (see

Figure 1). A total of 30 shovel tests were excavated within 40RE166 with five positive for cultural material. Visual examination [

[uncovered a lens of shell midden as well as a light scatter of FCR, lithic debitage, and prehistoric ceramic. Shovel tests revealed intact subsurface deposits at 40RE166 which extend to over 1 m (3.3 feet) in depth. TRC recommends 40RE166 as eligible for listing on the NRHP under Criterion D of 36 CFR 60.4 as it contains intact subsurface archaeological deposits dating to the Archaic and Woodland periods. TRC recommends TVA avoid this site during the current project. If the site can not be avoided during the current project, TRC recommends a data recovery plan be established for the site.

Five newly recorded archaeological sites (40RE585–589) were documented within the proposed APE (see Figures 1). 40RE585 consists of a light surface scatter of lithic debitage [

] 40RE586 and 40RE587 consist of late nineteenth to mid twentieth century farmsteads. 40RE589 consists of a prehistoric lithic scatter of undetermined cultural affiliation. TRC recommends all four of these sites as ineligible for listing on the NRHP due to a lack of research potential and lack of intact archaeological deposits. No further archaeological work is recommended in regards to 40RE585–587, and 40RE589.

40RE588 consists of the Hensley Cemetery which dates to the early to mid twentieth century. The NRHP employs a fairly rigorous policy regarding the listing of cemeteries. Ordinarily cemeteries are not considered eligible for the National Register, unless the site in question derives its primary significance from graves of persons of particular transcending importance, from age, from distinctive design features, or from association with historic events. Based on TRC's investigation, 40RE588 does not fulfill any of these criteria, and therefore is recommended ineligible for inclusion in the NRHP. Although 40RE588 has been recommended ineligible for the NRHP, TRC recommends TVA avoid this cemetery during the current project due to the presence of human burials. If the site can not be avoided during the current project, TRC recommends TVA refer to Tennessee law in regards to the treatment of cemeteries as outlined below.

Tennessee state law includes a variety of provisions that are applicable to the discussion of 40RE588. Two of these laws, the Desecration of a Venerated Object statute (TCA 2011b), and the Abuse of Corpse statute (TCA 2011a) provide for protection against intentional disturbance of cemeteries, burial sites, and human remains. In accordance with these state laws, avoidance measures should be employed if TVA should decide to undertake any ground disturbing activities in the area. The Termination of Cemetery statutes (TCA 2011c) provide a procedure for legally disinterring gravesites if avoidance proves impossible. According to these statutes, a landowner having property containing a burial ground can receive permission from the Chancery Court to move the graves if it can be shown that: 1) the burial ground is abandoned, 2) the burial ground is neglected, or 3) conditions exist that render the burial site improper as a resting place for the dead. If any one of these conditions is established, the Chancery Court can grant the property owner permission to move the graves and rebury them elsewhere.

II. ENVIRONMENTAL SETTING

PROJECT SETTING

The project area is located in Roane County in east-central Tennessee, on a peninsula created by a large bend in the Clinch River, from River Mile 15 to 18. The APE covers approximately 325 acres, surrounding and including a large previously disturbed area covering 153.44 acres. This disturbed area consists of a massively cut and filled building platform, the intended "power block" location of a never-completed breeder reactor complex. Construction on the disturbed area took place starting in the 1970s through 1983, when the project was abandoned. The project area is within the southwestern portion of the Ridge and Valley physiographic province, near its eastern boundary with the Cumberland Plateau (Swann et al. 1942). Elevations within the project area range from 740 to 900 feet above mean sea level (AMSL). The general terrain of this part of the state is characterized by narrow ridges and valleys oriented from northeast to southwest. The project area is located along the southeastern portion of the Chestnut Ridge system, just southwest of the Bethel Valley. Most of the project area is uplands associated with the Chestnut Ridge system, cut by steep narrow ravines draining northwest and southeast into the adjacent Clinch River. Also included along the western edge of the project area is a segment of relatively broad floodplain. The area is cut by two major transmission line routes and numerous logging and construction roads. Vegetation outside of the central disturbed area consists of secondary growth forest with frequent spots of heavy underbrush. The Clinch River here is impounded by Watts Bar Dam, located approximately 53 miles downstream on the Tennessee River near Spring City in Rhea County.

SOILS

There are several soil series within the project area with the Pope and Sequatchie soil series located near the shore of the Clinch River and the Clarksville, Colbert, Talbott, and Wolftever soil series in the uplands of the project area (Swann et al. 1942). Pope series soils are young well-drained soils that lie in the bottoms of streams. Most of the alluvial material giving rise to these soils comes from uplands underlain by sandstone and shale. Sequatchie series soils are young, showing some but not much development. These soils are developed from terrace material, most of which comes from the uplands underlain by sandstone. Clarksville series soils are referred to as white gravelly land. They are located on steep, hilly, and rolling areas on ridges underlain by cherty dolomitic limestone. Colbert series soils are very textured soils. They are developed from highly clayey limestones and occupy floors of the interridge valleys that are underlain by limestone. Talbott series soils occupy undulating, rolling, and hilly areas in the troughs of the interridge valley. They are developed from the residuum of clayey limestones and have grayish-brown surface soils and yellowish red subsoils. Wolftever series soils are developed from terrace material derived largely from uplands underlain by limestone. These soils occupy low terraces which are subject to floods.



Figure 3. View of APE along the east side of the APE with the Power Block in the background, facing south.



Figure 4. View of river terrace along the Clinch River within the APE, facing southwest.

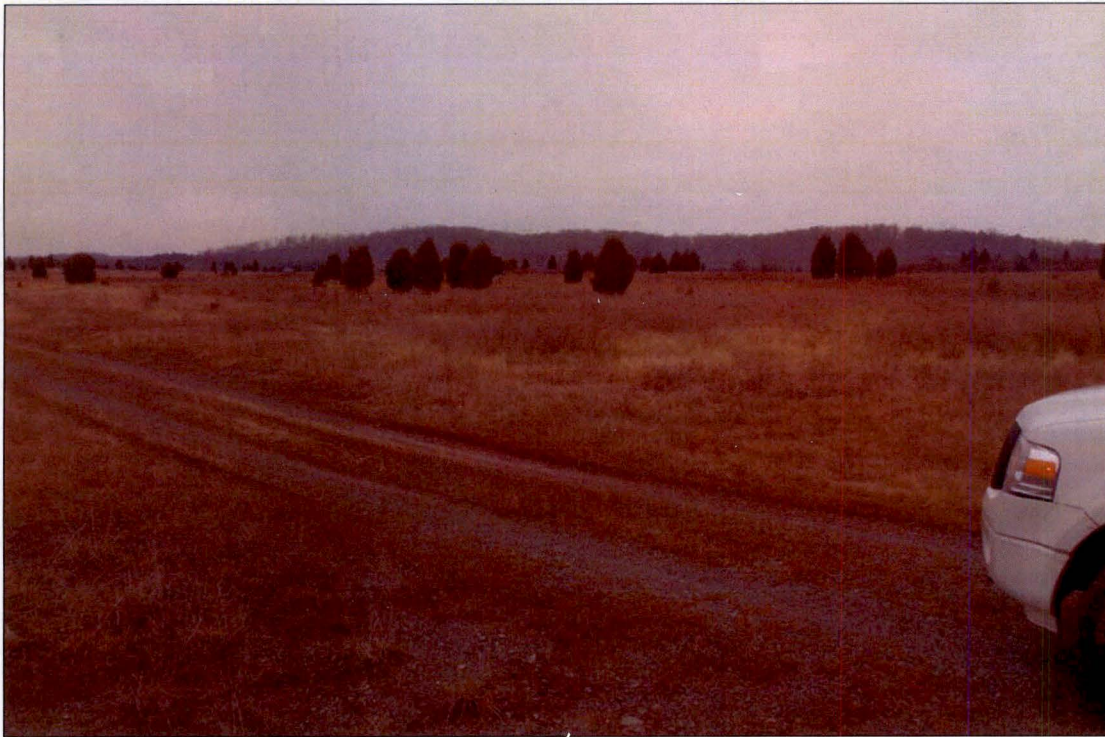


Figure 5. View of Power Block area within the APE, facing northwest.

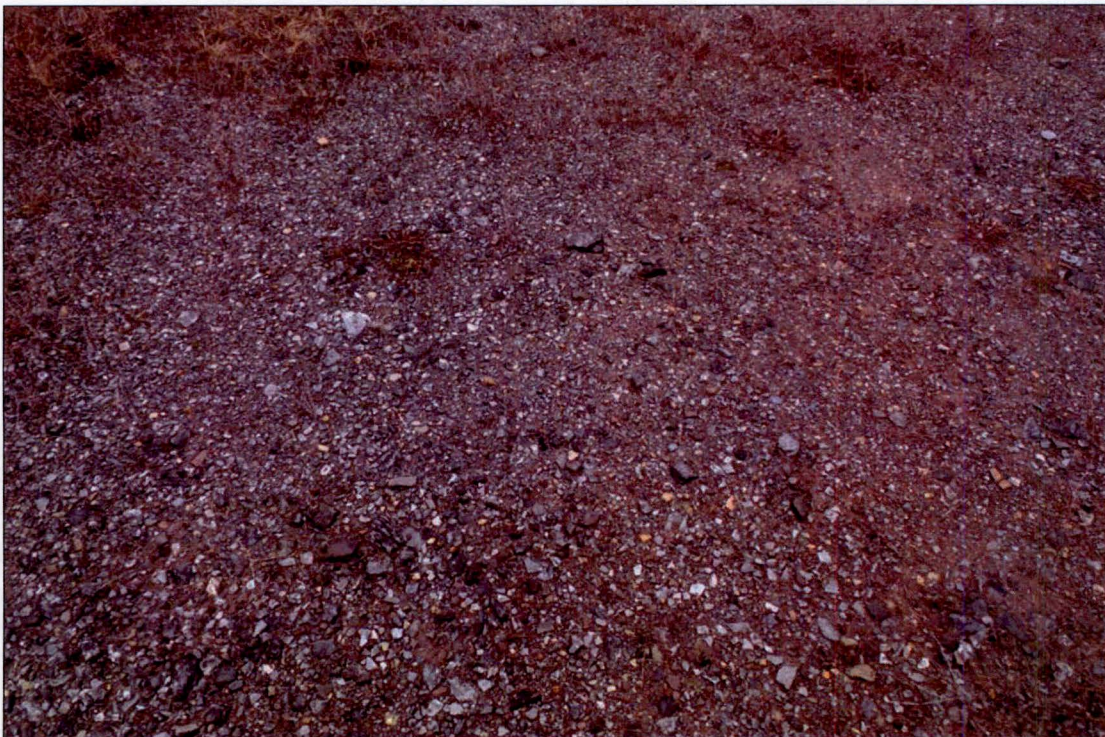


Figure 6. Gravel fill on the surface within the Power Block area, facing south.



Figure 7. View of proposed intake area, facing northeast.



Figure 8. View of access road along the Clinch River within the APE, facing southeast.



Figure 9. View of typical ground cover within the APE, facing southeast.

MODERN CLIMATE

As detailed in the Roane County soil survey (Swann et al. 1942), the climate of Roane County consists of cool winters and warm summers. Winter temperatures average 40 degrees Fahrenheit and summer temperatures average 77 degrees. Total annual precipitation is between 36.6 and 67 inches. Average seasonal snowfall is about four inches.

PHYSIOGRAPHY

The project area lies along the Ridge and Valley (or Great Valley) physiographic province of eastern Tennessee (Figure 10). The geology of the Valley and Ridge province reflects the tectonic processes that have operated on the North America continent for approximately 1.1 billion years. The development of the Valley and Ridge geologic formations began with the deposition of alluvial sediments in a large geosyncline west of what is now known as the Blue Ridge province. Folding and fracturing events associated with a mountain building episode 230–260 million years ago formed the basic geology and orientation of the province. Erosion-resistant rock including cherty limestones, sandstones, shales, and dolomites form the ridges in the region, while less resistant materials have eroded over time to form valleys (Floyd 1965). Topographic relief in the province varies between 750–1000 feet from valley floor to summit (Miller 1979).

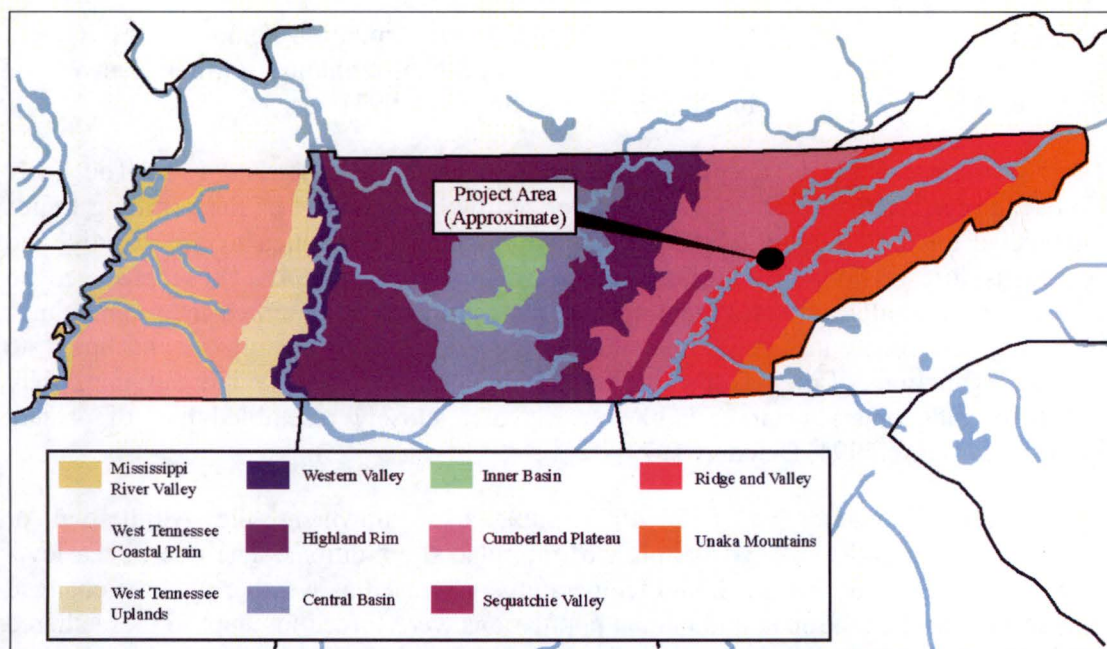


Figure 10. Physiographic map of Tennessee showing the location of the project area.

PALEOENVIRONMENT

The environmental setting of the project area has changed dramatically in the approximately 12,000 years since humans first occupied Tennessee. Humans first arrived in the American Southeast between about 10,000 and 12,000 years before present (B.P.), during the final stages of the Pleistocene epoch (ca. 1.8 MYA to 10,000 years B.P.). At that time the environment of the region was characterized by repeated glacial stages, punctuated by warmer interglacial periods. Full glacial conditions resulted in less seasonal variations and average temperatures 21–27 degrees Fahrenheit cooler than today (Bense 1994). Sea level had dropped dramatically during the Pleistocene, reaching levels 330–390 feet lower than today and exposing much of the continental shelf, including the Bering land bridge between Alaska and Siberia. During the Wisconsinian glaciation (ca. 28,000–18,000 B.P.), the great Laurentide ice sheet spread across much of North America above the Ohio Valley (Frison and Walker 1990). Many plant and animal species inhabiting the American Southeast during the late Pleistocene closely resembled modern species, and some conifers, mosses, flowering plants, insects, birds, and mammals survive to this day. In addition, a number of now extinct megafauna including mammoth, mastodon, bison, saber-toothed cats, giant ground sloth, horse, and bear roamed the Pleistocene Southeast.

The transition between the Pleistocene epoch and the ensuing Holocene (ca. 10,000 B.P. to present) is marked by fluctuations in global temperatures resulting in a gradual transition to interglacial conditions. As temperatures increased, the glaciers and ice sheets that covered much of North America began to retreat northward (Dawson 1994). Pine and spruce dominated boreal forests were established in the project area by about 14,000 B.P.

(Delcourt and Delcourt 1981). As temperatures and precipitation continued to increase, these boreal forests were replaced by deciduous growth, including northern hardwoods such as oak, hickory, beech, birch, and elm (Webb et al. 1993).

The Holocene can be divided into three periods; Early, Middle, and Late. The Early Holocene (ca. 10,000–8500 B.P.) is characterized by continuation of the warming trends established towards the end of the Pleistocene. Sea level continued to rise rapidly, and deciduous forests flourished throughout the region (Bense 1994). These provided an abundance of small game and plant species for use by the region's earliest inhabitants. Changing environmental conditions during the Early Holocene also contributed to massive extinctions of megafauna species. By about 8000 B.P., these large animals were largely extinct, and vegetation in the project area closely resembled that of present conditions (Bense 1994; Delcourt 1979).

The Middle Holocene (ca. 8500–4000 B.P.), also known as the Altithermal or Hypsithermal Interval, marked the peak of interglacial conditions. The rise in sea level slowed, precipitation decreased, and temperatures increased as weather patterns changed (Bense 1994). Plant, animal, and human populations were forced to adapt to these altered conditions. By the Late Holocene (ca. 4000 B.P. to present), the weather had again cooled, sea levels had stabilized, and environmental conditions in the Southeast were comparable to today (Bense 1994). Since the beginning of the Late Holocene, coniferous species have steadily intermixed with the predominately deciduous forests of the region.

III. CULTURAL HISTORY

PREHISTORIC OVERVIEW

Prehistoric occupation of the region is likely to have occurred continuously for at least 12,000 years before present (B.P.). Throughout this vast time period various changes in technology, settlements patterns, subsistence practices, population densities, social organization, ideology, and other aspects of human behavior have occurred. This chapter provides a general overview of current accepted understanding of these changes, as documented in the archaeological record of the region. It is divided into chronological periods that are widely accepted for the cultural sequence of eastern Tennessee; Paleoindian, Archaic, Woodland, Mississippian, and Historic settlement.

The prehistoric cultural sequence for the Great Valley of eastern Tennessee is largely derived from extensive archaeological investigations conducted along the Little Tennessee River in conjunction with TVA's Tellico Reservoir project (e.g., Chapman 1977, 1985a, 1985b; Kimball 1985). Other archaeological projects done near the project area, throughout the Ridge and Valley province, on the Cumberland Plateau, southeastern Kentucky as well as from the Unaka Mountains to the east of the project area as well as Southeastern archaeological research in general will be discussed in relation to the present study.

Paleoindian Period (11,500–10,000 B.P.)

The chronology of the Paleoindian period has been the subject of much ongoing debate in recent years. For the Eastern Woodlands in general, recent research on Paleoindian diagnostics suggests that this period can be somewhat arbitrarily subdivided into Early (ca. 11,500–10,900 B.P.), Middle (ca. 10,900–10,500 B.P.), and Late Paleoindian (ca. 10,500–10,000 B.P.) subperiods (Anderson 1990, 1995a, 1995b; Anderson et al. 1996). This tentative chronology is based on changes in hafted biface morphology. In particular, these three periods are thought to coincide with occurrences of Clovis and eastern fluted lanceolate forms like Gainey or Bull Brook; fluted and unfluted lanceolate forms with modified bases such as Cumberland, Quad, and Parkhill; and typically unfluted, notched, and unnotched lanceolate forms such as Dalton and Holcombe, respectively (Anderson 1995b; Morrow 1996). Other, somewhat less distinctive, features of Paleoindian lithic assemblages in eastern North America include a variety of unifacial cutting and scraping implements manufactured on blades.

Paleoindian adaptation in the Southeast as well as across North America likely was characterized by small, highly mobile bands that moved from place to place as preferred resources were depleted and new supplies of resources were sought. These bands are thought to have hunted and gathered now-extinct megafauna, like mastodon (*Mammuth americanum*) and bison (*Bison antiquus*), as well as flora that lived in the cooler climatic

conditions of the late Pliestocene. Other sources of food likely included aquatic and avian species.

Much like recovery patterns in other areas of the Southeast, Paleoindian diagnostics recovered in regions near the project area have occurred as isolated finds or as minor components of broader multi-component assemblages (see Broster 1989; Morse and Morse 1983; Pollack 1990). Although several intact Paleoindian deposits have been investigated recently in Tennessee (Broster 1989; Norton and Broster 1993), sparse data regarding Paleoindian settlement in the project area may be the result of a lack of intensive survey in the region, or even more likely the burial of Paleoindian sites by colluvial or alluvial processes. A survey of Paleoindian sites in the Southeast indicates that discrete, isolatable occupations do exist in the Ridge and Valley province of eastern Tennessee (Williams and Stoltman 1965). They have emphasized that the distribution of recorded sites seems to favor the lower lying valleys where suitable habitat for potentially important game resources would be more plentiful. Others have suggested that Paleoindian occupation may have been focused on the Mississippian Plateaus of south central Kentucky and Tennessee (Lewis 1954; Gatus and Maynard 1978). Gatus and Maynard (1978) found that Paleoindian remains are highly correlated with karst areas of south-central and eastern Kentucky.

Archaic Period (10,000–3000 B.P)

The Archaic period is traditionally divided into three subdivisions: Early (10,000–8000 B.P.), Middle (8000–5500 B.P.), and Late (5500–3000 B.P.). These divisions are largely based on temporal changes in style of projectile points. In general, the Archaic tradition is associated with two environmental changes that occurred at the terminal Pleistocene and early Holocene epochs; 1) large game, which either became extinct in the area or migrated north with the ice where the arctic tundra environment suited them, were replaced by modern faunal and floral species, and 2) coniferous forests were replaced by mixed deciduous forests. The Archaic can be distinguished within the archaeological record by the termination of fluted point manufacture, and the advent of numerous regional projectile forms and functions as well as a variety of specialized artifact types.

As glacial ice retreated northward mammals like white-tailed deer, turkey, squirrels, rabbits, and fish as well as vegetal resources that included nuts, berries, seeds, bulbs, and greens were now being exploited at times throughout the year. This broad range of fauna and flora was perhaps more prevalent than in the preceding Paleoindian period. The hunter-forager lifestyle in the Archaic period was highly efficient and resulted in a wide and even adaptation to the total natural environment (Jennings 1989). This intensive exploitation of local resources led to increased population growth over time throughout the Archaic period in the Southeast, which decreased group territory size (Anderson and Hanson 1988). Groups gradually became less mobile and more sedentary as villages began to be reoccupied annually.

Artifacts of the Archaic period pertain to an array of technological skills. Ground stone woodworking tools like axes, adzes, wedges, and gouges aided in exploiting the

deciduous forest environment. Food processing implements become more specialized and include metates, mortars, manos, and pestles. Stone vessels, used for storing food and water, begin to appear and reflect a more sedentary way of life. Multi-shaped atlatl weights, which made spear throwing more efficient and accurate, are introduced in the Archaic Period in the Southeast as well. Also, a higher incidence of fire-cracked stone is evident in the archaeological record reflecting an increased reliance on cooking. Finally, lanceolate forms of projectile points do continue, however a wider variety of style types emerge, including stemmed, corner-notched, and side notched respectively.

Adaptation in the Early Archaic is much like that of earlier Paleoindian hunting and foraging lifestyles. Most of the current knowledge regarding tool kits in this period for eastern Tennessee is restricted to lithic manifestations of its material culture. Diagnostic artifacts of the Early Archaic include chipped stone tools with side- and corner notched hafting elements and include Dalton, Big Sandy, Palmer, Bifurcate, and Kirk Corner Notched types with stemmed points such as Kirk stemmed manufactured in the latter part of the Early Archaic (Coe 1964).

The Middle Archaic period is generally seen as a difficult time, coinciding with the warmer and drier Hypsithermal Interval (Pielou 1991). Local inhabitants may have experienced occasional long droughts during this period. Chapman (1985b) suggests that indigenous populations may have declined during this period in eastern Tennessee as a result of environmental pressures.

The Middle Archaic period can be distinguished from Early Archaic times by an increase in ground stone tools and a more diverse stone tool kit. Diagnostic bifaces in eastern Tennessee include Stanly, Morrow Mountain, Sykes-White Springs, and Guilford types. Ground stone items, like atlatl weights, became increasingly common (Coe 1964).

During the Late Archaic period, modern climatic conditions prevailed throughout North America. This environmental change corresponded with increased moisture provided to the Southeast, causing local plant and animal life to flourish. Local inhabitants certainly took advantage of this by living along major streams where water, plants, and animals were plentiful. Some see this trend as the beginning of a sedentary lifestyle, which laid the foundation for more permanent villages in later periods (Wauchope 1966).

Savannah River Archaic (Coe 1964), Otarre Stemmed (Keel 1976), and Iddins (Chapman 1981) are the most common Late Archaic biface types. Exotic trade items, like marine shell and copper, appear in the Late Archaic archaeological record of the region and suggest the beginnings of a complex regional trade network. Evidence of social stratification, seen in differential mortuary treatments of grave goods, seems to be indicative of this period as well (Chapman 1985a).

Archaic period research in the Cumberland Plateau to the west of the project area suggests intensive seasonal exploitation rather than long-term residential living. This assertion is based on diagnostic tool types that indicate parallels in cultural development with respect to development in neighboring regions (Pace and Kline 1976; Ferguson and Pace 1981; Wilson and Finch 1980).

Woodland Period (3000–1100 B.P.)

The Woodland period in eastern Tennessee is divided into three sub-periods (Kimball 1985): Early (3000–2200 B.P.), Middle (2200–1650 B.P.), and Late (1650–1100 B.P.) Woodland. In many ways the Woodland period in Tennessee marks only a gradual transition in both subsistence and material culture of Archaic times. Undoubtedly this is because a similar deciduous forest environment was exploited throughout most of both periods. Various tools introduced in the Archaic, like drills, wedges, hoes, nutting stones, pestles, and awls, also appear in the archaeological record of the Woodland period. They were used for processing and preparing food and plants, woodworking, and textile manufacturing. Although exploitation patterns and subsistence patterns are generally similar in both Woodland and Archaic times, important ideological and technological changes occurred in Woodland times that clearly distinguish it from the Archaic.

On the technological front, ceramics first appear at the beginning of the Woodland period. They occur as very distinct series (or traditions) in various parts of the interior Southeast in a time-transgressive trend from the coastal margins of Georgia and South Carolina and spread inland between 2500 and 2000 B.P. The earliest of these include the Wheeler and Alexander series of the Tombigee drainage and Pickwick Lake region respectively, the Kellogg-Forsyth series of northern Georgia, the Deptford series of the Piedmont and Atlantic Coastal Plain, and a fabric and cordmarked series that prevailed in much of North Carolina and Tennessee (Smith 1986).

The Woodland period also saw changes in ideology. Burial customs, which were gaining importance in the Archaic period (Chapman 1985a), were expanded in the Woodland period by the creation of monumental earthworks in eastern Tennessee. These earthworks varied in form and function. Some were built over human bones and cremated remains and varied greatly in size. Others were not burial mounds and it is unclear what exact function they served. Enormous piles of earth characterized some of them; others were built in the shapes of animals, yet others were used to make enclosures around other mounds (Hudson 1976).

The Early Woodland period also saw the beginnings of intensive agriculture or horticulture (Watson 1989). Various plants, including goosefoot, maygrass, knotweed, sumpweed, little barley, and sunflower, began to be intensively exploited. Marshelder, goosefoot, cucurbits, and sunflower began to show morphological variations suggesting that the plants had been domesticated (Smith 1992). Diagnostic projectile points, like Adena, Adena-like, and Flint Creek forms, are common for the Early Woodland period in the region (McNutt and Weaver 1985). McCollough and Faulkner (1973) have described ceramics of the Watts Bar phase as quartz- and sand-tempered with fabric and cord markings. The Long Branch phase ceramics of the Early Woodland period are limestone tempered.

The Middle Woodland period can be distinguished by the occurrence of exotic non-local trade items associated with the Hopewell culture. Although centered on the Ohio River Valley, the Hopewell Interaction Sphere reached into eastern Tennessee (Caldwell 1964; Seaman 1979). Ceremonial artifacts have been found at [

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[^{Exempted from Disclosure by Statute}] in North Carolina (Chapman 1973; Keel 1976). Diagnostic hafted bifaces resembling Pigeon Side-Notched, Greenville, and Camp Creek (Keel 1976) are characteristic of the Middle Woodland period. Ceramics associated with this middle portion of the Woodland period in eastern Tennessee are sand-tempered Connestee series and limestone-tempered Pickwick Complicated Stamped, Wright Check Stamped, Bluff Creek Simple Stamped, and Candy Creek Cordmarked types. Horticulture continues to be practiced and remains of maize dated to about 1800 B.P. have been recovered from middens along the [^{Exempted from Disclosure by Statute}] (Chapman 1973).

Late Woodland period occupations in eastern Tennessee are much like the previous period with increased emphasis on horticulture leading to the transition to Mississippian lifestyles. It has traditionally been synonymous with the Hamilton culture (Lewis and Kneburg 1941), which was characterized by a preponderance of the limestone-tempered Hamilton Cord Marked ceramic type. Small shell heaps in the Ckickamauga and Watts Bar basins were identified as midden remains of single-family habitation sites. Radiocarbon assays on material from Hamilton conical burial mounds indicate a time span of 1300–800 B.P. for use of the mounds, which extends well into the Mississippian period (Schroedl et al. 1990). This also suggests that shell heaps [^{Exempted from Disclosure by Statute}]

[may not coincide exclusively with Hamilton habitation. Diagnostic bifaces like Jack's Reef Corner Notched, Bradley Spike, Hamilton, and Madison points, are characteristic of the Late Woodland period. These smaller Hamilton and Madison points are thought to reflect the adoption of bow and arrow technology in the Late Woodland. They also saw continued use in the succeeding Mississippian period.

Early Woodland occupations in areas surrounding the project area are very similar in nature to Late Archaic occupations despite the advent of ceramic technology. Archaeological evidence suggests that Early Woodland populations pursued an Archaic like, broad and mixed subsistence economy. For example, Early Woodland components at [^{Exempted from Disclosure by Statute}] in extreme northeast Tennessee on the Holston River reveal a heavy reliance on arboreal seeds like hickory, walnut, and acorn (Lafferty 1981). However, unlike Late Archaic adaptation, evidence exists at [^{Exempted from Disclosure by Statute}] that these wild plants were being stored. This points toward increased sedentism in the Early Woodland period.

Some have suggested that a dramatic shift occurred in settlement of upland areas during the Middle Woodland period in the Cumberland Plateau to the northwest of the study area (Pace and Kline 1976). Intensive surveying, conducted on the Plateau in the headwaters area of the Big South Fork, seem to confirm this as Middle Woodland sites comprise 25 percent of the total components recognized (Ferguson and Pace 1981). However, in his studies of archaeological sites found in the [^{Exempted from Disclosure by Statute}] in northwest North Carolina, Purrington (1982) recognized increased occupation of bottomland valley areas in Middle and Late Woodland times. North of Powell Valley in the southeastern mountain region of Kentucky Woodland settlement issues are less clear. As of 1990 only 123 Woodland sites had been recorded, which is among the lowest compared to other physiographic regions in eastern Kentucky (Railey 1990).

Mississippian Period (1100–400 B.P.)

The Mississippian period has been the subject of much research throughout the Southeast. Its cultural manifestations began along the middle course of the Mississippi River between present-day St. Louis, Missouri and Vicksburg, Mississippi. It developed, in a major way, at Cahokia in the American Bottom and spread in all directions mainly to the southwest and southeast along major river systems to all parts of the Southeast (Hudson 1976).

Research involving Mississippian culture in eastern Tennessee was initiated with archaeological work done in the 1930's and 40's in conjunction with dam construction along major rivers in the area. Webb's (1938) investigations were conducted in the Norris Basin of the Clinch River and Lewis and Kneberg's (1941) archaeological work was in the Chickamauga Lake region. More recently, archaeological investigations in the Tellico Reservoir have considerably reshaped our understanding of Mississippian culture in eastern Tennessee.

From 1100 B.P. until initial European contact about 400 years ago, Mississippian groups occupied local and regional territories along the Little Tennessee River in eastern Tennessee. Population was substantial and more permanent villages grew in sizes that far exceeded that of the Woodland period. These groups were primarily maize farmers who exploited fertile alluvial valleys. As reliance on maize horticulture increased other domesticated crops, like beans and squash, as well as wild plants and animals such as nuts, berries, greens, deer, turkey, and aquatic animals, were also important food items. Mississippian settlement resembled a hierarchal pattern, which included a nucleated village that was usually associated with some type of civic mound center with outlying rather isolated farmsteads. A palisade sometimes surrounded the main nucleated village. At least four Mississippian mound sites were located [

Exempted from Disclosure by Statute] Other villages and farmsteads were undoubtedly linked to these regional mound ceremonial centers, which were the focus of important religious and social activities.

Architecture within Mississippian settlements was characterized by permanent rectangular structures, with wall posts set vertically into trenches (Chapman 1985b). The wall posts were covered with interwoven cane strips and plastered with clay daub. Typically, these structures measured about 5 m on a side and contained a hearth. At larger villages and ceremonial centers, houses and mounds were arranged around an open central plaza, and a defensive palisade often encircled towns.

Ceramic vessels tempered with crushed and burned mussel shell, a combination of shell and limestone, or limestone alone typically mark the beginning of the Mississippian period (ca. 1100 B.P.). In particular, the introduction of shell being used as a temper ushered in a revolution in the manufacture of ceramic vessels (Morse and Morse 1983). It allowed for the construction of vessels with stronger, thinner walls that could be fashioned into a variety of new shapes and sizes (e.g. effigies, shouldered jars, and water bottles). Perhaps the most common forms of Mississippian ceramic vessels were globular jars, often with loop handles from the everted rim to the shoulder (Chapman 1985b).

Surface treatments or decorations include plain, burnished, cord-marked, fabric impressed, and painted.

The focus on maize as a primary food crop had significant impacts on how indigenous inhabitants of eastern Tennessee were organized socially and politically. Woodland period groups, traditionally thought to have been egalitarian, were transformed into more hierarchal groups with heavy emphasis on hereditary leadership and emerging managerial organizations or what is often termed the secondary elite. Essentially, maize production could far exceed the yield of other crops within the existing horticulture system with no apparent additional cost for labor. Populations grew and as a result Woodland sociopolitical systems could not be sustained. Only a hierarchal system that emphasized classes and resource allocation would work (Schroedl et al. 1990).

One of the most characteristic features of the Mississippian period was the construction of flat-topped, pyramidal earthen mounds that served as platforms for temples, chief's houses, and other important buildings (Hudson 1976). However, not all were pyramidal, some had a circular ground plan while others were long and ridge shaped. They usually faced a large open plaza that may have served as either a playing field, ceremonial area, or village commons. Other mounds were conical across the top as well as the base and were used to inter higher status individuals; while commoners were typically buried in family cemetery plots near dwellings.

Lithic assemblages during the Mississippian period are much less complex than the previous cultural periods. This may be a result of use of more perishable items that typically do not survive well in the archaeological record like bone, antler, and shell. However, triangular points like Madison and Hamilton are prevalent as well as hoes manufactured out of local and nonlocal chert. Mill Creek chert, native to central Illinois, was used in production of hoes that were apparently traded across wide regional boundaries. Other diagnostic artifacts include ground stone items, engraved shell items, mica, and galena.

HISTORIC OVERVIEW

HISTORIC PERIOD SETTLEMENT AND DEVELOPMENT OF ROANE COUNTY

This section presents a brief overview of the settlement and social and economic development of Roane County and the project vicinity. The background history provides a context for the interpretation of historic archaeological sites identified during the current survey.

Euroamerican Contact and Settlement

The earliest documented European incursion into the upper drainage of the Tennessee River was the de Soto expedition of 1540. The precise route of de Soto and his men has

been the subject of controversy for years. According to DePratter et al. (1985) and Hudson et al. (1985), the de Soto expedition crossed the Appalachians from North Carolina into Tennessee and arrived at the village of Chiaha on Zimmerman's Island in the French Broad River close to Dandridge, Tennessee. Chiaha was located at the northern border of the expansive chiefdom of Coosa, while the central town of the Coosa chiefdom was hypothesized to have been the Little Egypt site at Carters Quarters in northwest Georgia.

At least one other early Spanish expedition, led by Tristan de Luna in 1559–1561, also penetrated the upper Tennessee River in the sixteenth century, visiting many of the same sites as de Soto, including the Coosa site. Although the Spanish rarely ventured this far inland after these expeditions, the effects of the contact were felt throughout the southeast.

Anglo-American expansion into eastern Tennessee began after the Revolutionary War, with settlement concentrated along the fertile valleys of the Tennessee River. Prior to this time the lands of eastern Tennessee belonged to the Cherokee, whose own settlements focused on the Little Tennessee River south of Knoxville. Contact between whites and Cherokees in the Colonial period came primarily through fur traders from the Carolinas and Virginia, and later through the manipulations of war. The British Fort Loudon was established on the Little Tennessee River in 1756 to defend the Carolinas against possible invasion during the French and Indian War. With British victory, white settlers began to move into northeastern Tennessee, purchasing or leasing lands from the Cherokee. British colonial policy officially closed settlement of Tennessee, however, and Anglo-American occupation of this region remained sparse and isolated. During the Revolutionary War, the Cherokee sided with the British, whose defeat gave many land-hungry colonists a basis for assuming that the Cherokee had forfeited their claims to Tennessee.

After the Revolutionary War, the State of North Carolina sought to annex Cherokee lands along its western border, and in 1783 the state enacted the "land grab act," offering for sale all its lands in the Tennessee country at £10 per 100 acres, reserving the land east of the Tennessee River and south of the French Broad and Big Pigeon rivers for the Cherokee (although no formal agreement with the tribe had been made). The land grab act was the impetus for many early settlers arriving in eastern Tennessee (McArthur 1976).

The pioneers in the Tennessee territory arrived to great confusion, however, as control of the area west of the Appalachians remained uncertain. In 1783, North Carolina had ceded its western territories to the United States government, and then in the following year revoked the cession. The Jefferson Ordinance, passed by Congress in 1784, encouraged the organization of new states along the western boundary of the former colonies, and the Tennessee settlers, anxious to secure their independence and, more important, to expand their boundaries through the annexation of Cherokee lands, sought to organize themselves as the first state for admission (Rothrock 1946). Despite the revoked cession of these lands to the federal government, James Sevier, an aggressive fighter and land

speculator, was elected governor of the erstwhile State of Franklin and pursued both territorial expansion and recognized statehood. In 1785, the State of Franklin negotiated the Treaty of Dumplin Creek, which pushed the Cherokee boundary south of the Tennessee River. The United States government, however, refused to recognize the new state or the treaty. The Treaty of Hopewell, negotiated by the federal government, was more generous to the Cherokee and left many of the settlers of Tennessee in Indian territory (Pickel 1981; Rothrock 1946).

The conflicting claims led to years of violence between the American settlers and the Cherokee. In 1790 North Carolina ratified the federal Constitution and once again ceded its western territorial claims to the United States government, which organized the western lands as the Territory of the United States South of the Ohio River, or Southwest Territory (McArthur 1976). The capital of the territory was laid out in 1791 and named Knoxville, in honor of Secretary of War James Knox, and William Blount was elected its first governor. The same year, Blount negotiated the Treaty of Holston, which ceded the eastern part of what is now Roane County to the United States. Southwest Point, the later site of Kingston at the mouth of the Clinch River, was just outside this line. However, a survey of the line was not made until 1797, creating more confusion between the Cherokee and American settlers (Pickel 1981).

The militant Lower Cherokee, or Chickamauga band, refused to recognize the Treaty of Holston, and in 1792 declared war on the United States. In response, Governor Blount took it upon himself to assemble a militia force under John Sevier, who took up position at Southwest Point and began construction of a blockhouse there. Secretary of War Knox worried that Blount was overreacting and ordered the force disbanded. This was done, but in 1794, Congress authorized the construction of a fort at Southwest Point. A garrison was posted there through at least 1799, by which time enough civilians had taken up residence in the area to organize a town (Pickel 1981).

In 1795, a census of the Southwest Territory was taken to determine whether the 60,000 occupants required to vote for statehood were present. The population proved to be 77,262, so in 1796, a convention was held in Knoxville to write a state constitution, and Tennessee was admitted to the Union the same year (Rothrock 1946).

Permanent Euroamerican settlement of the project vicinity began after the Treaty of Tellico Blockhouse in 1798, which ceded the land between the Clinch River and Cumberland Mountain to the United States. With the threat of conflict with the Cherokee removed, settlement proceeded rapidly. As these settlements increased, the few remaining Cherokee inhabitants were gradually displaced. Some admixture did occur until their forced removal in 1838.

Roane County was created in 1801 and included what is now Morgan County. Kingston, at the confluence of the Clinch and Tennessee rivers, was designated the Roane County seat and had 600 inhabitants by the mid 1870s. When Roane County's borders were extended across the Tennessee River in 1819 following the Cherokee cession, Morgan County was created from the northern part of Roane (Killebrew 1974 [1874]).

Agricultural and Commercial Development (1801–1933)

Although it bordered on Indian country during the late eighteenth and early nineteenth centuries, the Roane County area was not particularly isolated a result of being located at the confluence of several rivers and on the road between Knoxville and Nashville, the centers of East and Middle Tennessee respectively. The Walton Road, known as the Kingston Pike from Knoxville to Kingston, was the main east-west route between Knoxville and Nashville. It was completed in 1801. In 1804, money was allocated by the Tennessee legislature for a road south from Kingston to the Georgia road in Cherokee territory. A stagecoach line began regular service between Nashville and the temporary capital of Tennessee located at Washington in what is now Rhea County by 1804. This route passed through Kingston and Roane County (Pickel 1981).

Self-sufficient agriculture was the principal pursuit of most nineteenth-century residents of the Clinch River valley. Corn and wheat were the basis of the system; corn was the food base for the family and animals, and wheat was primarily a money crop. Rye, oats, and surplus corn were also sold or bartered. Meat was acquired from hogs and cattle, which in the early years of settlement were allowed to forage freely. Kitchen gardens supplemented the diet with vegetables, and orchards provided fruit. Wild foods were also utilized, including wild game, fruits, and nuts. Clothing, soap, toys, and many other items were produced at home, and the wood lot supplied firewood and building material for houses, outbuildings, fencing, furniture, tools, and wagons. Although much of what was needed was produced on the farm, store-bought items were not uncommon. Surplus products were bartered or sold for iron goods, kitchenware, coffee, salt, shoes, storage containers, and other manufactured goods. These might be purchased on a regular basis from local merchants or from markets in Kingston or Knoxville, where an annual or semiannual trip might be made. As early as 1794, Nathaniel and Samuel Cowan advertised that they would accept "corn, rye, oats, beeswax, flax, old Congress money, and Martin's certificates" for goods at their store in Knoxville (*Knoxville Gazette* 1794). Farmers could also float their goods down the Tennessee River to markets as far away as New Orleans, although the trip was risky and dangerous.

Mills were constructed in convenient locations for grinding corn and wheat into meal. These mills also served as community social centers, where local news was exchanged and business conducted. Joseph Black was granted permission to construct a mill on Clinch River in 1833, provided he did not obstruct navigation on the waterway, which had its head of navigation at Clinton.

Although agriculture was the chief pursuit of most settlers in eastern Tennessee, the hilly topography and mineral wealth of the hills led to a number of experiments with industry. As early as the 1790s, Mathew English had constructed a primitive iron forge near White's Creek in the southern part of the county, using wood charcoal produced from the timbered hillsides for fuel. An iron furnace was reported for Roane County in the 1820 census, and around 1830, Robert Craven, who had purchased an interest in the old Mathew English furnace, erected Eagle Furnace on White's Creek that produced pig iron for the production of utensils and cookware locally, as well as for trade. Two forges and a

furnace are shown in Roane County at the base of Cumberland Mountain on the Rhea (1832) map of Tennessee. Coal came in to use as a source of power for the forges around 1840, and in that year, a rich vein of coal and iron ore at Rockwood was discovered. By the time of the Civil War iron production dominated Roane County's industry, with an estimated \$100,000 in capital invested in the four furnaces then in operation (Killebrew 1974 [1874]; Pickel 1981).

Prior to the Civil War, tanneries and related industries were a specialty of Roane County. Hats and saddlery were the main products made from the leather processed there. Distillers were also an important early industry, particularly when the costs and risks of transporting large amounts of corn were prohibitive. In 1820, nearly \$10,000 in whiskey was produced. The distilling industry had declined by 1840, however, perhaps as a result of improved transportation. A cotton factory was also started in Roane County before the Civil War, employing mostly women and children (Pickel 1981).

Despite a healthy industrial sector, the number of people employed in manufactures and the contribution of industry to the Roane County economy was nevertheless small when compared with agriculture. As previously noted, corn was the most important crop, with wheat, and other grains also important. Cotton was never a significant crop due to the short growing season, although there were two cotton gins in operation in Kingston prior to the Civil War. Only 200 bales were produced in 1860 compared to the state average of over 3,500 bales. Tobacco was introduced before 1850 and during the 1850s, production of the crop increased over five-fold. Farm values and improved acreage for all products increased dramatically during the decade prior to the Civil War, reflecting the prosperity of that period in the agriculture of the South. Although no railroads were constructed in Roane County until after the war, the county's river traffic benefited from the improved access to other nearby areas of the Tennessee Valley (Kennedy 1990a; Pickel 1981).

Farmers in the region of East Tennessee did not depend much on slave labor, relying instead on large families, the help of neighbors, and occasional day labor to tend their farms. Slaves were more common in the Tennessee River counties than in the adjacent hill country, however. In 1810, there were 670 slaves in the county, representing 12 percent of the total population. This percentage did not increase significantly up to 1860, when Roane County slaves made up not quite 15 percent of the total (Pickel 1981; Kennedy 1990b).

Not as dependent on the plantation economy or slave labor as other areas of the South, many citizens of East Tennessee supported the Union at the outset of the Civil War, although few would have supported emancipation. Many men from the area enlisted in northern units, some of them organized in Kentucky. No major battles were fought in the area, but the importance of controlling the river, railroad, and road transportation networks that passed through the area, led to numerous skirmishes. The East Tennessee and Georgia Railway was completed between Chattanooga and Knoxville was completed through the eastern portion of the county (now in Loudon County) just prior to the Civil War, which was an important link in supplying the Union army at Chattanooga during the

Tennessee Campaign (Goodspeed Publishing Company 1989 [1887]; Killebrew 1974 [1874]; McInnis and Jamborsky 1986).

In 1863, General Ambrose Burnside, urged by President Lincoln to come to the relief of Unionists in East Tennessee, moved into Knoxville, driving the Confederates back toward Chattanooga. The retreating Rebels burned the railroad bridge over the Tennessee River at Loudon as they withdrew. By September 1863, Roane County was under Union control, with Col. Robert K. Byrd of Kingston in command of the 1st Tennessee Volunteer Regiment, USA, comprised of many Roane County natives. When Burnside was pulled away from Knoxville to make a raid into Virginia, leaving garrisons at Kingston and Knoxville, Confederate cavalry commander Nathan Bedford Forrest made destructive raids into Roane County to disrupt Burnside's forces and prevent him from reinforcing Rosencrans at Chickamauga. Confederate forces under General James Longstreet attempted to recapture Knoxville in late 1863, but their siege was unsuccessful. During that campaign, General Joseph Wheeler's Confederate cavalry was sent to Kingston to capture the Union garrison there. Wheeler drove the Union skirmishers back into their main line on the high ground east of the city, but were unable to penetrate the line. They rejoined Longstreet at Knoxville (McInnis and Jamborsky 1986).

With the war's end, Roane County's economy was in shambles. Raiders from both armies had stripped the countryside of fences, livestock, and crops and many homes and churches were destroyed for firewood. Although the loss of slave labor was not as significant in Roane County as in other areas of the South, the county nevertheless struggled with the loss of labor through death and dismemberment from the war. The loss of capital resulting from the collapse of the Confederacy meant that money was not available to restore farms, replace livestock, and purchase supplies for planting. Because Unionists had been in control of Knoxville and the surrounding region for much of the war, the political and economic influence of Confederate supporters was co-opted by vengeful Reconstructionists. It was not until the late 1860s that life began to return to normal in Roane County (McInnis and Jamborsky 1986).

The construction of railroads into the hills of East Tennessee after the Civil War offered new opportunities to exploit the area's resources. Mines were opened all along the Cumberland Plateau where rich veins of coal, iron, and other minerals are located. The largest of these in Roane County was the Roane Iron Company, opened by General John T. Wilder, W. O. Rockwood, and others in 1867. The town of Rockwood grew up around the operation and by 1874 included more than 1,000 inhabitants (Killebrew 1974 [1874]). The Roane Iron Company constructed the Rockwood & Tennessee River Railway to transport its products 5.5 miles to Rockwood Landing on the Tennessee River for shipment, since the overland and water routes to the East Tennessee, Virginia & Georgia Railroad at Loudon were unreliable. By the mid 1870s, the Cincinnati-Southern Railroad, under construction from the Ohio River to Chattanooga was completed to Rockwood and the bridge over the Emory River became an important landing for the transfer of goods between rail and river routes. In 1879, the Cincinnati-Southern was completed to Chattanooga, passing along the base of the Cumberland escarpment and providing service

to a number of coal and iron ventures along its route through Roane County (Williams 1986). Figure 6 illustrates the industrial development of the area around Kingston in the mid 1870s. The proposed railroad through Kingston connecting the Cincinnati-Southern and East Tennessee, Virginia & Georgia railroads was never constructed.

Not all iron and coal ventures were successful. In 1890, the town of Cardiff was founded amid great land speculation that anticipated a great manufacturing center. Unfortunately, the Cardiff Coal and Iron Company went into receivership only a year later and the nationwide financial panic of 1893 doomed the enterprise (Galloway 1986). The effects of the growth of iron and coal industries during the last decade of the nineteenth century is evident from the 30 percent increase in the population of Roane County, from 17,417 to 22,738 (U.S. Bureau of the Census 1901).

The town of Harriman, established the same year as Cardiff, proved more durable. Founded by Frederick Gates, an idealistic Chattanooga minister and developer who believed a successful city could be developed around principles of temperance and industriousness, Harriman prospered and by 1900 supported about 60 businesses. Oliver Springs grew up around the resort established Richard Oliver before the Civil War, but expanded as a result of nearby coalmines. Besides coal mining, the region's industrial base in the late nineteenth and early twentieth centuries included lumbering and sawmills, stone quarrying, lime kilns, canneries, and wood products.

As railroad connections were expanded in the 1880s and 1890s, the coal and lumber industries also grew. The mines began to employ state convicts to work, much to the disgust of the Welsh, Scottish, and native workers that had been working in the dangerous mines for low pay and were now being forced out. In 1891 the free laborers rallied against the convict system. Joined by fellow workers from Kentucky and around Tennessee, they loaded the prisoners on trains and sent them back to Knoxville. The convicts were sent back several times accompanied by the state militia to keep order. However, continued violence and unrest eventually prompted the legislature to discontinue the convict lease program in 1896 (Hoskins ca. 1987).

Agriculture remained the principal pursuit of the region after the Civil War, in terms of overall economic impact and number employed. The main crops were corn, wheat, and oats, as they had been before the Civil War. Potatoes were often peddled to mining families. Self-sufficiency continued to be the model for farm operation, with most families supplementing their income with such pursuits as milling, blacksmithing, tanning, stone cutting, teaching, preaching, logging, canning, or sewing. Farms in Roane County appear to have been fairly prosperous. The average number of acres per farm (141 acres) was higher than in the state as a whole (125 acres), and included as many improved acres per farm (50 acres per farm in Roane County compared to 44 acres in Tennessee). Only 58 percent of the county's farmers owned their land, compared to 62 percent in the rest of the state, but this was not uncommon in mountainous counties. Farm size and ownership decreased steadily during the late nineteenth century as it did throughout the South. By 1900, the average farm size in Roane County was 105 acres, and the percentage of landowners had slipped to just under 50 percent (U.S. Bureau of

the Census 1883, 1902). The 1900 census statistics also highlight the decline in the number of farms, despite a significant population increase, as many local farmers began to work only part time in the fields, or leave farming altogether for the low but steady pay of the coalmines. However, other farmers benefited from the new markets, selling livestock and produce in the coal towns, rather than shipping to larger towns (Ridenour 1985).

The first decade of the twentieth century saw a spike in agriculture, with the number of farms and amount of improved acreage in the county increasing. Land ownership rebounded during this period, reaching 68 percent in 1910 and 1920. Cereals, principally corn, but also wheat and oats, accounted for over half of the total value of crops in the county in 1920. Hay and forage crops, such as grasses and silage represented about a quarter of the value of farm crops. Vegetables, fruits, and nuts were also a significant category of crop. Cotton was not produced at all, and tobacco, which had been an important crop in the late nineteenth century, was negligible (U.S. Bureau of the Census 1925).

Soil depletion, poor management, shrinking farm size, isolation, and the changing character of agriculture in the twentieth century forced many farmers to the edge of poverty in the 1920s. This was a boom period for the coalmines, and many farmers went to work in factories and other laboring jobs in Knoxville, as well. However, the stock market crash in 1929 closed many of the mines and resulted in layoffs in the manufacturing plants. With employment opportunities narrowed, many workers returned to farming the family land, but due to shrinking local markets for farm products, the improvement of living conditions was difficult (Ridenour 1985).

TVA and Oak Ridge (1933–Present)

As part of his Depression recovery plan, President Franklin Roosevelt proposed the development of the entire Tennessee Valley region, with dams for power generation and flood control coupled with programs for reforestation, erosion control, and diversification of the industrial base. The Tennessee Valley Authority was created in that year, and its first dam project was Norris Dam in northeastern Anderson County, named for the senator from Nebraska who was instrumental in the passage of the enabling legislation creating the TVA (TVA 1940a).

The construction of Norris Dam was seen as a turning point in the history of the region, bringing electricity to rural workers, steady employment, and a new way of life for many of its citizens, who began to leave farming and mining. In 1939 construction was begun on Watts Bar Lake, part of a system of dams and locks on the Tennessee River intended to improve navigation and control flooding. Industry located in the area to take advantage of inexpensive power, and the military needs of World War II led to the construction of Oak Ridge Laboratories in southwest Anderson County in 1941, further fueling growth. The population of Roane County, which had remained steady since the beginning of the twentieth century, began to increase steadily in the 1930s, and saw its largest gains in the 1950s and 1970s. The Kingston Steam Generating Plant, located adjacent to the project

area, was put into operation in the mid-1950s, and is TVA's fourth largest generating facility (Southern Alliance for Clean Energy ca. 2001; TVA 2002). Timbering, and light industrial facilities also provide jobs in the area.

Historic Overview of the Project Area

The property that includes the proposed SMR (small modular reactor) module site was initially part of a land grant warrant acquired by James White in 1787 from the State of North Carolina (Figure 11) (NCSA 1988). Born in 1747 in Rowan County (now Iredell County), North Carolina, White led an accomplished life as a statesman, military figure, and philanthropist (Faulkner 1998). During the Revolutionary War, White served as a captain in the North Carolina militia, which was proceeded by his election as a state legislator following the war. White's arrival to East Tennessee, which at the time constituted the Western frontier region of North Carolina, was precipitated by the passage of North Carolina's "Land Grab Act" of 1783. The act opened up the East Tennessee region to settlement following the Revolutionary War. As a consequence, White acquired over 4,000 acres of land, some of which he obtained as a result of his service during the Revolutionary War. One of the tracts that White acquired was an 800-acre tract known locally as the "White Rock Bluff" that encompasses the current project area (NCSA 1988). At the time in which White acquired the tract, the property was located in Green County, North Carolina. Based on the available documentation, there is no indication that White actually resided on this parcel of land.

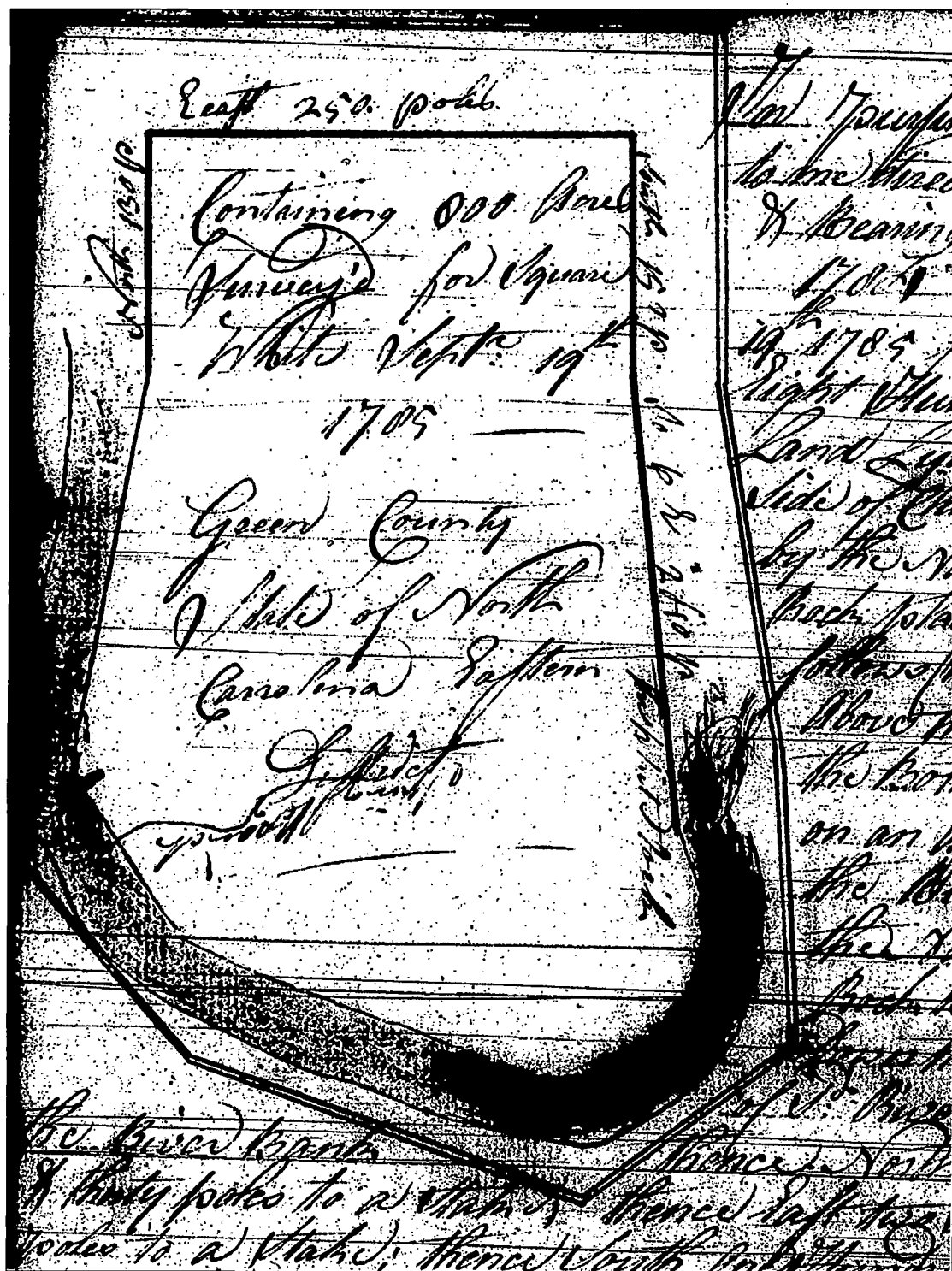


Figure 11. The survey map of James White's 800-acre land grant located within the project area (NCSA 1988).

Having secured ties to East Tennessee through his land holdings, White initially established a temporary residence in what is now the Riverdale community of Knox County (East Tennessee Historical Society 1976). It was during this period of the mid 1780s, that White was elected as a legislator of the short-lived State of Franklin. In 1786, White moved to a 1,000-acre tract atop a hill near the confluences of Third Creek and the Tennessee River, and with assistance from James Connor, constructed a log building named "White's Fort". Within five years, White donated land for a public square and Presbyterian church and cemetery, which developed into the city of Knoxville. In the early 1790s, White sold a portion of his land, at a modest price, for the establishment of Knoxville's first institution of higher learning. The school was called Blount College, which eventually became the University of Tennessee. During the ensuing years, he served as a representative to the Tennessee Constitutional Convention of 1796 and later as the first Speaker of the General Assembly (Faulkner 1998).

In 1795, White sold his 800-acre parcel at White Rock Bluff, to Samuel Givens of Knox County (Knox County Deed Book C, p. 207). Based on a review of Roane County deeds, Givens appears to be the first person to physically reside within the project area, however, it is unknown exactly where his residence was located (Roane County Deed Book B, p. 257). The original 800-acre parcel remained intact until 1807, when Givens sold 400 acres to Gabriel Richards (Roane County Deed Book B, p. 252). A review of deeds associated with the Richards family indicates that they resided on the property and also operated a ferry on the Clinch River (Roane County Deed Book E, p. 175).

By the 1820s, the land once comprising James White's original grant was gradually divided and sold off by members of the Givens and Richards families (Roane County Deed Book E, p. 90; Roane County Deed Book F, p. 212). A few of the subsequent owners who later acquired property within White's original land grant included the French, Trimble, Hembree, Burum, and Gallaher families (Roane County Deeds 1916-1921). Census records indicate that these families operated farms on their respective tracts during the nineteenth century (Ancestry.com 2011).

At the time of TVA's acquisition of the project area in late 1940, six individual tracts were situated within James White's original land grant. The six parcels were associated with the families of Callie Buhl, Joseph C. Hembree, Rice Hembree, Sylvester S. Hensley, George Peters, and John M. Robinett. Occupation of the project area by these families is illustrated in detail on a TVA land acquisition map, which indicates that the Hembree, Hensley, and Robinett properties had well established farmsteads that averaged around 90 acres (Figure 12). Each farmstead included residences and an assortment of outbuildings common to East Tennessee farms such as barns, smokehouses, sheds, crib barns, and well houses. In addition, orchards or scattered fruit trees were situated on tracts associated on the Rice Hembree and the Hensley and Robinett farms (see Figure 12) (TVA 1940b).

Exempted from Disclosure by Statute – Withheld Under 10 CFR 2.390(a)(3)

Figure 12. December 1940 TVA Acquisition Map of the project area (TVA 1940b).

Access to these farmsteads was achieved via [Exempted from Disclosure by Statute] that is labeled simply [Exempted from Disclosure by Statute] on the TVA acquisition map and more specifically as [Exempted from Disclosure by Statute] in the 1920 federal census. [Exempted from Disclosure by Statute] in a 1941 *Bethel Valley* and *Everton* topographical maps of the project area, which also reveals six residences that generally conform to the house locations found on the 1940 TVA acquisition map (Figure 13). The next version of the *Bethel Valley* and *Everton* topographical maps, published in 1953, illustrates [Exempted from Disclosure by Statute] which by this time extended entirely adjacent to the river bank (Figure 14). In addition, a transmission line corridor, is seen extending through the middle of the bend. Although no buildings are identified on the 1953, or subsequent, [Exempted from Disclosure by Statute]

[Exempted from Disclosure by Statute] study conducted by the University of Tennessee's Department of Anthropology (Schroedl 1974a).

Based on the results of Schroedl's survey, the area featured houses and outbuilding that were largely constructed between the late nineteenth and early twentieth centuries. However, Schroedl indicates that some structures may have been constructed as early as the 1870s. At the time of the 1974 survey, house locations were marked by limestone or brick foundations and collapsed chimneys. By this time, the outbuildings were either destroyed or had partially collapsed. Schroedl suggests that the lack of intact structures within the project at the time of his survey may be due to the removal of these structures to new locations, or the dismantling of the buildings for salvage material (Schroedl 1974a). TRC's current field effort yielded no evidence of standing structures within the project area.

The only tangible remnant of pre-TVA ownership of the project area is the Hensley Cemetery. Located approximately 150 feet from a former road bed, the cemetery contains five identifiable grave markers: S.S. Hensley (1854-1927), Lou Anna Peters (1885-1917), Callie D. Peters (1883-1941), and Stella Harvey (1921-1922). The cemetery also features an illegible metal marker (Schroedl 1972).

An examination of the 1920 federal census provides the best source of information regarding the composition of each family within the project area prior to TVA's acquisition of the land. This period marks the height of farm operations within the project area when the principle landowners were all still alive. The data lists Hensley as a 64-year old farmer who was born in Virginia and resided with his wife Rosa (age 54) and son Rankin (age 20). Also listed as living under the Hensley household is Callie Buhl (age 37) and George Peters (age 10) who are identified as Hensley's step daughter and step grandson respectively (Ancestry.com 2011). As Hensley died in 1927, the tracts associated with Buhl and Peters were likely obtained as part of an inheritance. These parcels are decidedly smaller than those of the adjoining Hembree and Robinett farmsteads and consisted of a single residence on the Buhl property and a barn on the Peters tract (TVA 1940b).

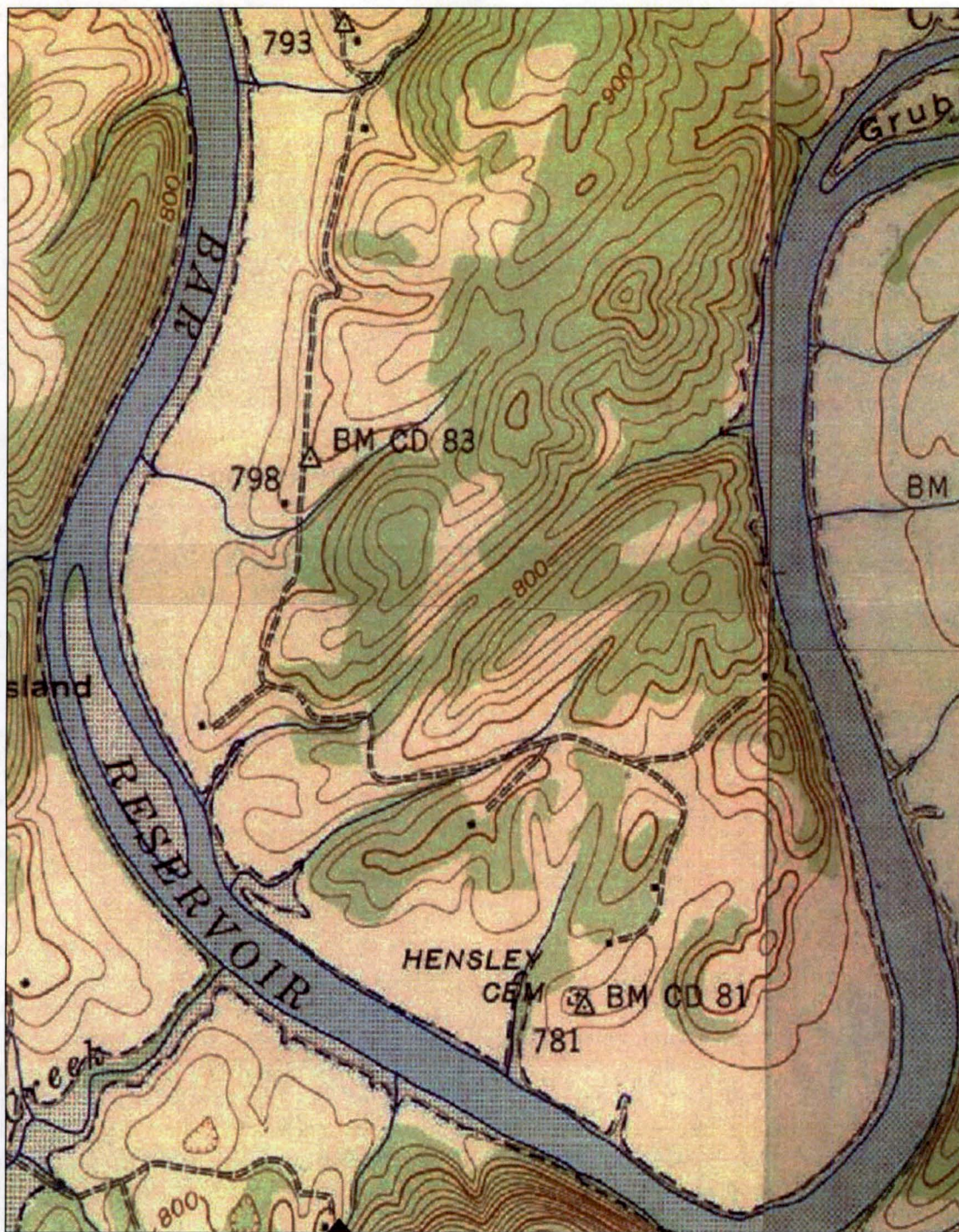


Figure 13. Excerpt of the 1941 *Bethel Valley* and *Everton* TN USGS topographical maps illustrating the location of residences prior to TVA ownership (Courtesy of the University of Tennessee Libraries – Map Services 2011).

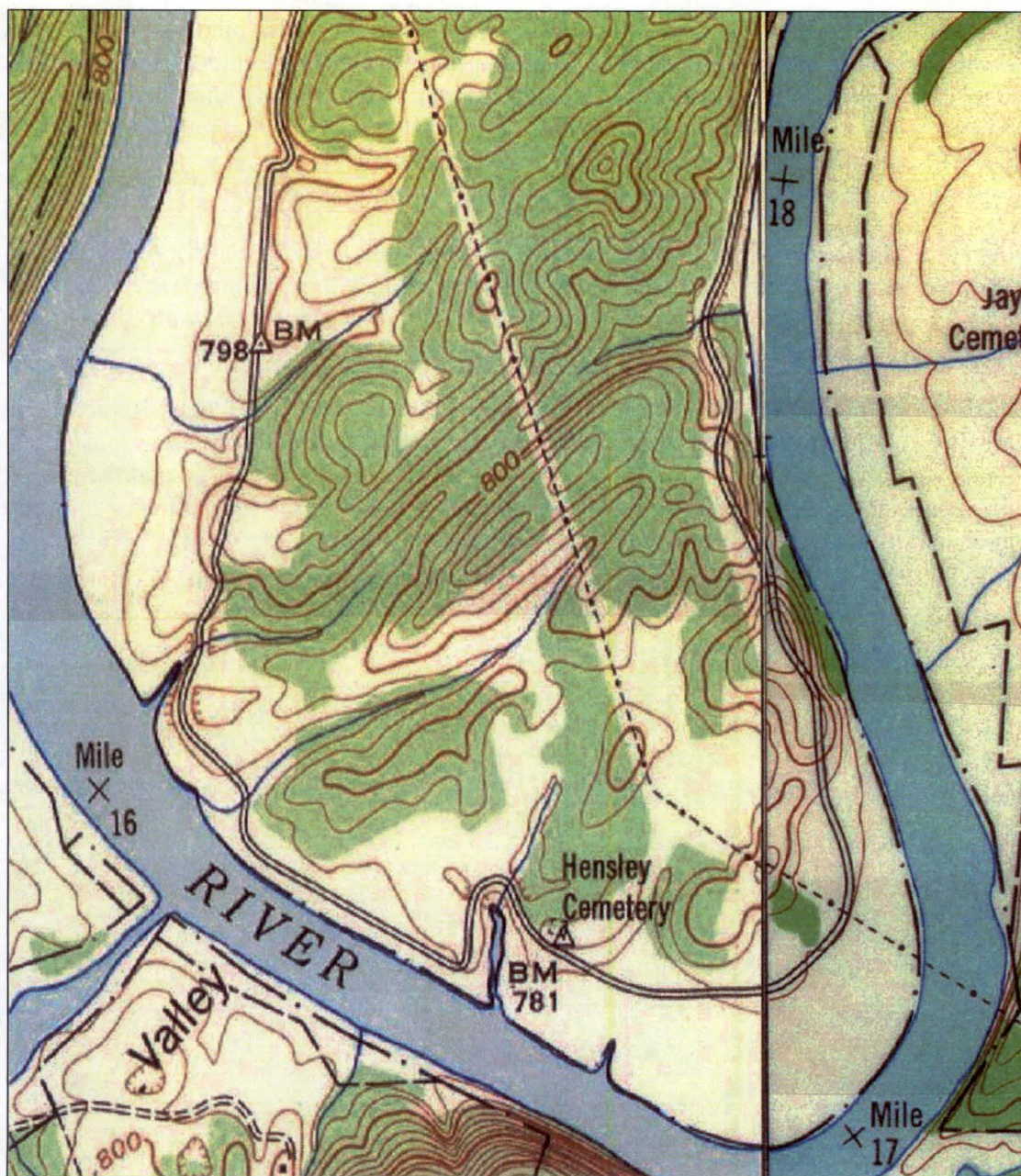


Figure 14. Excerpt of the 1953 *Bethel Valley* and *Everton* TN USGS topographical maps illustrating the removal of residences following TVA acquisition of the project area (Courtesy of the University of Tennessee Libraries – Map Services 2011).

The household of Rice Hembree identifies him as a 57-year old farmer who was born in Virginia. Hembree lived with his wife Francis (age 53); two daughters, Alice (age 30) and Edna (age 21); and son Burton (age 27) (Ancestry.com 2011). Other than her father, Alice is the only member of the family listed as having an occupation. In 1920 she is listed as a teacher in a "common school" (Ancestry.com 2011).

Among the families that once owned property in the project area, the Robinett household was the largest. In 1920, Robinett is listed as a 54-year old farmer who was born in Virginia who lived with his wife, Josie (age 36); three daughters, Monnie (age 13), Berrie (age 9), and Ida Grace (age 1); and three sons, Jay (age 15), Edd (age 7), and Charles (age 4) (Ancestry.com 2011).

In the early 1970s, TVA initiated plans for the construction of the Clinch River Liquid Metal Fast Breeder Reactor. Preparations for construction commenced in the mid-1970s, with ground leveling of the area, however, funding for the project ceased and the project was cancelled in the early 1980s. Since then, the project area has been allowed to return to its natural state as evidenced by the mature stands of trees.

IV. METHODS

BACKGROUND LITERATURE AND RECORDS SEARCH

Prior to initiating fieldwork, TRC conducted a background literature and records search in order to identify known historical and archaeological sites in the project area and to develop the historic context for the study area. The literature search included research at the state archaeological site files housed at the TDOA, NRHP listings and pending files, and historic structures and buildings files located at the THC located in Nashville, TN. The purpose of the records search was to identify the location and NRHP-status of all previously recorded archaeological sites and architectural properties within the APE of the proposed roadway.

ARCHAEOLOGICAL SURVEY METHODS

TRC personnel surveyed the proposed APE on foot in January and February 2011. The survey included a combination of systematic pedestrian examination of all exposed ground surfaces and shovel testing of areas having poor surface visibility. Pedestrian surface survey was undertaken in areas with greater than 50 percent ground surface exposure or greater than 20 percent slope. Pedestrian survey transects on terrain with slope greater than 20 percent were spaced no more than 30 m (100 feet) apart.

Shovel testing was conducted in areas with less than 50 percent surface exposure and having 20 percent or less slope. Shovel tests consisted of 50 x 50-cm (1.6 x 1.6 feet) in diameter, and extended 100-cm (1.6 feet) below surface or to archaeological sterile subsoil. Shovel tests were spaced at 30-m (100-foot) intervals along transects through the APE. Fill dirt was screened through ¼-inch mesh hardware cloth to insure uniform artifact recovery. All shovel tests were immediately backfilled following recordation. Shovel tests [Exempted from Disclosure by Statute] were auger tested to a depth of 1.5 m.

When archaeological materials were recovered, site boundaries were determined. If ground surface visibility exceeded 50 percent, the site was delineated by the lateral extent of surface artifacts. In areas where ground surface visibility did not exceed 50 percent, shovel testing was conducted in a cruciform pattern (north-south, east-west) across the site at 15-m (49.2-foot) intervals until two consecutive negative shovel tests were encountered or until the landform changed or became restricted by topography. All excavated dirt from delineation tests was screened through ¼-inch mesh hardware cloth, and all artifacts were segregated by provenience. Charcoal samples found *in situ* were removed from the soil matrix by trowel only and were placed in aluminum foil.

Identified sites were mapped using hand-held sub-meter GPS equipment and Tennessee State Plane (NAD83, Feet) coordinates were recorded for a site datum, usually consisting of the center of the site. Site boundaries were flagged using TVA-approved red

fluorescent flagging tape with appropriate labeling, so as to be visible and understandable to construction crews. Each site was photographed using 14.0 megapixel digital camera equipment and notes were maintained using standard archaeological nomenclature (Munsell soil colors, terrain descriptions, notes on findings and stratigraphy, etc.).

LABORATORY METHODS

All artifacts, notes, forms, film, etc. were transported to the TRC office in Nashville for processing and analysis. As per an ongoing agreement between TRC and TVA, these materials will be permanently curated at the University of Alabama facilities at Moundville Archaeological Park in Moundville, AL. Curation will follow the 36 CFR 79, *Curations of Federally-Owned and Administered Archaeological Collections* guidelines, as well as the standards and guidelines set forth by the TDOA. Currently, the project materials are housed at the Nashville Office of TRC. Artifacts were washed with brush and water and air-dried. Next, the artifacts were sorted based on the criteria described below. The focus of the laboratory analysis was geared to determine the occupation span, possible function, and degree of artifact preservation at each site, as well as to gather the data necessary to make evaluations regarding NRHP eligibility. Laboratory analysis included the comprehensive description of recovered artifacts using well-established, temporally diagnostic types. After the analysis, all artifacts were placed into reclosable plastic bags labeled with the pertinent descriptive and provenience data. During the analysis all artifacts were segregated by material, type, and morphological attributes (if discernable). The complete catalogue of artifacts recovered during this survey is presented according to provenience in Appendix A.

Lithic Artifact Analysis

Lithic tools and the waste generated during their production are perhaps the most common artifacts found on prehistoric archaeological sites in the American Southeast, and exhibit an infinite range of variability. For this reason, it is essential to impose a well-informed system of identification and classification onto lithic assemblages. An effective classificatory scheme for lithic materials reduces the potential variability into defined, manageable units in order to facilitate comparison with other data sets (Andrefsky 1998). Through effective comparison of separate lithic assemblages, researchers can reach meaningful conclusions regarding aspects of past human behavior. For example, sites that exhibit different frequencies of a certain type of lithic waste or tool may be effectively contrasted in order to reach conclusions regarding the nature of material acquisition and tool production.

To avoid ambiguity and the introduction of unnecessary subjectivity, analysis of lithics recovered during this survey utilized a standard scheme for consistent sorting and classification. This classification scheme, developed for the Nashville office of TRC, is based on the generally accepted methods of lithic analysis employed in a cultural resources management (CRM) setting throughout the region (e.g., Ensor and Roemer 1989; Rozen and Sullivan 1989; Sullivan and Rozen 1985). It is simple to implement,

easy to replicate, and can be combined easily with other quantitative and qualitative studies.

The lithic artifact sample initially was divided according to the presence or absence of positive percussion features. Those exhibiting only negative flake scars were included in the "core" category. Cores were further sorted by morphological attributes into more descriptive categories such as bifaces, unifaces, etc. Those items with positive percussion features were segregated by the presence or absence of retouch. The resulting retouched artifacts were further subdivided according to morphological characteristics. The following are descriptions of lithic artifact types identified in the total artifact assemblage.

Flake Debitage

Shatter. Includes angular, blocky specimens that do not exhibit evidence of striking platforms or bulbs of percussion and cannot be placed into any of the previous categories; overall form is irregular in shape, and heat alteration may be present.

Primary Flake. Flake with more than 50 percent of the dorsal surface covered by cortex; contains all or a portion of striking platform; no presence of flake scars on dorsal surface; represents initial decortification.

Secondary Flake. Flake with less than 50 percent of the dorsal surface covered by cortex; contains all or a portion of striking platform; negative scars are present on dorsal surface; represents secondary decortification.

Tertiary Flake. Flake with no cortex on dorsal surface or platform; contains all or a portion of striking platform; negative flake scars are present on dorsal surface; represents final reduction of decorticated core by either pressure or percussion flaking.

Flake Fragment. A broken flake lacking a striking platform. By amount of cortex present can be subdivided into primary, secondary, and tertiary flake fragment.

Formal Tools

Projectile Point/Knife (PP/K). Shaping usually consists of primary, secondary, and tertiary flaking; systematic flaking and removal of cortical surfaces; longitudinal asymmetrical with a haft element at proximal end and pointed at distal end. May be classified into existing typologies. Stylistic variations among hafted bifaces are recognized as being temporally and culturally (spatially) distinct.

Unimarginal Flake Tool. Flake exhibiting evidence of retouch or modification along only the dorsal or ventral surface.

Tertiary Biface (whole or fragment). Shaping consists of secondary and tertiary flaking; cortex is virtually absent and flaking is systematic; biface edges are straight and cross-

section is thin; usually represents an unidentifiable finished-tool fragment (e.g., PP/K mid-section or distal tip).

Secondary Biface (whole or fragment). Shaping consists of primary and secondary flaking; most or all cortex has been removed; flaking is more systematic; biface edges are less sinuous, although lateral edges have not been entirely straightened; represents a late-stage production failure or preform.

Primary Biface (whole or fragment). Shaping consists of only primary flaking; biface edge is sinuous and biface cross-section is thick and irregular; usually retains a portion of cortex; usually represents an unfinished tool.

Flake or Bifacial Tools.

Spokeshave. Tool class having one or more notches (small, concave scraping edges) made by unifacial marginal retouch.

Scraper. Flaked stone tool class including unifaces, bifaces and flake tools all characterized by one or more beveled edges with a working angle usually $> 30^\circ$.

Flake Tool. These artifacts exhibit evidence of expedient utilization as a tool but have not been intentionally modified (flaked) to perform a specific task.

Other Artifacts.

Abrader. This is a coarse to fine grained stone, normally sandstone, with grooves and/or trenchlike gouges resulting from scratching or sharpening another object against the surface. These could be used to sharpen bone, wood, or stone as well as platform preparation in flint knapping (Walling et al. 2000).

Chisel. These are specialized woodworking implements. Chisels are bifacially flaked but exhibit a distinctive plano-convex cross section. Bit ends are generally straight and heavily polished. Lateral edges can also display variable amounts of polish (Moore 2001).

Mano. Pecked/ground stone tool class of portable hand-held "mullers", most often used on a stationary rock slab (metate) to process seeds into flour.

Steatite. Steatite is a very soft stone that is easily worked. Artifacts frequently constructed of steatite include bowls, pipes, and beads.

Fire-Cracked Rock (FCR). Thermally altered stone either naturally or intentional; characterized by fractures, irregular edges, crazing, pot-lid fractures and discoloration.

Core. Objective cobble without recognizable dorsal or ventral surfaces, exhibiting one or more striking platforms, cortex removal, and evidence of primary flake removal from at least one shaping face.

Ceramic Analysis

As described in Chapter III, the appearance of ceramic artifacts (baked/burned clay, residual sherds, and pottery) is considered one of the hallmarks of the Woodland period (ca. 3000–1100 B.P.) in Tennessee and throughout the Southeast. Although ceramics were developed in the coastal margins of Georgia and South Carolina beginning as early as 4500 B.P., it was not until the Early Woodland that the technology spread inland and refined into a distinct series of traditions. Some of the earliest ceramic traditions in the Midsouth include the Wheeler and Alexander series from the Tombigee drainage and Pickwick Lake region, the Kellog-Forsyth series of northern Georgia, the Deptford series of the Piedmont and Atlantic Coastal Plain, and a fabric and cordmarked series that prevailed in much of North Carolina and Tennessee (B. Smith 1986).

A total of eight ceramic artifacts were recovered from 40MRE106, 24 from 40RE107, 11 from 40RE108, and one was found at 40RE166 during the archaeological survey. These consisted entirely of fragments of broken vessels, also called sherds. Following completion of fieldwork, all ceramic artifacts were processed in TRC's Nashville lab. They were first washed in tap water with a soft bristled brush used to remove sediments, and air-dried. Following an appropriate drying time, the ceramics were examined with the aid of a magnification glass. Body sherd thickness was measured via hand calipers to the nearest 0.1 mm at the thickest portion of the artifact.

The ceramics were sorted based on the temper type visible in cross section, and then by their surface decoration. *Temper* refers to substances such as limestone or sand that are crushed and mixed into raw clay to reduce shrinkage and the potential for breakage during the firing process. *Surface decoration* is the intentional patterned modification of the exterior surface of a vessel (Deter-Wolf 2004). Surface decoration techniques are widely varied, and can include processes such as wrapping the unfired vessel in cords, fabric pressing with a patterned stamp, or drawing with a stylus to create patterns in the wet clay. All together, four varieties of temper (limestone, quartz, sand, and shell) were identified within the assemblages at 40RE106–108, and 40RE166.

Limestone Tempered

Limestone-tempered ceramics are manufactured by mixing crushed limestone with raw clay to help prevent breakage during the firing of vessels. The paste, as exhibited in sherds recovered at 40RE106–108, is medium to fine with sporadic inclusions of sand and/or quartz. These inclusions are scarce enough to consider their presence insignificant to the overall temper. In East Tennessee, limestone tempered ceramics are associated with the Early, Middle, and Late Woodland as well as Mississippian contexts across its range. All sherds exhibit voids in the cross section and vessel walls caused by the post-depositional leaching of the limestone temper out of the ceramic paste. A total of eight of these ceramics were recovered during the survey at 40RE106, 11 were found at 40RE107, and nine were recovered at 40RE108.

Mulberry Creek Plain (40RE106 n=6; 40RE107 n=10; 40RE108 n=8)

Mulberry Creek Plain is a limestone-tempered pottery with no surface decoration. The typology was initially based on work done in the Pickwick and Guntersville Basins in the Tennessee River Valley (Haag 1939, 1942; Heimlich 1952). Mulberry Creek Plain is generally attributed to the Early and Middle Woodland period but continues into the Late Woodland and Mississippian period in some areas (Walling et al. 2000; Walthall 1980). This type has been uncovered at sites throughout East Tennessee and Northeastern Alabama including [Exempted from Disclosure by Statute], Tennessee (Cridlebaugh 1981) and the Bellefonte site (1JA300) and Spirit Hill site (1JA642) in Jackson County, Alabama (Futato 1977; Kelly Hockersmith personal communication 2011). A total of six ceramic sherds of this type were uncovered during excavations at 40RE106, 10 at 40RE107, and eight at 40RE108. All the pieces recovered were body sherds.

Long Branch Fabric Marked (40RE106 n=1)

Long Branch Fabric Marked is a limestone-tempered pottery with a fabric marked exterior surface (Walling et al 2000). The typology was initially based on work done in the Pickwick and Guntersville Basins in the Tennessee River Valley (Haag 1939, 1942; Heimlich 1952). Long Branch Fabric Marked is generally attributed to the Early Woodland period and continues into the Middle Woodland at reduced frequencies (Walling et al. 2000). A single ceramic sherd of this type were uncovered during the survey at 40RE106.

Flint River Cord Marked (40RE107 n=1; 40RE108 n=1)

Flint River Cord Marked is a limestone-tempered pottery with cord markings embedded on the surface (Walling et al 2000). The typology was initially based on work done in the Middle Tennessee River Valley (Heimlich 1952). Flint River Cord Marked is generally attributed to the Middle Woodland period but also continues into the Late Woodland period (Walling et al. 2000). Sites 40RE107 and 40RE108 each produced a single ceramic sherd of this type.

Sand Tempered

Sand-tempered pottery sherds are manufactured by mixing sand with the raw clay in order to reduce breakage during firing. The paste of the sand-tempered sherds that were recovered tended to be medium- to fine grained. A larger amount of tempering agent was added to the raw clay for these artifacts, as compared to the other types of pottery from the site. Sand-tempered sherds appear at Middle Woodland sites in East Tennessee, with the most well known example coming from the [Exempted from Disclosure by Statute] in [Exempted from Disclosure by Statute], Tennessee (Cridlebaugh 1981). In Middle Tennessee, sand-tempered ceramics occur as persistent minority constituents at Middle Woodland sites (Walling et al. 2000). In the Lower Tennessee River Valley in east Tennessee, sand temper is related to the Connestee series dating from 1750 to 1200 B.P. (Ward and Davis 1999). Seven

sand-tempered ceramic body sherds were recovered from 40RE107 and include two Connestee Cord Marked and five Connestee Plain.

Quartz Tempered

Quartz-tempered pottery sherds are manufactured by mixing crushed quartz/quartzite with the raw clay in order to reduce breakage during firing. The paste of the quartz-tempered sherds that were recovered tended to be coarsely ground quartz. Quartz-tempered sherds appear at Early Woodland sites in East Tennessee, with the most well known example coming from the [Exempted from Disclosure by Statute] in [Exempted from Disclosure by Statute] Tennessee (Cridlebaugh 1981). In Middle Tennessee, quartz-tempered ceramics occur as persistent minority constituents at Early and Middle Woodland and Mississippian sites (Walling et al. 2000). In east Tennessee, quartz temper is related to the Watts Bar series which is associated with the Early Woodland period (Cridlebaugh 1981). A single piece of Watts Bar Cord Marked was recovered from 40RE166. Two Watts Bar Plain, one Watts Bar Check Stamped, and three Watts Bar Fabric Marked ceramic sherds were recovered from 40RE107.

Shell Tempered

Shell-tempered pottery sherds are manufactured by mixing shell with the raw clay in order to reduce breakage during firing. The paste of the shell-tempered sherds that were recovered tends to be of very fine shell particles and are characterized by a very smooth surface. In Middle Tennessee, shell-tempered ceramics occur at Mississippian sites (Walling et al. 2000). Two Bell Plain shell-tempered ceramic sherds were recovered from 40RE108.

SPECIALIZED STUDIES

Radiocarbon Dating

A carbon sample was collected from a shell midden feature identified [Exempted from Disclosure by Statute] at 40RE166. The selected sample recovered from the feature was submitted to Beta Analytic, Inc., of Miami, Florida and is used in this report to ascertain a date of occupation. The sample underwent the Accelerator Mass Spectrometry (AMS) technique, which is uniquely suited for very small samples containing 0.00025 to 0.3 grams of final carbon. It has been C^{13}/C^{12} corrected for fluctuations in the atmospheric C^{14} reservoir. Conventional ages, the calibrated intercept age, and the calibrated one-sigma and two-sigma date range has been provided for the sample and appears in Appendix C.

HISTORIC ARTIFACT ANALYSIS

The focus of the historic artifact analysis for this Phase I study was to determine date of manufacture and probable site functions. Historic artifacts were described, where

possible, by material (e.g., solarized glass, nail, brick fragment, ceramic sherd/fragment, etc.) and by form (e.g., machine made bottle, decorated rim sherd, etc). Occupation dates were determined initially in a general sense based on the presence or absence of these usually common and often tightly datable artifacts. Specific dates of production, as well as style and technology were addressed for certain artifacts where appropriate. Possible historic site function was evaluated in terms of the density and types of artifacts present. General discussion of typical historic artifacts encountered in the project region is provided below followed by more detailed discussion and date ranges for artifacts recovered during this survey.

Historic Ceramics

The following discussion is drawn from Majewski and O'Brien 1984 and 1987, Garrow 1982, and McKee et al 2003.

White Refined Earthenwares (WRE) have porous bodies, a function of relatively low firing temperature, although this porosity varies greatly among subtypes. As the name implies, the clay used in making WRE underwent various refinement processes, driven by the desire for a "cleaner," more consistent raw material which would respond to firing in a very consistent way and produce a very light colored body. Body color for WRE can vary from very pale yellowish off-white to "pure" bright white to light dull gray. All types of WRE have a clear or slightly tinted glossy glaze, keeping the body from absorbing moisture and allowing the general whiteness of the paste to show through.

Subcategories of WRE recognized by historical archaeologists and antiques aficionados include such types as creamware, pearlware, cream-colored earthenware, whiteware, white ironstone, white granite, semi-porcelain, hotel ware, and stone china. Some of these divisions do have distinct validity in analyzing historic period archaeological assemblages, especially in contexts related to the decades immediately before and after the year 1800.

Decoration on WRE is common and important, and varies from unpainted molding to elaborate hand painting to transfer prints and decaling. Transfer printing allowed for very standardized motifs to be repeated on all vessels within a set. These motifs vary widely, from simple bands of leaves and flowers to well known landscape and historic scenes. Decorations on WRE can be very useful dating tools, given that the motifs and techniques underwent documented cycles of use.

The approach applied to the ceramic recovered during the survey keeps all WRE in one category rather than splitting it up into recognized and semi-recognized subcategories. This is driven in part by an assumption that those using the ceramic also more or less lumped these divisions together into one general category of "everyday tablewares." Pottery manufacturers developed WRE to be used almost exclusively for tablewares and serving pieces, rather than as utilitarian pieces used in food processing, cooking, and storage. As with many industries that emerged in the nineteenth century, those making and marketing ceramics carried out a constant stream of design and technological

innovations designed to catch the consumer's eye and maintain cost economy. General trends in these innovations are recognizable, but there were always a wide variety of WRE subtypes available to the consumer at any one time in the nineteenth century. Lumping all these varieties as WRE may overlook some details of the economics of consumer choice, but the approach is an efficient way to provide summary statements on the wide range of ceramics that are likely to be encountered on nineteenth and early twentieth century sites.

Porcelain is a high-fired ceramic, almost completely impervious to moisture. The firing process is intense enough to turn the specialized porcelain clays into a glass-like or vitrified form. In cross section, a porcelain fragment has a thin smooth glassy layer on its exterior surfaces, and its body has a grainy texture often compared to very fine sugar crystals because of the way it glints in the light. Thinner porcelain vessels are translucent, a characteristic not shared by the denser bodies of WRE vessels. Porcelains found on late nineteenth century North American sites are almost exclusively from tableware vessels with bright white bodies. Decoration is usually limited to unpainted molding or overglaze enameling or gilding.

Porcelain was first manufactured in China, and its attractive appearance and relative durability made it a highly valued commodity in early oceanic trade between Europe (and its American colonies) and the Far East. Eventually, European manufacturers figured out how to produce porcelains during the eighteenth century, but it remained an expensive product usually reserved for elite tables. As with WRE, there are a variety of subtypes recognized by both archaeologists and collectors, including hardpaste, softpaste, and bone china. Also as with WRE, the analysis of ceramics during analysis keeps all porcelain shards in one category.

Stonewares are subjected to higher firing than coarsewares and earthenwares, making for a body more resistant to moisture absorption even without glazing. Stonewares were mass-produced in the project region beginning in the early nineteenth century for use as large jugs, crocks, jars and other storage and utilitarian forms. Stoneware production continues in our own times at a very reduced level. Body color for these vessels is most typically gray, but can range from reds to yellows depending on the source clay and firing particulars. The bodies are typically thick, with broken cross sections having a dull, large-grained "clumped" appearance as opposed to the more homogenous texture seen in coarsewares and earthenwares. Stonewares in this period generally used one of four glaze types. Alkaline glaze, a sand and ash glaze that may bear a greenish tint, was produced in the Deep South from ca. 1820 until the 1890s (Burrison 1983). The use of salt glazing, one of the oldest stoneware glazes, was centered in the northeastern United States, but spread throughout the country during the nineteenth century. Salt glazed stoneware was typically locally produced in the project region. Albany and Bristol slip glazed stoneware were typically mass-produced throughout the southeast. Albany slip, a dark brown clay slip glaze made from raw materials mined near Albany, New York, was produced from the early 1800s to the present. Bristol, a chemical and white or light gray clay slip glaze, became popular after 1884 and especially popular after 1920 (Greer 1981). Stonewares with interior/exterior combinations of Bristol and Albany slip glazing date to between

1884 and 1920 (Greer 1981). After around 1920, the production of stonewares declined sharply in favor of more inexpensive storage modes (i.e., glass and metal, and later plastics).

Glass

Bottle Glass One of the most significant impacts of the Industrial Revolution on nineteenth-century material culture was the increase in the forms and functions of bottle and table glass. By the late nineteenth century, glass containers had mostly replaced ceramic vessels for food storage, tableware, and other functions. Bottle fragments are one of the most diagnostic classes of artifacts recovered from historic era archaeological sites. It is possible to assign more or less specific periods of manufacture based on unique morphological traits or manufacturing techniques. Such traits may include color, seam scars, finishes, and basal attributes.

In the late nineteenth-century, demand for clear glass increased. Clear glass allowed bottle contents to be viewed by the consumer, and thus it became associated with the attempt by sellers to display product purity. Technological innovation, manufacturing efficiencies, and standardization also spurred the increased production of clear glass. After 1860, soda lime was included in the glass formula as a clarifying and decolorizing agent. By 1879, this additive was largely replaced by manganese oxide as a cost saving measure. Manganese reacts with sunlight, however, gradually giving what started as perfectly clear glass an amethyst shade. By the second decade of the twentieth century, selenium was rapidly replacing manganese oxide as the decolorizing agent of choice, apparently due to its more stable reaction in the newer styles of glass furnaces associated with automated bottle blowing machines. Lockhart 2006 provides a thorough review of the literature on the evolution of glass manufacturing and coloring and decoloring additives to glass in the late nineteenth and early twentieth centuries.

Aqua glass and amber glass were often associated with medicinal, chemical, and household products. Again, it was thought that the colorizing would keep these products from deteriorating in the sunlight. Aqua glass was commonly produced until the 1930s and amber glass, widely used after ca. 1860, is still in use today. Cobalt blue glass was often used for medicines, poisons, “cosmetics, soda water and specialty use from the 1890s to the 1960s” (Fike 1987).

Mold seam marks are likewise temporally sensitive. Mold seams that end just above the shoulder generally predate 1860. From ca. 1860 to 1880, the mold seam continues to about ¼ inch below the finish. Seams that extend to the base of the lip date from 1880 to 1900, and machine-made bottles featuring seams around or up and over or around the top of the lip were manufactured after 1903 until the present day.

Emptontilling (basal scarring) can indicate manufacturing dates. Snap cases had largely replaced pontils by about 1870 (Jones and Sullivan 1985). Suction marks left by the Owens automatic machines appear on bottle bases after 1903–1904. These are irregular circles resulting from the severing of the glass after it was drawn by vacuum into the

mold. Machine-made valve scars are small circles less than an inch in diameter on the bottle base and date to 1930–1940.

During the current survey, numerous glass canning jars were recovered. Other names for these containers include Mason jars and fruit jars. Throughout the current report, these jars will be referred to as glass canning jars.

Architectural Materials

Nails recovered during the current project were sorted into two basic types, cut (also known as square) and wire (also known as round). In general, nails from the site were in poor condition, making it impossible to sort the collection into more precise size and specialized categories.

Cut nails were the predominant type used in construction for most of the nineteenth century in the United States, with wire nails coming onto the scene and largely supplanting the earlier type during the last ten to fifteen years of the century (see Adams 2002, Nelson 1968, Preiss 1973, Stewart-Abernathy 1986, Loveday 1983). The primary reason for the shift to wire nails at this time was reduced cost, due to development of more automated machinery that lowered the cost for wire stock and required less direct hands-on labor in the manufacturing process. “The wire nail was also easier to us. It did, as advertised, less damage to the wood and could be straightened if bent and even removed if necessary” (Loveday 1983).

Comparison of annual production numbers for the two types confirms the rapidity of the shift from cut to wire nails. In 1886, the peak year for cut nail production, American manufacturers produced about 8.2 million kegs of this type, and about half a million kegs of wire nails. In 1897, cut nail production had fallen to 2.1 million kegs, with more than nine million kegs of wire nails produced in the same year. “By 1912, the wire nail accounted for 92 percent of the total nail production in the United States and had effectively replaced the cut nail” (Loveday 1983).

Wire or round nails remain dominant in contemporary times, although cut nails are still made and used for specialized purposes such as for shoeing horses and for use with concrete and masonry.

Brick manufacturing evolved rapidly throughout the nineteenth century. Before the Civil War, brick was primarily hand-molded. By the end of the nineteenth century, brick production had been transformed from a process of brick molding to a process of cutting bricks from large slabs of clay using wire. Hoekensmith (1997) offers a comprehensive description of a large variety of bricks, their morphology, and brick-making practices on a large brick sample in Kentucky.

SITE DEFINITION

According to the TDOA's *Tennessee Archaeological Site Survey Record*, state trinomials (site numbers) are not assigned based on an arbitrary number of artifacts or other specific criteria (TDOA 1997). Historic sites are generally assigned state site numbers if artifacts and/or historic documentation support a pre-1933 date.

With regard to prehistoric sites, assignment of a state site number is based on a number of factors, which include, but are not limited to:

- The quantity and nature of an artifact assemblage;
- The presence of archaeological midden, burials, petroglyphs, or earthworks;
- Whether the nature of the site has been assessed only by surface collection in an area with relatively poor visibility;
- The landform, including distance to water and relationship to previously recorded sites;
- If the site is located in a geographic setting that is underrepresented within the region (i.e. upland setting vs. more populated lowland areas).

NATIONAL REGISTER OF HISTORIC PLACES ELIGIBILITY CRITERIA

Sufficient data were compiled to make recommendations regarding eligibility for listing on the NRHP for each archaeological resource addressed during this study. According to 36 CFR 60.4, cultural resources eligible for listing on the NRHP are defined as buildings, structures, objects, sites, and districts that have "integrity," and that meet one or more of the criteria outlined below (CFR 2010a; NRHP 2002).

- Criterion A (Event). Association with one or more events that have made a significant contribution to the broad patterns of national, state, or local history.
- Criterion B (Person). Association with the lives of persons significant in the past.
- Criterion C (Design/Construction). Embodiment of distinctive characteristics of a type, period, or method of construction; or representation of the work of a master; or possession of high artistic values; or representation of a significant and distinguishable entity whose components may lack individual distinction.
- Criterion D (Information Potential). Properties that yield, or are likely to yield, information important in prehistory or history. Criterion D is most often (but not exclusively) associated with archaeological resources. To be considered eligible under Criterion D, sites must be associated with specific or general patterns in the development of the region. Therefore, sites become significant when they are seen within the larger framework of local or regional development.

For a property to be eligible for the National Register of Historic Places, it must exhibit qualities of integrity (NRHP 2002). This rule also applies to historic districts. The seven aspects of integrity are as follows:

- *Location*: the place where the historic property (or properties) was/were constructed or where the historic event(s) occurred;

- *Design*: the combination of elements that create the form, plan, space, structure, and style of a property (or properties);
- *Setting*: the physical environment of the historic property (or properties);
- *Materials*: the physical elements that were combined to create the property (or properties) during the associated period of significance;
- *Workmanship*: the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory;
- *Feeling*: the property's (or properties') expression of the aesthetic or historic sense of the period of significance; and
- *Association*: the direct link between the important historic event(s) or person(s) and the historic property (or properties).

V. ARCHAEOLOGICAL SURVEY RESULTS

LITERATURE AND RECORDS SEARCH

In late December, 2010, prior to initiating fieldwork, TRC conducted a background literature and records search of the state archaeological site files at the TDOA. A total of 12 previously identified sites are present directly within the APE. A total of 35 sites have been previously identified within a 1.6-km (1.0-mile; see Figure 1) of the current APE. Information on these sites is presented in Table 1.

Table 1. Summary of Previously Recorded Archaeological Sites within a 1.6 km (1.0-mile) Vicinity of the Project Area.

Site Number	Cultural Affiliation	Site Type
40RE91	Late Woodland	Open Habitation
40RE92	Undetermined Prehistoric	Open Habitation
40RE93	Undetermined Prehistoric	Open Habitation
40RE94	Archaic / Middle and Late Woodland	Open Habitation
40RE104	Undetermined Prehistoric	Open Habitation
40RE105	Mississippian	Village
40RE121	Late 19 th and 20 th Century	Farmstead
40RE122	Late 19 th and 20 th Century	Farmstead
40RE123	Late 19 th and 20 th Century	Historic Structure
40RE124	Late Woodland / Mississippian	Mound
40RE125	Woodland	Open Habitation
40RE128	Mississippian	Open Habitation
40RE138	Paleoindian/Archaic/Woodland/Mississippian	Open Habitation
40RE140	Late Archaic/Woodland / 20 th Century	Cave
40RE151	Undetermined Prehistoric	Open Habitation
40RE153	Undetermined Prehistoric	Open Habitation
40RE155	Undetermined Prehistoric	Open Habitation
40RE156	Undetermined Prehistoric	Open Habitation
40RE157	Undetermined Prehistoric	Open Habitation
40RE158	Undetermined Prehistoric	Open Habitation
40RE160	Undetermined Prehistoric	Open Habitation
40RE161	Undetermined Prehistoric	Open Habitation
40RE163	Undetermined Prehistoric	Open Habitation
40RE164	Undetermined Prehistoric	Open Habitation
40RE167	Early Archaic / Woodland / Mississippian	Open Habitation
40RE202	Undetermined Prehistoric	Open Habitation
40RE492	Undetermined Prehistoric	Open Habitation
40RE493	Undetermined Prehistoric	Open Habitation
40RE494	Undetermined Prehistoric / Late 19 th and 20 th Century	Open Habitation / Historic Scatter
40RE500	Undetermined Prehistoric / Late 19 th and 20 th Century	Open Habitation / Historic Scatter
40RE501	Late Archaic	Open Habitation
40RE547	Undetermined Prehistoric	Open Habitation
40RE548	Undetermined Prehistoric	Open Habitation
40RE549	Woodland	Open Habitation
40RE575	20 th Century	House

Numerous archaeological investigations have taken place in both the general and specific project area, as detailed and discussed in publications such as Jolley 1982, Schroedl 1990, and Stanyard et al. 2003. A number of late nineteenth and early 20th century archaeological investigations were conducted in the general project vicinity, with a focus on mounds, shell middens, and large village sites [

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] Cyrus Thomas, J.W. Emmert, C.B. Moore, and M.R. Harrington identified and excavated numerous sites along these waterways between 1880 and 1922 (Brady and Koerner n.d.; Moore 1915; Harrington 1922, Thomas 1894). Of these early exploratory-period archaeologists, only Thomas seems to have ventured up the Clinch River to the project vicinity. His published writings provide a brief mention of two mounds on the opposite shore from the CRS, but no sites on the CRS itself.

More systematic investigations in the region were conducted in the 1930s as part of the massive public works projects of the New Deal. Extensive investigations were conducted in the Norris, Wheeler, Guntersville, Pickwick, and Chickamauga Reservoirs (Lewis and Kneburg 1941; Webb 1938; Webb and DeJarnette 1942; Webb and Wilder 1951). In the 1940s, World War II shifted emphasis away from government sponsored archaeology. In contrast to the 1930s New Deal projects, archaeological investigations in the Watts Bar, Loudon, and Douglass Reservoirs were limited. During this period, Charles Nash (n.d.) conducted surveys [

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] in the early 1940s [

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] Nash recorded five sites at the CRS, but none were subject to intensive investigation at that time.

Intensive archaeological survey of the entire CRS property took place in the early 1970s through the early 1980s as part of the planning by TVA for the development of the breeder reactor power plant on the site. (As well as looking at the current APE, these 1970s surveys also examined considerable adjacent areas to the north and south.) Gerald Schroedl of the University of Tennessee, Knoxville carried out most of the initial work during this period, including reevaluations of the five sites recorded by Nash on the property (Schroedl 1972) and recording of an additional prehistoric site and several historic period sites (Schroedl 1974a). Schroedl also carried out intensive investigations at four sites on the property, 40RE107, -108, -124, and -129, in 1974 and 1975 (Schroedl 1990). This included the full excavation of the Hamilton phase burial mound at 40RE124, south of the present APE (Cole 1975). Nick Fielder recorded additional historic and prehistoric sites in the area in 1974 and 1975 (Fielder 1974 and 1975). Further work in 1981 focused on [

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] survey, deep testing along the [

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] areas on the property, and shovel testing of selected [

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] areas (Jolley 1981). Following the professional standards of the time, these surveys all took a somewhat "opportunistic" approach, focusing on previously recorded sites, documented locations of historic period farmsteads, and what were viewed as areas with a high probability for cultural resources. Thus, the CRS has never been subject to a truly comprehensive Phase I archaeological survey, and this defines one goal of the current survey described in this report.

The Clinch River breeder reactor project was cancelled in 1983. Since then, additional archaeological investigations have taken place in the general vicinity of the current APE in connection with a variety of planned undertakings and federal lands inventories. These

include a [Exempted from Disclosure by Statute] survey of the Watts Bar Reservoir (Ahlman et al. 2000), surveys of proposed industrial developments (Turner 1988 and Jones 1999), a transmission line route (McKee and Karpynec 2006), and a proposed coal ash dump (Stanyard et al. 2003).

Another post-breeder reactor project study, Leigh 1999, is particularly relevant to the current project in that it focused on the geomorphology and buried site potential [Exempted from Disclosure by Statute] of the entire CRS. This study concluded that the alluvial deposits along the floodplains here are all fairly recent, dating to less than 13,000 years, even to a depth of five to six meters. Leigh also found that the upper strata of the alluvium (from 0.2 to 1.5 m deep) dates to the historic period, underlain by a distinctively textured and colored prehistoric substrate. [Exempted from Disclosure by Statute]

[Exempted from Disclosure by Statute] He concludes that [Exempted from Disclosure by Statute] [Exempted from Disclosure by Statute] for [Exempted from Disclosure by Statute] [Exempted from Disclosure by Statute] along these settings being of particular interest in this regard. His report concludes with a detailed presentation of a proposed sampling program to [Exempted from Disclosure by Statute] [Exempted from Disclosure by Statute], based on techniques presented in Stafford 1995.

ARCHAEOLOGICAL SURVEY RESULTS

TRC personnel conducted the archaeological survey from January 3 through February 2, 2011, utilizing both systematic visual inspections and shovel testing to prospect for archaeological remains. Shovel testing and visual examination of exposed ground surfaces within the APE identified five previously unrecorded archaeological sites (40RE585, 40RE586, 40RE587, 40RE588, and 40RE589). The survey also re-evaluated 12 previously identified archaeological sites (40RE106–108, 40RE120, 40RE129, 40RE152–154, 40RE159, 40RE163, 40RE165, and 40RE166).

Soils within the CRS along the terraces of the Clinch River consist of 10YR 3/3 dark brown silt loam underlain by a 10YR 5/8 yellowish brown silt clay subsoil (Figure 15). Soils within the uplands in the eastern half of the project area consist of a 10YR 4/3 silt loam underlain by a 7.5YR 5/8 strong brown clay subsoil (Figure 16). Soils within the “Power Block” area of the APE consist of gravel fill and deflated clay subsoil (Figure 17).

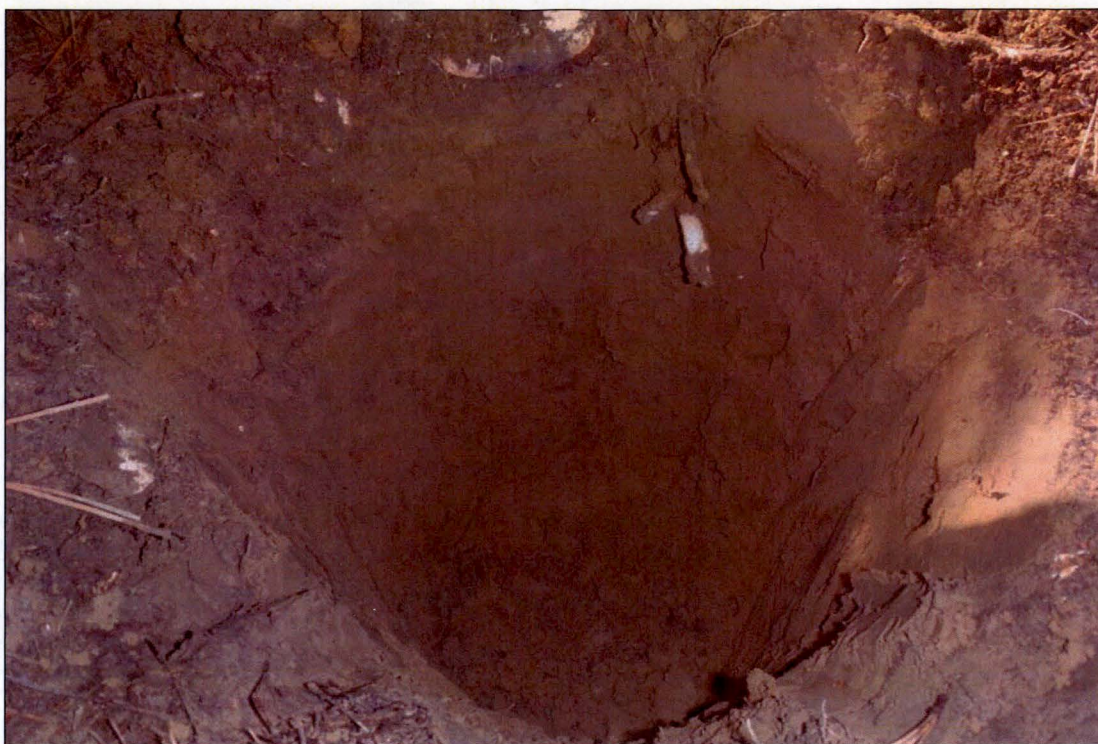


Figure 15. Typical soil profile within the terraces along the Clinch River.



Figure 16. Typical soil profile within the uplands of the project APE.



Figure 17. Soil profile within the "Power Block" area within the APE.

PREVIOUSLY RECORDED ARCHAEOLOGICAL SITES

40RE106

USGS quadrangle: Elverton, TN	Maximum artifact depth (cm): 75
TN State Plane (NAD83 Feet): [] Exempted from Disclosure by Statute	Artifacts: 73 Prehistoric
Cultural Affiliation: Early, Middle, and Late Woodland	Number of shovel tests: 31
Site Type: Open Habitation	Site Dimensions: 297 m SE/NW x 51 m NE/SW
NRHP recommendation: Eligible	Elevation: [Exempted from Disclosure by Statute]

The site location is mapped[

Exempted from Disclosure by Statute

.]The site was originally recorded by Nash in the early 1940s. He described it as a village, defined by the extent of the surface scatter of shell and pottery (Nash n.d.). In the early 1970s, Schroedl excavated 14 test units at 40RE106, with only one artifact, a wire nail, recovered from any of the tests. He described the site as being extensively disturbed by grading operations, and recommended no further work here in association with the planned reactor construction (Schroedl 1972). Two years later, Fielder investigated the site and reported discovering an intact cultural deposit below the plow zone (Fielder 1974).

Jolley revisited 40RE106 in his 1981-1982 investigation of the CRS (Jolley 1982). His [Exempted from Disclosure by Statute] at the location resulted in the recovery of FCR and ceramic fragments datable to the Early Woodland. Jolley also placed a backhoe trench at the site, measuring 5 m long and taken down to a depth of 1.7 m (Figure 18). In the trench, Jolley found debitage and FCR in the top 60 cm (defined as the plow zone) and a distinct dark brown loam with charcoal "mottling" (but no reported artifacts) below the plow zone to a depth of 1.4 m. He describes this soil as being deposited [Exempted from Disclosure by Statute] [As with all other sites examined in his survey, Jolley recommended 40RE106 as not being a significant archaeological resource.

40RE106 is situated within the CRS [Exempted from Disclosure by Statute] (see Figure 1). The site was resurveyed during an archaeological survey within the APE of the CRS. The site boundary is well defined and measures approximately 297-m SE/NW x 51-m NE/SW (Figures 19–20). Deposits at 40RE106 were delineated through shovel tests and visual examination of exposed soils [Exempted from Disclosure by Statute] (Figure 21–22).

A total of 31 shovel tests were excavated at the site with 12 positive for cultural material. Soils at the site consisted of a very dark grayish brown 10YR 3/2 silt loam topsoil (0-50 cmbs) underlain by a dark yellowish brown 10YR 4/4 clay loam sterile subsoil (Figure 23). Auger testing within the shovel tests determined that the subsoil is consistent to a depth of 1.5 m.

A total of 73 prehistoric artifacts were recovered during the excavation of shovel tests and visual examination [Exempted from Disclosure by Statute] at 40RE106. They are summarized by provenience in Appendix A. They include a primary flake, secondary flakes, tertiary flakes, flake fragments, shatter, FCR, and an end scraper (Figure 24). The majority of chert artifacts recovered at 40RE106 were manufactured from St. Louis chert. A single Jack's Reef Pentagonal PP/K was also recovered at 40RE106.

In addition to the PP/K, several prehistoric limestone tempered ceramic types were also recovered during excavations at 40RE106. Types recovered include Long Branch fabric marked and Mulberry Creek plain (see Figure 24). All of the prehistoric ceramics recovered at 40RE106 were body sherds. No rims were recovered at the site. A total of six pieces of Mulberry Creek Plain ceramic sherds were recovered at 40RE106. Mulberry Creek Plain is generally attributed to the Early and Middle Woodland period but continues into the Late Woodland and Mississippian period in some areas (Walling et al. 2000; Walthall 1980). A single piece of Long Branch Fabric Marked ceramic sherd was recovered at 40RE106. Long Branch Fabric Marked is generally attributed to the Early Woodland period and continues into the Middle Woodland at reduced frequencies (Walling et al. 2000).

Exempted from Disclosure by Statute – Withheld Under 10 CFR 2.390(a)(3)

Figure 18. West profile of Backhoe Trench 4 excavated by Jolley (1982) at 40RE106.

Exempted from Disclosure by Statute – Withheld Under 10 CFR 2.390(a)(3)

Figure 19. Overview of 40RE106, facing southeast.



Figure 20. Overview of 40RE106, facing southeast.

[

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Disclosure by Statute

Figure 21. View [Exempted from
Disclosure by Statute] at 40RE106, facing southeast.



Figure 22. View [Exempted from Disclosure by Statute] at 40RE106.

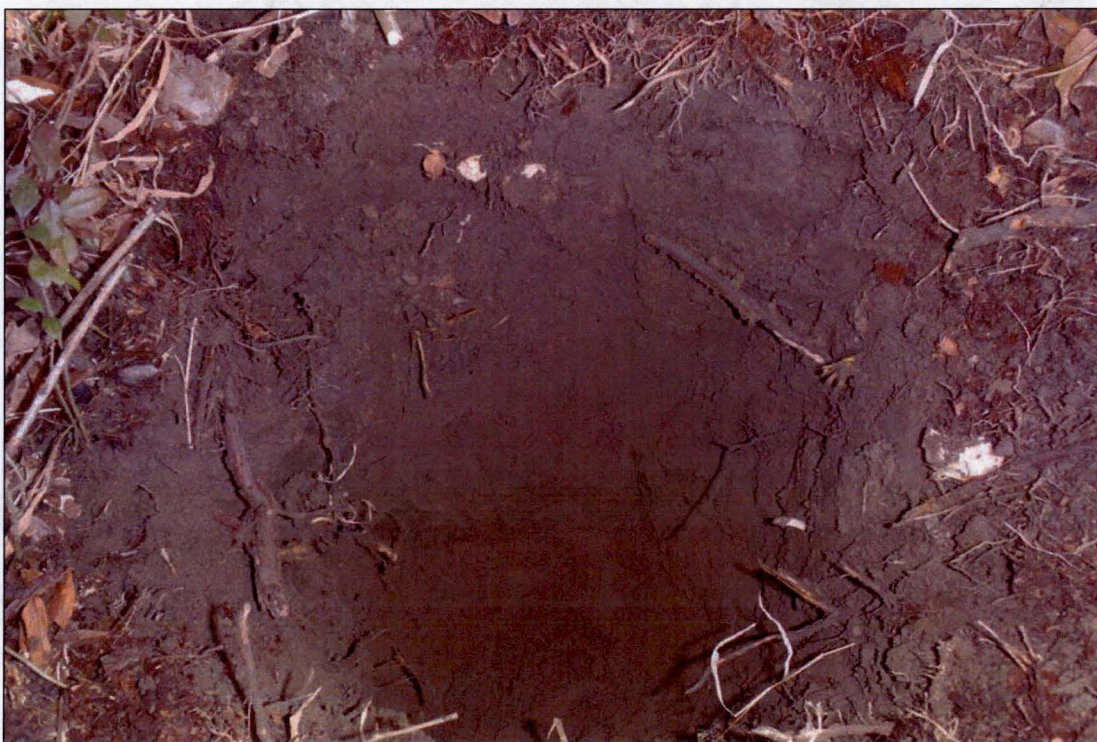


Figure 23. Typical soil profile at 40RE106.

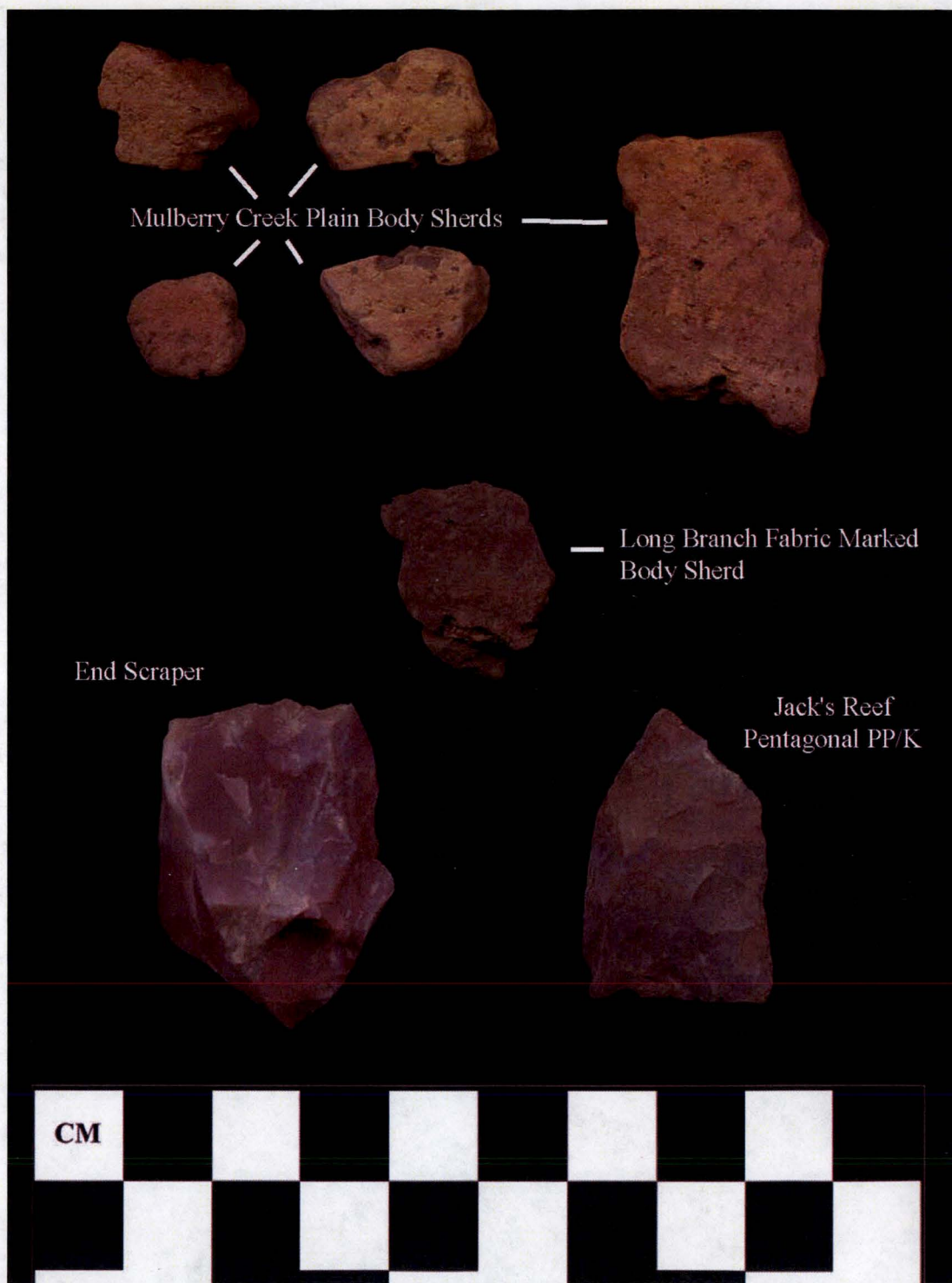


Figure 24. Lithic and ceramic prehistoric artifacts recovered from 40RE106.

TRC recommends 40RE106 as eligible for listing on the NRHP under Criterion D of 36 CFR 60.4 due to the presence of intact subsurface archaeological deposits at the site dating to the Woodland period. It appears that no looting or construction activity has occurred at the site since the last time it was surveyed in the early 1980s. The site represents an open habitation site occupied throughout all three subdivisions of the Woodland period. Artifacts were recovered up to 75 cm in depth at 40RE106. 40RE106 may yield significant information regarding prehistoric archaeological research regarding the Woodland period in the project region. TRC recommends TVA avoid this site during the current project. If 40RE106 can not be avoided during the current project, TRC recommends a data recovery plan be established for the site.

40RE107

USGS quadrangle: Elverton, TN TN State Plane (NAD83 Feet): [Exempted from Disclosure by Statute]	Maximum artifact depth (cm): 100 Artifacts: 495 Prehistoric 4 Historic
Cultural Affiliation: Early and Late Archaic and Woodland Site Type: Open Habitation	Number of shovel tests: 161 Site Dimensions: 585 m N/S x 215 m E/W
NRHP recommendation: Eligible	Elevation: [Exempted from Disclosure by Statute]

The site location is mapped[

Exempted from Disclosure by Statute

.] The site was originally

recorded by Nash in the early 1940s. He described it as a very puny, but extensive village marked largely by "hearth" rocks and flint spalls and categorized it, in the classification scheme of the time, as "Upper Valley Woodland" (Nash n.d.). Schroedl (1972), revisiting the site in the early 1970s, characterized 40RE107 as having widely dispersed cultural deposits (Figures 25–28). Schroedl carried out three separate investigations from 1972 to 1975 at the site, using test pits of various sizes and backhoe trenching. He reported that the work failed to locate intact deposits and features at the site and found no culturally or temporally diagnostic artifacts. Jolley did no work at 40RE107 in his 1981–1982 investigation of the CRS, apparently due to the negative results of Schroedl's excavations at the site (Jolley 1982).

40RE107 is situated within the CRS[

Exempted from Disclosure by Statute

](see Figure 1). TRC resurveyed the site during the archaeological survey within the APE of the CRS. The site boundary is well defined and measures approximately 585-m N/S x 215-m E/W (Figures 29–31). Deposits at 40RE107 were delineated through shovel tests and [

Exempted from Disclosure by Statute

]. A total of 161 shovel tests were excavated at the site with 61 positive for cultural material. Soils at the north end of the site consisted of a dark yellowish brown 10YR 4/4 silt loam (0–45 cmbs) underlain by a yellowish brown 10YR 5/8 silt clay loam sterile subsoil (Figure 32). Soils at the south end of the site consisted of a dark yellowish brown 10YR 5/8 silt loam plowzone (0–36 cmbs) underlain by a brown 10YR 4/3 silt loam (36–66 cmbs). From 66 to 110 cmbs, a dark brown 10YR 3/3 silt loam buried A horizon was encountered underlain by a dark yellowish brown 10YR 4/4 dark yellowish brown sterile subsoil (Figure 33).

Exempted from Disclosure by Statute – Withheld Under 10 CFR 2.390(a)(3)

Figure 25. Map of excavations at 40RE107 recorded by Schroedl (1990).

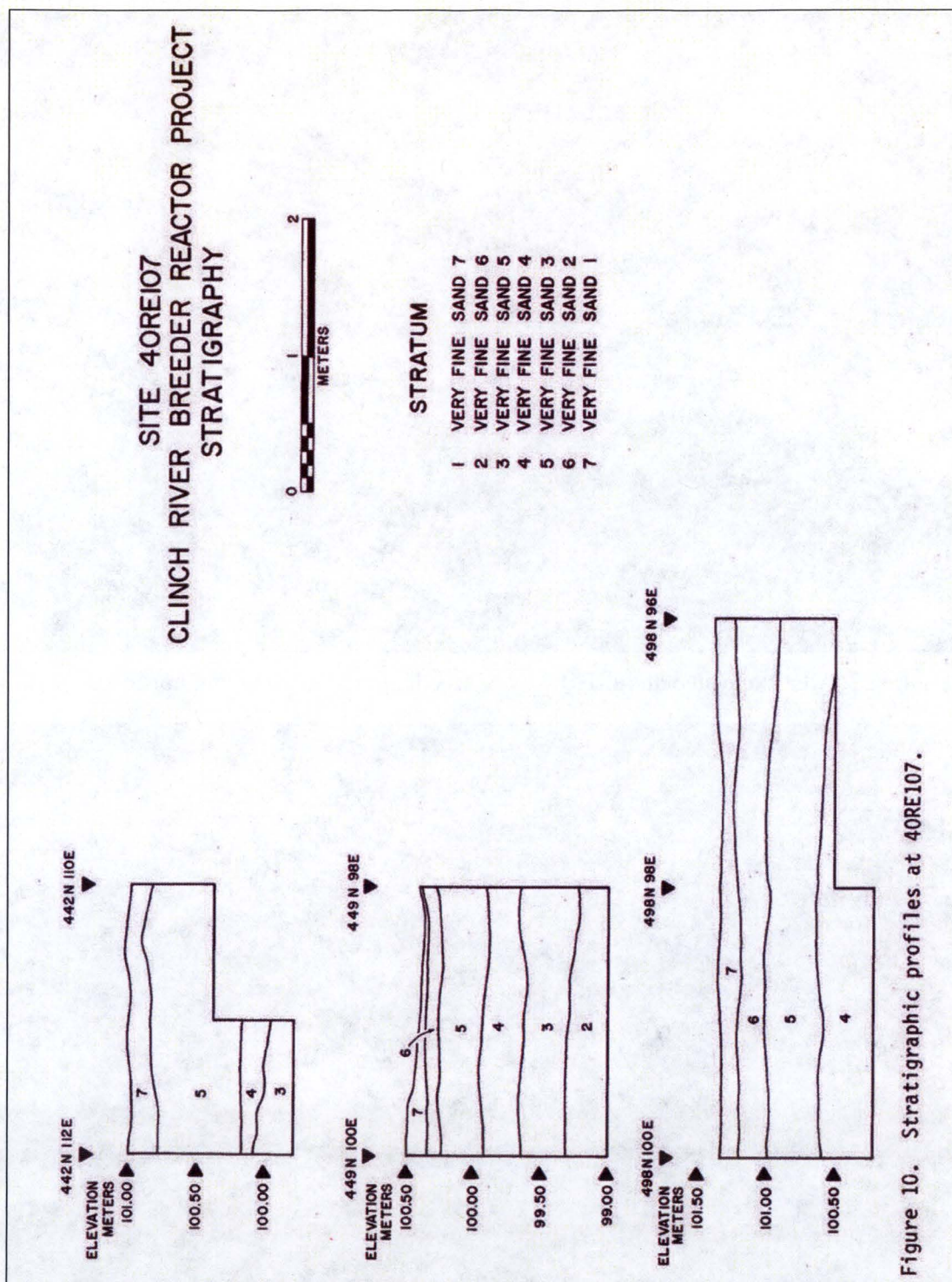


Figure 26. Soil profiles of excavations at 40RE107 recorded by Schroedl (1990).



Figure 27. Area excavated at 40RE107 by Schroedl in the 1970s, facing northwest.



Figure 28. Open test unit from Schroedl's work in the 1970s at 40RE107, facing west.

Exempted from Disclosure by Statute – Withheld Under 10 CFR 2.390(a)(3)

Figure 29. Map of 40RE107 showing the site boundary and excavated shovel tests.



Figure 30. General view of south end of 40RE107, facing north.



Figure 31. General view of north end of 40RE107, facing southwest.



Figure 32. Soil profile of shovel test 1 along Transect 3 at 40RE107.



Figure 33. Soil profile along Transect 10, 15 m south of shovel test 13 at 40RE107.

A total of 495 prehistoric and four historic artifacts were recovered during the excavation of shovel tests [Exempted from Disclosure by Statute] at 40RE107. They are summarized by provenience in Appendix A. They include primary flakes, secondary flakes, tertiary flakes, flake fragments, shatter, FCR, a core, a bimarginal flake tool, a secondary stage biface fragment, tertiary stage biface fragments, clear curved glass, metal band, and a .22 caliber shell case (Figure 34). The majority of chert artifacts recovered at 40RE107 were manufactured from St. Louis chert. A Palmer PP/K and untyped Early Woodland PP/K were also recovered at 40RE107. A single fragment of a steatite bowl was also recovered from 40RE107. Two steatite sherds were also recovered from 40RE108 located north of 40RE107 (Schroedl 1990). Steatite bowl artifacts are considered Late Archaic period artifacts (Chapman 1981).

In addition to the PP/Ks, several varieties of prehistoric ceramics were recovered at 40RE107 including limestone, sand, and quartz tempered (Figure 35). All of the prehistoric ceramics recovered at 40MI293 were body sherds. No rims were recovered at the site. A total of 11 limestone tempered ceramic body sherds were recovered during excavations at 40RE107. Types recovered include Flint River Cord Marked (n=1) and Mulberry Creek Plain (n=10) (Figure 35). Mulberry Creek Plain is generally attributed to the Early and Middle Woodland period but continues into the Late Woodland and Mississippian period in some areas (Walling et al. 2000; Walthall 1980). Flint River Cord Marked is generally attributed to the Middle Woodland period but also continues into the Late Woodland period (Walling et al. 2000). A total of seven sandstone tempered ceramic body sherds were recovered during excavations at 40RE107. Types recovered include Connestee Cord Marked (n=2) and Connestee Plain (n=5). Connestee Series ceramics are generally attributed to the Middle Woodland period (Cridlebaugh 1981). A total of six quartz tempered ceramic body sherds were recovered during excavations at 40RE107 including Watts Bar Fabric Marked (n=3), Watts Bar Check Stamped (n=1), and Watts Bar Plain (n=2). Watts Bar Series ceramics are generally attributed to the Early Woodland period (Cridlebaugh 1981).

TRC recommends 40RE107 as eligible for listing on the NRHP under Criterion D of 36 CFR 60.4 as it contains intact subsurface archaeological deposits dating to the Early Archaic and Woodland periods. It appears that no looting or construction activity has occurred at the site since the last time it was investigated in the mid 1970s. The site represents an open habitation site occupied throughout the Early Archaic and Woodland periods. Artifacts were recovered up to 100 cm in depth at 40RE107. 40RE107 may yield significant information regarding prehistoric archaeological research regarding the Early Archaic and Woodland periods in the project region. TRC recommends TVA avoid this site during the current project. If 40RE107 can not be avoided during the current project, TRC recommends a data recovery plan be established for the site.

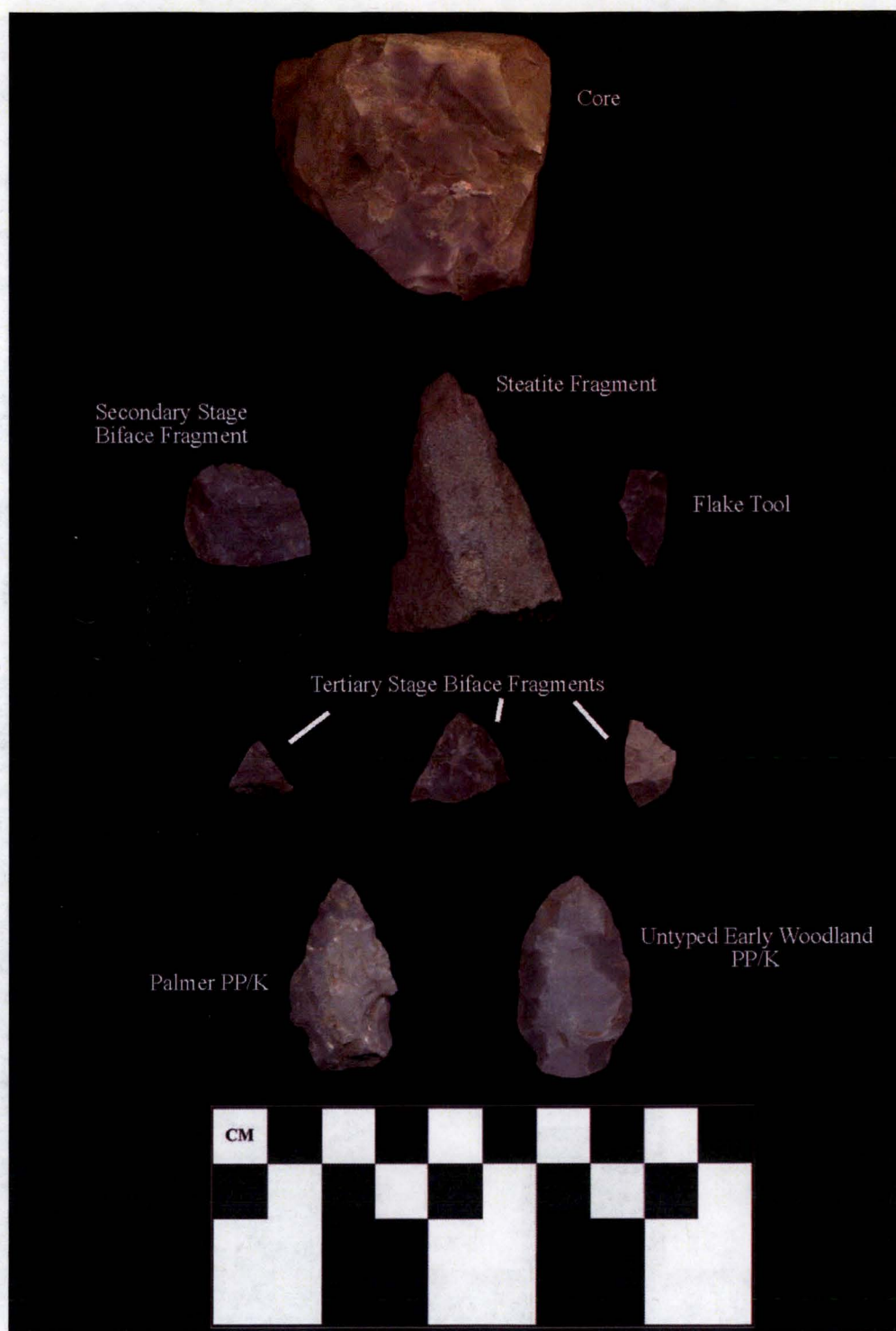


Figure 34. Lithic artifacts recovered from 40RE107.

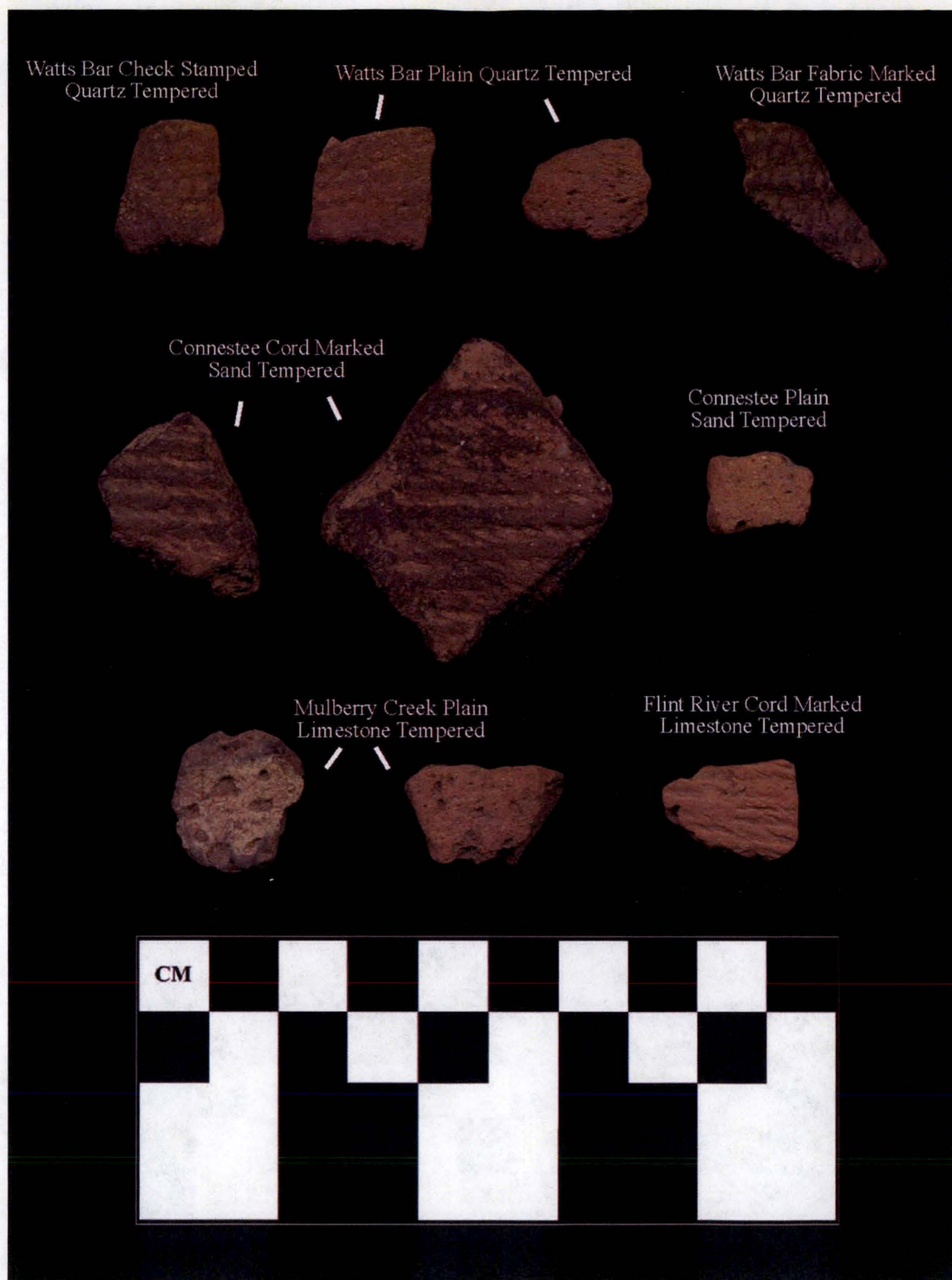


Figure 35. Prehistoric ceramics recovered from 40RE107.

40RE108

USGS quadrangle: Elverton, TN	Maximum artifact depth (cm): 70
TN State Plane (NAD83 Feet): [Exempted from Disclosure by Statute]	Artifacts: 264 Prehistoric 2 Historic
Cultural Affiliation: Late Archaic / Woodland / Mississippian	Number of shovel tests: 63
Site Type: Open Habitation	Site Dimensions: 274 m N/S x 111 m E/W
NRHP recommendation: Eligible	Elevation: [Exempted from Disclosure by Statute]

The site location is mapped [

Exempted from Disclosure by Statute
] The current project APE

includes only a small portion of the mapped location of the site, at its [

Exempted from Disclosure by Statute

1. Site 40RE108 was originally recorded by Nash in the early 1940s. He found at least one shell concentration here, and categorized it, in the classification scheme of the time, as "Upper and Middle Valley Woodland" (Nash n.d.). In his work on the area in the early 1970s, Schroedl defined four areas of concentrated cultural remains at the site, based on shell midden deposits [

Exempted from Disclosure by Statute

](Figures 36-42). All four areas were investigated by Schroedl, using hand-excavated test units, large block exposures, and backhoe trenching. One of these locations, Area 2, is mapped in Schroedl 1990 [

Exempted from Disclosure by Statute

] 40RE108 and [

Exempted from Disclosure by Statute

] Only Areas 1 and 2 are within the current project APE.

Schroedl reported that dates from radiocarbon analysis and diagnostic ceramics suggest an Early and Middle Woodland component at Area 1 and a Middle Woodland component at Area 2. Jolley did no work at 40RE108 in his 1981-1982 investigation of the CRS, although he included it in a list of sites within the reactor project area (Jolley 1982). His lack of investigation of the site was apparently due to it being outside of what was then defined as the "direct impact" area associated with the reactor construction.

40RE108 is situated within the CRS [

Exempted from Disclosure by Statute
](see Figure 1). The site was resurveyed by TRC during the

archaeological survey within the APE of the CRS. The site boundary is well defined and measures approximately 274-m N/S x 111-m E/W (Figure 43-44). Deposits at 40RE108 were delineated through shovel tests and visual examination of exposed soils [

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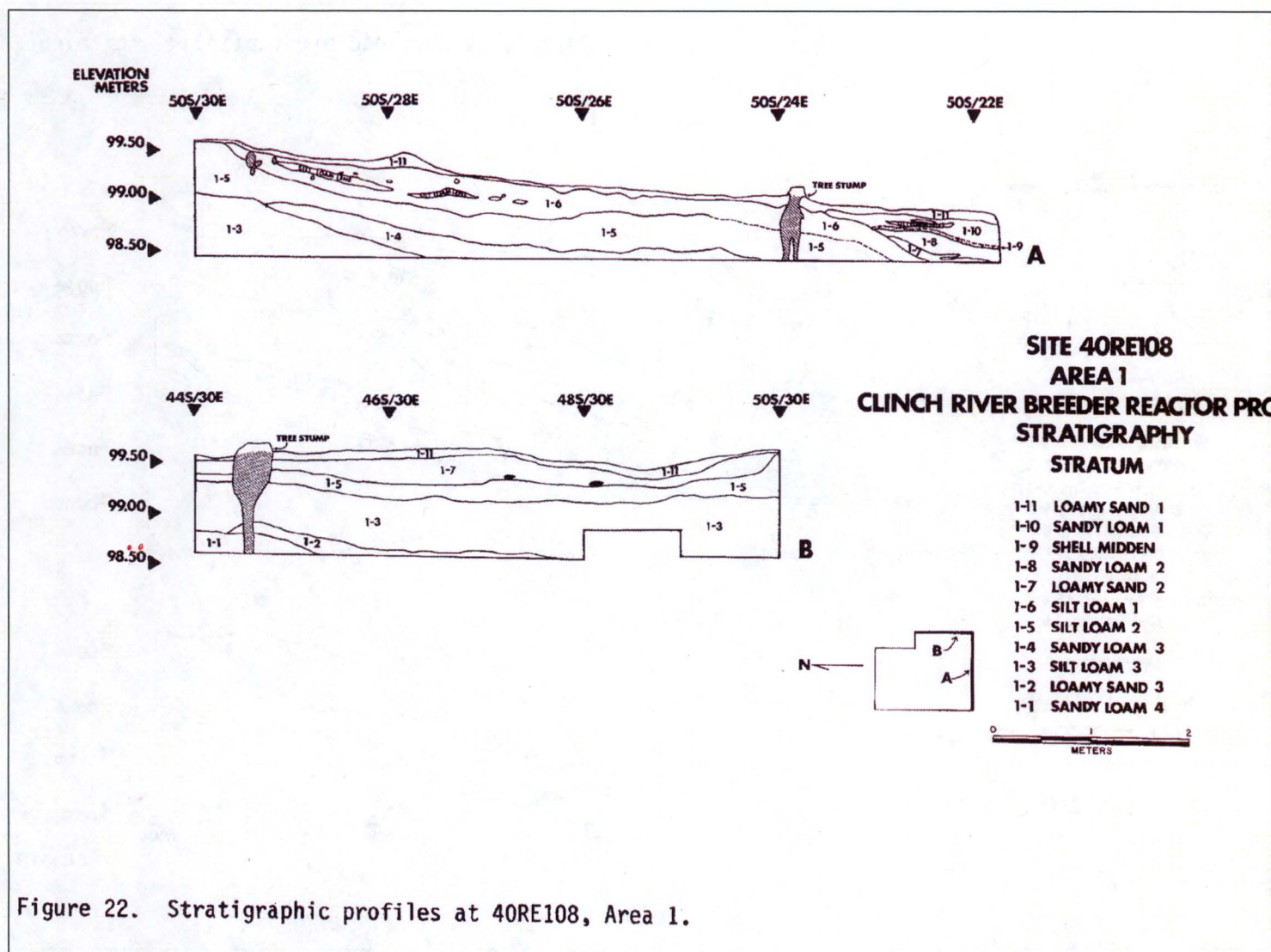
Disclosure by Statute
].

A total of 63 shovel tests were excavated at the site with 17 positive for cultural material. A total of 264 prehistoric and two historic artifacts were recovered during the excavation of shovel tests and visual examination [Exempted from Disclosure by Statute] at 40RE108. They are summarized by provenience in Appendix A. They include primary flakes, secondary flakes, tertiary flakes, flake fragments, shatter, a core, a core fragment, FCR, a spokeshave, a flake tool, a secondary stage biface fragment, a tertiary stage biface fragment, burned earth, nutshell, gastropod and bivalve shells, a piece of WRE, and a piece of amber curved glass (Figure 46). The majority of chert artifacts recovered at 40RE108 were manufactured from Chalcedony and St. Louis cherts. A single Ledbetter PP/K was also recovered at 40RE108.

Exempted from Disclosure by Statute – Withheld Under 10 CFR 2.390(a)(3)

Figure 36. Map made by Schroedl (1990) of 40RE108.

Figure 37. Soils profiles recorded by Schroedl (1990) in Area 1 of 40RE108.



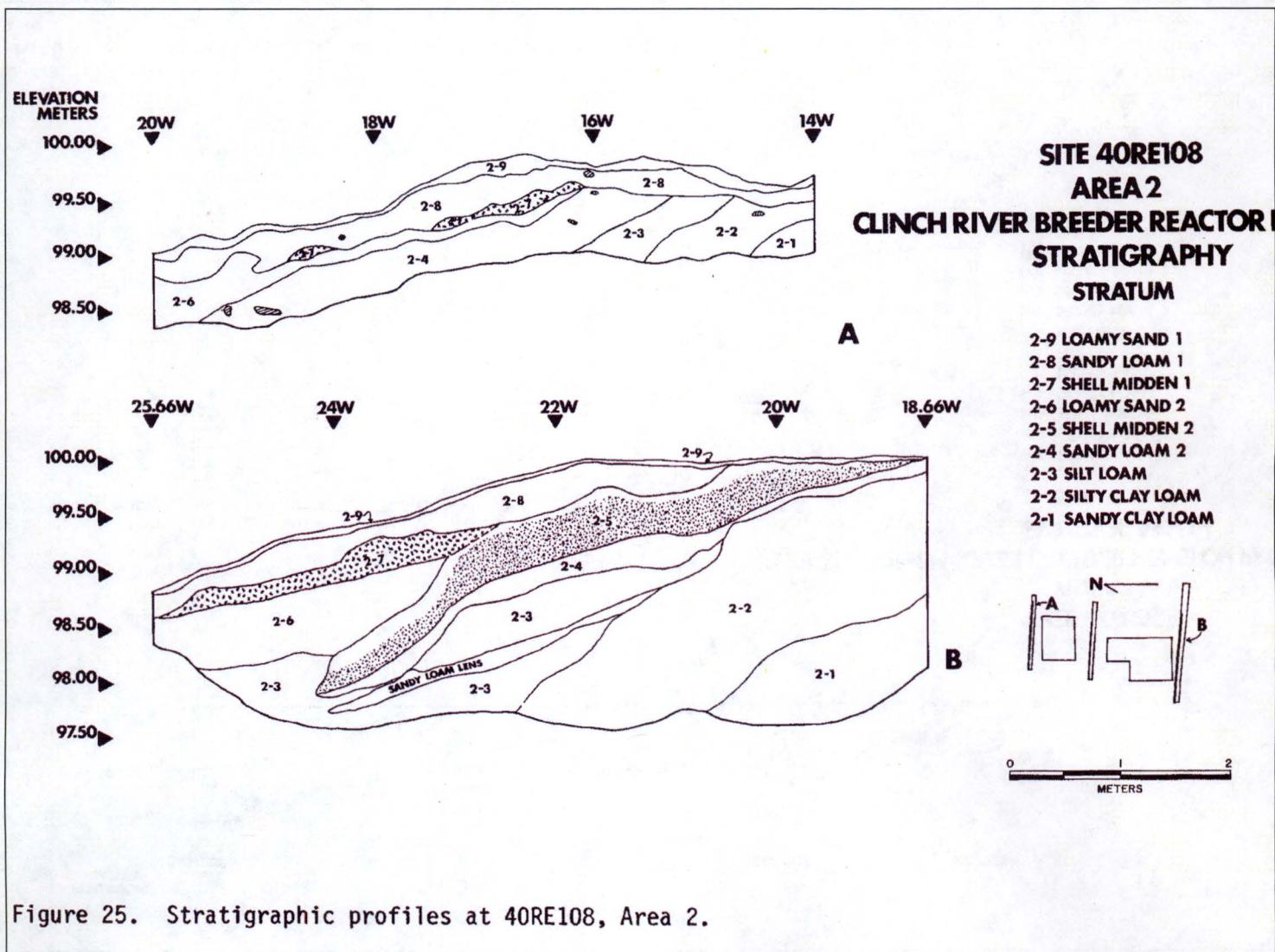


Figure 38. Soil profiles recorded by Schroedl (1990) in Area 2 of 40RE108.

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Figure 39. Overview of Area 1 excavated by Schroedl (1990) at 40RE108, facing north.

[

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Disclosure by
Statute

Figure 40. Overview of Backhoe Trenches 1A and 1B excavated by Schroedl (1990) in Area 1 at 40RE108, facing west.

[

] Exempted from
Disclosure by
Statute

Figure 41. View southeast of Area 2 excavated by Schroedl (1990) at 40RE108.

[

] Exempted from
Disclosure by
Statute

Figure 42. One of the backhoe trenches excavated by Schroedl (1990) in Area 2 at 40RE108, facing west.

Exempted from Disclosure by Statute – Withheld Under 10 CFR 2.390(a)(3)

Figure 43. Map of 40RE108 showing the location of previous excavations, shovel tests, and shell midden deposits.

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Statute

Figure 44. Overview of 40RE108, facing west.

[

] Exempted from
Disclosure by
Statute

Figure 45. Overview [Exempted from
Disclosure by Statute] at 40RE108, facing south.

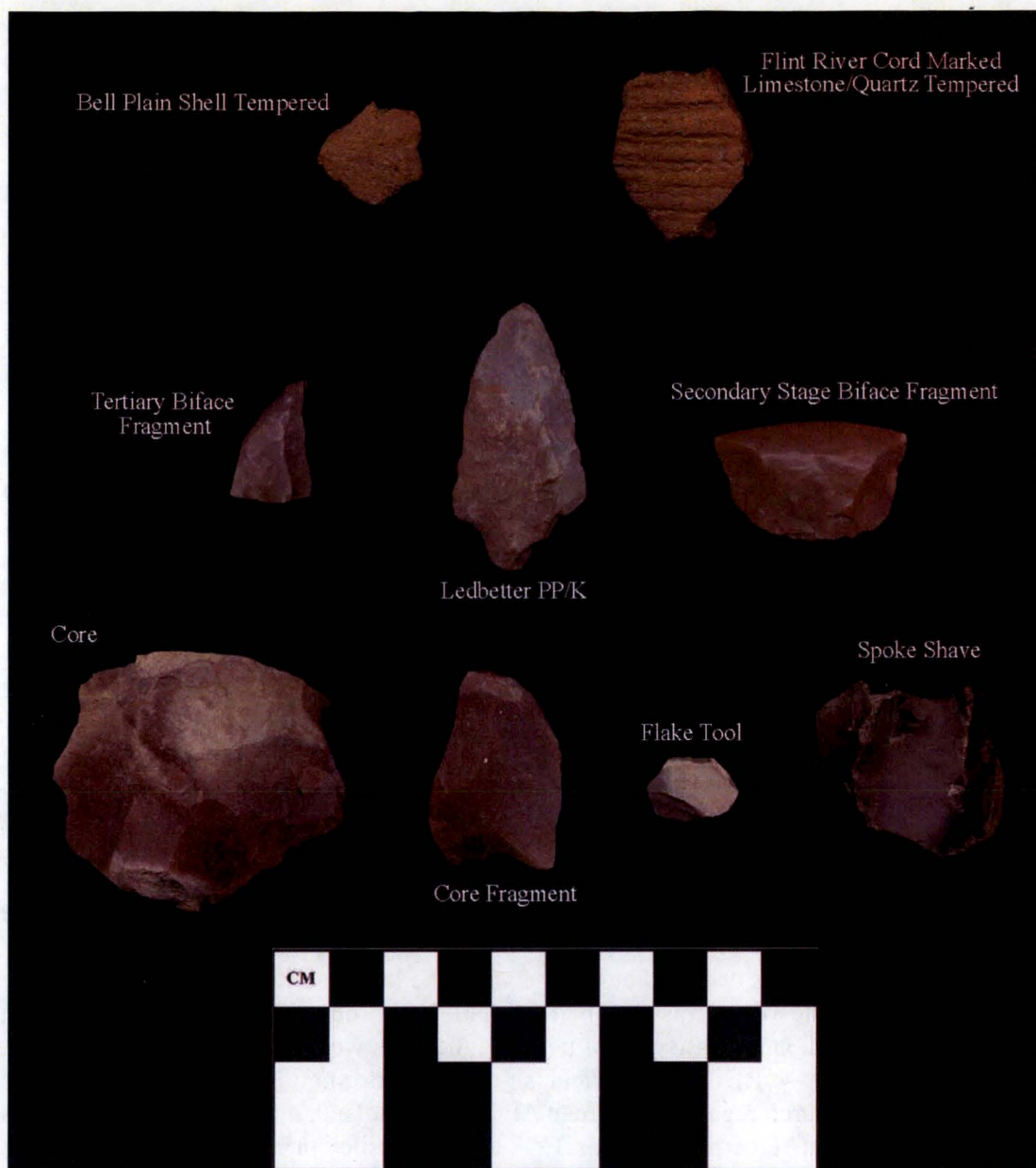


Figure 46. Prehistoric ceramic and lithic artifacts recovered from 40RE108.

In addition to the PP/K, limestone, limestone/quartz and shell tempered prehistoric ceramics were recovered from 40RE108. Types recovered include Flint River Cord Marked, Mulberry Creek plain, and Bell Plain (see Figure 46). All of the prehistoric ceramics recovered at 40RE108 were body sherds. No rims were recovered at the site. A total of eight pieces of Mulberry Creek Plain ceramic sherds were recovered at 40RE108. Mulberry Creek Plain is generally attributed to the Early and Middle Woodland period but continues into the Late Woodland and Mississippian period in some areas (Walling et al. 2000; Walthall 1980). A single piece of Flint River Cord Marked ceramic variant was recovered at 40RE108. Flint River Cord Marked is generally attributed to the Middle Woodland period but also continues into the Late Woodland period (Walling et al. 2000). Two pieces of Bell Plain ceramic sherds were recovered at 40RE108. Bell Plain is generally attributed to the Mississippian period (Walling et al. 2000).

Two lenses of shell midden were identified within Area 2. Schroedl (1990) reported uncovering shell midden deposits within backhoe trenches excavated in Area 2. The two lenses of shell midden were [

Exempted from Disclosure by Statute

](Figures 47–49). Each exposed section of the shell midden lens were approximately 15 to 25 cm thick and less than a 1 m wide.

Soils within Area 1 (Schroedl 1990) near Backhoe Trench 1A consisted of a brown 10YR 5/3 sandy silt top soil (0-20 cmbs) underlain by a layer of black burned earth (10YR 2/1) and a very dark grayish brown 10YR 3/2 sandy loam (20-70 cmbs) and a brown 10YR 4/3 silty sand sterile subsoil (Figures 50–51). Soils overall at the site consisted of a brown 10YR 4/4 silt loam plowzone (0-40 cmbs) underlain by a dark grayish brown 10YR 3/3 silt clay loam (40-90 cmbs) and a dark yellowish brown 10YR 4/4 clay (90-120 cmbs) sterile subsoil (Figure 52).

TRC recommends 40RE108 as eligible for listing on the NRHP due to the presence of intact subsurface archaeological deposits at the site. It appears that no looting or construction activity has occurred at the site since the last time it was investigated in the mid 1970s. The site represents an open habitation site occupied throughout the Late Archaic, Woodland, and Mississippian periods. Artifacts were recovered up to 70 cm in depth at 40RE108. 40RE108 may yield significant information regarding prehistoric archaeological research regarding the Late Archaic, Woodland, and Mississippian periods in the project region. TRC recommends TVA avoid this site during the current project. If 40RE108 can not be avoided during the current project, TRC recommends a data recovery plan be established for the site.



Figure 47. Overview of shell midden [Exempted from Disclosure by Statute] at 40RE108, facing east.



Figure 48. Overview of shell midden and plastic from previous excavations in Area 2 (Schroedl 1990) [Exempted from Disclosure by Statute] at 40RE108, facing east.

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Figure 50. Soil profile of shovel test 500N 500E along Transect 1 at 40RE108.

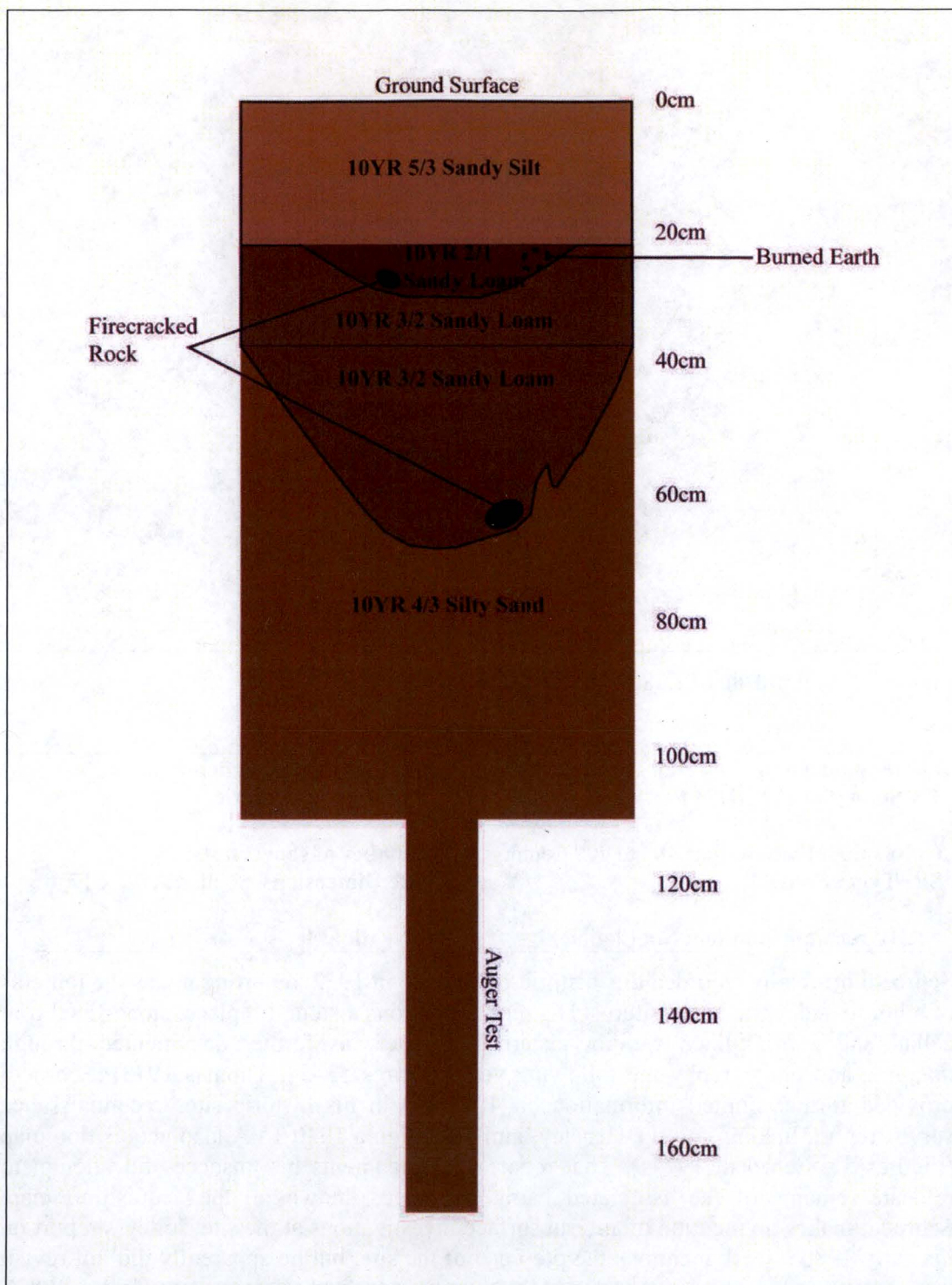


Figure 51. Soil profile of 500N 500E in Area 1 of 40RE108 showing a possible hearth feature.



Figure 52. Soil profile of E380 N500 at 40RE108.

40RE120

USGS quadrangle: Elverton, TN	Maximum artifact depth (cm): 20
TN State Plane (NAD83 Feet): [Exempted from Disclosure by Statute]	Artifacts: 13 Historic
Cultural Affiliation: Late 19 th to 20 th Century	Number of shovel tests: 23
Site Type: House	Site Dimensions: 66 m SE/NW x 17 m NE/SW
NRHP recommendation: Not Eligible	Elevation: [Exempted from Disclosure by Statute]

Schroedl originally recorded this historic-period site in 1972, reporting it was the remains of a house and associated features. His report mentions a stone fireplace, stone-lined root cellar, and a brick-lined well or cistern. The site was further documented through mapping and photography the following year (Figures 53–54; Thomas 1973). Schroedl provided further limited information on 40RE120 in his historic sites reconnaissance survey report, linking it to the Hensley family through a 1940 TVA land acquisition map (Figures 55; Schroedl 1974a). That report also documents his unsuccessful attempt to relocate remains of the associated barns and sheds shown on the acquisition map. Schroedl makes no mention of any subsurface investigations at the site. Jolley's report on his early 1980's work mentions the presence of the site, but he apparently did not revisit the location and gave no reason for not subjecting it to further assessment (Jolley 1982). 40RE120 is a farmstead that appears to have been occupied during the late nineteenth to the twentieth century. The entire site is covered with secondary growth pines and shrubs. The total site measures approximately 66 x 17 m (217 x 56 feet) and [Exempted from Disclosure by Statute] Figure 57–58).

Exempted from Disclosure by Statute – Withheld Under 10 CFR 2.390(a)(3)

Figure 53. Map made of 40RE120 in 1973 (Thomas 1973).

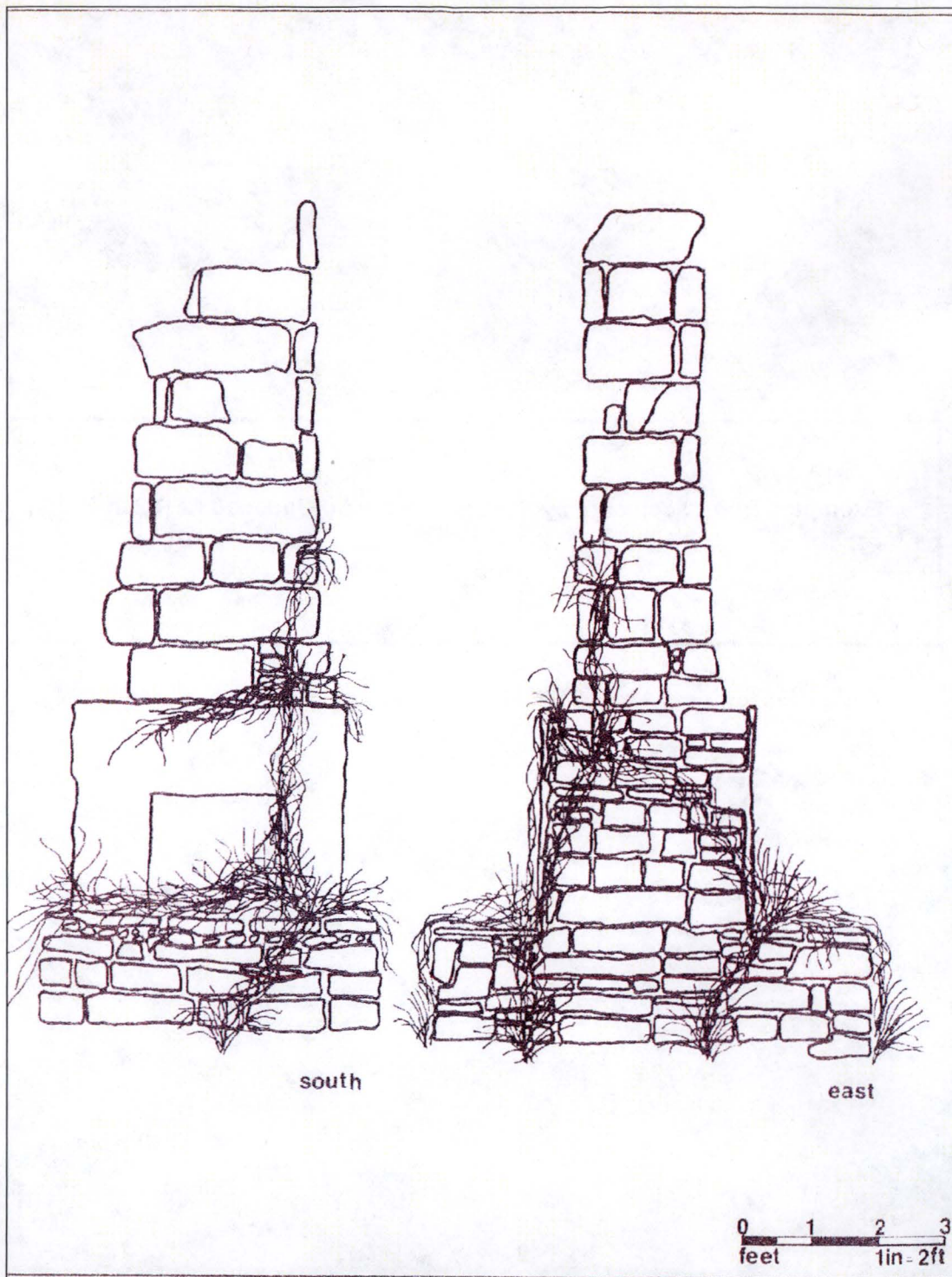


Figure 54. Sketch made in 1973 of the chimney at 40RE120 (Thomas 1973).

Exempted from Disclosure by Statute – Withheld Under 10 CFR 2.390(a)(3)

Figure 55. TVA acquisition map showing the locations of 40RE120, 40RE586, 40RE587, and 40RE588 (Schroedl 1974a).

Exempted from Disclosure by Statute – Withheld Under 10 CFR 2.390(a)(3)

Figure 56. Excerpt of the 1941 Elverton and Bethel Valley, TN 7.5-minute USGS quadrangles, showing the locations of 40RE120, 40RE586, 40RE587, and 40RE588.

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Figure 57. Excerpt of the 1953 Elverton, TN 7.5-minute USGS quadrangle, showing the locations of 40RE120, 40RE586, 40RE587, and 40RE588.

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Figure 58. Map of TRC investigation at 40RE120.

Features identified at 40RE120 include a pile of cut limestone and handmade bricks and an oval shaped surface depression (Figures 59–60). The pile of cut limestone and handmade bricks measures approximately 7.5 m N/S x 7.5 m E/W (24.6 x 24.6 feet). The oval shaped surface depression measures approximately 5 x 3 m (16.4 x 9.8 feet) and is approximately 70 to 80 cm (2.3 x 2.6 feet) in depth. A single shovel test was placed in the center of the depression and revealed shallow soils and no artifacts. No sign of any intact features associated with the house or barn were uncovered at 40RE120. The only artifacts on the surface at the site was the pile of handmade brick and limestone blocks.

A building appears on the 1941 version of the topographic map of the area (see Figure 56). This building depicted on the topographic map is in the same general location as the limestone rubble and handmade brick encountered at 40RE120. It appears the house was torn down after TVA acquired the property in 1941 as part of the Watts Barr Reservoir.

40RE120 was delineated by a combination of shovel testing and visually scanning the surface for signs of cultural material. A total of 23 shovel tests were excavated across the site to ascertain the depth of deposition and the boundary of the site. Soils within the site area consisted of a layer of dark grayish brown 10YR 4/2 silt loam (0-20 cmbs) underlain by a brownish yellow 10YR 6/8 clay loam sterile subsoil (Figure 62). Soils in the area have been impacted by the demolition of the house and outbuildings in the area. Three shovel tests were positive for cultural material. A total of 13 artifacts were recovered at the site. An artifact inventory for the site is presented in Appendix A.

Excavation at 40RE120 uncovered a light density of historic artifacts within the site area. A mix of architectural and domestic artifacts were recovered from the site including handmade brick, wire nails, clear and aqua curved glass, shell, and WRE. A majority of the historic artifacts recovered date to the early to mid twentieth century.

The surrounding soil and the overall condition of 40RE120 have been severely impacted from the demolition of the house. 40RE120 represents the remains of a typical late 19th to mid twentieth century farmstead in eastern Tennessee. It lacks integrity and further research potential and is recommended ineligible for listing on the NRHP. No further work is recommended in its regard.



Figure 59. View of depression and limestone rubble at 40RE120, facing southwest.



Figure 60. View of the surface scatter of handmade bricks at 40RE120, facing southeast.



Figure 61. View of limestone rubble at 40RE120, facing east.



Figure 62. Soil profile of shovel test excavated in the depression at 40RE120, facing east.

40RE129

USGS quadrangle: Elverton, TN	Maximum artifact depth (cm): N/A
TN State Plane (NAD83 Feet): N/A	Artifacts: N/A
Cultural Affiliation: 20 th Century	Number of shovel tests: N/A
Site Type: N/A	Site Dimensions: N/A
NRHP recommendation: Not Eligible	Elevation: N/A

The site was recorded by Fielder in 1974 during a general survey of the Oak Ridge property. He recorded it as a possible prehistoric mound (Fielder 1974). Schroedl carried out tests on the mounded area in 1974, and found items dating to the early to mid 20th century in its fill (Schroedl 1974b). Schroedel's work determined the mound to be a recent historic soil disturbance. Tennessee site records indicate the site number was vacated and is no longer in use as an official state site number. No further archaeological work is recommended for 40RE129.

40RE152

USGS quadrangle: Elverton, TN	Maximum artifact depth (cm): 30
TN State Plane (NAD83 Feet): [<small>Exempted from Disclosure by Statute</small>]	Artifacts: 34 Prehistoric
Cultural Affiliation: Undetermined Prehistoric	Number of shovel tests: 18
Site Type: Open Habitation	Site Dimensions: 88 m N/S x 50 m E/W
NRHP recommendation: Not Eligible	Elevation: [<small>Exempted from Disclosure by Statute</small>]

Jolley recorded this site during his 1981-82 survey of the CRS property. It is located at the [Exempted from Disclosure by Statute

] Jolley placed 11 shovel tests and two 1x1 m test units at the site, recovering debitage and cores but no diagnostic PP/Ks or ceramics. He concluded this represents a small habitation site of undetermined cultural affiliation and recommended 40RE152 as not being a significant archaeological resource.

40RE152 was relocated and resurveyed by TRC and is situated within the CRS [Exempted from Disclosure by Statute] (see Figure 1). The site boundary is well defined and measures approximately 88-m N/S x 50-m E/W (Figures 63-64). Deposits at 40RE152 were delineated through shovel tests spaced 10 m apart. A total of 18 shovel tests were excavated at the site with nine positive for cultural material.

A total of 34 prehistoric artifacts were recovered during the excavation of shovel tests at 40RE152. They are summarized by provenience in Appendix A. They include a primary flake, secondary flakes, tertiary flakes, flake fragments, and shatter. The majority of chert artifacts were manufactured from St. Louis chert. Soils at the site consisted of a dark yellowish brown 10YR 4/4 silt loam topsoil (0-15 cmbs) underlain by a dark yellowish brown 10YR4/6 silt clay loam (15-40 cmbs) and a strong brown 7.5YR 5/8 silt clay (40+cmbs) sterile subsoil (Figure 65).

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Figure 63. Map of 40RE152 showing the location of shovel tests excavated at the site.



Figure 64. Overview of 40RE152, facing east.



Figure 65. Soil profile of shovel test 500N 480E, facing east.

TRC recommends 40RE152 as ineligible for listing on the NRHP, due to the low number of artifacts and lack of intact archaeological deposits at the site. The site represents a prehistoric open habitation site of unknown cultural affiliation. Soils have been disturbed from previous logging activities at 40RE152 and a low density of artifacts were recovered from the shovel tests. The site is unlikely to yield any significant information regarding prehistoric archaeological research in the project region. No further archaeological work is recommended at 40RE152 in connection with the proposed CRS.

40RE153

USGS quadrangle: Elverton, TN	Maximum artifact depth (cm): N/A
TN State Plane (NAD83 Feet): [Exempted from Disclosure by Statute]	Artifacts: N/A
Cultural Affiliation: Undetermined Prehistoric	Number of shovel tests: N/A
Site Type: Open habitation / lithic extraction	Site Dimensions: N/A
NRHP recommendation: Not Eligible	Elevation: [Exempted from Disclosure by Statute]

Jolley recorded this site during his 1981-82 survey of the CRS property. Its mapped location is [Exempted from Disclosure by Statute]

[Jolley placed 4 shovel tests at the site, recovering debitage and cores but no diagnostic PP/Ks or ceramics. The area is near an outcrop of Chickamauga chert, and all recovered artifacts are of this type. For this reason, Jolley suggests this was a lithic extraction site rather than a habitation site. As with all other sites examined in his survey, Jolley recommended 40RE153 as not being a significant archaeological resource. Previously recorded site 40RE153 was resurveyed by TRC in order to determine its relationship to the boundary of the APE. Terrain in the area where 40RE153 is marked on TDOA maps [Exempted from Disclosure by Statute]. Survey in the recorded location of 40RE153 included visual examination [Exempted from Disclosure by Statute] TRC's survey determined the site is located [Exempted from Disclosure by Statute]. No further archaeological work is recommended for 40RE153.

40RE154

USGS quadrangle: Elverton, TN	Maximum artifact depth (cm): 40
TN State Plane (NAD83 Feet): [Exempted from Disclosure by Statute]	Artifacts: 31 Prehistoric
Cultural Affiliation: Undetermined Prehistoric	Number of shovel tests: 18
Site Type: Open Habitation	Site Dimensions: 71 m E/W x 45 m N/S
NRHP recommendation: Not Eligible	Elevation: [Exempted from Disclosure by Statute]

Jolley recorded this site during his 1981-82 survey of the CRS property. Its mapped location is [Exempted from Disclosure by Statute]

[Jolley placed 17 shovel tests and four 1x1 m test units at the site, recovering a single biface fragment, debitage and cores but no diagnostic PP/Ks or ceramics. Jolley concluded that this was likely a habitation site. As with all other sites examined in his survey, Jolley recommended 40RE154 as not being a significant archaeological resource.

40RE154 was relocated and resurveyed by TRC. It is situated [Exempted from Disclosure by Statute] (see Figure 1). The site boundary is well defined and measures approximately 71-m E/W x 45-m N/S (Figures 66–67). Deposits at 40RE154 were delineated through shovel tests spaced 10 m apart. A total of 18 shovel tests were excavated at the site with eight positive for cultural material. A total of 31 prehistoric artifacts were recovered during the excavation of shovel tests at 40RE154. They are summarized by provenience in Appendix A. They include a secondary flake, tertiary flakes, flake fragments, shatter, Tertiary Stage Biface fragment, and FCR. The majority of chert artifacts were manufactured from St. Louis chert. Soils at the site consisted of a brown 10YR 4/3 silt loam topsoil (0-30 cmbs) underlain by a yellowish brown 10YR5/6 silt clay (30-55 cmbs) sterile subsoil (Figure 68).

TRC recommends 40RE154 as ineligible for listing on the NRHP, due to the low number of artifacts and lack of intact archaeological deposits at the site. The site represents a prehistoric open habitation site of unknown cultural affiliation. Soils have been disturbed from previous logging activities at 40RE154 and a low density of artifacts were recovered from the shovel tests. The site is unlikely to yield any significant information regarding prehistoric archaeological research in the project region. No further archaeological work is recommended at 40RE154 in connection with the proposed CRS.

40RE159

USGS quadrangle: Elverton, TN	Maximum artifact depth (cm): N/A
TN State Plane (NAD83 Feet): [Exempted from Disclosure by Statute]	Artifacts: None
Cultural Affiliation: Undetermined Prehistoric	Number of shovel tests: 6
Site Type: Lithic Extraction / Open Habitation	Site Dimensions:
NRHP recommendation: Not Eligible	Elevation: [Exempted from Disclosure by Statute]

Jolley recorded this site during his 1981-82 survey of the CRS property. Its mapped location is on a [Exempted from Disclosure by Statute]

Along with surface collection of areas exposed by grading activity, Jolley placed 16 shovel tests and one 1x1 m test units at the site. The work resulted in the discovery of debitage and cores but no diagnostic PP/Ks or ceramics. Given the presence of outcropping Chickamauga chert and the high ration of shatter and flakes with cortex in the assemblage, he recommended that this was likely a lithic extraction site. As with all other sites examined in his survey, Jolley recommended 40RE159 as not being a significant archaeological resource. Previously recorded site 40RE159 was resurveyed by TRC in order to determine its relationship to the boundary of the APE (See Figure 1). Terrain in the area where 40RE159 is marked on TDOA maps shows it [Exempted from Disclosure by Statute] Survey in the recorded location of 40RE153 included visual examination of the [Exempted from Disclosure by Statute] and shovel tests across [Exempted from Disclosure by Statute] (Figures 69–72). TRC was unable to relocate 40RE159 during the current survey. It appears that the site may have been destroyed during the previous construction of the “power block” area. TRC recommends 40RE159 as ineligible for listing on the NRHP due to a lack of intact subsurface archaeological deposits. TRC recommends no further archaeological work for 40RE159.

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Figure 66. Map of 40RE154 showing the location of shovel tests excavated at the site.



Figure 67. Overview of 40RE154, facing west.



Figure 68. Soil profile of shovel test 500N 500E at 40RE154, facing east.



Figure 69. Ridge top shovel tested during survey within the area of 40RE159, facing northeast.



Figure 70. Portion of 40RE159 within the “power block” area, facing southwest.



Figure 71. [Exempted from Disclosure by Statute] the ridge top at 40RE159, facing west.



Figure 72. Shovel test excavated [Exempted from Disclosure by Statute] within the recorded location of 40RE159.

40RE163

USGS quadrangle: Elverton, TN	Maximum artifact depth (cm): 15
TN State Plane (NAD83 Feet): [Exempted from Disclosure by Statute]	Artifacts: Prehistoric
Cultural Affiliation: Undetermined Prehistoric	Number of shovel tests: 8
Site Type: Open Habitation	Site Dimensions: 10 m N/S x 10 m E/W
NRHP recommendation: Not Eligible	Elevation: [Exempted from Disclosure by Statute]

Jolley recorded this site during his 1981-82 survey of the CRS property. Its mapped location is on the [Exempted from Disclosure by Statute]

] This is in the [Exempted from Disclosure by Statute]

] Jolley placed 4 shovel tests at the site, recovering debitage and cores but no diagnostic PP/Ks or ceramics. Jolley concluded that this was likely a habitation site. As with all other sites examined in his survey, Jolley recommended 40RE163 as not being a significant archaeological resource.

40RE163 was relocated and resurveyed by TRC. It is situated [Exempted from Disclosure by Statute] (see Figure 1). The site boundary is well defined and measures approximately 10-m N/S x 10-m E/W (Figures 73-74). Deposits at 40RE163 were delineated through shovel tests spaced 10 m apart. A total of eight shovel tests were excavated at the site with one positive for cultural material.

One prehistoric artifact consisting of a tertiary flake was recovered during the excavation of shovel tests at 40RE163. Soils at the site consisted of a dark grayish brown 10YR 4/2 silt loam topsoil (0-15 cmbs) underlain by a yellowish red 5YR 5/8 clay (15+cmbs) sterile subsoil (Figure 75).

TRC recommends 40RE163 as ineligible for listing on the NRHP, due to the low number of artifacts and lack of intact archaeological deposits at the site. The site represents a prehistoric open habitation site of unknown cultural affiliation. Soils are deflated at 40RE163 and only one artifact was recovered from the shovel tests. The site is unlikely to yield any significant information regarding prehistoric archaeological research in the project region. No further archaeological work is recommended at 40RE163 in connection with the proposed CRS.

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Figure 73. Site map of 40RE163.



Figure 74. Overview of 40RE163, facing north.



Figure 75. Soil profile in Transect 1 Shovel Test 2 at 40RE163, facing north.

40RE165

USGS quadrangle: Elverton, TN	Maximum artifact depth (cm): 110
TN State Plane (NAD83 Feet): [] Exempted from Disclosure by Statute	Artifacts: 253 Prehistoric
Cultural Affiliation: Early and Late Archaic	Number of shovel tests: 17
Site Type: Open Habitation	Site Dimensions: 177 m SE/NW x 45 m NE/SW
NRHP recommendation: Eligible	Elevation: _____

Jolley recorded this site during his 1981-82 survey of the CRS property (Jolley 1982). Its mapped location is[

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trenches [

Exempted from Disclosure by Statute

]Jolley placed two backhoe

]with some

subsidiary hand excavation into cultural deposits uncovered at about 1.6 to 2 m below surface in the trenches (Figures 76–78). The excavation discovered three separate cultural features, two small shallow pits and a concentration of FCR. The feature characteristics and associated diagnostic PP/Ks (an Iddins Undifferentiated stemmed and a Kirk corner notched) led Jolley to conclude that this site represents Early and Late Archaic occupations. Jolley recommended 40RE165 as a significant archaeological resource due to the presence of buried Early Archaic deposits.

40RE165 is situated within the CRS[

Exempted from Disclosure by Statute
]to the southeast

(see Figure 1).The site was resurveyed by TRC during the archaeological survey within the APE of the CRS. The site boundary is well defined and measures approximately 177-m NW/SE x 45-m E/W (Figure 79). Deposits at 40RE165 were delineated through shovel tests and [

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](Figures 80–84). At the

[of the site, a possible fish weir was recorded (Figure 85). The fish weir consists of dry laid stones measuring approximately 10 m (32.8 feet) in length x 75 cm (2.5 feet) wide.

A total of 17 shovel tests were excavated at the site with 11 positive for cultural material. A total of 253 prehistoric artifacts were recovered during the excavation of shovel tests and [

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]at 40RE165. They are summarized by provenience in Appendix A. They include primary flakes, secondary flakes, tertiary flakes, flake fragments, shatter, FCR, nutshell, a tertiary stage biface fragment and an untyped Early Archaic PP/K (Figure 86). The majority of chert artifacts recovered at 40RE165 were manufactured from St. Louis and Chickamauga cherts.

Soils at the site consisted of a humic dark gray (10YRE 4/1) silt loam (0-10 cmbs) underlain by a dark grayish brown (10YR 4/2) clay loam (10-50 cmbs) and a yellowish brown (10YR 5/4) compact clay loam (50-150 cmbs) (Figure 87).

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Figure 76. Map of excavations at 40RE165 recorded by Jolley (1982).

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Figure 77. Soil profiles of backhoe trenches excavated at 40RE165 and recorded by Jolley (1982).



Figure 78. View of backhoe trench 6 excavated by Jolley (1982) at 40RE165, facing northeast.

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Figure 79. Map of 40RE165 showing the location of previously excavated backhoe trenches, shovel tests, and a possible fish weir.

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Figure 80. View of shore line along the Clinch River at 40RE165, facing southeast.



Figure 81. View of the [Exempted from Disclosure by Statute] at 40RE165, facing northeast.

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Disclosure by
Statute

Figure 82. View of 40RE165, facing southeast.

[

] Exempted from
Disclosure by
Statute

Figure 83. [Exempted from Disclosure by Statute] making up the northern boundary of 40RE165, facing northwest.

[

] Exempted from
Disclosure by
Statute

Figure 84. View of road bisecting 40RE165, facing north.

[

] Exempted from
Disclosure by
Statute

Figure 85. View of fish weir at 40RE165, facing north.



Figure 86. Lithic artifacts recovered from 40RE165.



Figure 87. View of soil profile of shovel test 10N 90E at RE165, facing south.

TRC recommends 40RE165 as eligible for listing on the NRHP due to the presence of intact subsurface archaeological deposits at the site. It appears that no looting or construction activity has occurred at the site since the last time it was investigated in the early 1980s. The site represents an open habitation site occupied throughout the Early and Late Archaic periods. Artifacts were recovered to a depth of 1.1 m at 40RE165. 40RE165 may yield significant information regarding prehistoric archaeological research regarding the Archaic period in the project region. TRC recommends TVA avoid this site during the current project. If 40RE165 can not be avoided during the current project, TRC recommends a data recovery plan be established for the site.

40RE166

USGS quadrangle: Elverton, TN	Maximum artifact depth (cm): 80
TN State Plane (NAD83 Feet): [Exempted from Disclosure by Statute]	Artifacts: 200 Prehistoric
Cultural Affiliation: Middle and Late Archaic Early and Middle Woodland	Number of shovel tests: 30
Site Type: Open Habitation	Site Dimensions: 136 m SE/NW x 40 m NE/SW [Exempted from Disclosure by Statute]
NRHP recommendation: Eligible	Elevation: [Exempted from Disclosure by Statute]

Jolley recorded this site during his 1981-82 survey of the CRS property (Jolley 1982). Its mapped location is [

backhoe trench in this site, adjacent to an area where [Exempted from Disclosure by Statute] Jolley placed a single [Exempted from Disclosure by Statute] had found a relatively dense artifact scatter. The trench was taken to a depth of 2 m below surface, but no buried archaeological materials or deposits were encountered. The [Exempted from Disclosure by Statute] did collect several diagnostic artifacts, including a Stanly Cluster PP/K datable to the Middle Archaic, a steatite bowl fragment associated with the terminal Archaic, and a Haywood Triangular PP/K associated with the Middle Woodland. Jolley recommended further evaluation of 40RE166 if the site were to be impacted by the proposed construction plans.

40RE166 is situated within the CRS [

Exempted from Disclosure by Statute

(see Figure 1). The site was resurveyed by TRC during the archaeological survey within the APE of the CRS. The site boundary is well defined and measures approximately 136-m SE/NW x 40-m NE/SW (Figures 88-91). Deposits at 40RE166 were delineated through shovel tests and [Exempted from Disclosure by Statute] (Figure 92-93).

Soils at the site consisted of a very dark grayish brown (10YR 3/2) silt clay topsoil (0-15 cmbs) underlain by a dark brown (10YR 3/3) silt loam (15-60 cmbs) and a dark yellowish brown (10YR 4/4) clay silt subsoil (Figure 94). A total of 30 shovel tests were excavated at the site with five positive for cultural material.

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Figure 88. Map of 40RE166 showing the location of the shell midden and shovel tests.

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Figure 89. Overview of 40RE166, facing southwest.

[

] Exempted from
Disclosure by
Statute

Figure 90. View of northern boundary of 40RE166, facing southeast.

[

] Exempted from
Disclosure by
Statute

Figure 91. [Exempted from Disclosure by
Statute] adjacent to 40RE166, facing northeast.

[

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Disclosure by
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Figure 92. [Exempted from Disclosure by Statute] at 40RE166, facing southeast.



Figure 93. [Exempted from Disclosure by Statute] at 40RE166, facing northeast.



Figure 94. Soil profile of shovel test 10N 120E at 40RE166, facing north.

A total of 200 prehistoric artifacts were recovered during the excavation of shovel tests and visual examination of the shore line at 40RE166. They are summarized by provenience in Appendix A. They include primary flakes, secondary flakes, tertiary flakes, flake fragments, shatter, a core, FCR, an abrader, a mano, a chisel, primary, secondary, and tertiary biface fragments, a whole tertiary stage biface, and pieces of bivalve shell (Figures 95–96). The majority of chert artifacts recovered at 40RE166 were manufactured from St. Louis chert. A single Watts Bar Cord Marked Quartz Tempered ceramic body sherd was recovered during excavations at 40RE166. The Watts Bar Series is generally attributed to the Early Woodland period (Cridlebaugh 1981).

One feature was identified at 40RE166 and labeled Feature 1. This shell midden feature was [Exempted from Disclosure by Statute] while visually [Exempted from Disclosure by Statute] during excavations at 40RE166 (Figures 97–98). Investigation of Feature 1 involved trowel excavation of only the exposed profile section of the [Exempted from Disclosure by Statute]. The rest of the feature [Exempted from Disclosure by Statute] was left intact. The exposed profile of the feature measures approximately 140 cm (4.6 feet) in length and is 15 to 20 cm (5.9 to 7.9 inches) thick. Feature fill was characterized as a lens of bivalve shell containing flake fragments, FCR, and charcoal. A total of 28 artifacts were recovered from Feature 1 and are presented in Appendix A. TRC is still awaiting results of a radiocarbon AMS date of one charcoal sample from Feature 1 (shell midden) and will be included in the final report. Given the fact that only a small portion of Feature 1 is [Exempted from Disclosure by Statute] it is unclear as to the size of this feature.

TRC recommends 40RE166 as eligible for listing on the NRHP due to the presence of intact subsurface archaeological deposits at the site. It appears that no looting or construction activity has occurred at the site since the last time it was investigated in the early 1980s. The site represents an open habitation site occupied throughout Middle and Late Archaic and Early and Middle Woodland periods. Artifacts were recovered up to 80 cm in depth at 40RE166. 40RE166 may yield significant information regarding prehistoric archaeological research regarding the Archaic and Woodland periods in the project region. TRC recommends TVA avoid this site during the current project. If 40RE166 can not be avoided during the current project, TRC recommends a data recovery plan be established for the site.

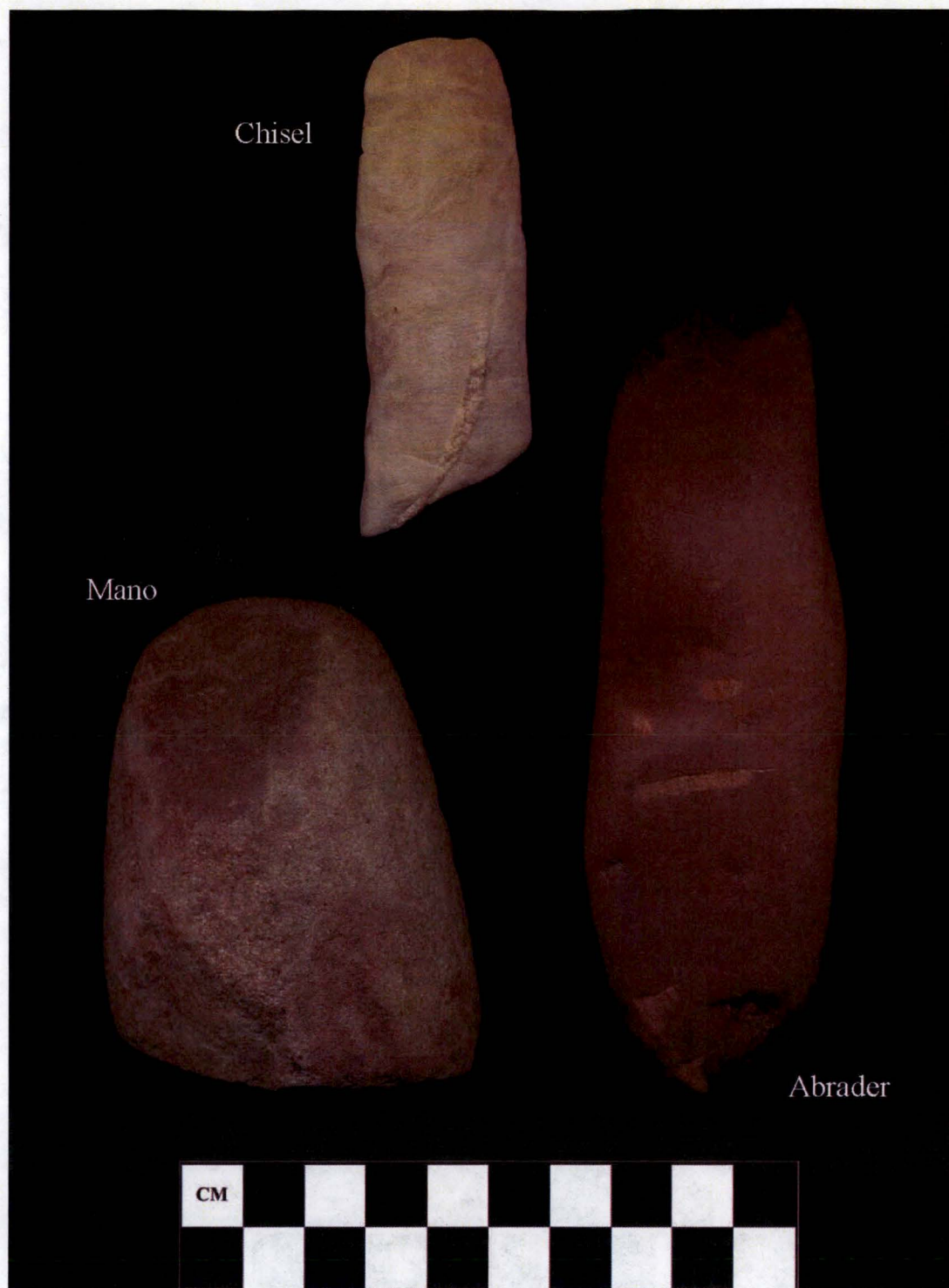


Figure 95. Groundstone tools recovered at 40RE166.

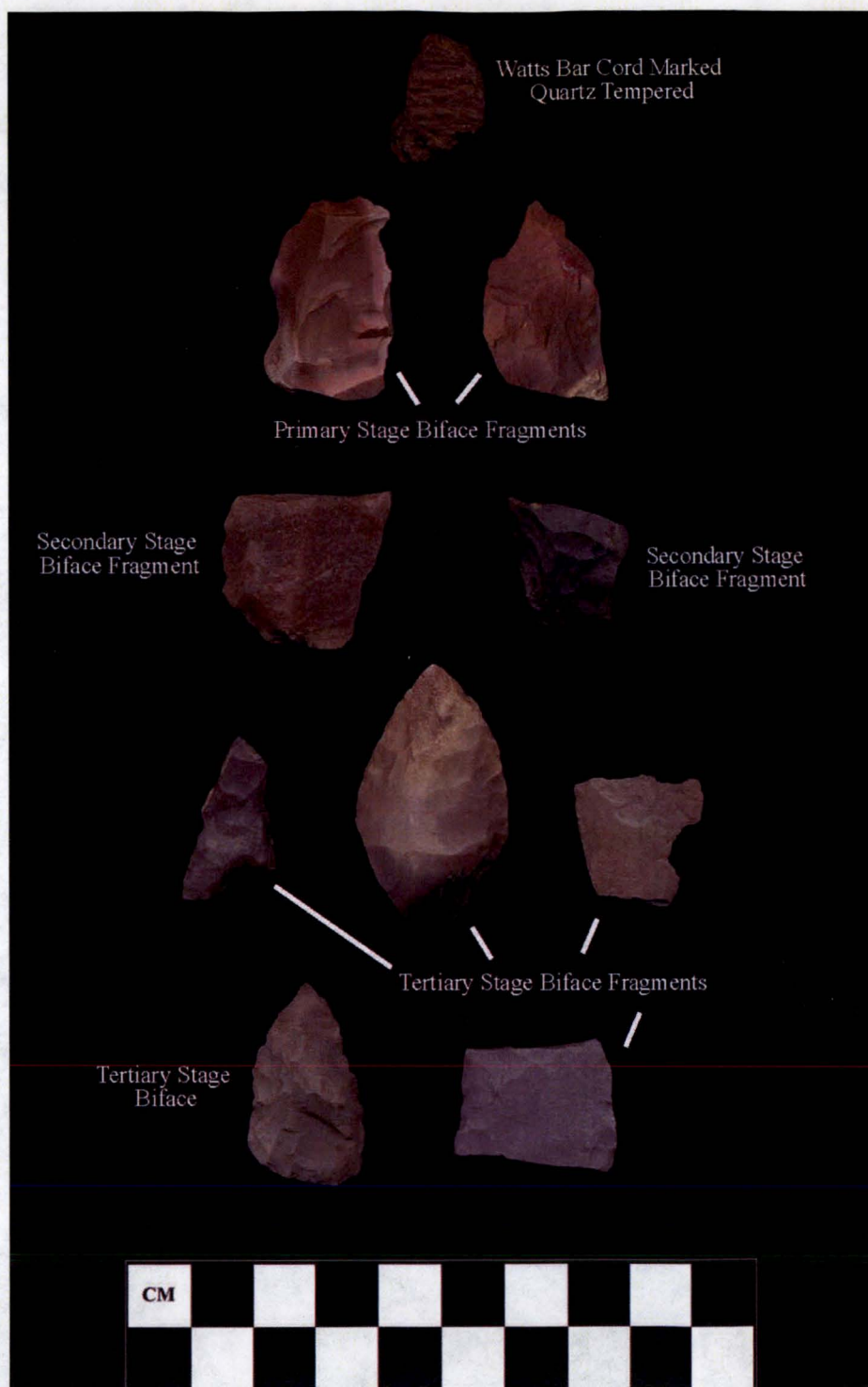


Figure 96. Prehistoric ceramic and lithic artifacts recovered from 40RE166.



Figure 97. Overview of Feature 1 at 40RE166, facing northeast.



Figure 98. Close up view of Feature 1 at 40RE166, facing northeast.

NEWLY RECORDED ARCHAEOLOGICAL SITES

40RE585

USGS quadrangle: Elverton, TN	Maximum artifact depth (cm): Surface
TN State Plane (NAD83 Feet): [Exempted from Disclosure by Statute]	Artifacts: 10 Prehistoric
Cultural Affiliation: Undetermined Prehistoric	Number of shovel tests: Surface Collection
Site Type: Open Habitation	Site Dimensions: 140 m NW/SE x 15 m E/W
NRHP recommendation: Not Eligible	Elevation: [Exempted from Disclosure by Statute]

40RE585 is [

Exempted from Disclosure by Statute

](see Figure 1). The site was discovered by TRC during the archaeological survey within the APE of the CRS. The site boundary is well defined and measures approximately 140-m NW/SE x 15-m E/W (Figures 99). Deposits at 40RE585 were delineated through visual examination [Exempted from Disclosure by Statute] (Figure 100–101).

A total of 10 prehistoric artifacts were recovered during the visual examination of [Exempted from Disclosure by Statute] 40RE585. They are summarized by provenience in Appendix A. They include a primary flake, a secondary flake, a tertiary flake, flake fragments, shatter, and a core. The majority of chert artifacts recovered from the site were manufactured from St. Louis chert. TRC recommends 40RE585 as ineligible for listing on the NRHP, due to the low number of artifacts and lack of intact archaeological deposits at the site. The site represents a prehistoric open habitation site of unknown cultural affiliation. Soils have been extensively disturbed from constant wave action at 40RE585 and a low density of artifacts were recovered [Exempted from Disclosure by Statute]. The site is unlikely to yield any significant information regarding prehistoric archaeological research in the project region. No further archaeological work is recommended at 40RE585 in connection with the proposed CRS.

40RE586

USGS quadrangle: Elverton, TN	Maximum artifact depth (cm): 15
TN State Plane (NAD83 Feet):	Artifacts: 39 Historic
Cultural Affiliation: Late 19 th and 20 th Century	Number of shovel tests: 16
Site Type: House	Site Dimensions: 18 m E/W x 17 m N/S
NRHP recommendation: Not Eligible	Elevation: [Exempted from Disclosure by Statute]

40RE586 is recorded on the US-TVA Watts Bar Reservoir land acquisition map dated December 1940 (see Figure 55). The 1940 map depicts a single story frame house, a barn, and a shed associated with 40RE586. Its mapped location on the 1940 TVA property map corresponds with a cluster of buildings associated with Callie Buhl. Callie Buhl is buried at the Hensley Cemetery (40RE588), located south of 40RE586. During a survey of the CRBRP in the spring of 1974, Schroedl was unable to relocate this site (Schroedl 1974a). He does label the cluster of buildings associated with 40RE586 as Locale 9.

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Figure 99. Map of 40RE585 showing the area visually scanned for artifacts.

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Figure 100. View ^{Exempted from} [Disclosure by Statute] at 40RE585, facing southeast.



Figure 101. View ^{Exempted from} [Disclosure by Statute] at 40RE585 showing active erosion, facing southeast.

40RE586 is a farmstead that appears to have been occupied during the late nineteenth to the mid twentieth century (see Figures 1 and 63). The entire site is covered with secondary growth trees and shrubs. The total site measures approximately 18 x 17 m (59 x 56 feet) [Exempted from Disclosure by Statute](Figures 102–105).

Extant features at 40RE586 include the remains of a house foundation and a collapsed machine made brick chimney. The house foundation measures approximately 9.75 m N/S x 7.5 m E/W (32 x 24.6 feet) and consists of cut dry laid limestone. A cluster of machine made bricks was uncovered at the surface and appear to be either a walk way or the base for a second chimney (Figure 105). The chimney is partially collapsed and measures 1.25 x 1 m (4.1 x 3.3 feet)(Figure 106). A chimney fall is located immediately east of the fireplace measuring 4.5 x 1 m (14.8 x 3.3 feet)(Figure 107). A rubble pile measuring 2.5 x 4.25 m (8.2 x 13.9 feet) is located in the southeast corner of the foundation. A light scatter of cultural material, dating to the mid to late 20th century, was uncovered within the house foundation.

A building appears on the 1941 version of the topographic map of the area (see Figure 56). This building depicted on the topographic map is in the same general location as the house foundation encountered at 40RE586. The house was torn down after TVA acquired the property in 1941 as part of the Watts Barr Reservoir.

40RE586 was delineated by a combination of shovel testing and visually scanning the surface for signs of cultural material. A total of 16 shovel tests were excavated across the site to ascertain the depth of deposition and the boundary of the site. Soils within the site area consisted of a layer of dark brown 10YR 3/3 silt loam (0-15 cmbs) underlain by a yellowish brown 10YR 5/6 silt clay sterile subsoil (Figure 108). Soils in the area have been impacted by the demolition of the house and outbuildings in the area. Two shovel tests were positive for cultural material. A total of 39 artifacts were recovered at the site. An artifact inventory for the site is presented in Appendix A.

Excavation at 40RE586 uncovered a light density of historic artifacts within the site area. A mix of architectural and domestic artifacts were recovered from the site including stoneware, porcelain, WRE, wire nails, wire, clear curved glass, Ball canning jar, and an enameled tea kettle (Figure 109-110). A majority of the historic artifacts recovered date to the early to mid twentieth century.

The surrounding soil and the overall condition of 40RE586 has been severely impacted from the demolition of the house. 40RE586 represents the remains of a typical early to mid twentieth century farmstead in eastern Tennessee. It lacks integrity and further research potential and is recommended ineligible for listing on the NRHP. No further work is required in its regard.

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Figure 102. Map of 40RE586.



Figure 103. Overview of 40RE586, facing southeast.



Figure 104. Overview of house foundation at 40RE586, facing southeast.



Figure 105. View of possible brick walkway or fireplace base at 40RE586, facing southeast.



Figure 106. View of fireplace at 40RE586, facing west.



Figure 107. Back of the chimney and brick scatter, facing southwest.

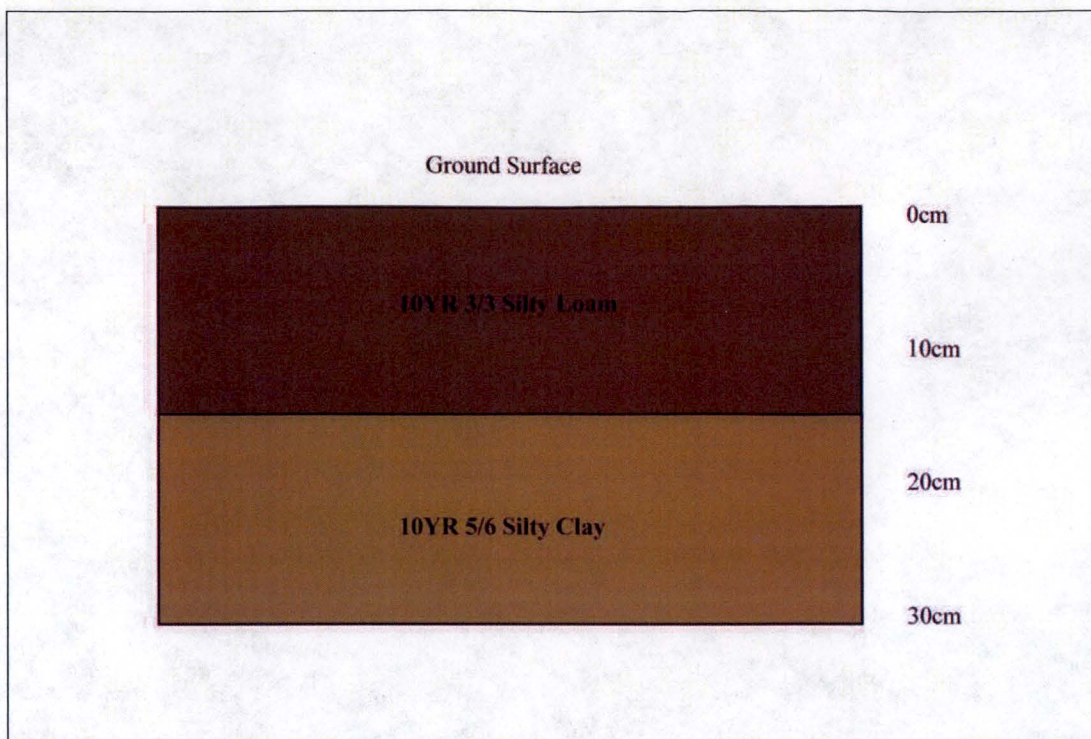


Figure 108. Soil profile at 40RE586.

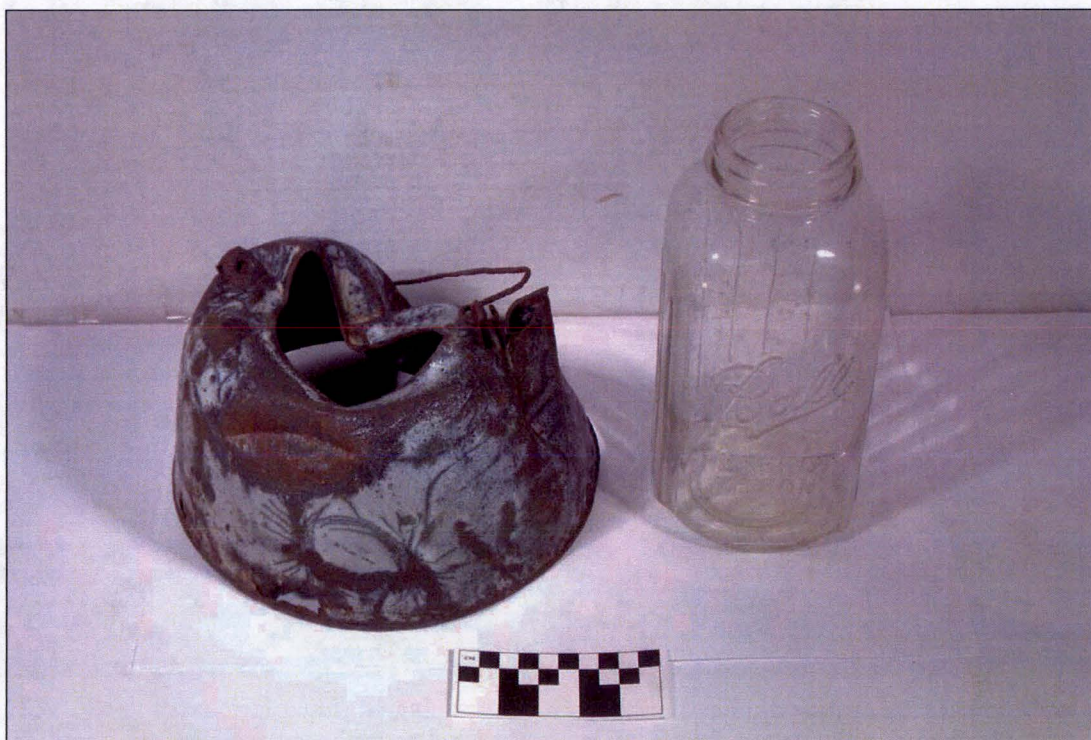


Figure 109. Enamel ware tea kettle and a Ball Strong Shoulder jar recovered from 40RE586.



Figure 110. Ceramics recovered from 40RE586.

40RE587

USGS quadrangle: Elverton, TN		Maximum artifact depth (cm): 35
TN State Plane (NAD83 Feet): [Exempted from Disclosure by Statute]	Artifacts: 125 Historic 9 Prehistoric
[Exempted from Disclosure by Statute]		
Cultural Affiliation: Late 19 th and 20 th Century / Undetermined Prehistoric		Number of shovel tests: 6
Site Type: Farmstead / Open Habitation		Site Dimensions: 150 m NE/SW x 115 m N/S
NRHP recommendation: Not Eligible		Elevation: [Exempted from Disclosure by Statute]

Schroedl recorded this site during the survey of the CRBRP in the spring of 1974 (Schroedl 1974a). Its mapped location corresponds with a cluster of buildings associated with the J. C. Hembree's heirs location on the US-TVA Watts Bar Reservoir land acquisition map dated December 1940 (see Figure 55). [Exempted from Disclosure by Statute]

Schroedl's 1974 survey attempted to relocate the position of buildings shown on the 1940 TVA property map and to briefly describe their condition and photograph them. Schroedl labeled 40RE587 as Locale 6, the J.C. Hembree's Heirs. He states that the 1940 map depicted one two-story frame house, one well house, one smokehouse, one shed, one crib, and two barns. During the 1974 survey, Schroedl relocated the house, smokehouse, crib, and two barns. In 1974, the limestone and brick foundation and two completely collapsed chimneys were all that was left of the house. No walls, floors, or roof supports remained. He speculated the house was probably town down or moved during the clearing of the Watts Bar Reservoir. The smokehouse consists of a partially collapsed log structure constructed of large hand hewn beams fitted at the corners in half dovetail fashion (Figure 111). The building had no windows and a single door in the northeast corner of the structure. Both wire and cut nails were used in the construction of the door. The smokehouse forms part of the southwest side of a rectangular fence with a gae at the northwest corner of the structure. The fence is barbed wire and woven mesh wire stapled to cedar posts and encloses the house. The crib consists of a partially collapsed log structure and is constructed with hand hewn beams fitted at the corner in half-dovetail fashion (Figure 112). No doors, entry, or windows were observed due to the thickness of vines and brambles. Both barns had been completely destroyed except for their limestone slab foundations which were obscured by heavy vegetation. The 1974 survey was unable to relocate the well house. As with all other sites examined in his 1974 historic sites reconnaissance survey, Schroedl did not make any recommendations in regards to its NRHP status or treatment as an archaeological resource.

40RE587 is a farmstead that appears to have been occupied during the late nineteenth to the mid twentieth century. The entire site is covered with secondary growth trees and shrubs. The total site measures approximately 150 x 115 m (492 x 377 feet) [Exempted from Disclosure by Statute] (Figures 113–114).

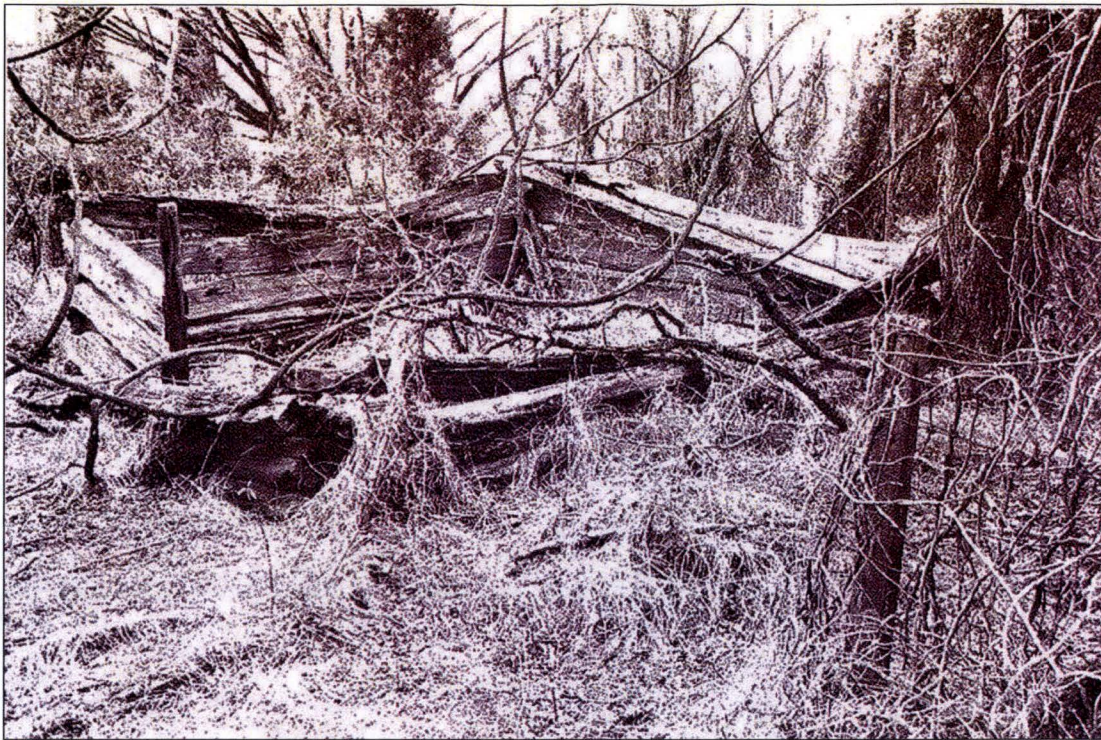


Figure 111. View of smokehouse in 1974, facing southwest (Schroedl 1974a).



Figure 112. View of crib in 1974, facing northwest (Schroedl 1974a).

Exempted from Disclosure by Statute – Withheld Under 10 CFR 2.390(a)(3)

Figure 113. Map of 40RE587.

Exempted from Disclosure by Statute – Withheld Under 10 CFR 2.390(a)(3)

Figure 114. Detailed map of the house and smokehouse at 40RE587.

Extant features at 40RE587 include the remains of a house foundation, a collapsed machine-made brick chimney, the partial foundation of the smokehouse, the foundation for the crib, a well house, and an abandoned electric utility pole (Figures 115–121). The house foundation measures approximately 18 m NW/SE x 5.5 m NE/SW (59 x 18 feet). It consists of cut limestone and handmade brick. Pieces of sheet metal, electrical wire, the top of a chimney, and handmade brick are scattered across the interior of the house foundation. The chimney was heavily overgrown with vines and vinca and consisted of machine made brick and limestone blocks and measures 3.2 m E/W x 2.5 m N/S (10.5 x 8.2 feet). It has fallen over and a rubble scatter spreads out south of the chimney. The foundation of the smokehouse measures approximately 4.1 m NE/SW x 2.6 m SE/NW (13.5 x 8.5 feet) and consists of dry laid stacked limestone blocks. Portions of the smokehouse foundation have been destroyed. The remains of a wire mesh metal fence surrounds the house and smokehouse supported by cedar posts. Four segments of a foundation for a crib were located approximately 40 m southeast down slope of the house foundation remains. These foundation remains measure 10 m E/W x 4.5 m N/S (32.8 x 14.8 feet). A square shaped well house constructed with cinder blocks and an electric utility pole were located 85 m east of the house foundation. The well house measures approximately 2 x 2.5 m and had standing metal pipe within the cinder block structure. A light scatter of cultural material, dating to the mid to late 20th century, was uncovered within the house and smokehouse area.

A building appears on the 1941 version of the topographic map of the area (see Figure 56). This building depicted on the topographic map is in the same general location as the house foundation encountered at 40RE587. The house was torn down after TVA acquired the property in 1941 as part of the Watts Barr Reservoir. At some point the farmstead was wired for electricity, based on the abandoned electric utility pole and electric wire recorded at the site.

40RE587 was delineated by a combination of shovel testing and visually scanning the surface for signs of cultural material. A total of six shovel tests were excavated across the site to ascertain the depth of deposition and the boundary of the site. Soils within the site area consisted of a layer of very dark grayish brown 10YR 3/2 silt loam (0-15 cmbs) underlain by a brown 10YR 5/3 clay loam sterile subsoil (Figure 122). Soils in the area have been impacted by the demolition of the house and outbuildings in the area. Five shovel tests were positive for cultural material. A total of 134 artifacts were recovered at the site. An artifact inventory for the site is presented in Appendix A.

Excavation at 40RE587 uncovered a moderate density of historic artifacts within the site area. A mix of architectural and domestic artifacts were recovered from the site including unidentifiable metal pieces, window glass, an R. V. Pierce, M.D. Buffalo, New York bottle manufactured by the Pierce Glass Company (Toulouse 1971), bottle glass, machine made brick, cut nails, wire nails, a screw, a piece of stoneware, a horseshoe, and a window counterweight (Figures 123–124). A majority of the historic artifacts recovered date to the early to mid twentieth century. In addition to the historic artifacts, a light scatter of prehistoric artifacts were also recovered including secondary flakes, flake fragments, and shatter.



Figure 115. Overview of 40RE587, facing south.



Figure 116. Overview of the overgrown house structure and chimney remains, facing east.



Figure 117. Overview of the chimney, facing south.



Figure 118. Close up view of a portion of the house foundation, facing northeast.



Figure 119. View of overgrown sheet metal, foundation rubble, and possible top of a chimney, facing north.



Figure 120. Overview of a portion of the foundation for the crib, facing north.



Figure 121. Overview of well house and electric utility pole, facing southeast.



Figure 122. View of soil profile at shovel test 0N 0E at 40RE587, facing north.



Figure 123. A glass bowl, an R. V. Pierce M.D. bottle, and a window counterweight recovered from 40RE587.

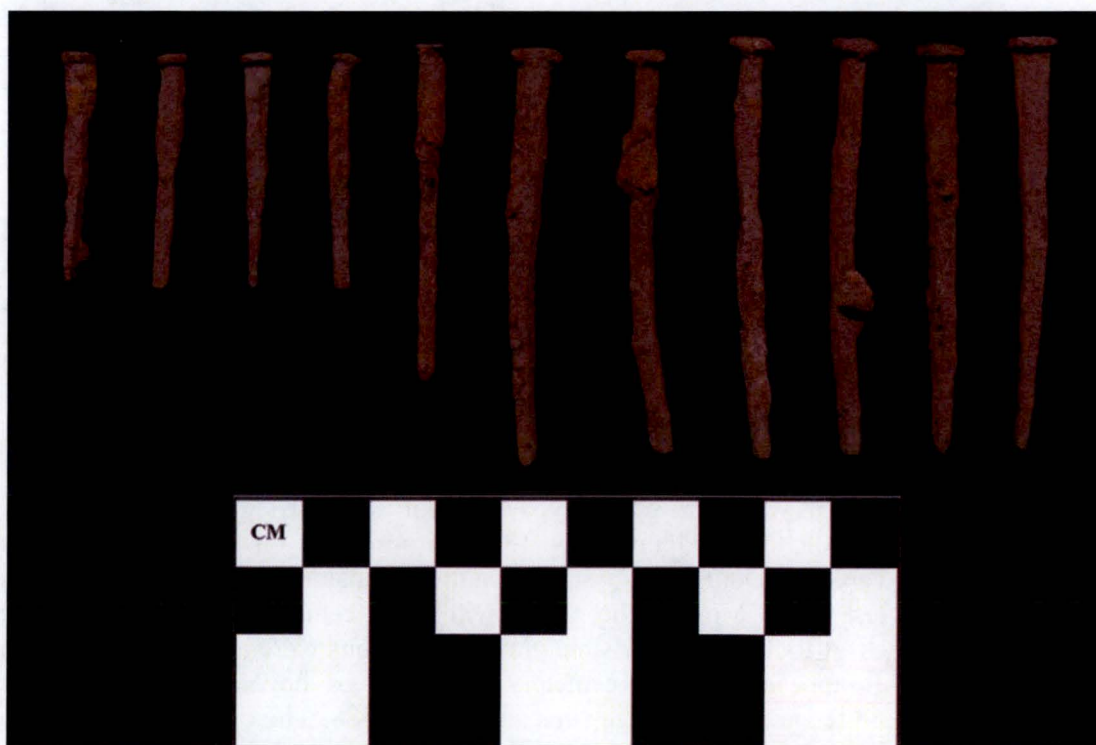


Figure 124. Cut nails recovered from 40RE587.

The surrounding soil and the overall condition of 40RE587 has been severely impacted from the demolition of the house and subsequent episodes of demolition. 40RE587 represents a typical late nineteenth to twentieth century farmstead in eastern Tennessee. It lacks integrity and further research potential and is recommended ineligible for listing on the NRHP. No further work is required in its regard.

40RE588

USGS quadrangle: Elverton, TN	Maximum artifact depth (cm): N/A
TN State Plane (NAD83 Feet): [Exempted from Disclosure by Statute]	Artifacts: None
Cultural Affiliation: 20 th Century	Number of shovel tests: None
Site Type: Cemetery	Site Dimensions: 12.1 m N/S x 12.7 m E/W
NRHP recommendation: Not Eligible	Elevation: [Exempted from Disclosure by Statute]

40RE588 consists of a historic cemetery and is situated [Exempted from Disclosure by Statute] (see Figures 1 and 63; Figures 125–126). It is located within a pine forest and marked off with cedar posts along the edges of the cemetery. The site was re-evaluated by TRC during the survey of the CRS. The site boundary is well defined and measures approximately 12.1-m N/S x 12.7-m E/W (40 x 42-feet) which totals 153.7 square meters (1654 square foot). 40RE588 is currently vegetated with pines and is covered with grass and small brush.

The Hensley Cemetery was previously recorded by Gerald Schroedl in 1972 (Schroedl 1972). He initially labeled the cemetery as 40RE119 but that number has been reassigned to the Fort Southwest Point site located west of 40RE588. Schroedl states the cemetery is located approximately [Exempted from Disclosure by Statute] The cemetery consists of a fenced area 75 feet on a side enclosing five marked graves. He listed four identified markers including S. S. Hensley (1854-1927), Lou Anna Peters (1885-1917), Callie D. Peters (1883-1941), and Stella Harvey (1921-1922). He states these graves are concentrated along the northern edge of the cemetery. All are marked with headstones and all except Stella Harvey have foot markers. In addition, there is a small illegible metal marker in the southeast corner of the cemetery. Schroedl recommended no archaeological work was required at the cemetery and it should be left intact if possible or relocated if necessary.

TRC resurveyed 40RE588 during the current survey of the CRS. The cemetery was visually inspected for visible headstones, footstones, and grave shafts. Approximately 8 to 10 graves are present within the cemetery. TRC identified four legible headstones and two footstones at 40RE588 (Figures 127–131). Information for each headstone is summarized in Table 2. Duplicate surnames on the headstones suggests family ties among those at rest here. Most of the graves within the cemetery are demarcated by marked headstones. A total of four possible grave depressions were also recorded within the cemetery. It appears that the cemetery does not go beyond the cedar posts demarcating an old fence row that once surrounded 40RE588. The oldest grave dates to 1917 and the most recent grave dates to August 6, 1941. Most of the headstones are in good shape.

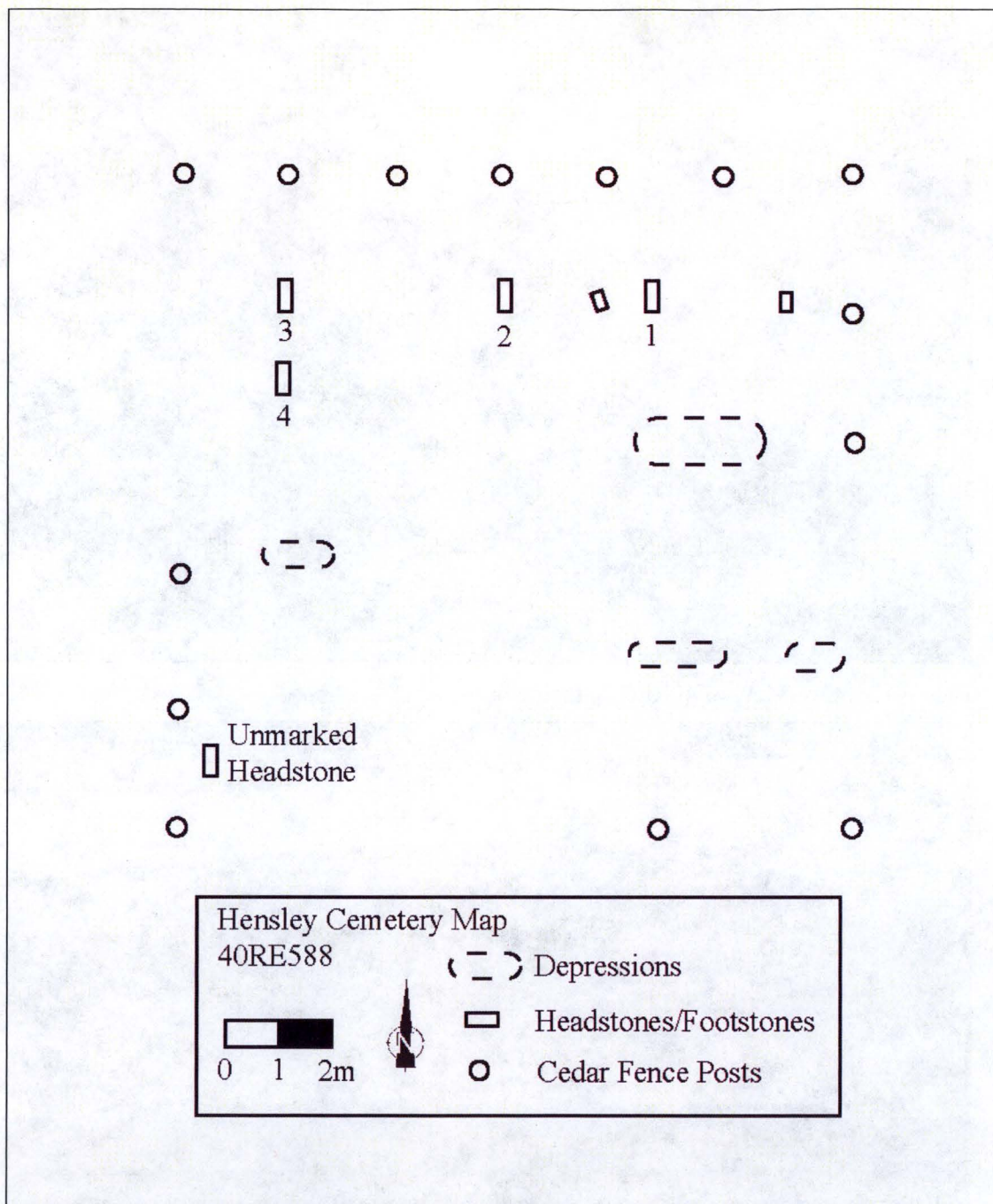


Figure 125. Site layout of 40RE588.



Figure 126. Overview of 40RE588, facing northwest.



Figure 127. Headstone of S.S. Hensley, facing east.



Figure 128. Headstone of Stella R. Harvey, facing east.

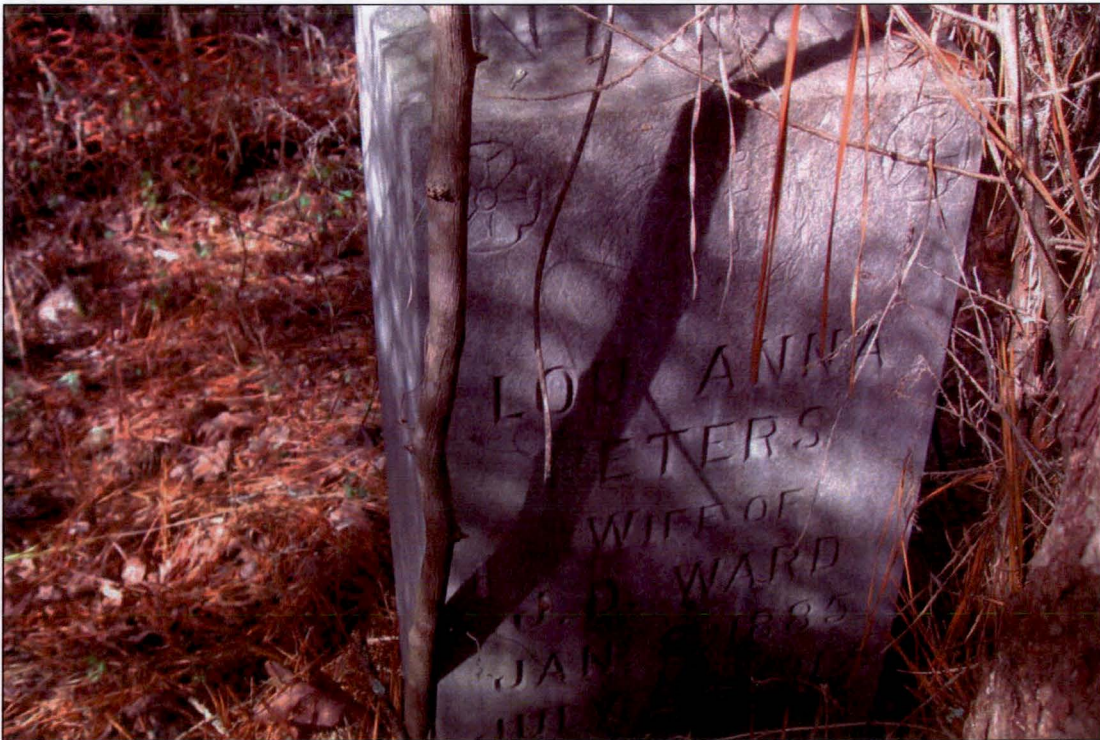


Figure 129. Headstone of Lou Anna Peters, facing east.



Figure 130. Headstone of Callie D. Peters, facing east.



Figure 131. Metal grave marker at 40RE588, facing west.

Table 2. Marked Headstones Identified at 40RE588.

Burial Number	Name	Birth Date	Death Date
1	S. S. Hensley	June 27, 1854	March 13, 1927
2	Stella R. Harvey	November 9, 1921	November 23, 1922
3	Lou Anna Peters (Ward)	January 18, 1885	July 22, 1917
4	Callie D. Peters (Buhl)	July 30, 1883	August 6, 1941

The NRHP employs a fairly rigorous policy regarding the listing of cemeteries. Ordinarily cemeteries are not considered eligible for the National Register, unless the site in question derives its primary significance from graves of persons of particular transcending importance, from age, from distinctive design features, or from association with historic events. 40RE588 does not fulfill any of these criteria, and therefore is recommended ineligible for inclusion in the NRHP. Although 40RE588 has been recommended ineligible for the NRHP, TRC recommends TVA avoid this cemetery during the current project due to the presence of human burials. If the site can not be avoided during the current project, TRC recommends TVA refer to Tennessee law in regards to the treatment of cemeteries as outlined below.

Tennessee state law includes a variety of provisions that are applicable to the discussion of 40RE588. Two of these laws, the Desecration of a Venerated Object statute (TCA 2011b), and the Abuse of Corpse statute (TCA 2011a) provide for protection against intentional disturbance of cemeteries, burial sites, and human remains. In accordance with these state laws, avoidance measures should be employed during development of CRS. The Termination of Cemetery statutes (TCA 2011c) provide a procedure for legally disinterring gravesites if avoidance proves impossible. According to these statutes, a landowner having property containing a burial ground can receive permission from the Chancery Court to move the graves if it can be shown that: 1) the burial ground is abandoned, 2) the burial ground is neglected, or 3) conditions exist that render the burial site improper as a resting place for the dead. If any one of these conditions are established, the Chancery Court can grant the property owner permission to move the graves and rebury them elsewhere.

40RE589

USGS quadrangle: Elverton, TN	Maximum artifact depth (cm): 45 cmbs
TN State Plane (NAD83 Feet): [Exempted from Disclosure by Statute]	Artifacts: 18 Prehistoric
Cultural Affiliation: Undetermined Prehistoric	Number of shovel tests: 17
Site Type: Open Habitation	Site Dimensions: 60 m E/W x 30 m N/S
NRHP recommendation: Not Eligible	Elevation: [Exempted from Disclosure by Statute]

40RE589 is situated within the archaeological [Exempted from Disclosure by Statute] (see Figure 1). The site was discovered during shovel testing within the APE of the CRS. The site boundary is well defined and measures approximately 60-m E/W x 30-m N/S (Figures 132–133). Deposits at 40RE589 were delineated through shovel tests spaced 15 m apart. A total of 17 shovel tests were

excavated at the site with four positive for cultural material. A total of 18 prehistoric artifacts were recovered during the excavation of shovel tests at 40RE589. They are summarized by provenience in Appendix A. They include secondary flakes, a tertiary flake, flake fragments, shatter, and a core. The majority of the chert artifacts recovered at the site are manufactured from St. Louis chert. Soils at the site consisted of a dark yellowish brown 10YR 4/4 silt clay loam plowzone (0-35 cmbs) underlain by a strong brown 7.5YR 5/8 clay sterile subsoil (Figure 134). TRC recommends 40RE589 as ineligible for listing on the NRHP, due to the low number of artifacts and lack of intact archaeological deposits at the site. The site represents a prehistoric open habitation site of unknown cultural affiliation. Soils have been extensively disturbed from the previous construction^{Exempted from Disclosure by Statute} at 40RE589 and a low density of artifacts were recovered from the shovel tests. The site is unlikely to yield any significant information regarding prehistoric archaeological research in the project region. No further archaeological work is recommended at 40RE589 in connection with the proposed development of CRS.

[

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Figure 132. View of 40RE586, facing west.

Exempted from Disclosure by Statute – Withheld Under 10 CFR 2.390(a)(3)

Figure 133. Site map of 40RE589.

Exempted from Disclosure by Statute – Withheld Under 10 CFR 2.390(a)(3)

Figure 133. Site map of 40RE589.



Figure 134. View of shovel test profile at 440N 605E at 40RE589.

VII. SUMMARY AND RECOMMENDATIONS

In January and February of 2011, TRC conducted a Phase I archaeological survey of the CRS in Roane County, Tennessee. The site, owned by the TVA, is on a peninsula defined by a large bend in the Clinch River between approximately River Miles 15 to 18. As part of the planning for possible construction of power-generating small module reactors on the property, TVA proposes to carry out various site characterization investigations across the entire parcel. Among other tasks, these investigations will include geological core borings and installation of observation wells. In advance of the ground disturbance expected during these investigations, TVA contracted with TRC to carry out a Phase I archaeological survey of the project area, in compliance with Section 106 of the National Historic Preservation Act (as amended) and its implementing regulations at 36 CFR 800 (CFR 2010b).

This survey was designed to document and assess archaeological resources located within the APE of the planned project. Archaeologically, the APE consisted of approximately 310.2 acres including and surrounding the previously disturbed "power block" area on the property which totals 153.4 acres. A total area of approximately 156.7 acres (0.25 square miles or 0.63 square km) was subjected to an archaeological survey.

A TRC field crew under the direction of Principal Investigator Jared Barrett surveyed the project APE on foot from January 3 to February 2, 2011. Much of the work focused on redelination and reassessment of previously recorded archaeological resources within the APE along with intensive survey of the project area outside of the recorded sites. Shovel testing and visual examination of exposed ground surfaces within the APE identified five previously unrecorded archaeological sites (40RE585–589). The survey also re-evaluated 12 previously identified archaeological sites (40RE106–108, 40RE120, 40RE129, 40RE152–154, 40RE159, 40RE163, 40RE165, and 40RE166).

Previously recorded archaeological site 40RE106 consists of a prehistoric open habitation dating to the Middle and Late Woodland periods (see Figure 1). Discrepancies in the site location of 40RE106 existed between the TDOA record and TVA information. The survey examined both recorded locations for 40RE106 and confirmed that TDOA location information on the site is correct. A total of 31 shovel tests were excavated within 40RE106 with 12 positive for cultural material. Visual examination of exposed soils [Exempted from Disclosure by Statute] in the vicinity of 40RE106 also observed a light scatter of lithic debitage. Shovel tests revealed intact subsurface deposits at 40RE106. TRC recommends 40RE106 as eligible for listing on the NRHP under Criterion D of 36 CFR 60.4 as it contains intact subsurface archaeological deposits dating to the Middle and Late Woodland period. TRC recommends TVA avoid this site during the current project. If the site can not be avoided during the current project, TRC recommends a data recovery plan be established for the site.

Previously recorded archaeological site 40RE107 consists of a prehistoric open habitation dating to the Early Archaic and Woodland periods (see Figure 1). A total of 161 shovel tests were excavated within 40RE107 with 61 positive for cultural material. Visual

examination of [Exempted from Disclosure by Statute] in the vicinity of 40RE107 did not observe any cultural material. Shovel tests revealed intact subsurface deposits at 40RE107 which extend to over 90 cm (2.6 feet) in depth. TRC recommends 40RE107 as eligible for listing on the NRHP under Criterion D of 36 CFR 60.4 as it contains intact subsurface archaeological deposits dating to the Early and Late Archaic and Woodland periods. TRC recommends TVA avoid this site during the current project. If the site can not be avoided during the current project, TRC recommends a data recovery plan be established for the site.

Previously recorded archaeological site 40RE108 consists of a prehistoric open habitation dating to the Late Archaic, Woodland, and Mississippian periods (see Figure 1). A total of 63 shovel tests were excavated within 40RE108 with 17 positive for cultural material. Visual [Exempted from Disclosure by Statute] of 40RE108 observed two [Exempted from Disclosure by Statute

] Shovel tests revealed intact subsurface deposits at 40RE108 which extend to over 1 m (3.3 feet) in depth. TRC recommends 40RE108 as eligible for listing on the NRHP under Criterion D of 36 CFR 60.4 as it contains intact subsurface archaeological deposits dating to the Late Archaic, Woodland, and Mississippian periods. TRC recommends TVA avoid this site during the current project. If the site can not be avoided during the current project, TRC recommends a data recovery plan be established for the site.

Previously recorded archaeological site 40RE120 consists of the structural debris of a twentieth century farmstead and a scatter of historic artifacts (see Figure 1). TRC recommends 40RE120 as ineligible for listing on the NRHP due to a lack of research potential and lack of intact archaeological deposits. No further archaeological work is recommended for 40RE120.

Previously recorded site 40RE129 was investigated in 1974 by Gerald Schroedl with the University of Tennessee. Schroedl's work determined the main feature at the site, the mound, to be a recent historic soil disturbance. Tennessee site records indicate the site number was vacated and is no longer in use as an official state site number. No further archaeological work is recommended for 40RE129.

Previously recorded sites 40RE152, 40RE154, and 40RE163 consist of prehistoric open habitation lithic scatters of undetermined cultural affiliation. TRC work at these sites confirmed these characteristics. TRC recommends 40RE152, 40RE154, and 40RE163 as ineligible for listing on the NRHP due to a lack of research potential and lack of intact archaeological deposits. No further archaeological work is recommended for 40RE152, 40RE154, and 40RE163.

Previously recorded site 40RE153 was resurveyed in order to determine its relationship to the boundary of the APE. Survey in the recorded location of 40RE153 determined the site is located outside the current APE. No further archaeological work is recommended for 40RE153.

The current project also attempted to relocate previously recorded site 40RE159 in order to determine its exact relationship to the current APE. Site 40RE159 could not be relocated within the APE during the current archaeological survey. It appears the site was destroyed during grading operations within the "power block" area in the early 1980s. No further archaeological work is recommended for this site in respect to this project.

Previously recorded archaeological site 40RE165 consists of a prehistoric open habitation dating to the Early and Late Archaic periods and a historic fish weir (see Figure 1). A total of 17 shovel tests were excavated within 40RE165 with 11 positive for cultural material. Visual examination of [

Exempted from Disclosure by Statute

] uncovered a light scatter of FCR and lithic debitage. Shovel tests revealed intact subsurface deposits at 40RE165 which extend to over 1 m (3.3 feet) in depth. TRC recommends 40RE165 as eligible for listing on the NRHP under Criterion D of 36 CFR 60.4 as it contains intact subsurface archaeological deposits dating to the Early and Late Archaic periods. TRC recommends TVA avoid this site during the current project. If the site can not be avoided during the current project, TRC recommends a data recovery plan be established for the site.

Previously recorded archaeological site 40RE166 consists of a prehistoric open habitation dating to the Middle and Late Archaic and Early and Middle Woodland periods (see Figure 1). A total of 30 shovel tests were excavated within 40RE166 with five positive for cultural material. Visual examination of [

Exempted from Disclosure by Statute

] Shovel tests revealed intact subsurface deposits at 40RE166 which extend to over 1 m (3.3 feet) in depth. TRC recommends 40RE166 as eligible for listing on the NRHP under Criterion D of 36 CFR 60.4 as it contains intact subsurface archaeological deposits dating to the Archaic and Woodland periods. TRC recommends TVA avoid this site during the current project. If the site can not be avoided during the current project, TRC recommends a data recovery plan be established for the site.

Five newly recorded archaeological sites (40RE585-589) were documented within the proposed APE (see Figures 1). 40RE585 consists of a light surface scatter of lithic debitage [

Exempted from Disclosure by Statute

] 40RE586 and 450RE587 consist of late nineteenth to mid twentieth century farmsteads. 40RE589 consists of a prehistoric lithic scatter of undetermined cultural affiliation. TRC recommends all four of these sites as ineligible for listing on the NRHP due to a lack of research potential and lack of intact archaeological deposits. No further archaeological work is recommended in regards to 40RE585-587, and 40RE589.

The fifth newly recorded archaeological site, 40RE588, consists of the Hensley Cemetery. Graves in the cemetery date to the early to mid twentieth century. The NRHP employs a fairly rigorous policy regarding the listing of cemeteries. Ordinarily cemeteries are not considered eligible for the National Register, unless the site in question derives its primary significance from graves of persons of particular transcending importance, from

age, from distinctive design features, or from association with historic events. Based on TRC's investigation, 40RE588 does not fulfill any of these criteria, and therefore is recommended ineligible for inclusion in the NRHP. Although 40RE588 has been recommended ineligible for the NRHP, TRC recommends TVA avoid this cemetery during the current project due to the presence of human burials. If the site can not be avoided during the current project, TRC recommends TVA refer to Tennessee law in regards to the treatment of cemeteries.

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**APPENDIX A: ARTIFACT TABLES FOR 40RE106, 40RE107,
40RE108, 40RE120, 40RE152, 40RE154, 40RE163, 40RE165, 40RE166,
40RE585, 40RE586, 40RE587, AND 40RE589**

Exempted from Disclosure by Statute – Withheld Under 10 CFR 2.390(a)(3)

Exempted from Disclosure by Statute – Withheld Under 10 CFR 2.390(a)(3)

Exempted from Disclosure by Statute – Withheld Under 10 CFR 2.390(a)(3)

Exempted from Disclosure by Statute – Withheld Under 10 CFR 2.390(a)(3)

Exempted from Disclosure by Statute – Withheld Under 10 CFR 2.390(a)(3)

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Exempted from Disclosure by Statute – Withheld Under 10 CFR 2.390(a)(3)

Exempted from Disclosure by Statute – Withheld Under 10 CFR 2.390(a)(3)

**APPENDIX B: ATTRIBUTES OF PP/KS RECOVERED AT 40RE106,
40RE107, 40RE108, AND 40RE165**

TRC NASHVILLE PROJECTILE POINT ANALYSIS FORM

Project Name: TVA-Clinch

TRC Project Number:

Temporary Site Number:

Permanent Site Number: 40RE165

Catalogue Number: TVA-11-1-121

Analyst: JMG

Provenience: S.T. 0N/150E

Depth: 35-90 cmbs

Bag Number:

Recovered From: Shovel Test

Date: 1-4-11

Condition: Base Missing**Cortex:** No cortex**Raw Material:** Fort Payne chert**Comments:****Heat Treatment:** Not altered**Grinding on Haft:** select from menu**Type:** Unident, possible E.A.**Metric Attributes:**

Maximum length: 31.7 mm

Maximum width: 23.8 mm

Maximum thickness: 7.3 mm

Shoulder width: 23.2 mm

Blade length: 25.0 mm

Haft length: 6.7 mm

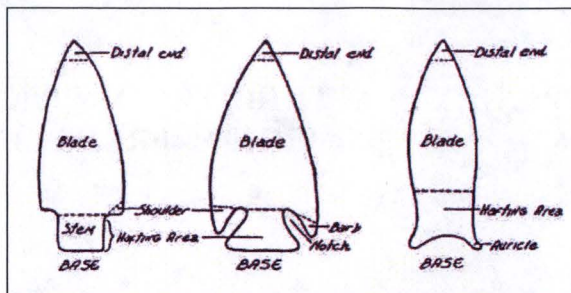
Distal haft element width: 11.9 mm

Maximum width at blade midpoint: 17.8 mm

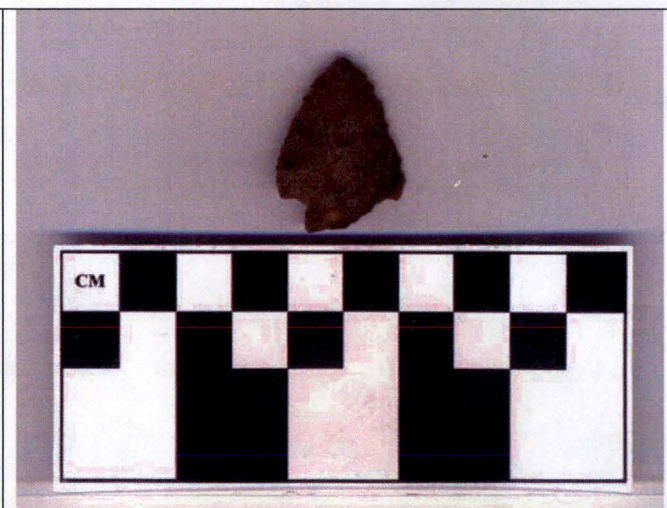
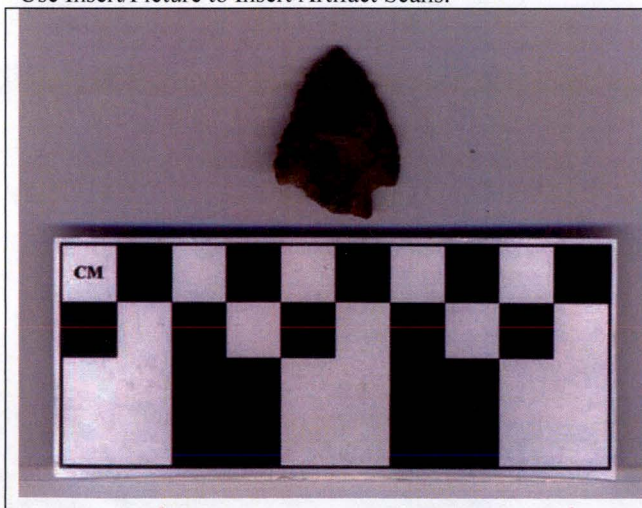
Proximal haft element width: N/A mm

Maximum thickness at distal haft: 5.3 mm

Weight: 4.5 g

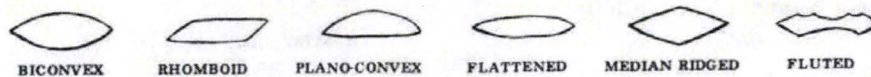


Use Insert/Picture to Insert Artifact Scans:



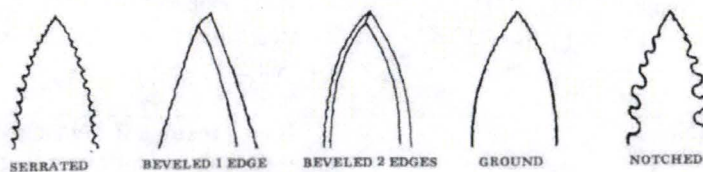
CROSS SECTION:

Biconvex



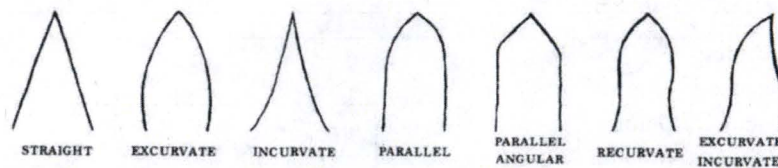
BLADE EDGE:

Serrated



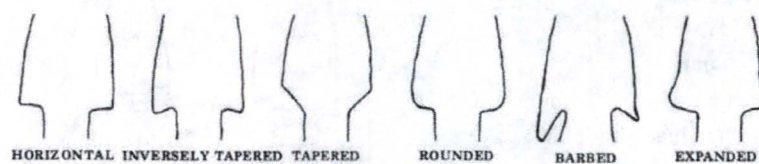
BLADE SHAPE:

Excavate



SHOULDER FORM:

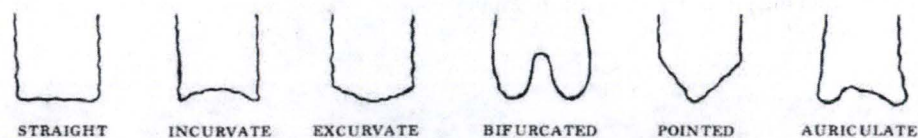
Inversely Tapered



BASAL STEM

EDGE:

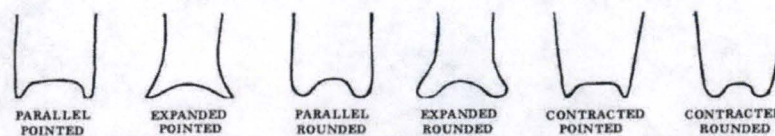
N/A



AURICULATED

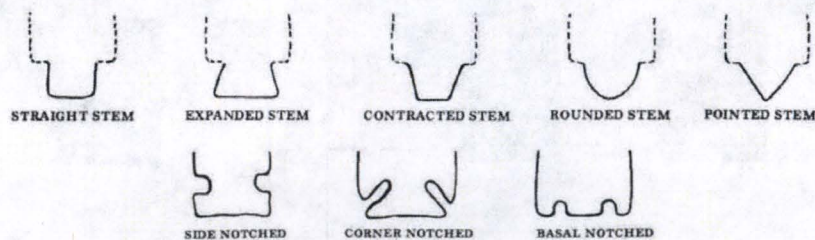
BASE:

N/A



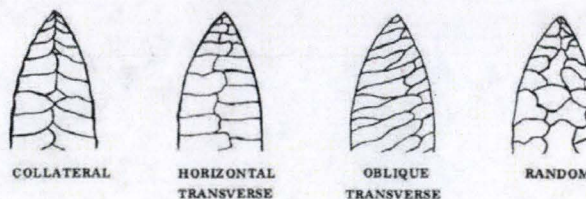
HAFT TYPE:

N/A



FLAKING
PATTERN:

Collateral



TRC NASHVILLE PROJECTILE POINT ANALYSIS FORM

Project Name: TVA-Clinch

TRC Project Number:

Temporary Site Number:

Permanent Site Number: 40RE107

Catalogue Number: TVA-11-1-184

Analyst: JMG

Provenience: TR-9 ST 1

Depth: 25-70 cmbs

Bag Number:

Recovered From: Shovel Test

Date: 1-26-11

Condition: Whole**Cortex:** No cortex**Raw Material:** St. Louis**Heat Treatment:** Not altered**Grinding on Haft:** Grinding absent**Type:** Undet., Poss E Woodland**Comments:** Recycled piece, fresh marginal flaking**Metric Attributes:**

Maximum length: 37.0 mm

Maximum width: 22.0 mm

Maximum thickness: 8.0 mm

Shoulder width: 22.0 mm

Blade length: 31.5 mm

Haft length: 5.5 mm

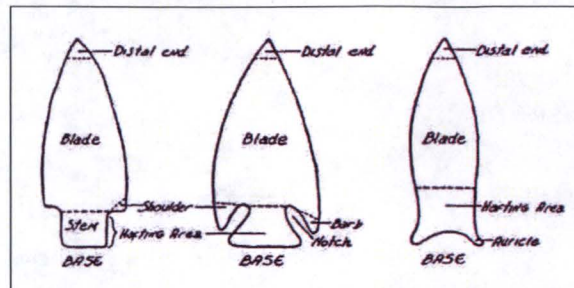
Distal haft element width: 14.0 mm

Maximum width at blade midpoint: 20.5 mm

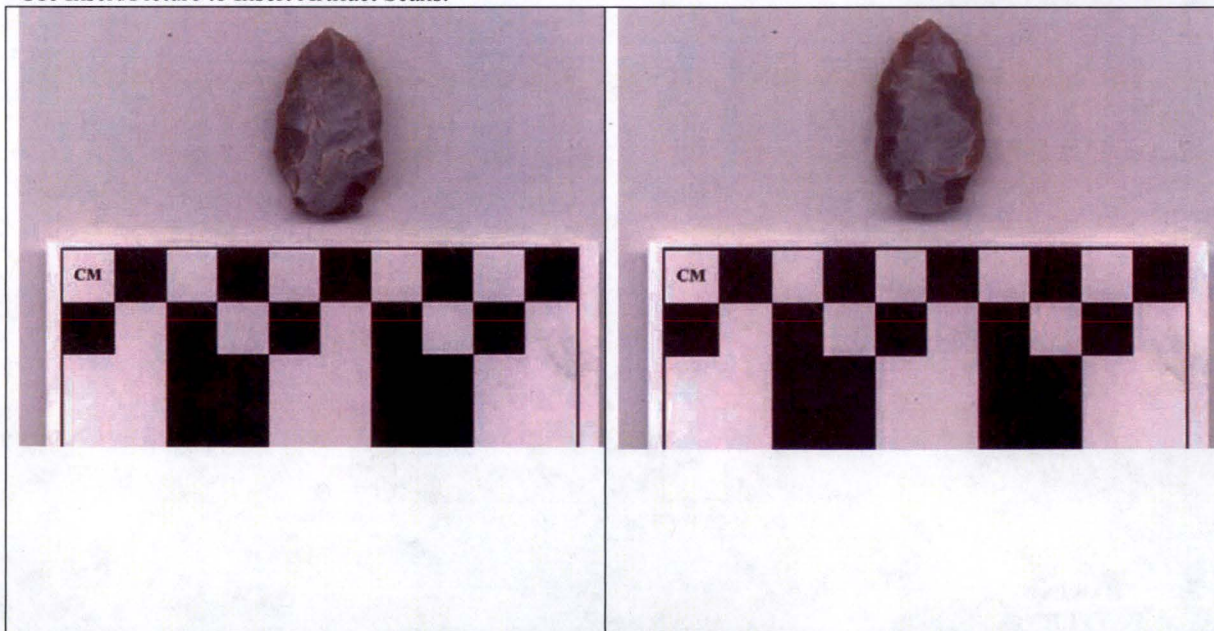
Proximal haft element width: 13.5 mm

Maximum thickness at distal haft: 6.0 mm

Weight: 6.8 g

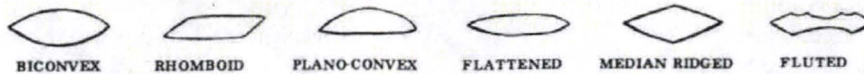


Use Insert/Picture to Insert Artifact Scans:



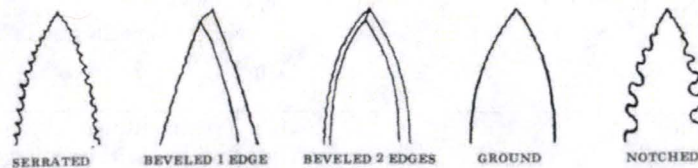
CROSS SECTION:

Biconvex



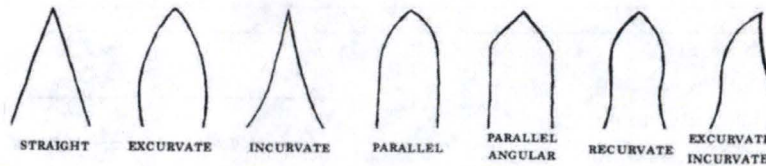
BLADE EDGE:

Ground



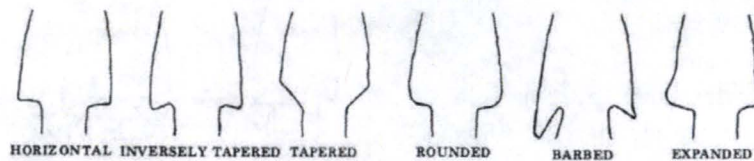
BLADE SHAPE:

Excurvate



SHOULDER FORM:

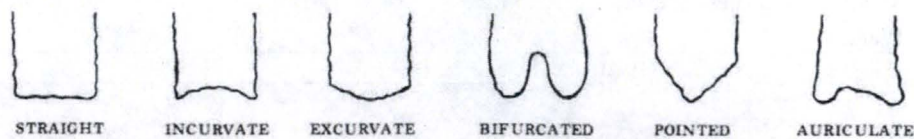
Tapered



BASAL STEM

EDGE:

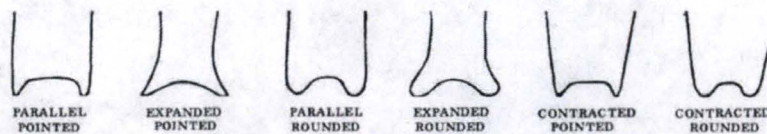
Excurvate



AURICULATED

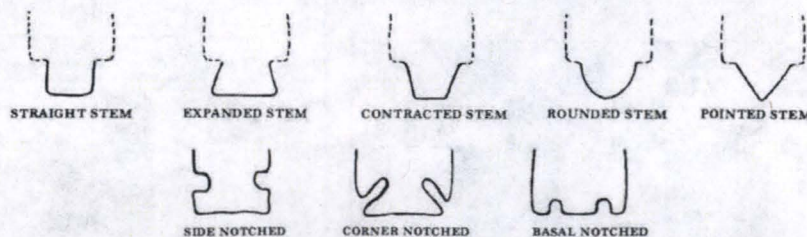
BASE:

N/A



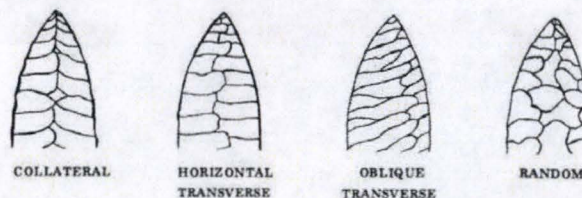
HAFT TYPE:

Straight Stem



FLAKING
PATTERN:

Random



TRC NASHVILLE PROJECTILE POINT ANALYSIS FORM

Project Name: TVA-Clinch

TRC Project Number:

Temporary Site Number:

Permanent Site Number: 40RE108

Catalogue Number: TVA-11-1-711

Analyst: JMG

Provenience: ST 440 N / 500 E

Depth: 0-30cmbs

Bag Number:

Recovered From: Shovel Test

Date:

Condition: Whole**Cortex:** No cortex**Raw Material:** St. Louis**Comments:****Heat Treatment:** Not altered**Grinding on Haft:** Grinding absent**Type:** Ledbetter**Metric Attributes:**

Maximum length: 49.0 mm

Maximum width: 25.5 mm

Maximum thickness: 10.0 mm

Shoulder width: 25.5 mm

Blade length: 39.5 mm

Haft length: 9.5 mm

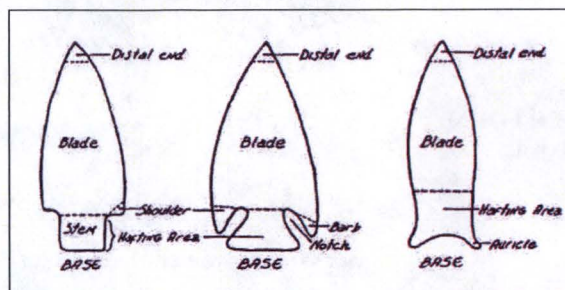
Distal haft element width: 13.0 mm

Maximum width at blade midpoint: 20.3 mm

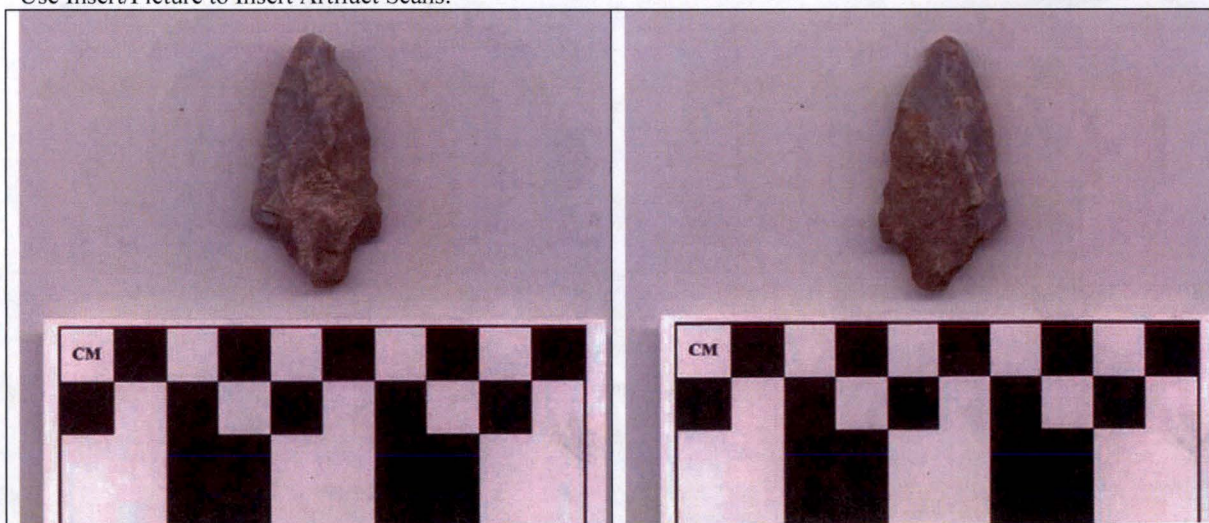
Proximal haft element width: 11.3 mm

Maximum thickness at distal haft: 7.5 mm

Weight: 11.2 g

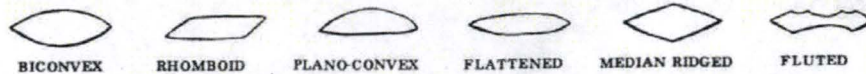


Use Insert/Picture to Insert Artifact Scans:



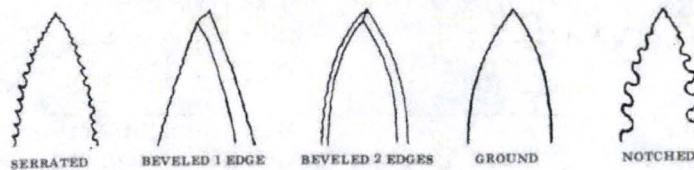
CROSS SECTION:

Biconvex



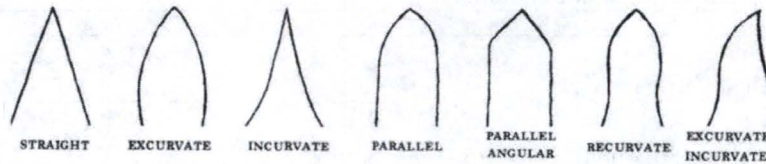
BLADE EDGE:

Ground



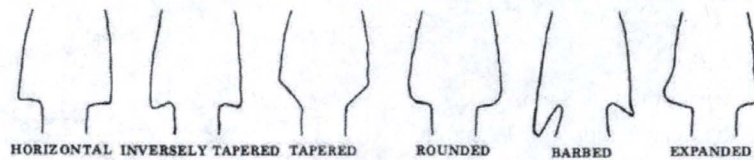
BLADE SHAPE:

Excurvate



SHOULDER FORM:

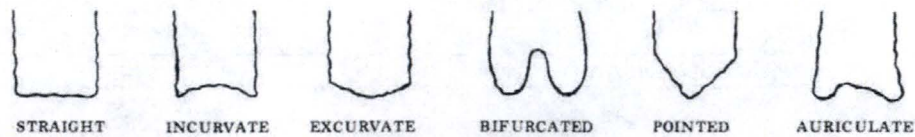
Tapered



BASAL STEM

EDGE:

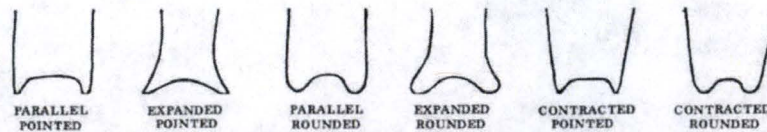
Excurvate



AURICULATED

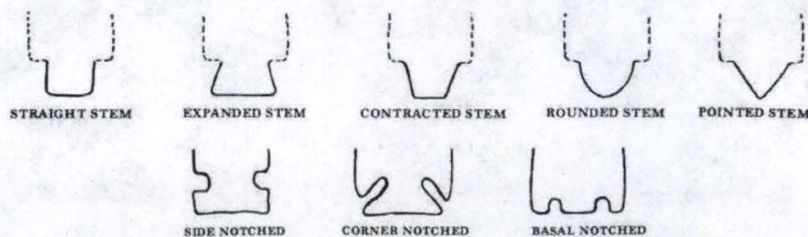
BASE:

N/A



HAFT TYPE:

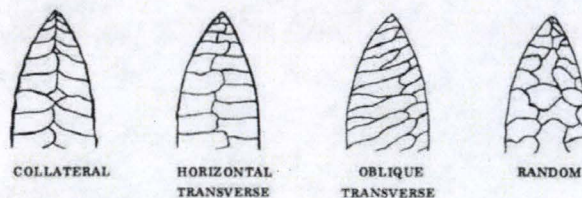
Contracted Stem



FLAKING

PATTERN:

Random



TRC NASHVILLE PROJECTILE POINT ANALYSIS FORM

Project Name: TVA-Clinch

TRC Project Number:

Temporary Site Number:

Permanent Site Number: 40RE107

Catalogue Number: TVA-11-1-712

Analyst: JMG

Provenience: TR-4 ST 5

Depth: 20-40 cmbs

Bag Number:

Recovered From: Shovel Test

Date:

Condition: Whole**Cortex:** No cortex**Raw Material:** Fort Payne chert**Comments:** Basal ears and one shoulder broken**Heat Treatment:** Not altered**Grinding on Haft:** Present Along Base**Type:** Palmer**Metric Attributes:**

Maximum length: 35.5 mm

Maximum width: 21.5 mm

Maximum thickness: 6.7 mm

Shoulder width: 21.5 mm

Blade length: 27.8 mm

Haft length: 7.7 mm

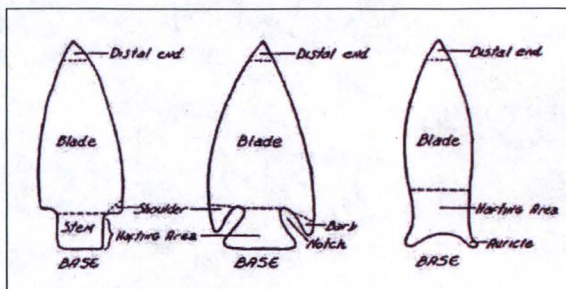
Distal haft element width: 14.8 mm

Maximum width at blade midpoint: 19.5 mm

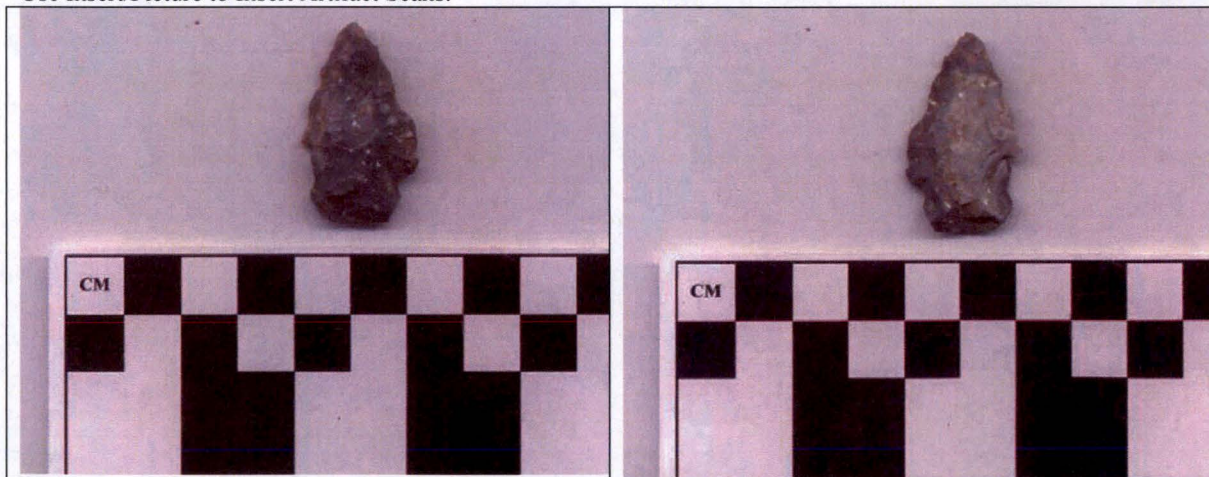
Proximal haft element width: N/A mm

Maximum thickness at distal haft: 6.7 mm

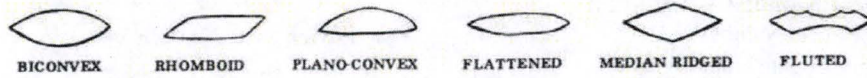
Weight: 4.7 g



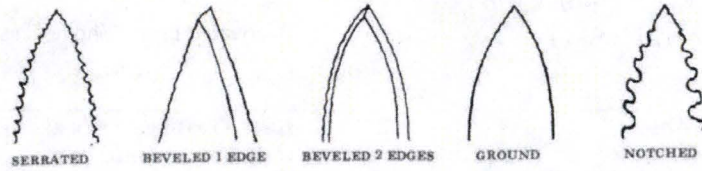
Use Insert/Picture to Insert Artifact Scans:



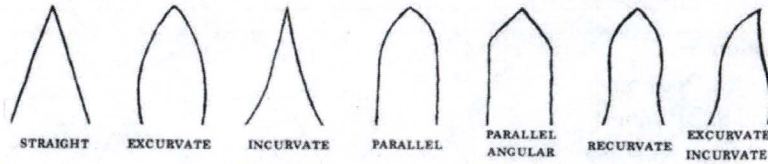
CROSS SECTION:
Rhomboid



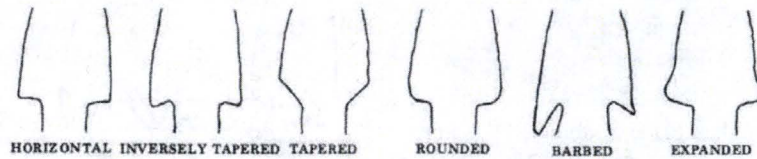
BLADE EDGE:
Serrated



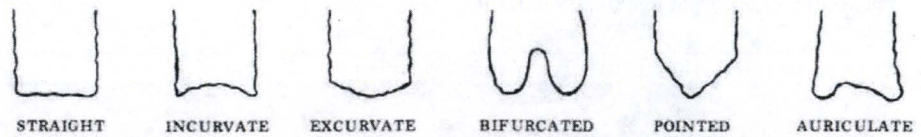
BLADE SHAPE:
Straight



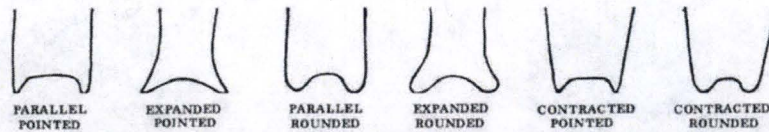
SHOULDER FORM:
Horizontal



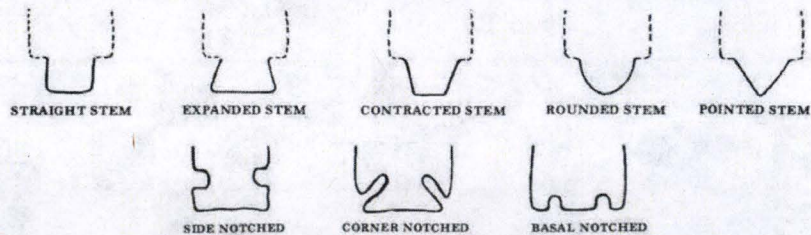
**BASAL STEM
EDGE:**
Straight



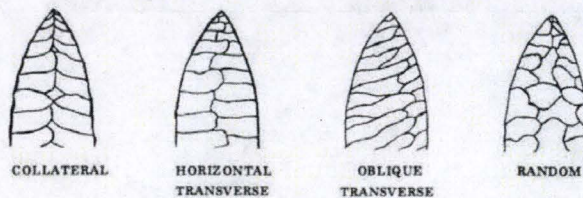
**AURICULATED
BASE:**
N/A



HAFT TYPE:
Corner Notched



**FLAKING
PATTERN:**
Random



TRC NASHVILLE PROJECTILE POINT ANALYSIS FORM

Project Name: TVA Clinch

TRC Project Number:

Temporary Site Number:

Permanent Site Number: 40RE106

Catalogue Number: TVA-11-1-370

Analyst: JT

Provenience: N500/E540

Depth: 0-40cm

Bag Number:

Recovered From: Shovel Test

Date: 2-3-2011

Condition: Tip Absent**Cortex:** No cortex**Raw Material:** St. Louis**Comments:** Tip slightly broken**Heat Treatment:** Not altered**Grinding on Haft:** Grinding absent**Type:** Jack's Reef Pentagonal**Metric Attributes:**

Maximum length: N/A mm

Maximum width: 21.7 mm

Maximum thickness: 8.3 mm

Shoulder width: 21.3 mm

Blade length: N/A mm

Haft length: 6.9 mm

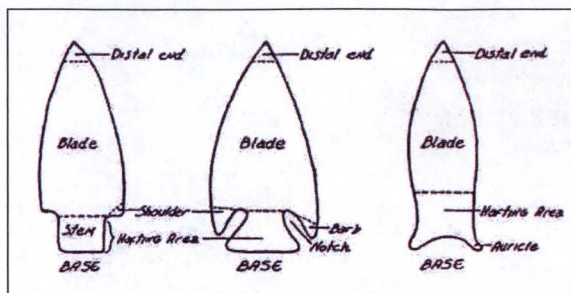
Distal haft element width: 21.3 mm

Maximum width at blade midpoint: 18.4 mm

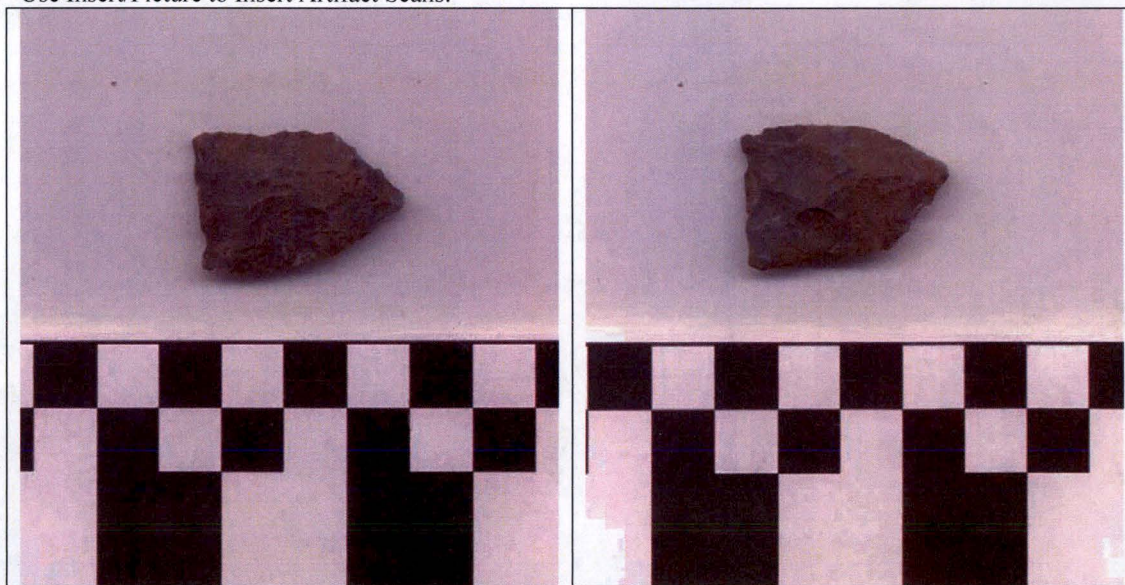
Proximal haft element width: 21.7 mm

Maximum thickness at distal haft: 7.6 mm

Weight: 7.1 g

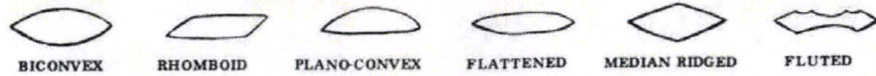


Use Insert/Picture to Insert Artifact Scans:



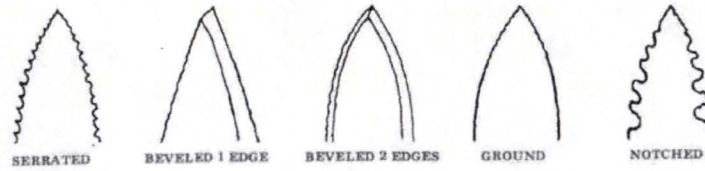
CROSS SECTION:

Biconvex



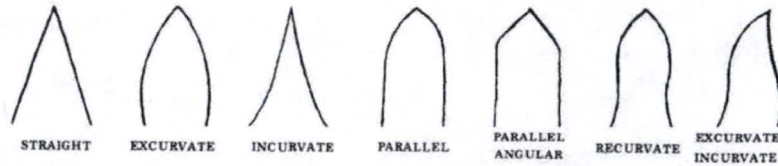
BLADE EDGE:

N/A



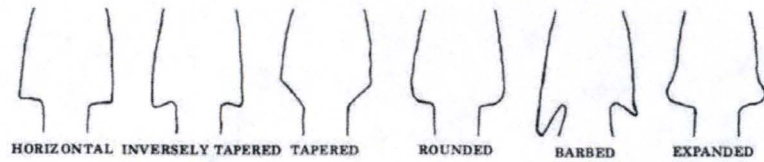
BLADE SHAPE:

Parallel Angular



SHOULDER FORM:

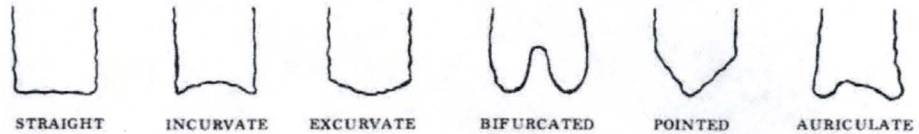
N/A



BASAL STEM

EDGE:

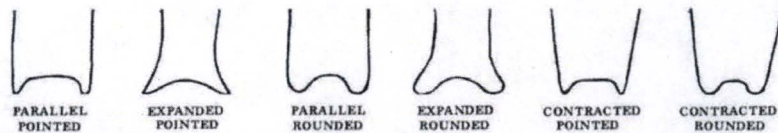
Straight



AURICULATED

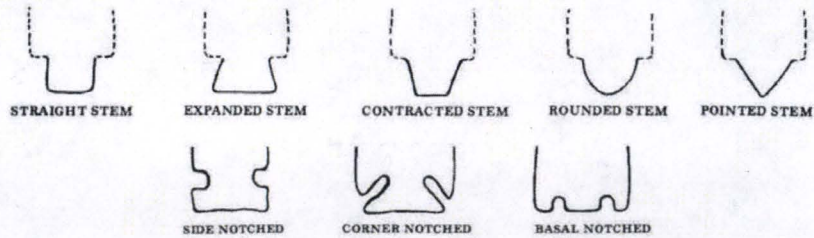
BASE:

N/A



HAFT TYPE:

N/A



FLAKING
PATTERN:

Random

