PHASE I

ARCHAEOLOGICAL SURVEY AHEAD OF THE RECONSTRUCTION OF THE KY 36 AND KY 32 INTERSECTION, NICHOLAS COUNTY, KENTUCKY

KYTC ITEM # 9-205.00

By:

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Prepared for:

KY Transportation Cabinet
Division of Environmental Analysis
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Frankfort, Kentucky 40622

Kentucky Office of State Archaeology Project Number:
FY14-7986

CDM Smith

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Lead Federal Agency: Federal Highways Administration

Kentucky Office of State Archaeology
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Archaeology Report

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Abstract

At the request of the Kentucky Transportation Cabinet (KYTC), archaeologists from CDM Smith conducted a Phase I archaeological survey for reconstruction of the intersection of KY 36 and KY 32 in Carlisle, in Nicholas County, Kentucky (Item Number 9-205.00). The area of potential effect (APE) consisted of 65 acres (26.3 ha) along KY 36 and 32 and where the two intersect. The APE was visited by a CDM Smith archaeology crew on March 14th through 22nd, 2014, at which time approximately 100 percent of the APE was either in pasture grasses or mowed lawns that offered zero ground surface visibility. The archaeological survey involved systematic shovel test excavation and visual inspection over the entire APE.

Five previously unrecorded archaeological sites, 15Ni66-15Ni70, seven previously unrecorded isolated finds, and one non-site, CDMS 10, were identified within the project bounds. Sites 15Ni67, 15Ni68, and 15Ni70 did not qualify for nomination to the National Register under Criterion D and no further work is recommended. Upon completion of concurrent review for the assessment and recommendation for Sites 15NI66 and 15NI69, FHWA, SHPO, and KYTC are in agreement that the sites do not qualify for nomination to the National Register under Criterion D. Therefore, no additional work will be undertaken at these sites.

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Acknowledgements

The Principal Investigator for the archaeological survey was Mr. J. David McBride, RPA. Field crew consisted of J. David McBride, RPA, J. Howard Beverly, MA, RPA, GISP, Dona Daugherty, and Ann Wilkinson. Howard Beverly and Brady Johnson generated maps and formatted the report. Robert Ball provided support in Lexington.

Section 1 -

Introduction

This report describes the field and laboratory method and the results of a Phase I archaeological survey conducted at the request of the Kentucky Transportation Cabinet (KYTC) by archaeologists from CDM Smith the reconstruction of the intersection of KY 36 and KY 32 in Carlisle, Nicholas County, Kentucky (Item Number 9-205.00). Field work was conducted on March 14, 2014 through April 22, 2014.

1.1 Project Sponsor and Regulatory Authority

The state agency sponsoring this survey is the KYTC; the lead federal agency is the Federal Highway Administration. The survey was conducted in compliance with the guidelines established by the Kentucky Heritage Council Guidelines (Sanders 2006) and the National Historic Preservation Act of 1966 (P.L. 89-655; 80 Stat. 915, 16 U.S.C. 470 et seq), the National Environmental Policy Act of 1969 (P.L. 910190; 83 Stat. 852, 42 U.S.C. 4321 et seq), Procedures of the Advisory Council on Historic Preservation (36CFR800), Executive Order 11593, and the Protection and Enhancement of the Cultural Environment (16 U.S.C. 470; supp. 1, 1971).

1.2 Purpose and Scope of Work

A Phase I archaeological survey was conducted for the proposed reconstruction of the intersection of KY 36 and KY 32 in Carlisle, Nicholas County, Kentucky (Item Number 9-205.00.)

The archaeological surveyors were prepared to shovel probe areas of less than 15% slope, auger deeper soil deposits, and to visually inspect the entire area. The purpose of this work was to identify any archaeological resources which might have existed and to record their extent, significance, and the potential impact of the proposed project on these cultural resources.

1.3 Project Location and Description

This project is located along the intersection of KY 32 and KY 36 in Carlisle, Nicholas County, in the Kentucky Department of Highways District 9 (Figure 1-1). The project area involves the intersection of KY 36 and KY 32 (Figure 1-2 and Figure 1-3).

1.4 Area of Potential Effect (APE)

The area of potential effect (APE) is defined as the limits of the proposed right-of-way and proposed temporary construction easement. The total area is 65 acres (26.3 ha).

1.5 OSA Records Research

On March 6, 2014, the site files and survey records at the Office of State Archaeology (OSA) were accessed.

1.6 Principal Investigator

The principal investigator for the project was J. David McBride, MA, RPA.

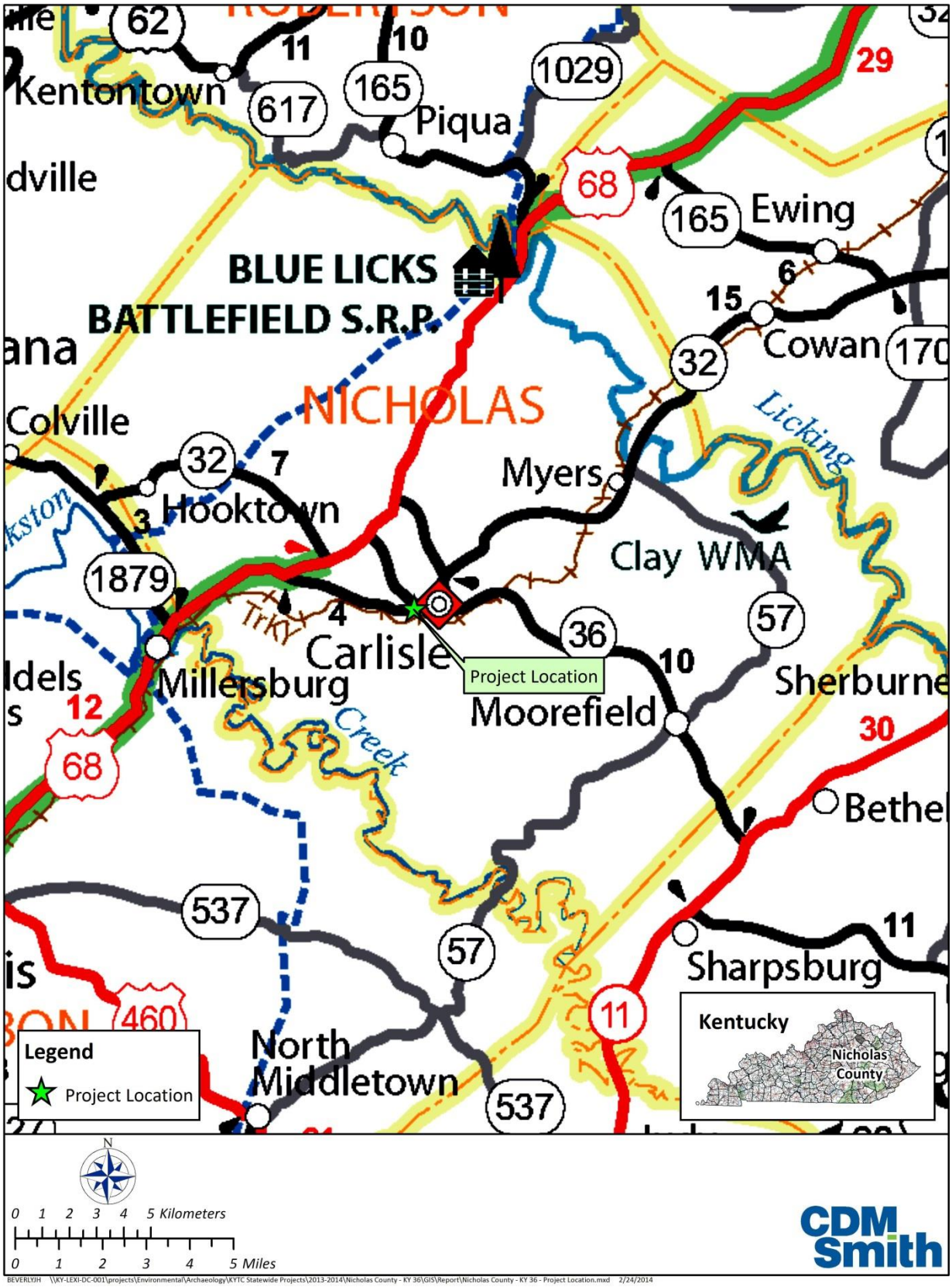

Figure 1-1. Project Location within Nicholas County.

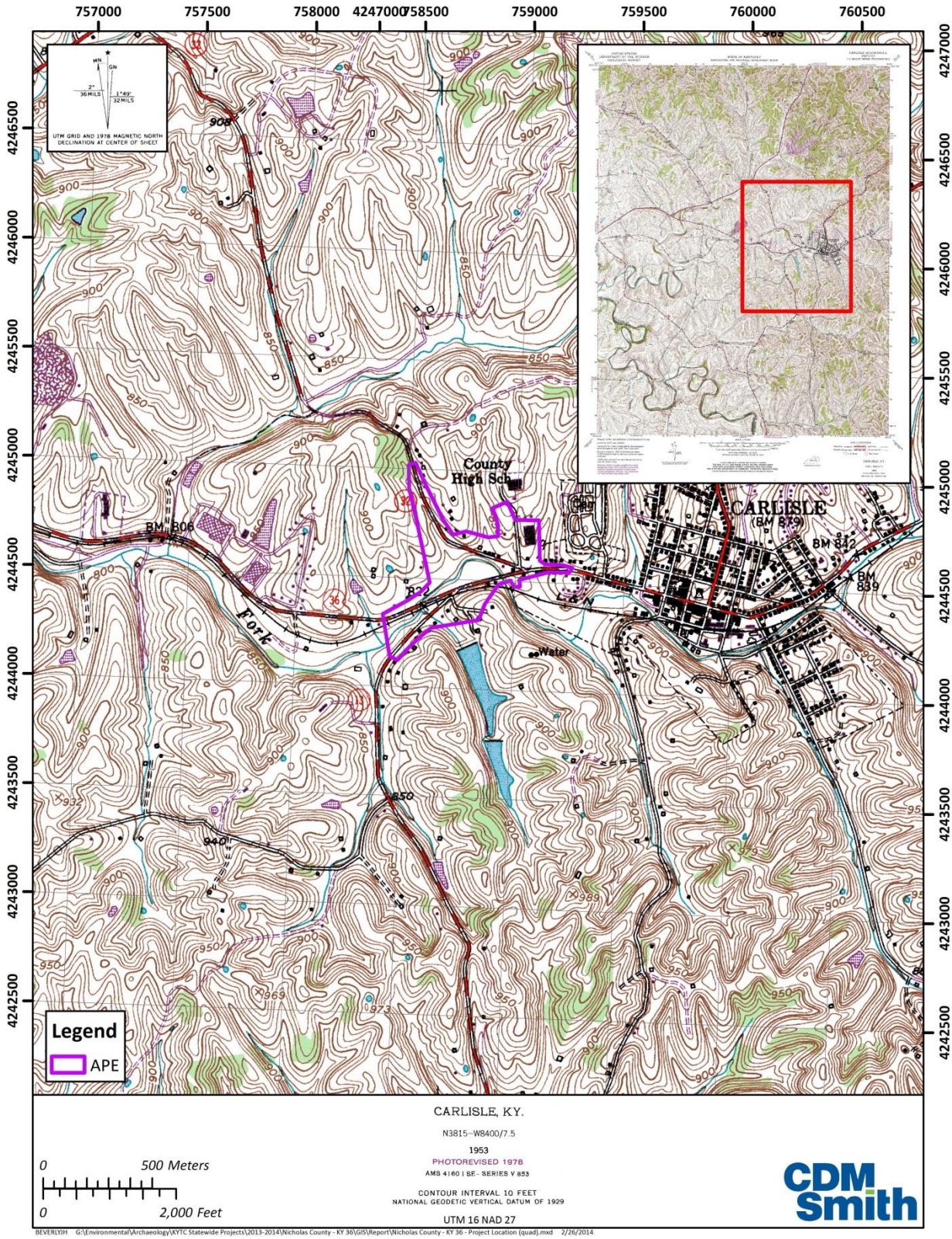

Figure 1-2. USGS Topographical Map showing Project Location.

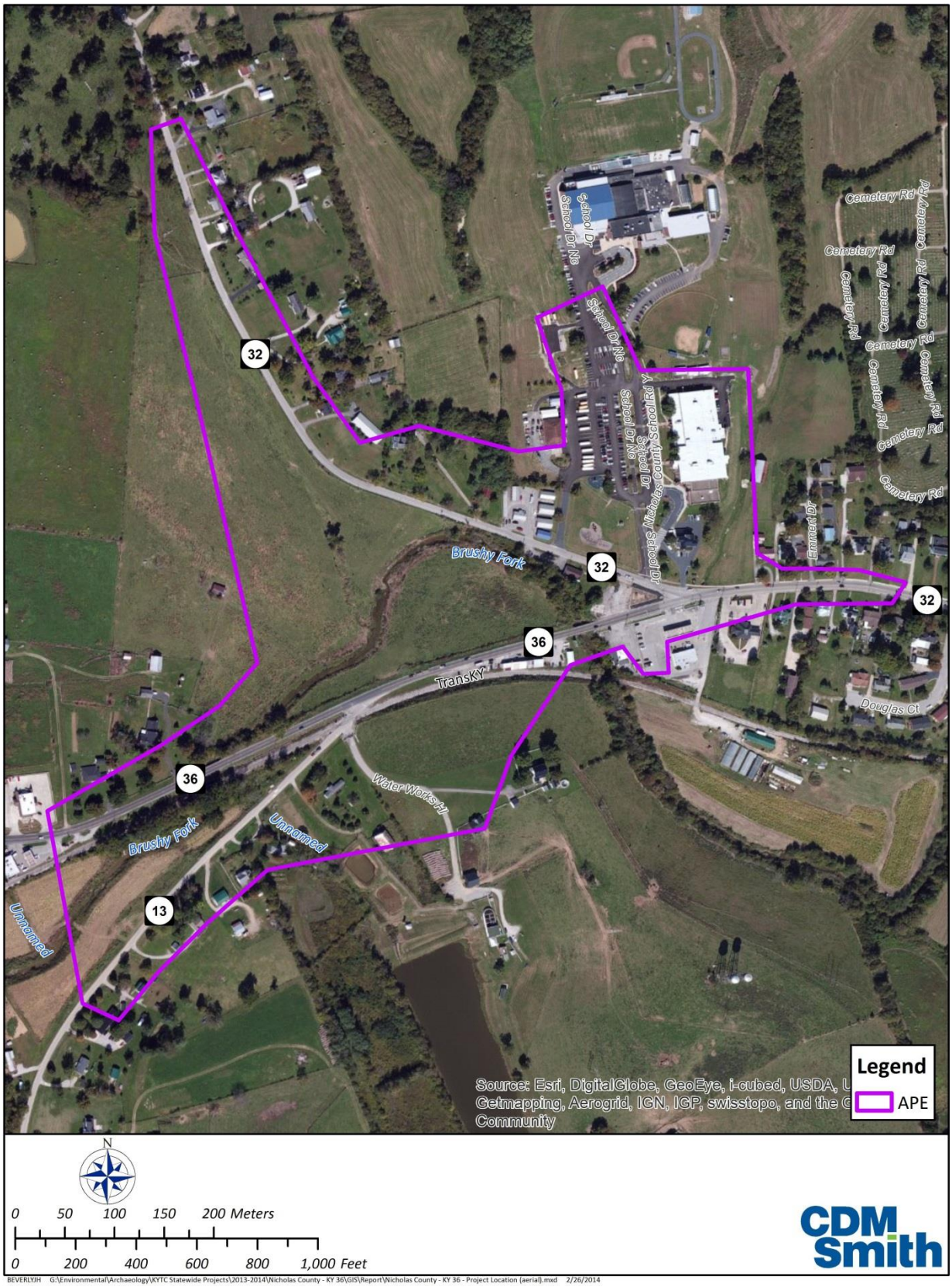

Figure 1-3. Aerial Map showing Project Location.

1.7 Field and Laboratory Crew

The field crew consisted of J. David McBride, J. Howard Beverly, Jr., Dona Daugherty, and Ann Wilkinson. Mr. McBride served as the field director and planned, coordinated, and supervised all field activities. J. Howard Beverly, Jr., J. David McBride, and Dona Daugherty prepared the final report, and J. Howard Beverly, Jr., prepared the maps and formatted the report. Laboratory analysis was coordinated by Dona Daugherty. Prehistoric and historic artifact analysis was conducted by J. David McBride.

1.7.1 Field Effort

The total number of hours expended during fieldwork was 254. Field work for the project was conducted on March 14, 2014 through April 22, 2014.

1.7.2 Laboratory Effort

The total number of hours expended to wash, catalog, analyze, and write up artifacts was 35 hours. Identification of artifacts was conducted using available library references and by comparison with artifact collections at CDM Smith.

1.8 Maps and Figures

Maps and figures for this report were prepared using a combination of Microstation design files, GIS data overlays, and databases gathered from a number of different resources. Existing site information was provided by the Office of State Archaeology. Soil mapping was provided by United States Department of Agriculture online and printed resources. Landowner data and vegetation coverage were obtained from aerial photographs and field reconnaissance. All GIS work was conducted by J. Howard Beverly, MA, RPA, GISP.

1.9 Curation

All field notes, maps, forms, and artifacts will be curated at the University of Kentucky's curation facility, the William S. Webb Museum of Anthropology.

1.10 Summary of Investigations

A Phase I archaeological survey was conducted by archaeologists from CDM Smith at the request of the KYTC ahead of the proposed reconstruction of the intersection of KY 36 and KY32 in Carlisle, Nicholas County, Kentucky. The total APE measures 65 acres (25.3 ha). The survey identified 5 archaeological sites, 7 isolated finds and 1 non-site. Two of the sites were potentially eligible for recommendation to the National Register of Historical Places (NRHP) under Criterion D. One was also potentially eligible under Criterion A. If the sites cannot be avoided, additional work is recommended. The non-site, CDMS 10, consisted of modern material associated with a 1950 farmstead, and after analysis, it was deemed not worthy of a site number or isolated find number due to its modern context. Upon completion of concurrent review for the assessment and recommendation for Sites 15NI66 and 15NI69, FHWA, SHPO, and KYTC are in agreement that the sites do not qualify for nomination to the National Register under Criterion D. Therefore, no additional work will be undertaken at these sites.

Section 2 -

Environmental

Aspects of the natural environment often influence the development of prehistoric and historic communities. In this section, the environmental background of Nicholas County and the surrounding region is reviewed. Environmental data includes physiography, geology, hydrology, soils, climate, flora, and fauna.

2.1 Physiography and Topography

Kentucky can be divided into five primary regions: the Cumberland Plateau (Eastern Coalfields) in the east, the north-central Bluegrass Region, the south-central and western Pennyroyal Plateau, the Western Coal Fields and the far-west Jackson Purchase. The Bluegrass Region is divided further into two regions - the Inner Bluegrass and the Outer Bluegrass.

Nicholas County lies within one physiographic area of Kentucky (Figure 2-1), the Outer Bluegrass Physiographic Regions of north-central Kentucky. The topography of the county area is hilly with steep hillsides and undulating to rolling ridgetops (Richardson et al 1982).

2.2 Geology

The geology underlying the project area consists of strata deriving from the Upper Ordovician and the Pleistocene and Holocene (Figure 2-2 and Figure 2-3).

The Outer Bluegrass Physiographic Region is underlined by Upper Ordovician rocks. This layer consists of interbedded fossiliferous limestone or dolomite and shale. The shale dominates some parts of the section, and limestone or dolomite in other parts (McDowell 1984). Rocks of Upper Ordovician were deposited in tropical latitudes in shallow marine water on a shelf that sloped gently northward (McDowell 1984). The project area is underlain by Lexington Limestone (Blade 1978).

The Pleistocene and Holocene rocks consist of Alluvium. Most Alluvium is Holocene, but some is late Pleistocene in origin (McDowell 1984).

2.3 Hydrology

Nicholas County is drained by the Licking River which is located in the northern part of the county and Hinkston Creek on the southern border. The Project Area is located within the Licking River watershed. The project area is drained by the Brushy Fork. Brushy Fork flows into South Fork and then into the Licking River (Figure 2-4).

2.4 Soils

Most of the soils found in Kentucky developed under the same formation processes and climate conditions. The differences in soils from one area to another are chiefly dependent on three factors: parent material, the topography where the soils are found, and the amount of time exposed to erosional forces.

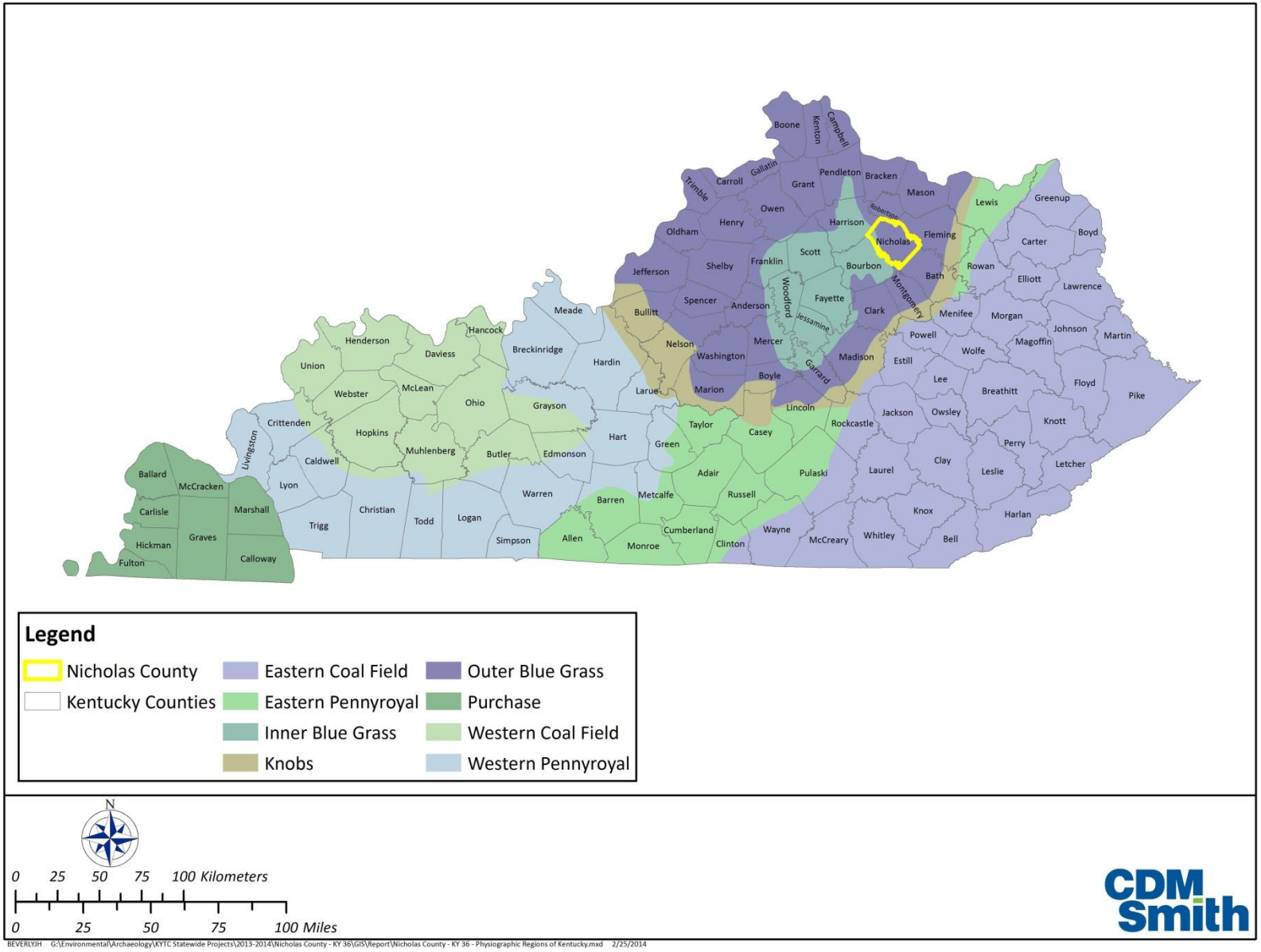

Figure 2-1. Physiographic Map of Kentucky.

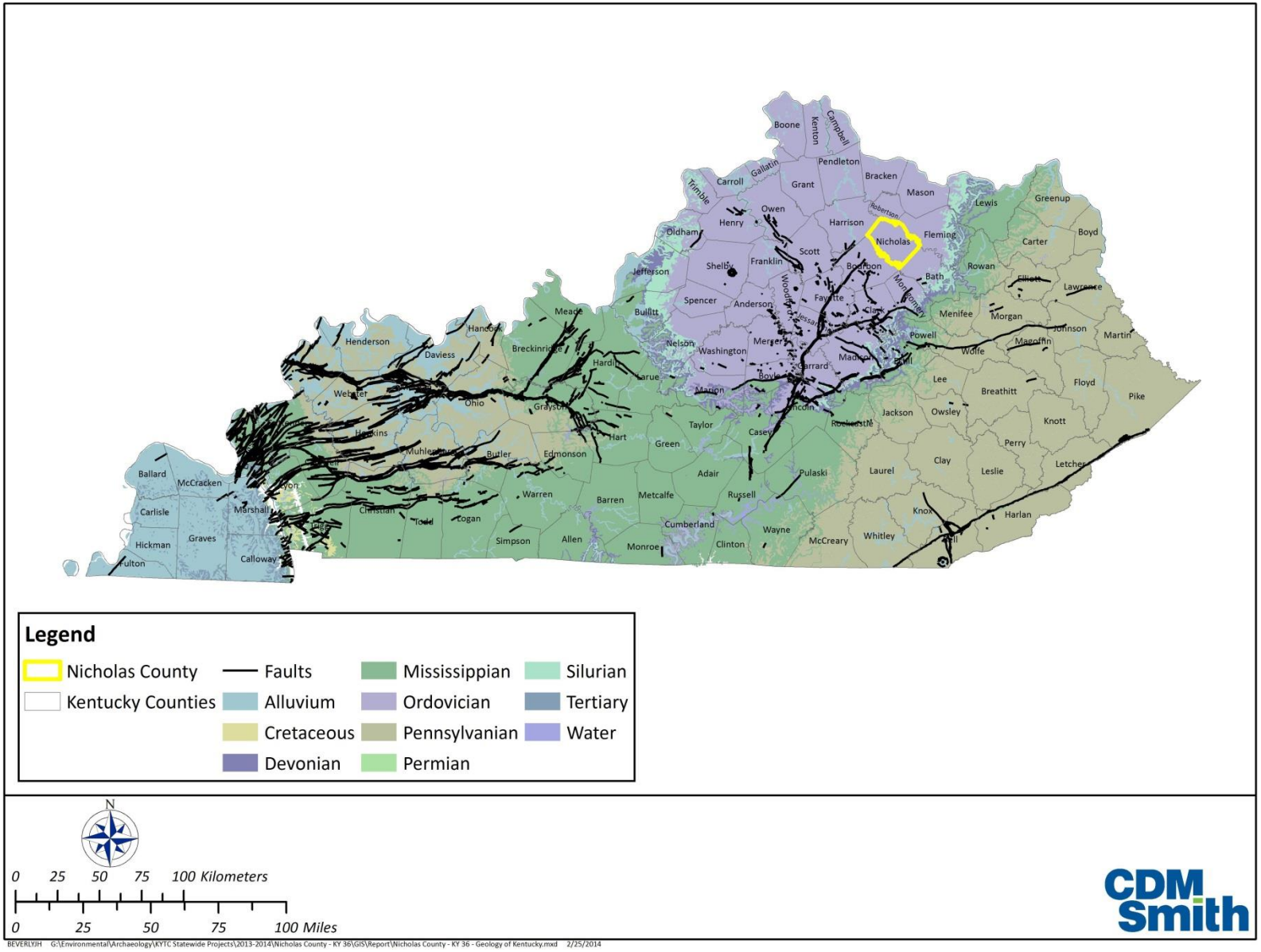

Figure 2-2. Geologic Map of Kentucky.

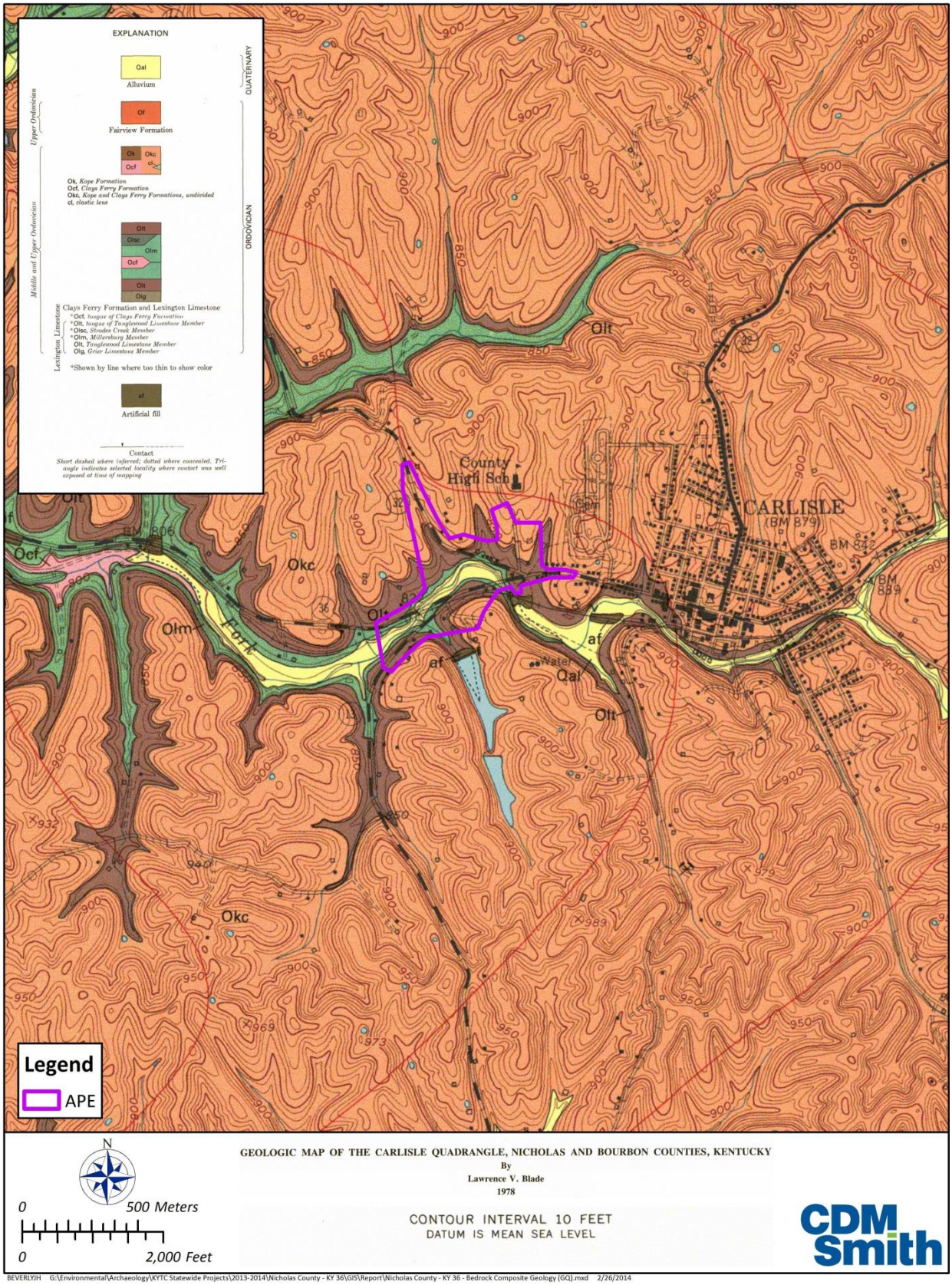

Figure 2-3. Geological Quadrangle.

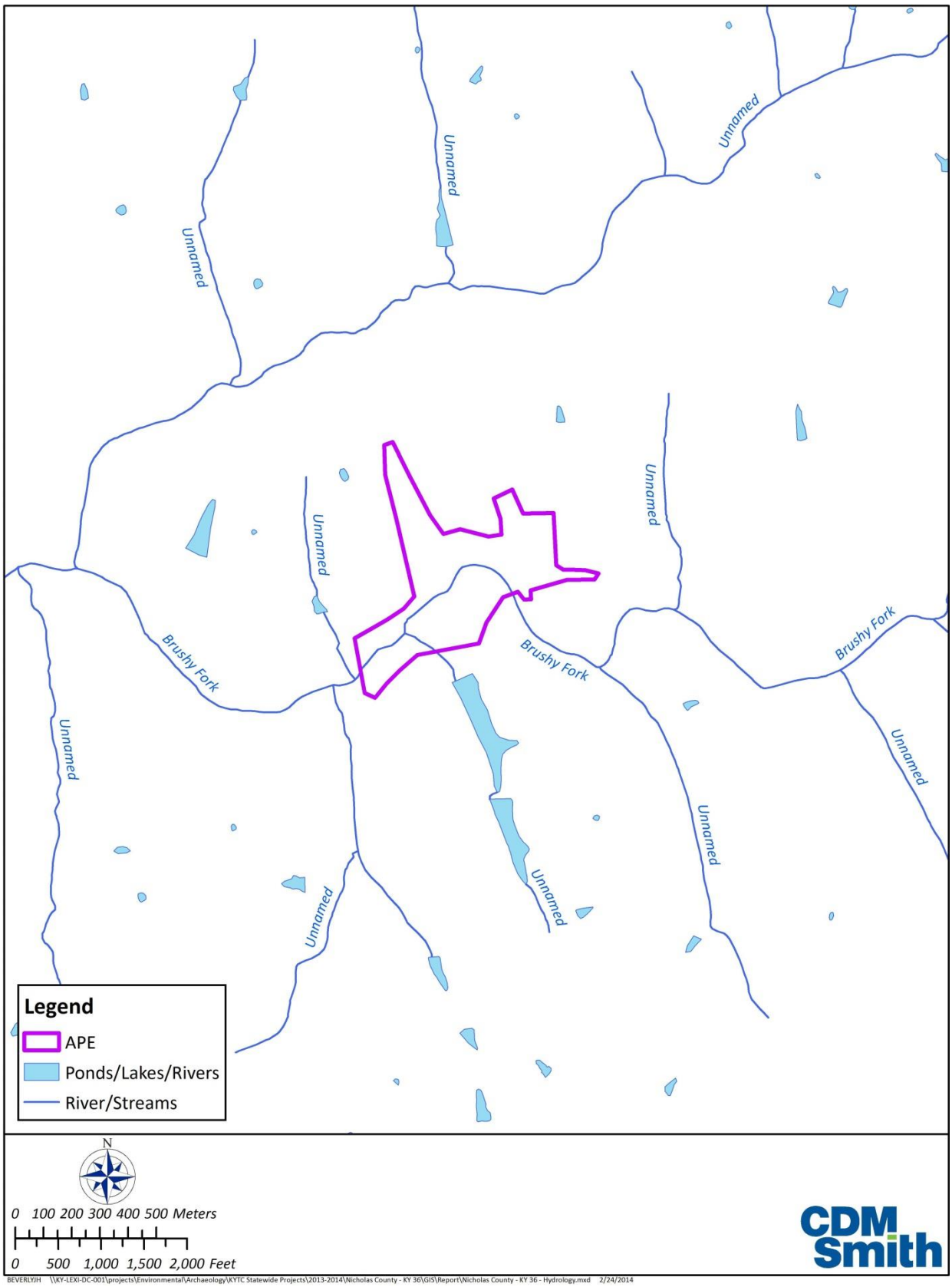

Figure 2-4. Hydrology.

There are seven soil types found within the project area (Figure 2-5). They are described below.

The Cynthiana-Faywood (CnD) complex soils are very rocky and are on ridges and hillsides of 6 to 20 percent slopes. Cynthiana and Faywood soils are so intermingled that they could not be separated for the soil map. Cynthiana soils are shallow and well drained and Faywood soils are moderately deep and well drained. Cynthiana soils have a surface layer that consists of a dark grayish silt clay loam about 6 inches thick. The subsoil extends to 16 inches and consists of a yellowish brown silt clay. Faywood soils have a surface layer that consists of a brown silty clay loam about 7 inches thick and a subsoil which extends to 24 inches and consists of yellowish brown silty clay or clay (Richardson et al. 1982).

The soils are suited to pasture, hay crops, and woodland. They are poorly suited to urban development (Richardson et al. 1982:18).

The Cynthiana-Faywood (CnE) complex soils are very rocky and are on hillsides dissected by many V-shaped hollows and on short hillsides bordering stream channels of 20 to 35 percent slopes. The descriptions of the stratigraphy are the same for the Cynthiana-Faywood (CnD) above.

The soils are suited for woodland. They are poorly suited for pasture, hay crops, and urban development (Richardson et al. 1982:19).

Elk silt loam (EkB) is a deep well drained gently sloping soil on stream terraces. It has a slope of 2 to 6 percent. The surface layer consists of dark grayish brown silt loam about 8 inches thick. The subsoil consists of two layers. There is a brown silt loam to a depth of 13 inches and a brown, strong brown, and yellowish brown silty loam to a depth of 54 inches. The substratum consists of a yellowish brown silty clay loam that extends to a depth of 93 inches (Richardson et al. 1982:23).

The soil is well suited to all locally grown crops, pasture, hay crops, and urban development (Richardson et al. 1982:23).

Faywood silt loam (FwC) is a moderately deep, well drained, soil on narrow ridges. The slopes are generally smooth at 6 to 12 percent. The surface layer consists of a dark grayish brown silt loam which extends 6 inches. The subsoil consists of a dark yellowish brown silty loam to a depth of 11 inches, a brown silty clay to a depth of 19 inches, a yellowish brown clay to a depth of 34 inches. Bedrock is at a depth of 34 inches (Richardson et al. 1982:26).

It is suited for cultivated crops, woodland, and most urban uses. It is well suited for pasture and hay crops (Richardson et al. 1982:26).

Faywood silty clay loam (FyD) is a moderately deep, well drained, soil on narrow ridges. The slopes are generally smooth at 6 to 12 percent. The surface layer consists of a brown silty clay loam which extends 7 inches. The subsoil consists of a yellowish brown silty clay or clay to a depth of 24 inches. Substratum consists of a pale brown flaggy clay to a depth of 29 inches. Bedrock is at a depth of 29 inches (Richardson et al. 1982:26).

It is poorly sited for cultivated crops and urban uses because of the slope. It is suited for pasture, hay crops and woodland (Richardson et al. 1982:27).

McAfee silt loam (McC) is a moderately deep, well drained, soil on low lying hills and irregular side slopes in areas of karst topography. The slopes are at 6 to 12 percent. The surface layer consists of a dark reddish brown silt loam which extends 8 inches. The subsoil consists of a dark brown silty clay

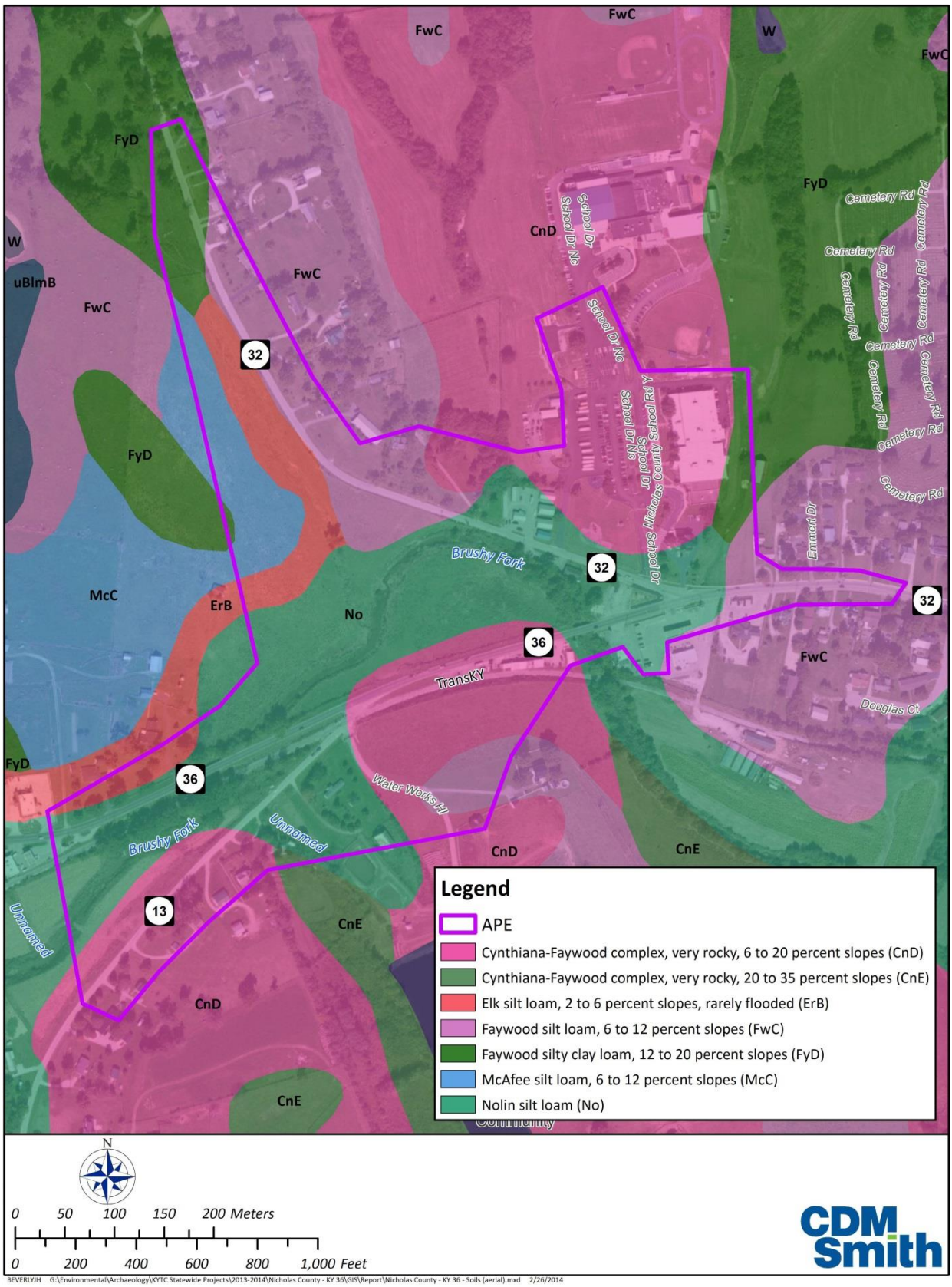

Figure 2-5. Soils in the Project Area.

loam to a depth of 21 inches and a reddish brown silty clay to a depth of 32 inches. Limestone bedrock is at a depth of 32 inches (Richardson et al. 1982:26).

It is well sited for cultivated crops and woodland. It is suited to most urban uses (Richardson et al. 1982:35).

Nolin silt loam (EkB) is a deep well drained, nearly level soil on flood plains along most streams. It has a slope of 0 to 2 percent. The surface layer consists of dark grayish brown silt loam about 9 inches thick. The subsoil consists of a brown silt loam to a depth of 49 inches. The substratum consists of a grayish brown silty clay loam that extends to a depth of 72 inches (Richardson et al. 1982:37).

The soil is well suited to cultivated crops, pasture, and hay crops. It is poorly suited for most urban uses because of flooding (Richardson et al. 1982:23).

2.5 Cherts

No chert is found in the alluvium, the Lexington Limestone, or other formations within the Carlisle quad (Blade 1978). The Lexington Limestone in the Paris East Quad, to the south of the project area, does contain chert (Outerbridge 1974). Chert is also present in the Lexington Limestone formation in the Millersburg quad, also to the south of the project area (Cuppels and Outerbridge 1974).

2.6 Prehistoric Climate Conditions

The beginning of the Holocene Age, dating between 12,700 and 11,300 B.P., is believed to be associated with major and rapid warming temperatures, decreases in cloud cover, and generalized landscape instability (Delcourt 1979:270). Estimated temperature increases during this period are three times greater than later Holocene fluctuations. During the early Holocene, rapid increases in boreal plant species occurred on the Allegheny Plateau in response to the retreat of the Laurentide ice sheet from the continental United States (Maxwell and Davis 1972:517-519; Whitehead 1973:624). At lower elevations, deciduous species were returning after having migrated to the southern Mississippi Valley refugia during the Wisconsin advances (Delcourt and Delcourt 1981:147). The climate during the early Holocene seems considerably cooler than the modern climate, and extant species in upper altitude zones of the Allegheny Plateau reflect conditions most similar to the Canadian boreal forest region (Maxwell and Davis 1972:515-516).

Conditions at lower elevations were probably less severe and favored the transition from boreal to mixed mesophytic species. Middle Holocene (8,000 to 4,000 B.P.) climate conditions appear to have been consistently drier and warmer than twentieth century conditions (Delcourt 1979: 271; Wright 1968). The influx of westerly winds during this Hypsithermal climatic episode contributed to periods of severe moisture stress in the Prairie Peninsula and to an eastward advance of prairie vegetation (Wright 1968). Delcourt has identified Middle Holocene moisture stress along the Cumberland Plateau in Tennessee, but indicated that upland barrens did not expand appreciably as did the Midwestern prairies (Delcourt 1979:274). Changes in Archaic settlement patterns in both central and northern Missouri have been associated with possible decreases in upland resource availability during the Hypsithermal.

The earliest distinguishable Late Holocene climatic episode began circa 5,000 to 4,000 B.P. and ended around 2,800 B.P. This episode is associated with the establishment of modern deciduous forest communities in the southern highlands and increased precipitation across most of the mid-continental United States (Delcourt 1979:270; Maxwell and Davis 1972:517-519). Beginning around 2,800 B.P., warm conditions similar to the modern climate prevailed until the onset of the Neo-Boreal episode

around 700 B.P. Fluctuations in this Late Holocene Pacific episode appear to have varied locally, with either increased or decreased temperatures and precipitation (Delcourt 2002). Certain fluctuations have been associated with adaptive shifts in midwestern prehistoric subsistence and settlement systems. An example is Struever and Vickery's (1973) suggestion of a possible correlation between the onset of a cooler and moister period circa 1,600 B.P. and increased use of polygonum species (smartweed) by Late Woodland groups in the Midwest (Struever and Vickery 1973:1215-1216). Researchers have inferred warmer temperatures for the Great Plains and drier conditions for the Upper Great Lakes during this same period (1,600-1,300 B.P.) (Delcourt 2002). Other fluctuations during the Pacific episode are similarly non-uniform across the mid-continental United States; however, the interfaces of all fluctuations are generally consistent.

Local paleoecological evidence is required to determine the kinds of climatic fluctuations Woodland populations experienced during the Pacific episode. Given evidence of fluctuations elsewhere, it is most likely that changes occurred circa 1,700 B.P., 1,300 B.P., and 900 B.P., with a possible fourth change around 2,300 B.P.

Studies of historic weather patterns and tree ring data by Fritts (1971) have indicated that climatological averages are "unusually mild" when compared with seventeenth and nineteenth century trends. His study suggests that winters were generally colder, weather anomalies were more common, and severe winters were more frequent between A.D. 1602 and 1899 than after 1900. These cooler, moister conditions are associated with the Neo-Boreal episode, or Little Ice Age, which began around 700 B.P. and coincided with minor glacial advances in the northwest and Europe.

The effects of the Neo-Boreal episode, which ended during the mid- to late nineteenth century, have not been studied in detail for this region. Despite this, it appears that the area experienced less radical temperature decreases during the late Neo-Boreal than did the upper Midwest and northern Plains (Fritts 1971). Related changes in extant vegetation should therefore be more difficult to detect. It is probably safe to assume, however, that average temperatures were at least a few degrees cooler during the late Prehistoric and early Historic periods. The frequency of severe winters and average winter precipitation were probably greater as well.

2.7 Current Climate Conditions

Nicholas County has hot summers and moderately cold winters. The average summer temperature is 72^0 F and the average winter temperature is 32^0 F. On average, thunderstorms occur on about 50 days each year. About 24 inches, just over half of the annual precipitation, falls between April and September. During winter, at least 8 days have at least one inch of snow on the ground, and the average snow fall accumulation is 18 inches (Richardson et al. 1982:1-2).

2.8 Prehistoric and Present Flora and Fauna

The project area is included in the Western Mesophytic Forest Region, which is transitional between the extremely diverse Mixed Mesophytic Forest of the Appalachian Mountains and the Tall-Grass Prairies of the Midwest. The Western Mesophytic Forest contains a wide variety of vegetation climaxes and subclimaxes throughout its range, with oak and hickory as the dominant species. Trees commonly occurring in the project area include chinquapin, red oak, water maple, honey locust, elm, black cherry, hackberry, Kentucky coffeetree, walnut, shagbark and butternut hickory, basswood, sycamore, box elder, willow, and cedar. Common shrubs include sumac, blackberry, poison ivy, Virginia creeper, pawpaw, spicebush, plum, hornbean, redbud, wild grape, and buckberry. Some of the common native

herbaceous plants are ironwood, milkweed, cane, nettle, white snakeroot, bloodroot, spring beauty, trillium, violets, cardinal flower, wild strawberry, goldenrod, and May apple.

These forest communities have produced and supported a wide variety of animals, such as white-tailed deer, red fox, raccoon, squirrel, rabbit, groundhog, other mammal species, birds, reptiles, amphibians, fish, and mollusks (Barbour and Davis 1974; Esarey et al 1992:4). During prehistoric times white-tailed deer was by far and away the most important animal resource. Other species were also exploited, including turkey, fish, waterfowl, and mollusks (Fenton et al. 1996).

2.9 Current Land Use

Present land use for the Archaeological APE was derived from the National Land Cover Database compiled in 2006 and based on the classification scheme developed by Homer et al. (2004), combined with reconnaissance, in-situ observations.

The land cover classification data was created by a combination of Landsat imagery and ancillary data. The combined image data is then generalized to a 1 acre minimum mapping unit. An algorithm is then used to compare the pixel data against known values resulting in a product that identifies land cover type for the pixel. The land cover within the Archaeological APE is shown in Figure 2-6 and examples are shown in Figure 2-7 through Figure 2-10.

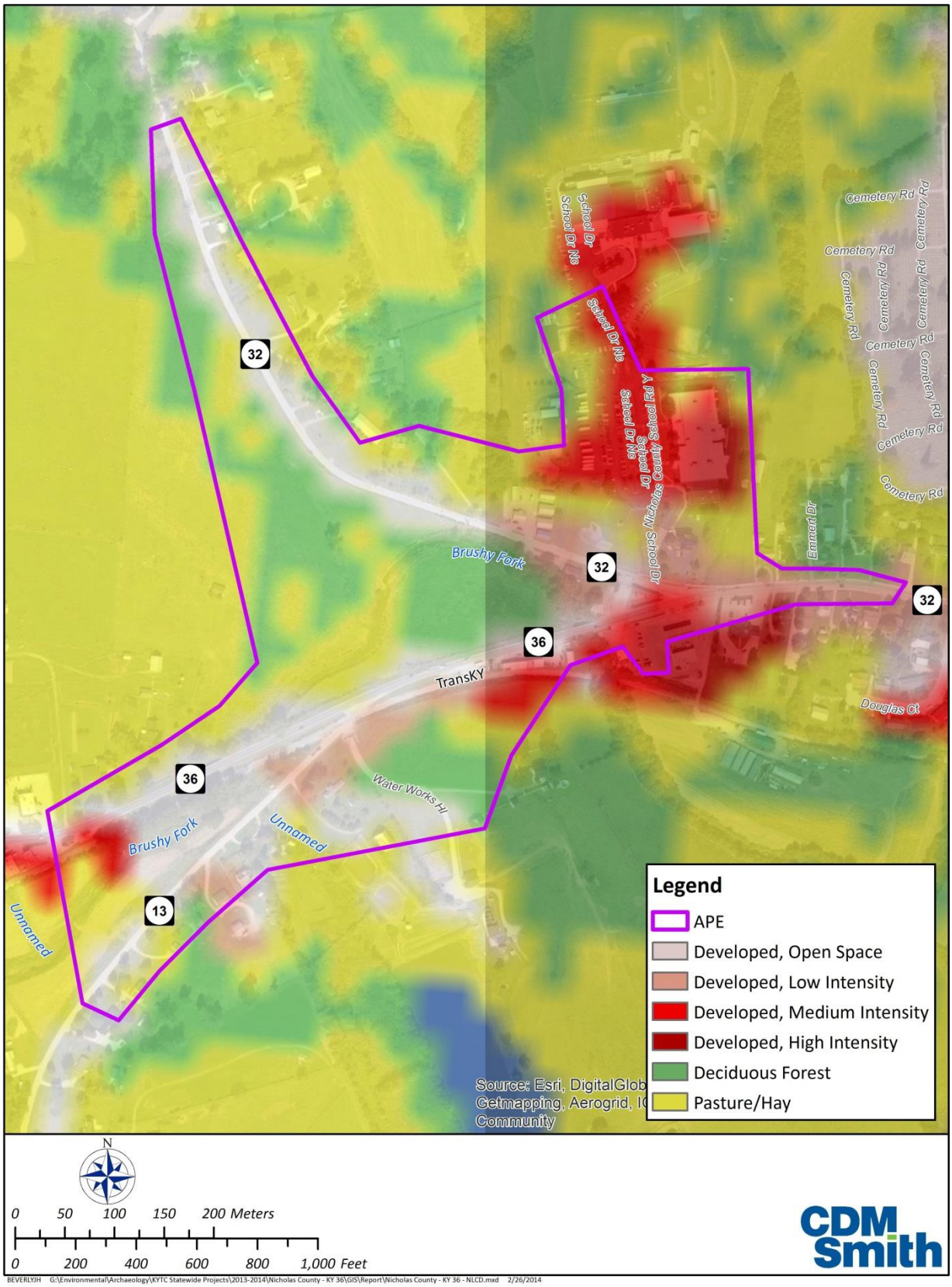

Figure 2-6. Existing Land Use, 2006.

Figure 2-7. Developed, Open Space inside the Project Area.

Figure 2-8. Pasture/Hay use area inside the Project Area.

Figure 2-9. Developed Light Intensity use areas inside the Project Area.

Figure 2-10. Developed Medium Intensity use areas inside the Project Area.

Section 3 -

Cultural Context, Previous Investigation, and Summary of Known Sites

In this chapter, the culture history of Nicholas County and this region of Kentucky are reviewed. The research methodology used to develop this background and context involved archival research at the Office of State Archaeology, and research at the University of Kentucky's various libraries. Included within the culture history section are reviews of the known prehistory from the State Plan for this part of the Commonwealth (Applegate 2008; Jefferies 2008; Maggard and Stackelbeck 2008; and Pollack 2008) followed by a consideration of the major historic time periods and subperiods (McBride and McBride 2008). This general review of the culture history of the region is followed by a synopsis of the cultural resource management recommendations for sites already documented within the archaeological APE and within two km of it. These recommendations are in accordance with the Kentucky Heritage Council specifications (Sanders 2006).

The prehistoric cultural chronology of Kentucky is divided into a series of periods that generally correspond to major shifts in subsistence procurement strategies, social organization, technology, and settlement patterning. They are also linked to distinct material cultural styles, particularly in projectile point shapes and (in later times) ceramic vessel form and decoration. These periods form a convenient framework for the discussion of human societies in eastern North America.

Since the Late Pleistocene, humans have occupied all areas of the continental U.S., adapting to the regionally diverse ecosystems and the long-term changes brought about by human occupation. Only the past 500 years is historically documented in any fashion; most of the past 15,000 years can be documented only by the study of prehistoric sites. This period of prehistory is commonly divided into four major chronological periods, which are discussed below.

3.1 Prehistoric Period

This section examines general prehistory of the archaeological APE area. The prehistory of the archaeological APE area can be usefully divided into four major periods – Paleo-Indian, Archaic, Woodland, and Late Prehistoric. Each of these periods is discussed below.

3.1.1 Paleoindian Period

The Paleoindian period begins around 13,000 B.C. and continues to circa 8,000 B.C., coinciding with the end of the Pleistocene and the beginning of the Holocene. The earliest documented inhabitants of the continental U.S. crossed from Asia sometime before 13,000 B.C. and rapidly colonized all of North and South America. The arrival of humans in the region was probably linked to the movements of the Pleistocene glaciers. During the Paleoindian period, the last of these glacial advances and retreats, called Great Lakes Stadial (after 9,900 B.C.), occurred. Although the glaciers never actually extended south of the Ohio River, the climatic effects were felt. A cooler, moister climate affected the composition and distribution of floral and faunal communities (Delcourt and Delcourt 1982; Klippel and Parmalee 1982).

Clovis projectile points are the hallmarks of the early part of the Paleoindian period. The hafted bifaces are distinctively lanceolate-shaped and often fluted. In addition to the Clovis point, unifacially and bifacially chipped tools such as knives, scrapers, spokeshaves, end scrapers with spurs, drills, and gravers have also been recovered. Archaeologists infer that artifacts and tools of wood, bone, and shell were used, although rarely preserved in the archaeological record. A number of these tools were manufactured for the killing and butchering of extinct fauna, including megafauna. For instance, at the Adams Mastodon site in Harrison County, Kentucky, the remains of a single mastodon were found in association with large limestone slabs and cut marks on the bones. The configuration of the skeletal remains, in addition to the above evidence, has been interpreted as possible human butchering (Duffield and Boisvert 1983; Walters 1988).

The Paleoindian period is poorly understood in Kentucky and in the Southeast as a whole. Much of the information concerning Paleoindian subsistence, settlement patterns, and chronology comes from information outside of Kentucky because dated Paleoindian material in the Bluegrass is limited. Seventy-one Paleoindian sites have been recorded for the Bluegrass Management Area. Eleven sites have been recorded in the Northern Bluegrass Section and none in Trimble County (Maggard and Stackelbeck 2008).

For example, archaeological research in various parts of the U.S. has documented large numbers of surface finds of fluted points diagnostic of this period. Far fewer Paleoindian sites with subsurface cultural materials have been documented. In a recent survey of Paleoindian sites in the U.S., Anderson (1990) reports very few sites in the Southeast. Of these, slightly more than 50 sites are known to retain more than surface scatters of lithic materials. Although few sites have been thoroughly excavated and reported, some information on Paleoindian lifeways is available. Recent analysis of Paleoindian tool assemblages has established chronologically significant tool types to identify three temporal subdivisions of the Paleoindian time period (Anderson 1990; Sanders 1983, 1988; Tankersley and Isaac 1990).

Despite a refinement of the chronology, the temporal range and spatial distribution of these point types is poorly understood. Some inferences may be drawn, however, from the frequent isolated finds and paucity of large Paleoindian sites in the Southeast. Meltzer (1988, cited in Anderson 1990) has suggested two models of Paleoindian settlement patterns, one appropriate to the Northern Tundra-Spruce Parkland zone, and one to the Southern Boreal-Deciduous Forest zone. Meltzer's model of Southeastern Paleoindians, cited in Anderson (1990), suggests they were generalized foragers, exploiting the diverse plant and animal resources of the Boreal-Deciduous forests. As a result of this foraging strategy, the dense accumulation of animal bone and lithic materials that characterize sites in the Western plains (e.g., Olson-Chubbuck, Colby), and some of the Northeastern sites (e.g., Delbert, Vail, Bull Brook), is absent. According to Anderson, under Meltzer's model, southeastern Paleoindian occupations are characterized by light lithic scatters, with some functional diversity in the tool assemblage. Although Meltzer's model of Paleoindian period settlement is reasonable, several large Paleoindian sites or site clusters have been documented in the Southeast (e.g., Adams site, Big Bone Lick, Pine Tree, Quad, Thunderbird, Well Creek Crater), although none has yet been intensively excavated (Anderson 1990; Sanders 1983, 1988; Tankersley and Isaac 1990). Current excavation at the Thunderbird site in Virginia may provide more detailed information on Paleoindian lifeways in the Boreal-Deciduous Forest zone.

3.1.2 Archaic Period

The Archaic period includes a long span of time during which important cultural changes took place. Because of the growing evidence for the existence of transitional cultural manifestations, it is agreed generally that Archaic cultures evolved from late Paleoindian expressions of the Southeast and Midwest (Funk 1978:19). These manifestations probably occurred in response to environmental changes that took place at the close of the Pleistocene. The Archaic period is customarily divided into three sub-periods: Early (8,000-6,000 B.C.); Middle (6,000-4,000 B.C.); and Late (4,000-1,000 B.C.). As of 2008, 923 Archaic period sites had been identified in the Bluegrass Management Area (Jefferies 2008:214).

3.1.2.1 The Early Archaic Period

During the Early Archaic, the last glaciers retreated, and the arctic-like boreal forest began developing into the eastern deciduous forest. By the Middle Archaic, the environment was warmer and drier than it is today. In response to the changing environment, with its associated changes in plant and animal life, Late Archaic peoples developed a more diversified subsistence strategy based on local choices from a variety of subsistence options including hunting, plant food gathering, fishing, and in some areas, the beginnings of plant domestication in a planned seasonal round exploitation strategy. Caldwell (1958:6-18) has called this Archaic subsistence approach "primary forest efficiency." This strategy appears to have continued well into the Woodland period.

The limited amount of Early Archaic material found at most sites and the general absence of middens, features, and burials, suggests that most occupations were of short duration. Early Archaic social units were small, probably consisting of bands comprised of related individuals. The relatively high percentage of projectile points in Early Archaic assemblages made from non-local cherts suggests that social groups were highly mobile. Items manufactured from non-local chert would have been incorporated into tool kits when groups traveled near the source areas. Some tools manufactured from certain kinds of high quality chert were used and curated for an extended period of time and later discarded far from the source area (Binford 1979; Jefferies 1990:151).

Except for the adoption of new projectile point styles, Early Archaic tool kits are nearly identical to those of the Paleoindians. The fact that projectile point styles are found over a very large area suggests that little regional subsistence diversity occurred during the Early Archaic. Rather, subsistence strategies are believed to have been similar to those employed by Paleoindian peoples, although a greater variety of game was hunted. The scarcity of tools associated with the preparation of plant foods and fishing in the early part of the Archaic indicates that hunting was probably still the major subsistence activity (Dragoo 1976:II). Archaeological investigations at a number of deeply buried sites in the Southeast like the Longworth-Gick Site near Louisville, Kentucky (Collins 1979) have provided important information on Archaic lifeways and their changes through time.

3.1.2.2 The Middle Archaic Period

The environment during the Middle Archaic sub-period was dryer and warmer than modern conditions. By the beginning of the Middle Archaic period, environmental remnants of the Pleistocene had disappeared and animal and plant communities more closely resembled those present at the time of European-American contact. Pollen records from some parts of the region indicate that drier climatic conditions associated with the Hypsithermal interval reached their maximum around 6,500 B.P. (King and Allen 1977). The subsequent reduction of arboreal communities and the influx of grass and herb communities appear to have affected Middle Archaic settlement and population distributions (Conaty 1985; Janzen 1977; Jefferies 1983; Nance 1985).

Increasing regionalization of artifact inventories and the addition of new artifact classes and projectile point styles implies the development of extensive exploitation strategies. The Middle Archaic is marked by the introduction of groundstone artifacts manufactured through pecking, grinding, and polishing. A number of these groundstone tools, such as manos, mortars and pestles, and nutting stones, are interpreted as plant food processing artifacts, indicating an increasing utilization of plant food resources during the Middle Archaic.

New projectile point styles appeared during this sub-period. Stemmed and comer notched points appear. A variety of bone tools, including antler projectile points, fishhooks, and gouges, suggests an improved efficiency in exploiting local resources. Middle Archaic sites tend to contain larger accumulations of materials than those of earlier periods, suggesting an increased group size and/or longer periods of occupation (Cohen 1977:191). Chapman (1975) has suggested that projectile points were probably used in conjunction with the atlatl, a device that increases the distance and accuracy of a thrown spear. The recovery of bone and groundstone objects (banner-stones) in Middle Archaic contexts that are interpreted as atlatl weights tends to support his suggestion (cf. Neuman 1967:36-53). Certain classes of chipped stone tool artifacts, such as scrapers, unifaces, drills, and gouges, indicate a continuation of their importance from the Paleoindian period.

In the middle Ohio Valley there appears to be at least two Middle Archaic horizons, although the second is not particularly well documented. The first is the North Carolina sequence, first defined by Coe (1964). The second Middle Archaic manifestation is represented by corner- notched and side-notched Brewerton-like points, which are typically thought of as Late Archaic points, but they may well have first appeared during the Middle Archaic (Hemmings 1977, 1985; Wilkins 1978).

3.1.2.3 The Late Archaic Period

The Late Archaic was a time of continued cultural expansion and growing complexity. Dragoo (1976:12-15) has discussed several Late Archaic traditions for the Eastern Woodlands. Their distinctiveness stems from varied regional responses reflected in material culture. Straight-stemmed, basal-notched, or contracted-base projectile point types characterize the Late Archaic. Judging from the greater number of sites that have been recorded, an increase in population can be postulated. Evidence of longer and more intensive site occupation suggests, in some cases, extended habitation within an area.

Aside from hickory nuts, a variety of other nuts, fruits, and seeds were exploited. The increased dietary significance of certain starchy seeds, such as goosefoot, marshelder, and knotweed, has been noted in the Eastern Woodlands (Cowan 1985:229-230). These seasonally available food resources were exploited at appropriate times during the social group's annual settlement/subsistence cycle. Group organization and movement were structured to efficiently accomplish these tasks. The occasional presence of native and tropical cultigens at some sites suggests that some Late Archaic groups were experimenting with horticulture (Chomko and Crawford 1978; Cowan et al. 1981; Watson 1985).

A series of related Late Archaic sites that serve to define the Skidmore phase in eastern Kentucky have been investigated in Rowan and Powell counties, adjacent to the Bluegrass. These include the Bluestone site complex (15RO35-36) (Brooks et al. 1979), and the Skidmore (15PO17) and Zilpo sites (Rolingson and Rodeffer 1968). Diagnostic projectile points of the phase have been referred to in a variety of ways, but these are generally broad-bladed with stubby, contracting stems. Turnbow and Jobe (1981) suggest a maximum age range of 2,400 to 1,650 B.C. for the Skidmore phase.

The Grayson site covered about 6 hectares (15 acres) of a broad second terrace overlooking the Little Sandy River near Grayson, Kentucky. Machine stripping and block excavation revealed a relatively discrete Maple Creek base camp that was occupied during the fall and winter. The site was far less substantial than the Maple Creek site described by Vickery (1976) for the Ohio River near Cincinnati. Diagnostic artifacts recovered included small Merom-Trimble points and absolute dates spanning the period from 1,700 to 1,250 B.P. Two rectangular pit houses with rounded corners were excavated. These ranged from six meters x seven meters to 10 meters x 11 meters (20 feet x 23 feet to 33 feet x 36 feet) in size, and were constructed with unevenly spaced posts around an open area. A single large pit containing a small central hearth was found in each structure. The houses were surrounded by medium – to large – sized pits. Similar structures occur at Late Archaic sites (9WR4 and 9WRl1) in Warren County, Georgia (Ledbetter 1991).

Population increase and, in some parts of Kentucky, an inferred increase in mortuary ceremonialism, have led some to suggest that a more complex social organization was developing in some areas of the eastern United States. Along the Green River in west-central Kentucky, large shell mound sites such as Chiggerville (Webb and Haag 1939), Indian Knoll (Webb 1946), and Carlson Annis (Webb 1950) contain hundreds of human burials and evidence of complex mortuary practices and rich ceremonial life. The development of inter-regional trading networks is indicated by the recovery of copper, marine shell, and other non-local artifacts from Late Archaic burials (Winters 1968) which testify to the growing complexity of burial ritual and the interaction of many groups (Dragoo 1976:17).

The appearance of cultigens in Late Archaic contexts has been interpreted as evidence of early plant domestication and use of these plants as subsistence resources. Evidence of early cultigens has been documented at such sites as Koster in central Illinois (Brown 1977:168), at the Carlson Annis and Bowles sites along the Green River in west-central Kentucky (Marquardt and Watson 1976:17), and at Cloudsplitter shelter in Menifee County (Cowan et al. 1981).

Struever and Vickery (1973) have defined two plant complexes domesticated at the close of the Archaic, which continued in use into the Woodland period. One consisted of non-native plants such as gourd and squash, occurring sporadically but early, and corn, which did not become important in the Ohio Valley until circa A.D. 1000. The other was a group of native plants, such as Chenopodium, marsh elder, and sunflower. Recent research in Missouri, Kentucky, and Tennessee suggests that squash was under cultivation in the mid-south by the late third millennium B.C. (Adovasio and Johnson 1981:74), and that by the second half of the second millennium B.C., evidence from Illinois, Kentucky, and Tennessee demonstrates that squash, gourd, and sunflower were well established (Adovasio and Johnson 1981:74), although some view these plants as two different groups of cultigens: the East Mexican Agricultural complex and the Eastern United States Agricultural complex. The latter includes sunflower (Helianthus annuus), sumpweed (Iva annua), chenopod (Chenopodium sp.), may grass (Phalaris sp.), and knotweed (Polygonum sp.). The East Mexican Agricultural complex includes squash (Curcurbita pepo), bottle gourd (Lagenaria siceraria), and maize (Zea mays). Watson (1976), like Struever and Vickery (1973), suggests that corn, squash, and bottle gourd were domesticated in Mexico and imported into the eastern United States by way of the Gulf of Mexico and then up the Mississippi River and its tributaries. The native cultigens consist of local species whose seeds recovered from archaeological contexts are much larger than those which grow in a natural state; hence, cultivation is inferred.

Plant domestication was an important factor in Late Archaic cultural development. Recent research at Cloudsplitter shelter has documented early plant domestication. Desiccated squash rind was found in

a Late Archaic deposit associated with a radiocarbon date of 3728 +/- 80 B.P. (1778+/- 80 B.C.)(UCA 2313- K) (Cowan et al. 1981:71). Seeds of the Eastern Agricultural complex (sunflower, sumpweed, may grass, and erect knotweed) are sparse in the Late Archaic levels in the site, but after 3000 B.P. (1050 B.C.), all members of the Eastern Agricultural complex underwent a sudden and dramatic increase in the rate at which they were being deposited in the site, perhaps indicative of a wholesale introduction of the complex into the region at this time. The Late Archaic and Early Woodland inhabitants of Cloudsplitter seem to have followed a similar trajectory in cultivated plant usage experienced in several other river drainages in the East (Cowan et al. 1981:71).

The data from Cloudsplitter suggest that squash may not have diffused into the East or Southwest from Mexico as previously postulated by Struever and Vickery (1973), but that it may have evolved in situ from North American stock (Cowan et al. 1981:71). This interpretation seems to be substantiated by more recent investigations conducted throughout the southeastern and Midwestern United States.

There are a number of projectile point styles, considered to be terminal Late Archaic, that extend into the Early Woodland period, i.e., from about 2000-1500 B.C. to about 500 B.C. (see below). On the whole, they have been found in contexts without Woodland pottery, a situation that leads archaeologists to place them in the Late Archaic rather than Early Woodland. This may not be the case.

3.1.3 Woodland Period

Although initially there was very little difference between Late Archaic and Woodland period settlement, over the two millennia of the period, Woodland cultures in the Ohio Valley diverged sharply from their Archaic beginning. The Kentucky Bluegrass and the adjacent Knobs region shared in this development that produced burial mounds and earthwork enclosures, some of the more notable prehistoric monuments in the Ohio Valley of Kentucky. These went along with intensification in the earlier efforts at plant domestication present in the Archaic period, the development of fired clay ceramic containers (first used as ceremonial containers, later used more widely), and the intensification of trade with distant regions of the Midwest in materials used specifically as burial offerings.

The Woodland period is customarily divided into Early (1000 B.C. – 300 B.C.), Middle (300 B.C. – A.D. 400), and Late (A.D. 400 – A.D. 1000) sub-periods. Of these, the Early Woodland is the least known, but reflects its Archaic origins. During the Middle Woodland, the Bluegrass was characterized by large burial mounds and earthwork complexes that are termed “Adena” and have counterparts north of the Ohio River.

Towards the end of this sub-period, a few sites reflect the Hopewellian cultural fluorescence, best known again from Ohio in the major earthworks of the Scioto valley. During the Late Woodland, a distinctive cultural adaptation developed with similar variants throughout the Middle Ohio River valley. As of 2008, 659 Woodland period sites had been recorded for the Bluegrass Management Area (Applegate 2008:453).

3.1.3.1 Early Woodland

Some of the earliest known Early Woodland sites in the Bluegrass and in the adjoining Ohio Valley to the north include Peter Village in Fayette County (Clay 1984, 1985, 1987) and the West Runway site in Boone County (Duerksen et al. 1995). Quite different sites, Peter Village was an enclosure first surrounded by a post stockade, later by a ditch and internal bank, while the West Runway site was a

campsite with multiple hearths, suggesting a series of short-term occupations. Radiocarbon dates place the occupation of West Runway possibly as early as 600 B.C. and Peter Village at about 350-400 B.C. While West Runway, in the types of features and their clustering in this upland location, is not that different from a Late Archaic site, the Peter Village enclosure marks a sharp break with Archaic settlement systems.

At both sites, that hallmark of the Woodland period occurs: thick and relatively crude ceramics representing quite large containers. First called Fayette Thick pottery from its occurrence at the Peter Village site (Griffin 1943), the pottery occurs widely, though sparsely, across the Bluegrass (cf. Clay 1980) with some variation suggesting different pottery – making groups. The type even occurs in small and early burial mounds, for example the Hartman mound in Boone County (Webb 1943) where it may date around 400 B.C. At the Peter Village enclosure, it is hypothesized by Clay (1987) that groups gathered to mine a source of barite and galena that was then fashioned into pigments and objects for personal use and for trading with other groups. The large ceramic vessels represented at the site may have been "feast containers" made to serve large work crews on the spot. The occurrence of thick pottery at the Hartman burial mound suggests also that the pots may have been made to serve funeral parties during the course of burial ceremonies, the first indication of customs that would become common in the Middle Woodland.

Outside of the few sites that have been excavated, artifacts belonging to the Early Woodland occur widely in the Bluegrass. Chipped chert bifaces are large and of a type known as Adena Stemmed. Polished, ungrooved stone axes were widely used. Finally, the existence of worked weights made from barite/galena suggests atlatl or throwing stick weights.

3.1.3.2 Middle Woodland

The Middle Woodland in the Bluegrass is marked notably by the construction of burial mounds that have been called Adena after a site in southern Ohio (Webb and Snow 1945; Webb and Baby 1957). Major mound excavations in the region of Fischer, Drake, Mt. Horeb, Morgan Stone, Wright, Ricketts, Camargo, and many others, have given archaeologists a detailed picture of burial customs during this time period (Clay 1986). Excavations at the small Auvergne mound in Bourbon County (Clay 1983) suggest that Native Americans from a larger area came together at the time of a death to feast at graveside.

Some of the large mounds, containing multiple burials, suggest that these groups often returned to the same mound to add more burials to the structure. At times the burial mound could, like the Wright mound in Montgomery County (Webb 1940), grow to imposing size.

Although we have considerable excavated evidence for burial customs, the total settlement system is not well understood (Clay 1998:13-19). Those responsible for the burial mounds may have lived widely dispersed throughout the Bluegrass in relatively small groups. Seen in this light, the elaborate burial sites (mounds) offered essential foci for scattered groups where they could meet and interact. There were also small, circular enclosures called ceremonial circles of which the Mount Horeb site in Fayette County (Webb 1941) is an excavated example. Late in the Middle Woodland, hilltop enclosures were constructed, such as Indian Fort Hill near Berea, Madison County, Kentucky. Still, daily domestic sites are very poorly understood, although examples dating to the time period have been found to the south on the Cumberland Plateau (Kerr and Creasman 1995). While hunting was always important, during the Middle Woodland, finds from rockshelters in the Knobs region adjoining the Bluegrass suggest the manipulation of native plants. Despite this, the additional food supply did not make significant changes in the way people lived.

3.1.3.3 Late Woodland

Defining the temporal parameters of the Late Woodland has not been an easy task, since clear boundaries have not been identified in the archaeological record, and diagnostic ceramic and lithic attributes, although widespread, show little temporal variability within this period. As a result, the transition from Middle to Late Woodland traditions was a gradual process and not an abrupt one, since no dramatic shifts in cultural practice or in styles of tools or ceramics occurs (Pollack and Henderson 2000). Changes that occurred between the Middle and Late Woodland are probably linked to changes in plant subsistence strategies, hunting technologies, long-distance trade networks, and the degree of ritual expression (Pollack and Henderson 2000:615).

While Pollack and Henderson's study demonstrates continuity in material culture, analysis of some site data suggests that population increase or at least localized aggregation occurred, which over time may have led to a smaller number of larger settlements, or increased inter-community violence. In other words, population cycles may have impacted lifeways and contributed to some changes in subsistence, settlement organization, and the duration of a particular settlement. A recent survey of available radiocarbon-dated sites in Kentucky and adjacent parts of West Virginia reveals some trends during the Middle and Late Woodland that support (in part) a population increase, and possibly some subsequent population declines.

The above discussion has highlighted the fact that a large number of sites are assigned to the Late Woodland period, and that many have been dated. These dated sites suggest that the Late Woodland period, as Pollack and Henderson (2000) among others have suggested, can be subdivided into at least two sub-periods. This apparent division may reflect some cyclicity in population expansion, changes in subsistence, settlement re-organization, or the introduction or incorporation of new technologies such as corn agricultural and the bow and arrow into pre-existing cultural complexes. While these data provide a substantive framework that identifies some temporal parameters, recent syntheses, along with earlier studies of the Late Woodland period, suggest that within the region of southern Ohio, northern and central Kentucky, and extreme southern Indiana, a single cultural complex or phase was present: the Newtown tradition. In the following paragraphs, the culture history of this region between about A.D. 400 and A.D. 800 is examined to build a case for the interpretation of the cultural complex at Dreaming Creek as an early Late Woodland Newtown component. Griffin (1956:187), working on artifacts from the Turpin site in Ohio, recognized a previously undocumented cultural complex which he named "Newtown," and which he considered to post-date the Middle Woodland Hopewell tradition and to pre-date the Fort Ancient tradition in the Middle Ohio Valley. Although he could not discern the length of the period during which this Late Woodland culture flourished, he did suggest that little cultural progress was made during this period (Griffin 1952). Owing to the paucity of Late Woodland archaeological data, Griffin was unable to characterize the Newtown culture or ascertain if distinctive regional variations existed (1952, 1956).

More archaeological data has been gathered since Griffin's groundbreaking research, but considerable debate on the temporal and geographic extent of Newtown and other Late Woodland cultures still exists (e.g., Clay and Creasman 1999; Davis et al. 1997). Site assemblages throughout the region are linked by the occurrence of the ceramic complex known as Newtown Cordmarked, a type described by McMichael (1968) in the 1960s and characterized by large jars with thickened, angular shoulders. More recent research (e.g., Pollack and Henderson 2000; Seeman and Dancey 2000) indicates that while a thickened, angular shoulder may be a characteristic of some Newtown vessels, some site assemblages are considered Newtown even though they lack ceramic vessels with this particular characteristic.

Recent archaeological investigations at several sites in the region have revealed additional traits about Newtown phase assemblages (e.g., Ahler 1988; Dancey 1988, 1991, 1992; Henderson and Pollack 1985; Kreinbrink 1992; Railey 1984, 1990). Typically, Newtown lithic assemblages are characterized by Steuben, Lowe, or Chesser notched variety projectile points (see Justice 1987), thick stone bifaces, and small, triangular, shaped celts. The ceramic assemblage includes ceramic jars with incurvate to direct rims, flattened lips, and vertical cordmarking on their outer surfaces. Personal adornment, highly developed in the preceding Middle Woodland period, was apparently limited in the Late Woodland, as Newtown assemblages are distinguished by a lack of decorative and personal ornaments. Seeman and Dancey report "...Late Woodland societies created virtually nothing that can be considered artistic..." (2000:598). The few documented artifacts showing artistic style include some stone and bone gorgets, bone pins, small mica sheets, limestone elbow pipes, and stone and shell beads.

Pollack and Henderson's recent review of the Late Woodland period in Kentucky offers current data on what the term "the Newtown phase/complex/tradition" (2000:625) means in Kentucky, while Seeman and Dancey's review of southern Ohio Late Woodland traditions incorporates discussion of some northern Kentucky sites (2000:595). Pollack and Henderson focus their study on either side of the Falls of the Ohio, which serves to demarcate two regions of Kentucky that appear to differ culturally, and which may have maintained distinct cultural traditions for a long period of time. Seeman and Dancey use the Ohio River and its tributaries as an organizing principal. In this review, Pollack and Henderson's geographic model is used, although mention is also made of Seeman and Dancey's findings where appropriate.

One of Pollack and Henderson's sub-regions is downstream of the Falls of the Ohio, and occupies the western portion of the state; the second sub-region, and the one which is more the focus of this review, is upstream of the Falls and is in the eastern portion of the state. This eastern region encompasses the Middle Ohio River valley, the Central and Inner Bluegrass region, and the Knobs and mountains of Eastern Kentucky. Major rivers in the region include the Ohio, as well as its Kentucky tributaries (Kentucky, Licking, and Big Sandy), all of which are deeply entrenched with narrow flood plains. Within this region, only one cultural complex is well documented for the early Late Woodland subperiod: the "Newtown phase/complex/tradition" (Pollack and Henderson 2000:625). Components associated with this phase are noted at several important Kentucky sites such as the Dreaming Creek site in Madison County, Hansen and Bentley sites in Greenup County, and the Pyles site in Mason County, as well as numerous smaller sites in the Bluegrass (e.g., Shelby Lake, Froman, and sites in the Cumberland Plateau such as Rock Bridge and Haystack rock shelters). Other Late Woodland cultural traditions (e.g., Beal's Run) in this region are only now being examined, since this period has typically been understudied (e.g., Pollack and Henderson 2000), so additional variation may be present that is only recently being documented.

3.1.4 Late Prehistoric Period

The Late Prehistoric archaeological complex of the middle Ohio Valley is Fort Ancient, which spans the time period from approximately A.D. 1000 to about A.D. 1700. Geographically, Fort Ancient extends from western West Virginia to southeastern Indiana and from south-central Ohio to north-central and northeastern Kentucky (Griffin 1978:551). In the Bluegrass, Fort Ancient is divided into the early Osborne Phase (circa A.D. 950 – A.D. 1200), Middle Fort Ancient (A.D. 1200 – A.D. 1400) and Madisonville Horizon (A.D. 1400 – A.D. 1700). The Osborne Phase is known in the Bluegrass from the Muir and Dry Run sites (Sharp 1984) in Jessamine and Scott counties. Middle Fort Ancient sites include Buckner, Gilfoil, and Florence (Fassler 1987).

The development of Fort Ancient and its relationship to Late Woodland cultures has been a debated issue. Two hypotheses have been offered in explanation for the relationship between Fort Ancient and Late Woodland cultures. One hypothesis suggests that Fort Ancient represents the fluorescence of an indigenous Late Woodland culture (Graybill 1980:55-56; Rafferty 1974). Others (e.g., Essenpreis 1978:154-155) suggest that Fort Ancient represents an influx of Mississippian peoples from the lower Ohio River Valley. Although the question has yet to be resolved, it is entirely possible that each of these hypotheses may be correct, depending upon the data set and region employed to address the problem. Essenpreis (1978), for example, has suggested that these two hypotheses are appropriate for explaining Fort Ancient manifestations at different times during the Late Prehistoric. In this scenario, Fort Ancient is viewed as a fluorescence of Mississippian-influenced Late Woodland culture during the early phases (Baum, Anderson, and Feurt) and as an influx of Mississippian peoples during the later Madisonville phase (Essenpreis 1978:164).

Fort Ancient reflects an elaboration of Late Woodland subsistence activities and social organization. Settlements were much more nucleated, as evidenced by large village sites (Mayer-Oakes 1955). Village sites tend to be situated in valley bottoms along the main stems of the region's larger drainage (Graybill 1978, 1979). On the other hand, smaller sites tend to be located throughout tributary drainage and are thought to represent seasonal camps and resource procurement activity stations. A number of sites along the Ohio River, or close to it, were fortified; and many have central courtyards or plaza areas (Griffin 1978:552).

Fort Ancient subsistence is characterized for the first time by a reliance on the cultivation of maize, coupled with beans and squash. Despite the increased importance of horticulture, hunting provided an important source of food. Deer was the main meat source; at some sites it made up to 80 percent of the game consumed (Griffin 1978:552). The cultural material assemblage included elaborate ceramic styles (usually tempered with crushed mussel shell, although limestone and grit-tempered ceramics also occurred), triangular arrow points, mussel shell tools (e.g., knives, scrapers, and hoes), and bone tools (e.g., bone reamers), which also serve to distinguish Fort Ancient cultures from Late Woodland occupations.

Although Fort Ancient subsistence, like that of Mississippian populations, was based on the cultivation of corn and other cultigens, other aspects of Fort Ancient clearly distinguish it from the contemporary Mississippian occupations: Fort Ancient sites lack large ceremonial centers and earthworks, although Early and Middle Fort Ancient sites (through circa A.D. 1250) exhibited burial mounds. For example the Rowena Site, flooded by Lake Cumberland, was described as a small Mississippian regional center, possibly occupied from A.D. 1300-1400 (Weinland 1980: 133). The artifact assemblage indicated the site was influenced strongly by eastern Tennessee cultures throughout most of its history, especially the Dallas cultures (Weinland 1980:131). Other Mississippian sites along the Cumberland, like Crowley-Evans (Jefferies 1995; Jefferies and Flood 1996), were built around low platform mounds on which the house of a local chief was constructed. However, the complex settlement hierarchy found in the Mississippian, some sites having mounds, others with none, does not occur in Fort Ancient. Villages and hunting camps have been the only Fort Ancient site types defined thus far.

There were 523 Fort Ancient site in the Bluegrass Management Area. Ninety-one percent of the sites are open habitations without mounds. Ninety-two Fort Ancient sites were recorded in the Northern Bluegrass Area (Henderson 2008:808).

3.2 Historic Period

3.2.1 Exploration and Early Settlement (ca. 17th Century-1820)

It is not exactly known when the first Europeans entered Kentucky, but early explorers like Marquette and Jolliet certainly witnessed the western portion of Kentucky as they traveled the Mississippi and it's possible that La Salle may have visited the Ohio Valley. British exploration of the New and Holston rivers and stories from Native Americans led them across the mountains (Alvord 1920). What is known is that the Native American tribe that was first contacted by Europeans in Kentucky was probably the Shawnee. It has been traditionally and historically maintained that the earliest routes into Kentucky followed buffalo and game trails frequented by Native Americans (Boisvert 1984:46-49, Brown 1929:4). It was quickly discovered by European Americans that these early trails were easy to follow and that they invariably led to salt and water.

The region in which the study area lays, the Outer Bluegrass, is a large and diverse cultural landscape, encompassing varying soil types, minerals, navigable rivers, and overall terrain. The land was suitable for homesteaders and farmers eager to start a new life in the trans-Appalachian West. The Native Americans of Kentucky and Tennessee were important to Europeans mainly because of Europe's insatiable desire for animal skins and furs. White traders became a common sight along Kentucky and Tennessee's Indian trails after 1673 (Bergeron 1999). French traders operated from posts along the Mississippi and may have ventured into the Ohio Valley, although no posts or forts are documented during this early period. The Ohio Valley during the time of the French in the Mississippi Valley was mostly abandoned of large Native American settlements. The first English traders were from the Virginia colonies, but overall, Kentucky and Tennessee were explored by traders, surveyors, and explorers from both Virginia and North Carolina (Bergeron 1999). By the late 1720s, groups like the Shawnee and Delaware returned to the valley and traded fur with the British and Iroquois. By the mid-eighteenth century, British traders were located at Lower Shawneetown and Pennsylvanian traders and trading houses were present in the larger Indian villages. Traders George Croghan and William Trent established one trading house on the Kentucky side of the Ohio River (McBride and McBride 2008:906-907).

The exploration of Kentucky began in 1750 when Dr. Thomas Walker explored some of eastern Kentucky. His party reached the confluence of the Red and Kentucky rivers. He was followed in rapid succession by a number of other Englishmen: Christopher Gist in 1751 and John Finley in 1752. Walker was a surveyor and employed by the Loyal Company to locate tracts of land for settlement in eastern Kentucky, as well as southwestern Virginia. Working for the Ohio Company, Gist journeyed down the Ohio River as far as the Kentucky River where he was warned about proceeding further on to the Falls of the Ohio because of the threat of the Indians who grew increasingly allied with the French (Rice 1975:9-11).

With the conflict between France and Britain leading to the French and Indian War, the Shawnee and most other Indians in the valley sided with the French. The Pennsylvania traders were forced to abandon the valley as the French entered into the Forks of the Ohio area and in 1757 established a fort (Fort Ascension, later Massac) in Illinois on the north side of the river. Although there was little conflict in Kentucky during this war, the French controlled all trade in the Ohio Valley at this time. However, this was short lived when the fall of a strategic fort (Fort Duquesne), located in western Pennsylvania, greatly lessened French dominance in the upper valley. Before the Treaty of Paris in 1863, most of the French abandoned the upper and much of the central valley (McBride and McBride 2008:908-909).

With the French gone, exploration of Kentucky by the British began in earnest. Land speculators and settlers wasted no time in moving into the area, but were temporarily halted by the Proclamation of 1763 and Pontiac's Uprising of 1763-1765. This did not stop the "Long Hunters", however, who had already entered into Kentucky during the mid-eighteenth century. These hunters came from the eastern United States via the Cumberland Gap and traveled in hunting groups of three to four, collecting elk and buffalo hides (Rice 1975:21-22). In 1769, the most famous Long Hunter, Daniel Boone, first entered Kentucky (Rice 1975:24).

With pressure on British and Colonial officials to shift the Proclamation line further west, a new treaty (Treaty of Lochaber in 1770) and acceptance of an error which shifted the Donelson Line further west in 1771, the new western boundary limiting settlement became the Kentucky River. Surveyor John Donelson had originally thought he had marked the new line on the Big Sandy, but the error was obscured by the inaccurate maps of the day. When the error was eventually revealed, it was too late because of the overwhelming pressure of the speculators and settlers (Rice 1975:34). In 1772, all of Kentucky and the parts of Virginia south of the New and Kanawha rivers became part of a new county, Fincastle. The formation of Fincastle County foreshadowed the inevitable advance into Kentucky (Rice 1975:47).

Both the overland and water routes were considered dangerous during the eighteenth century due to intermittent Indian attacks. Daniel Boone, negotiating with the Cherokee, built the Wilderness Road, which became the primary overland route through Kentucky from 1775 to 1818 (Ison et al. 1991:11). Settlers from North Carolina and southwestern Virginia generally chose this route. Those entering Kentucky via the Ohio River were from Pennsylvania, Maryland, and western Virginia. Travelers' accounts of seeing Kentucky for the first time spoke of great canebreaks with stalks often twelve feet high on the Kentucky side of the river. Further west was vast grassland, mostly cleared by the Indians, and referred to as the "Barrens." It was more expensive to travel by river and few people could afford the price; however, river travel was faster (Rice 1975:19; McBride and McBride 2008:911). Most of these early settlers were heading for the Bluegrass of Kentucky.

The first permanent settlements in Kentucky were in central Kentucky and included Harrodstown (now Harrodsburg, county seat of Mercer County) and Boonesborough. Boone established Boonesborough in what is now Madison County, and most of its settlers came through the Cumberland Gap. Harrodstown was settled by people who came down the Ohio River, however. It predates Boonesborough by one month, having been established by James Harrod on June 16, 1774 (McBride and McBride 2008:911). The earliest settler in Nicholas County was David Tanner settled at Blue Licks in 1784, two years after the Battle of Blue Licks (Kleber 1992).

By 1780, there were three clusters of settlements in Kentucky. These included one at the Falls of the Ohio and Beargrass Creek where George Rogers Clark established Fort Nelson, one northeast of the Kentucky River including Lexington and Bryan's Station, and a third located south of the Kentucky River which included the areas of Harrodstown, Danville, and Logan's Fort. This rapid growth of population combined with threat of Indian attacks led the settlers to demand more county division. Virginia granted their request and Kentucky was divided into three counties: Fayette, Jefferson, and Lincoln. All of these settlements were located around forts and stations which varied from a single fortified cabin or blockhouse to what was almost a fortified town with numerous cabins surrounded by stockade (i.e. Bryan, Ruddles, or Strode stations) (McBride and McBride 2008:911).

Unfortunately for the first settlers, the Revolutionary War was beginning and most of the Ohio Valley Indians were allied with the British. The Shawnee in particular were given incentive to attack any new

American settlement. The result for many of these new settlements was their abandonment temporarily and settlement only progressed slowly throughout the war until its end in 1783. After 1783, however, this changed and the rush for new lands, particularly of central Kentucky, once again commenced (McBride and McBride 2008:911-12). Most of these settlers came from the piedmont and valley of Virginia, but some also from Maryland and North Carolina. They were not restricted to the lower or middle classes, as some gentry were settlers too. These gentry brought with them their slaves, establishing large plantations in the Bluegrass with slave labor and ideas of social hierarchies practiced back in Virginia where they were considered the social elite.

In 1792 Kentucky finally became a state. Statehood brought state-funded transportation improvements. Besides road developments, improvements and regulation in river transportation included the first passenger boats in 1799 and ferry crossings on rivers or larger creeks.

Nicholas County was formed in 1799 from Mason and Bourbon counties. The soils in the county are good for raising tobacco, corn, and hay. It is also good for raising livestock. Hemp, tobacco, grains, and livestock were the main produce on both the small and large farms (Clark 1992:6-10; Cotterill 1917; Earl and Hoffman 1976).

At the turn of the nineteenth century there was a religious fervor that swept through the western frontier. In 1801, there was a highly emotional revival at the Cane Ridge Meeting House in Bourbon County. As many as seven ministers preached simultaneously before a crowd of 20,000. The revival led to the founding of the Christian Church and the Christian Church (Disciples of Christ) denominations. Several scholars also spoke on social and theological issues including slavery and many participants returned home and emancipated their slaves (Everman 1992:160).

Although the Cane Ridge was a Presbyterian Church, the churches that gained from revivalism were the Baptists, Methodists, and the new evangelical churches such as the Christian Church. The Deists, Unitarians, Episcopalians and Presbyterians had little appreciation for the activities at Cane Ridge. The evangelical excitement and ways defied the cultural hegemony of Kentucky and eventually the rest of the United States. The evangelical spirit of selflessness contrasted to the gentry's spirit of gain (Aron 1996; Friend 2005).

In Nicholas County, the revival movement arrived around 1803. William Mathers was a recognized leader of the movement and held services on his farm, which is located on KY 36 near Carlisle. His brick house was built circa 1812 and is listed on the National Register of Historic Places (Neary 1989; Conley 1976).

3.2.2 Antebellum (1820-1861)

From the 1780s and into the early nineteenth century, an agricultural surplus of tobacco, corn, and whiskey in Kentucky served as important commercial commodities. Shipment of these products was tied to the rivers of Kentucky.

Connecting to these waterways, several networks of state turnpikes and county roads linked the communities of central and northern Kentucky with the international market in New Orleans (Dunaway 1996). The Ohio River was the main corridor of trade in the early settlement period, linking settlements on both sides of the river, and carrying livestock droves and trade goods to distant markets. It was in the 1830's that the Limestone-Lexington Turnpike became macadamized, to support the volume of traffic on that important route. It was the decision of Carlisle, Nicholas County's seat, to have the road bypass the town as a measure of support for the local wagon-business owners.

Consequently the immediate commercial increase that accompanied the road improvements also bypassed the town to some extent (Conley 1992a:163; Raitz and O'Malley 2012).

The first two decades of the nineteenth century in Kentucky underwent significant changes in settlements, agriculture, social and economic structure, and political organization. Growth and speculation occurred and an economic boom in the 1810s led to an increase in commercialization of farming and growth in slave plantations. An increase in industrialization led to river improvements and the arrival of the steamboat in 1815 opened the Ohio River on a new level and led to a dramatic increase in the already thriving river trade (McBride and McBride 2008:918).

By the mid-1820s, Kentucky and most of the country was recovering from the depression. River steamboat traffic was increasing on the Ohio River and cultural and economic ties between Kentucky and the rest of the country were greatly improved. According to McBride and McBride (2008:922), this time was "truly the age of the river town, or city, in Kentucky."

During the Antebellum period the industries associated with small towns were agriculturally based and included flour and grist mills, tobacco factories, hemp factories, leather shops, woolen mills and distilleries (McBride and McBride 2008:927). Blue Licks Springs, in Nicholas County, became a spa in the mid-1800s. The Arlington Hotel at the springs had 300 rooms and catered to the wealthy who came for the mineral springs (Kleber 1992:93).

3.2.3 Civil War (1861-1865)

Kentucky's status as a border state not fully joining the Confederacy but yet still allowing slavery brought division within the population. The Union Army headquarters for Kentucky were at Louisville and Camp Nelson in Jessamine County which was a large quartermaster depot and African–American recruitment center that operated from 1863 to 1865. The fort employed over 2,000 civilian employees, and housed between 900 and 5,000 troops at any time (McBride et al. 2003).

The Battle of Perryville, the largest Civil War battle to occur in Kentucky, was fought near Perryville in Boyle County. On October 8, 1862, the battle ensued, involving 16,000 Confederate troops and 58,000 Union troops. The Confederate force was defeated and they retreated to Tennessee, and the three-month long Confederate effort to secure Kentucky was halted. (Kleber 1992).

The economic effects of the Civil War were probably more significant to people in Kentucky than the physical devastation. Many farmers and merchants were hurt by the curtailment of trade with the south (McBride and McBride 1990:609). The hemp industry, which was already declining in the 1850's, lost its most significant domestic market, the southern cotton producers (Hopkins 1998:68). There were also transportation system disruptions due to war damage or to Union control.

The three largest factors in the deterioration of Kentucky's agriculture and industry during this time were the loss of the labor force, the loss of the market at New Orleans, and the major drought across the region that lasted from 1860 to 1863. About 100,000 Kentucky men entered the Union Army and up to 40,000 entered the Confederate Army (McBride and McBride 1990:610). Almost one third of those enlisted died. With the help of individuals like Delia Webster, slaves escaped across the Ohio River in the early years of the war. In 1864 the U.S. Government granted freedom to any slave that enlisted in the U.S. Army. The male slaves also brought their families to the encampments (McBride et al. 2003).

3.2.4 Postbellum Industrialization (1865-1914)

There were changes in social and economic systems that greatly affected Kentucky during the Postbellum period (McBride and McBride 1990:615). During this period the state began to deal with the emancipation of African-Americans and their role in the society. The agricultural system began to change with the introduction of white burley tobacco (McBride and McBride 1990:615). There were significant developments in communication and transportation, growth in industry and commerce and increased urbanization (McBride and McBride 1990:615).

After the war, agriculture and manufacturing recovered and expanded. Former slaves took agricultural or industrial jobs for pay. Many hamlets grew up around farms and also in urban areas that were populated by the recently freed African-Americans. Markets in the south opened up again. The hemp industry revived after the war and again became a major crop and industry (Hopkins 1998). However, the production of tobacco gradually increased and would eventually overtake hemp as the most important cash crop in Kentucky.

Despite all these hardships, by 1870, Kentucky was first in hemp production, third in the production of mules, fifth in the production of swine, and eight in the production of corn, wheat, and flax (Axton 1975; Tapp and Klotter 1977). Tobacco production increased more than 70% from 1870 to 1900 in Kentucky (Tapp and Klotter 1977). Kentucky benefited from the fact that less damage occurred within the state in comparison to other states during the Civil War.

It was in 1871 that the Kentucky Central Railroad (later the Louisville and Nashville and currently TTI Railroad) connected into Carlisle, supporting the tobacco and industrial markets and demands. The 1893 railroad depot still stands, and has been restored as a museum. (Conley 1992b:163).

Mass production and a growing desire for consumer goods stimulated retail trade and the growth of most cities and towns throughout Kentucky during this period. The availability of mass-produced goods led to a general decline in local manufacturing and the consolidation of small manufacturing operations. The decline in local industries also may have resulted in the rural to urban migration (McBride and McBride 2008:948).

3.2.5 Twentieth Century

The beginning of this period was very similar to the previous period. Kentucky was still a leader among the southern states in agricultural products and a continued production pattern in industrialization and manufacturing also occurred.

The Great Depression and World War II were two of the most important events of the Twentieth Century. For many, the onslaught of the Depression was not apparent until the stock market crashed in October 1929. For farmers, however, hard times began much earlier. Agricultural prices had been depressed for nearly a decade before the crash and remained so until World War II.

The Great Depression affected every facet of American life, sapping energy from the economy and draining the citizenry's ability to build. Although no unemployment figures were kept, it is generally thought that the jobless rate hovered around 12 percent in Kentucky.

New Deal programs put together by the Roosevelt administration in the 1930s changed the face of Kentucky. Born of economic desperation of the Great Depression, the New Deal implemented work programs that provided paying jobs for the unemployed. The Civilian Conservation Corps (CCC), Works Progress Administration (WPA), Public Works Administration (PWA), Civil Works

Administration (CWA), and Resettlement Administration put to work many of the Kentucky unemployed.

Mechanization of agriculture and the general decline in farming as a way of life, continued urbanization, major improvements in roads, and a decline in river traffic all occurred at this time. There were also increases in stores and access to consumer goods (McBride and McBride 2008:967). Kentucky's population increased during the period, but at a slower rate than the rest of the Southeast (McBride and McBride 2008:967). The population in Nicholas County has increased from 4,898 in 1810 to 7,135 in 2010 (Table 3-1).

Table 3-1. Population changes for Nicholas County, Kentucky.

Census Year	Total Population
1810	4,898
1830	8,834
1860	11,030
1880	11,869
1900	11,952
1920	9,894
1950	7,532
1980	7,157
2010	7,135

Carlisle is the county seat of Nicholas County and has been since 1816. During the modernization of the Lexington to Maysville Road, the city of Carlisle voted to be bypassed, in an economic gamble expected to support local wagoneers. In 1871 the Kentucky Central Railroad entered Carlisle, and the city became a regional tobacco marketing center until the burley decline of 1921. The city is one of the smallest county seats in central Kentucky with a population of 1,639 in 1990. The *Carlisle Mercury,* the weekly newspaper, was founded in 1867. The city's largest employer is Jockey International which manufactures underwear (Conley 1992b:163).

3.3 Historic Map Research

USGS maps available were the 1953 and 1953 (photorevised 1978) 7.5 minute topographic maps for the Carlisle, KY quadrangle. Also available were a 1937 and 1954 *Highway and Transportation Map of Mercer County, Kentucky* (Kentucky Department of Highways 1937, 1954).

3.4 Previous Archaeological Research

The survey report files at the Office of State Archaeology (OSA) were consulted on March 6th, 2014. There were five prior archaeological surveys recorded within a 2 km radius of the archaeological APE (Figure 3-1).

A two-acre (0.8 ha) lot opposite Brushy Fork Creek from an existing sewage plant in Carlisle, Kentucky, was subjected to a Phase I archaeological survey on September 4, 1987. The work was accomplished by Nancy O'Malley with the University of Kentucky's Program for Cultural Resource

Figure 3-1. Locations of Previous Archaeological Investigations.

Assessment (UK's PCRA). Visual inspection and shovel probing produced evidence that the area had been severely eroded by natural cause (a portion of the project area was on a ridge slope) and by agricultural activities (tobacco cultivation). The adjacent creek had also been subjected to re-channeling, which also caused some disturbance. There were no cultural remains or artifacts identified within the project bounds, and no further work was recommended (O'Malley 1987).

A Phase I archaeological assessment was conducted by UK's PCRA on February 6, 1990, of 3.5 acres (1.4 ha) on a knoll (910 to 920 ft. AMSL) atop a northwest to southeast trending ridge in Carlisle, Kentucky, that had previously been used for agricultural purposes. The work was requested ahead of a housing construction project. Pedestrian survey and shovel probing were the survey methods utilized. A site was identified, 15Ni19, and is described below. The entire project area was heavily disturbed, having been used as a topsoil borrow, a dumpsite for rocks/dirt/tree limbs, and was also disturbed by the construction of Rayne Street and sideslope erosion. An existing subdivision, Brushy Fork Creek, and fence lines served as the project boundaries. The site was not recommended for nomination to the NRHP, nor was any further work recommended, due to the lack of intact contexts (Henderson 1990).

On November 17, 1998, Dr. Jack Schock of Arrow Enterprises conducted a Phase I survey of ten acres (four hectares) in a planned industrial park in Carlisle, Kentucky. A total of 95 shovel probes were excavated on the ridge tops, between 780 and 900 ft. AMSL. There were no cultural resources identified within the project area, and no further work was recommended (Schock 1998).

A Phase I survey was conducted in 2004 ahead of construction of a cellular transmission tower in Carlisle, Kentucky. The project area measured 0.92 acre (0.37 ha) and was located on a ridge slope at an elevation of 940 ft. AMSL. Using shovel probing along with visual inspection, the Environment & Archaeology, LLC, archaeologists did not locate any cultural resources within the project area and no further work was recommended (Breetzke 2004).

Cultural Resource Analysts, Inc., conducted a Phase I survey of two preferred alternate routes for the proposed US 68 re-alignment in Bourbon and Nicholas Counties. The work took place from March 7 to April 15 in 2003. The alternate routes varied from 70 to 150 meters wide (230 to 492 ft.) and 25 km (15 mi) long. The project area was primarily agricultural. A total of 17 new sites and two isolated finds (IFs) were recorded. Four of the new sites and one IF had only prehistoric components, five of the new sites and one IF had only historic components, while ten of the new sites had both prehistoric and historic components. Four previously recorded sites were revisited and all were found to require no further work. None of the sites newly recorded or revisited lay within 2 kilometers of the present survey area (King 2003).

3.5 Known Archaeological Sites

The site files at the OSA were consulted on March 6th, 2014. There were not any previously recorded archaeological sites documented within the project area, but three sites had previously been recorded within a two-kilometer radius of the APE. These sites – 15Ni5, 15Ni 9, and 15Ni 19 – are described below.

Site 15Ni5 was investigated and recorded in 1925. The site is described on the site card as an "ancient burial field" that yielded fragments of human bone and a few "insignificant artifacts"— flakes and ceramic sherds. The site was found adjacent to XXXXXX XXXXXX.

Site 15Ni9 has very little information recorded on its site card. The site was reported by W. J. Curtis, and described as being a stone grave located southwest of Carlisle.

Site 15Ni19 was reported by A.G. Henderson with the University of Kentucky in 1990. The site was a light scatter of prehistoric and historic artifacts across a knoll and side slope of a northwest-southeast trending ridge on the southern edge of the Town of Carlisle, at an elevation of 920 ft. AMSL. There were no subsurface deposits within the 3,750 square meter site area- erosional gullies on the slope produced 14 flakes, while an Archaic projectile point fragment was recovered from the knoll crest.

Section 4 -

Methodology

In this chapter, the methods employed during the course of this study are described. These methods include the fieldwork activities, their application in different portions of the archaeological APE reflecting conditions encountered, and an evaluation of their effectiveness in conducting initial National Register evaluation of the archaeological site. Laboratory methods are discussed in the following section (Section Five) along with the site assemblage and a discussion of the associated contexts of recovery and interpretation. This section also presents an overview of the requirement for nomination to the National Register of Historical Places and concludes.

4.1 Implemented Field Methods

The field methods implemented for the Phase I investigations conform to the Kentucky Heritage Council's specifications for conducting a Phase I survey (Sanders 2006). The field methods included systematic shovel probes and visual inspection. Systematic shovel test probes (STPs) were excavated where possible. All soil excavated from the STPs was screened through ¼ inch mesh screens with the intention that any and all artifacts retained in the screen would be collected and bagged according to provenience. Areas of 15 percent or greater slope were visually inspected for surface remains.

Areas that were under concrete or asphalt, such as gas stations and the Nicholas County High School, were not excavated, but were visually inspected. Several other areas were disturbed by construction or other activities and were not excavated. Four properties were not surveyed because entry permission was denied. Three were private homes on KY32 that were post-1950 construction. These properties are located on Page 1 of the project maps. The fourth property is on KY 36 and is a small apartment building. This property is located on Page 4 of the project maps.

A total of three hundred and twenty-four (324) STPs and six (6) core probes were excavated. The location of all the shovel and core probes on USGS quadrangle maps and aerial photographs are shown in Figure 4-1 through Figure 4-14.

4.1.1 Field Conditions

The entire APE was subjected to visual inspection. Shovel probing was conducted across the entire APE. Approximately 100 percent of the shovel tested portions of the APE were completely grown over in pasture grasses or mowed lawns that offered zero ground surface visibility (Figure 4-15 through Figure 4-21).

4.1.2 Evaluation of Field Methods Used

Shovel testing and visual inspection were used to identify and define approximate site limits within the survey area. The methods were successful in identifying site location, delineating site boundaries, and obtaining a sample of cultural materials from the site.

4.2 National Register Evaluation of Archaeological Sites

Section 106 of the National Historic Preservation Act of 1966 requires federal agencies to take into account the effects of their undertakings on properties listed or eligible for listing in the National

Figure 4-1. Location of STPs on USGS Topographical Map, Page 1.

Figure 4-2. Location of STPs on USGS Topographical Map, Page 2.

Figure 4-3. Location of STPs on USGS Topographical Map, Page 3.

Figure 4-4. Location of STPs on USGS Topographical Map, Page 4.

Figure 4-5. Location of STPs on USGS Topographical Map, Page 5.

Figure 4-6. Location of STPs on USGS Topographical Map, Page 6.

Figure 4-7. Location of STPs on USGS Topographical Map, Page 7.

Figure 4-8. Location of STPs on Aerial Photograph, Page 1.

Figure 4-9. Location of STPs on Aerial Photograph, Page 2.

Figure 4-10. Location of STPs on Aerial Photograph, Page 3.

Figure 4-11. Location of STPs on Aerial Photograph, Page 4.

Figure 4-12. Location of STPs on Aerial Photograph, Page 5.

Figure 4-13. Location of STPs on Aerial Photograph, Page 6.

Figure 4-14. Location of STPs on Aerial Photograph, Page 7.

Figure 4-15. Survey Area along KY36, Looking ENE.

Figure 4-16. Survey Area From Pasture Looking S at KY36 and KY13 Intersection.

Figure 4-17. Nicholas County High School, Area Disturbed by Construction, Looking N.

Figure 4-18. Area Surveyed along KY13, Looking N.

Figure 4-19. Along Main Street, Looking E.

Figure 4-20. Properties along KY32 not allowed entry, Looking SE.

Figure 4-21. End of Project Area along KY32, Looking SE.

Register and to give the Advisory Council on Historic Preservation a reasonable opportunity to comment. While it does not require the preservation of such properties, it does require that their historic or prehistoric values be considered in weighing the benefits and costs of federal undertakings to determine what is in the public interest. Section 106 is invoked when "any project, activity, or program that can result in changes in the character or use of historic properties" (36 CFR Part 800) whether federal agency jurisdiction is direct or indirect.

Pursuant to the October 1992 Amendments to the National Historic Preservation Act (Section 110 of NHPA 1980, amended 1992) an "undertaking" means a project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a federal agency, including (A) those carried out by or on behalf of the agency; (B) those carried out with federal financial assistance; (C) those requiring a federal permit, license, or approval; and (D) those subject to state or local regulation administered pursuant to a delegation or approval by a federal agency.

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- that are associated with events that have made a significant contribution to the broad patterns of our history; or
- that are associated with the lives of persons significant in our past; or

- that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic value, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- that have yielded, or may be likely to yield, information important in prehistory or history.

Mere association with historic events or trends is not enough, in and of itself, to qualify under Criterion A-the property's specific association must be considered important as well. Often, a comparative framework is necessary to determine if a site is considered an important example of an event or pattern of events.

In order to qualify under Criterion B, the persons associated with the property must be individually significant within a historic context. As with all Criterion B properties, the individual associated with the property must have made some specific important contribution to history.

To be eligible under Criterion C, a property must meet at least one of the following requirements: the property must embody distinctive characteristics of a type, period, or method of construction, represent the work of a master, possess high artistic value, or represent a significant and distinguishable entity whose components may lack individual distinction.

Criterion D requires that a property "has yielded, or may be likely to yield, information important in prehistory or history." Most properties listed under Criterion D are archaeological sites and districts, although extant structures and buildings may be significant for their information potential under this criterion. To qualify under Criterion D, a property must meet two basic requirements:

- The property must have, or have had, information that can contribute to our understanding of human history of any time period;
- The information must be considered important.

The use of Criteria A, B, and C for archaeological sites are appropriate in limited circumstances and have never been supported as a universal application of the criteria. However, it is important to consider the applicability of criteria other than D when evaluating archaeological properties. It is important to note that under Criteria A, B, and C the archaeological property must have demonstrated its ability to convey its significance, as opposed to sites eligible under Criterion D, where only the potential to yield information is required.

Section 5 -

Materials Recovered

In this section the laboratory procedures and analytic methods are discussed and the materials recovered are presented. The analytic methods involve the use of an artifact classification scheme that creates useful analytic categories for evaluating National Register eligibility. The artifact assemblages are also discussed with the site descriptions and results in Section Six.

5.1 Laboratory Methods

Artifacts recovered during field investigations were brought to the CDM Smith archaeology laboratory in Lexington, Kentucky, for washing, cataloging, and initial analysis. Materials were washed and sorted by general material type (e g., historic vs. prehistoric). All prehistoric specimens are classifiable into one class based on stage of reduction, tool form, and portion represented. A series of attributes and metric data were then collected for specific prehistoric artifact classes including size of debitage, cortex presence and absence, thermal alteration, and raw material type. Prehistoric lithic specimens were identified by J. David McBride. Historic artifacts were washed and sorted into major material categories. These were then cataloged according to the system of artifact-function association modified from South (1977). All artifacts were assigned to the functional groups (kitchen, architecture), then to a material class (e.g., ceramic, glass, metal), to a type (e.g., base of bottle, jar lip), and to a subtype (e.g., color, decoration type). Historic specimens were identified by J. David McBride.

In the following discussion, each of the major categories of artifacts is defined. Prehistoric artifact types are discussed first, followed by the standard classifications of historic artifacts developed by South (1977).

5.1.1 Prehistoric Artifact Assemblages

5.1.1.1 Prehistoric Lithics

The analyses included tool analysis, raw material analysis, and mass analysis. These different techniques provide complementary data and permit the extrapolation of stronger inferences about the organization of lithic technology at the four sites. One hundred percent of all surface-collected and excavated materials were subjected to these, except where noted below.

All debitage was macroscopically examined for evidence of retouch and/or utilization. Those artifacts displaying retouch and/or utilization were then separated from non-utilized debitage. Additionally, all chipped stone artifacts were analyzed for presence of primary geologic or secondary incipient cone cortex and macroscopic evidence of thermal alteration. A typology of specimens was developed using standard techniques and definitions employed throughout eastern North America (e.g., Callahan 1979; Crabtree 1982; and Odell 1996).

5.1.1.1.1 Lithic Debitage

One of the most ubiquitous artifact categories on prehistoric sites is lithic debitage, which is considered to include all the material produced from the initial reduction stage to the use/reworking stage. Debitage is produced during all stages of reduction, but the representation of each class as compared to the other classes provides insight into the types of lithic use that occurred at a specific

location. All flakes, blades, chunks/shatter were analyzed according to platform facet and dorsal scar counts, presence of cortex, and macroscopic evidence of thermal alteration and/or utilization.

Flakes are pieces of debitage with two faces, a dorsal and a ventral. The dorsal surface can be partly or totally covered by cortex, but normally shows the scars from removals that were made before the flake was removed from the core. The ventral surface contains only the features related to the detachment of the particular flake.

Flake debitage produced in bifacial and unifacial technologies is divided into three major categories including primary flakes, secondary flakes, and tertiary flakes, and several subcategories based on specific morphological attributes. These lithic reduction categories follow classification stages proposed by Collins (1974), Flenniken (1978), Boisvert et al. (1979), Magne and Pokotylo (1981), Magne (1985), Ebright (1987), and Bradbury and Carr (1995) with some modifications. A brief description of each debitage category is provided.

> *Primary flakes* (primary and secondary decortication flakes) are those produced during the earliest stages of lithic reduction and result from the removal of cortex from the raw material. *Primary decortication flakes* are usually large and cortex is present on over 50 percent of the dorsal surface. *Secondary decortication flakes* contain cortex on less than 50 percent of the dorsal surface.
>
> *Secondary flakes* (interior and thinning flakes) result from the reduction and shaping of the initial biface. Secondary flakes characteristically display a well-developed bulb of percussion, one or more flake scars on the dorsal surface, and may exhibit platform preparation. *Interior flakes* generally have large, double faceted platforms perpendicular to the orientation of the flake. *Thinning flakes* may have multi-faceted platforms at an acute or obtuse angle to the flake's orientation and may show signs of crushing or battering in preparation for flake removal from the parent material.
>
> *Tertiary flakes* (late stage percussion and pressure flakes) result from the sharpening and/or reworking of tools or points. These flakes are generally very small with small striking platforms, often multifaceted and steeply angled. Tertiary flakes are usually underrepresented in artifact assemblages recovered with standard ¼ inch hardware mesh screens, as these flakes are frequently smaller than ¼ inch and pass through the screens.

Flakes struck from flake cores for further unifacial modification are generally indistinguishable from those produced in bifacial reduction. However, a formal, specialized unifacial technology is blade manufacture, which produces morphologically distinct artifacts.

> *Blades* are specialized flakes with more or less parallel or sub-parallel lateral edges which, when complete, are at least twice as long as wide (Owen 1982: 2). Blades contain at least one dorsal crest but may contain two or more dorsal crests. Blades are associated with prepared cores and blade technique and are not produced randomly (Crabtree 1982: 16).
>
> Debitage displaying some flake characteristics are classified as *undetermined flakes* if they are too fragmentary to determine flaking stage.
>
> *Chunks/shatter* are pieces of usable raw material with at least one freshly broken surface. Blocky and angular fragments are usually produced in the initial stages of flintknapping as a result of removing unstable areas of material from the core or blank. Chunks/shatter are

distinguished from cores by the absence of negative flake scars and striking platforms. Natural processes may produce a small proportion of chunk/shatter.

5.1.1.1.2 Raw Material Analysis

The determination of raw material type was accomplished with the aid of written descriptions (DeRegnaucourt and Georgiady 1998, Gatus 1980, 1982). All debitage and tools in the assemblage were macroscopically inspected to determine raw material type and compared with existing descriptions. Examining raw material procurement trends can yield data on settlement patterns, resource procurement strategies, and trade and exchange networks.

5.1.1.1.3 Mass Analysis

Mass analysis focuses on the variables of size, shape, and presence of cortex on aggregate batches of debitage as a means of distinguishing various forms and characteristics of reduction within a lithic artifact assemblage. Because there are several disadvantages in using reduction stage classification exclusively to analyze flaking debris, data obtained from mass analysis can be used to compare with those gained from reduction stage classification to provide more solid interpretations of the lithic artifact assemblage (Ahler and Christensen 1983, Ahler 1989, Bradbury and Franklin 2000). Two general theoretical observations regarding flintknapping underlie mass analysis and are relevant to the current study:

Flintknapping is fundamentally a reductive technology, and the nature of this technology places predictable and repetitive size constraints on the byproducts (and products) produced. Most flakes produced early in reduction should be larger, and most flakes produced late in reduction should be smaller. Similarly, the frequency of flakes with cortex should be highest in early reduction and lowest in late reduction.

Variation in load application in the flintknapping procedure produces corresponding variations in both size and flake shape. Experimental data shows that percussion flaking, on the whole, is capable of producing flakes much larger in size than any produced by pressure flaking. Size grade distribution data provides a fairly direct measure of load application variation (Ahler 1989: 89-91).

For this project, all non-utilized debitage (flakes, flake fragments) were passed through a series of nested laboratory hardware cloth screens to sort by size. Size grades follow Stahle and Dunn (1982, 1984). The size grades are as follows:

Grade 0 includes specimens smaller than ¼ inch

Grade 1 includes specimens smaller than ½ inch but larger than ¼ inch

Grade 2 includes specimens smaller than 1 inch but larger than ½ inch

Grade 3 includes specimens smaller than 2 inches but larger than 1 inch

Grade 4 includes specimens larger than 2 inches

Flake debris from each provenience in each grade was weighed as an aggregate to the nearest tenth of a gram and then counted. One attribute, thermal alteration, was also recorded for the reduction debris. Thermal alteration is often intentional within the culture in order to change the properties of the chert in order to make the raw material more adept to tool production.

The presence of primary geologic cortex may indicate that the raw material was procured from outcrops, whereas secondary incipient cone cortex on the core surface suggests that raw material was procured from a stream context. Research has shown that reduction analysis insufficiently provides data on the stage during which a flake was removed. However, by comparing frequency of occurrence of cortex on flakes, research indicates that a higher percentage of flakes during the initial stages of lithic reduction will have cortex and a lower percentage will have cortex during the final stages of lithic reduction. In addition, the amount of the flake covered in cortex is also an indicator of the stage during which the flake was removed, again more coverage indicates removal during the initial stages, and less coverage indicates later removal. Thus flakes with cortex were evaluated according to the following criteria:

Grade 1 includes specimens with primary geologic cortex over greater than 50% surface

Grade 2 includes specimens with primary geologic cortex over less than 50% surface

Grade 3 includes specimens with secondary conical cortex over greater than 50% surface

Grade 4 includes specimens with secondary conical cortex over less than 50% surface

All of these methods compose mass analysis. When taken together, they can provide extensive data on the methods of tool production.

5.1.1.1.4 Materials Recovered

Five pieces of lithic debitage (Table 5-1) were recovered from Phase I investigations. The debitage consisted of one undetermined flake and four secondary flakes. The debitage was made from Boyle (n=4) and Cane Run chert (n=1).

Table 5-1. Prehistoric Lithic Debitage.

Tool Type	Raw Material	Debitage Type	Deb. Size Grade	Cortical Grade	Total
Boyle	Secondary Flake	1	0		3
	Secondary flake	1	2		1
Cane Run	Undetermined Flake	1	0		1
Total					**5**

5.1.2 Historic Artifact Assemblages

In accordance with South (1977), artifacts are ascribed to functional groups reflecting their association with the dwelling (architecture); food preparation, serving, and preserving (kitchen); personal items; clothing items; furnishing; jobs/activities; arms; transportation; and finally fuel and miscellaneous categories.

Six hundred and thirty-five historic artifacts were recovered from the Phase I investigations. Table 5-2 shows the various groups or artifact classes recovered.

Table 5-2. Historic Artifacts Recovered.

Functional Group	Quantity
Activities	1
Architecture	349
Clothing	1
Fuel	122
Kitchen	127
Furniture	4
Transportation	1
Other	29
Total	**635**

5.1.2.1 Kitchen Group

This group consists of artifacts used in the preparation, consumption, and/or storage of foods and beverages. For the most part, this group comprises container glass and ceramics. As most of these are manufactured, there is significant variation in decorative style and manufacturing techniques over time. This chronological variation forms the basis for the assignment of individual sites to historic time periods.

One hundred and twenty-seven Kitchen Group related artifacts, consisting of bone, glass, ceramic and plastic, were recovered (Table 5-3, Figure 5-1).

Table 5-3. Kitchen Artifacts.

Group	Type	Total
Kitchen	Bottle/Jar	105
	Burned/ Melted	1
	Tableware	1
	Bone	3
	Whiteware	6
	Ironstone	1
	Unidentified Refined Earthenware	3
	Redware	6
	Rubber Seal	1
Total		**127**

5.1.2.1.1 Container Glass

Container glass, like ceramic sherds, constitutes one of the most important components of a historic assemblage. Like domestic ceramics, these artifacts convey significant chronological, functional, and social information. Analysis offers an important source of data about the period of occupation of the site, the kinds of activities undertaken there, and potentially the social or ethnic status of the occupants. Studies of bottle glass have isolated the significant chronological characteristics of these vessels. Jars and other glass containers are discussed in a separate section.

5.1.2.1.2 Bottle Glass

European and American bottles were free blown and shaped to the vessel form, or were blown into simple dip molds. Dip molds are single component iron or wooden molds that give the body of the vessel its shape. These molds can only be square or cylindrical with the basal area being smaller or the same width as the shoulder area. Dip molds continued to be used as late as 1860 (Deiss 1981:12-18). Multipart molds having dip molded bodies (Rickett's molds) were produced into the 1920s (Jones and Sullivan 1985). To finish the neck of these early bottles, a glass-tipped rod (pontil) was attached to the bottle base to provide a means of holding it. Early types of finishing included fire-polished, flanged, folded, and applied string. All of these finishes persisted until the 1840s-1870s, when they were replaced by improved methods (Deiss 1981:18-24; Jones and Sullivan 1985; Jones 1971).

English bottle manufacturers used simple two-piece molds to make proprietary medicine bottles since the mid-1700s, and by 1800, American bottle makers were also using two-piece molds. These molds were hinged at the base or shoulder and may be referred to as open and shut molds. Bottles could be shaped in any form, such as square, round, or multi-sided. Consequently, polygonal bottle forms were very popular in the mid-nineteenth century (Deiss 1981:62). These molds enabled embossed lettering to be put on the fronts, backs, sides, and shoulders of the bottles (Jones and Sullivan 1985) and Gothic-style lettering was the most common style used until circa 1850 (Deiss 1981:48-49). Liquor flasks made in two-piece molds were introduced circa 1810 and were very popular by 1830. Embellished with a wide variety of molded or pictorial images, flasks remained popular until after the mid-1800s (Deiss 1981:62-65). Removable plates or panels that could be inserted into the mold were patented in 1867 (Jones and Sullivan 1985). These panels or plates were often embossed with the manufacturer name, product name, and city of manufacture, and could be used to personalize large shipments of bottles. This became popularly used on pharmaceutical and bitters bottles.

Two-piece molds were eventually eclipsed by multipart open and shut molds by 1850. These molds are similar to two-piece molds, but have a separate base plate. During the period 1840 to 1860, the two-piece and multi-part open and shut molds were the most popular mold types (Jones and Sullivan 1985). Vessel finishes (lip and necks) could still be hand formed by applying additional glass to the vessel and hand shaping a lip. By the 1820s, lipping shears were being used to shape the inside of the bottle, producing a standardized form known as an applied-tooled finish, which was most common from about 1840 to 1870.

Open and shut molds, dip molds, and multipart dip molds were all popularly used molds during the nineteenth century. Another mold, the turn-mold or turn-paste mold was developed and used in France on wine bottles as early as 1860 (Jones and Sullivan 1985). This mold type leaves no mold seams. In America, this mold type was most frequently used for wine and other beverages from 1870 to the 1920s (Jones and Sullivan 1985).

Even though molds are the most often used method to establish the manufacturing date of glass vessels, changes in the glass formula and innovations in overall glass vessel manufacture can aid in establishing chronology. For example, although the soda-lime formula was in use to make moderately clear glass for many centuries, a modified form of the soda-lime formula was developed in 1864 that revolutionized the glass industry in that it was less brittle and could be molded, cut, and engraved easily (Jones and Sullivan 1985). Because of this new formula, decorated and highly colored glass became cheaper and easier to produce, allowing it to be affordable and subsequently popular after the 1870s (Jones and Sullivan 1985; Innes 1976). By 1880, manganese oxide was used in molten glass as a decolorizer. Glass containers made with manganese oxide turn purple or amethyst when exposed to

sunlight. Selenium began replacing manganese oxide as a decolorizer by 1915, and the replacement was complete by 1918 (Deiss 1981:78-83). Selenium glass when exposed to ultraviolet rays becomes a straw yellow color.

Another turning point in the glass industry occurred between 1850 and 1860, with the development of a device called the snap case. This implement held the vessel while the neck and lip were finished. No longer was a pontil rod attached to the base of a glass vessel. Other innovations occurred to revolutionize glass production. By the 1870s, finishes incorporated in the mold had become common. This type, involving the reheating and tooling of the finish to eradicate mold seams on the lip, is referred to as the improved-tooled finish. Improvements in annealing ovens also helped to totally fuse the lip to the neck. Bottle lips were no longer distinctly separate bits of glass. Molds with incorporated finishes predominated until the early twentieth century, when automated glass vessel manufacture replaced less efficient processes (Deiss 1981:54-59).

By circa 1884 to 1892, semi-automatic manufacture of wide and small mouth containers was possible. The only difference between semi-automatic manufacture and automatic manufacture is the way that the melted glass is passed to the machine. In semi-automatic manufacture, the glass is introduced by laborers and in automatic manufacture; the glass is introduced mechanically to the machine. It was not until the perfection of the Owen's machine in 1903 that fully automatic bottle manufacture was possible. This machine leaves a distinct mark on the base of the vessel. By 1917, 50 percent of glass containers were made using this machine (Miller and Sullivan 1984). Vessels made using the Owen's machine are not found in archaeological contexts after 1970 (Miller and Sullivan 1984). Also, during the late nineteenth and early twentieth centuries, semi-automatic machines continued to be used and modified for automatic manufacture through the development of glass feeding devices like the Peeler Paddle Gob Feeder (Miller and Sullivan 1984). Vessels made by semi-automatic machines are indistinguishable from vessels made on other machines (except the Owen's machine). The precision of automatic manufacturing enabled the standardization of continuous thread finishes, and screw caps replaced other forms of non-pressurized sealing.

Kitchen glass recovered from the Phase I investigations consisted of 105 fragments of bottle/jar glass, one tableware fragment and one unidentified burned/melted fragment. Eight fragments was machine made and the remainder was of unidentified manufacture. The fragments were primarily body (n=27) or unidentified fragments (n=97) (Figure 5-1 (C – F)). The machine made glass fragments consisted of amber (n=3), clear (n=4), and milk glass (n=1). The unidentified manufactured fragments consisted of 46 clear fragments, 32 amber fragment, 7 aqua fragments, and 3 blue fragments.

The amber bottle/jar fragments probably represented modern beer bottles. The clear bottle/jar base may have been a modern pint whiskey bottle.

5.1.2.1.3 Tableware

The manufacture of glass tableware is a somewhat problematic process. In many cases, discerning the manufacture type is not helpful in answering questions concerning chronology. Processes used to make tableware were used over long periods of time. These processes include free blowing, press molding, optic molding, and pattern molding. Most of these methods are still used to lesser degrees today.

Free blowing is still used today to make tableware. Eighteenth and nineteenth century glass was also formed by hand. Usually these pieces are distinctive to specific glass houses and their age can be determined if the manufacturing house can be ascertained. For instance, table glass produced at the

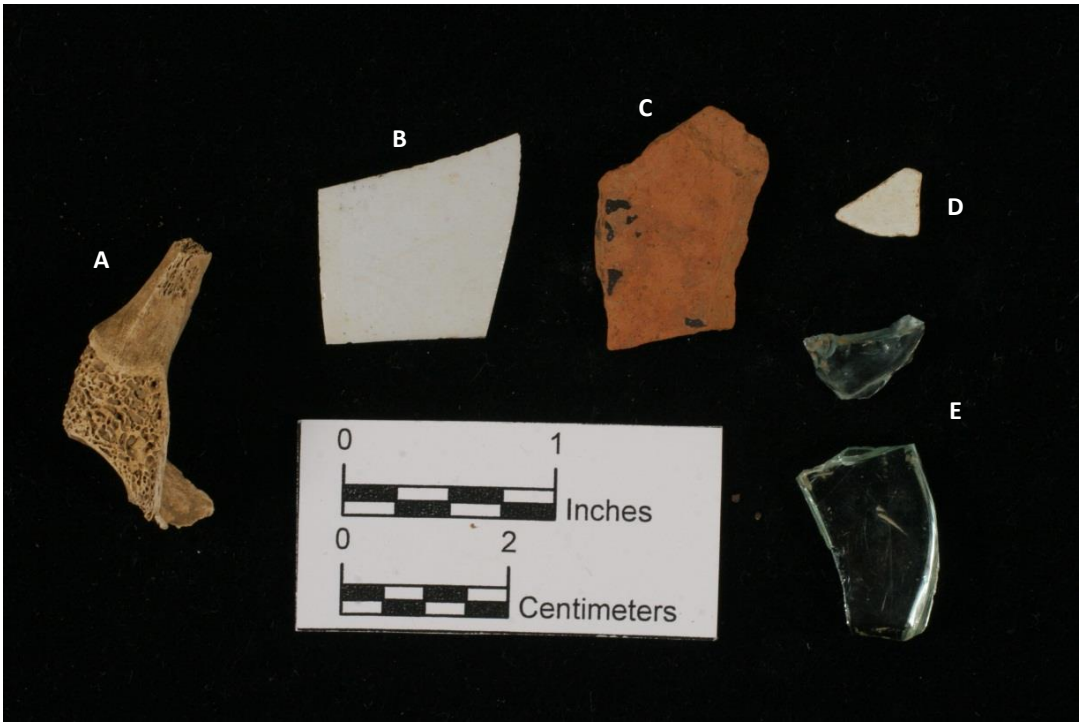

Figure 5-1. Kitchen Group Artifacts: A) Animal Bone; B) Undecorated Ironstone; C) Redware; D) Whiteware; E) Container Glass.

Stiegle glass house had a distinctive smoky color and specific stylistic motifs were patented and developed by glass houses for their use.

Although the process of press molding glass had been used to make door knobs and stemware feet, by the late 1820s, press molding hollowware became possible. Pressed glass made in the first few decades of the nineteenth century was often decorated with relief motifs, including classical busts, and a finely stippled or mat background that hid defects in the glass and mold seams. These highly decorated pieces, usually made using leaded glass, reflected light and were aptly referred to as "lacy glass". By the 1850s, improvements in manufacturing eliminated the need to hide defects. By the 1870s, the popularity of pressed glass increased as white, multi-colored, and other new shades of glass became affordable due to improvements in the glass formula (Deiss 1981:71-76; Davis 1949; Innes 1976; McKearin and McKearin 1948). The new glass formula resembled leaded formulas and was used extensively in press-molding after the 1870s. Consequently, press molded, leaded tableware is uncommon on American sites after 1870 (McKearin and McKearin 1948:395).

More elaborate combinations of decoration types and color became popular in press molded table glass after 1870 (Innes 1976). Carnival glass, for example, often given away as prizes at carnivals and fairs, was made by coating pressed glass with metallic paint to simulate more-expensive wares. Carnival glass was produced from the late 1890s to the 1930s (Deiss 1981:86).

Optic molding was used to make tableware during the eighteenth century. Optic molding, never a popular form of manufacture, was eclipsed by press molding early in the nineteenth century. By the late nineteenth century, optic molding had a resurgence in popularity. This molding type was used predominantly for tableware, specifically tumblers. It is a distinctive molding style involving a two-stage process. The vessel is formed by blowing glass into a part-size mold. This gives the vessel a rudimentary shape and decoration on the interior of the vessel. The vessel is then placed in another

mold that provides the final shape to the vessel. This type of molding is easy to identify as the interior of the vessel will often have a totally different decoration than the exterior of the vessel.

The process of pattern molding has been used for several centuries but was most popular in the late eighteenth and early to mid-nineteenth centuries (Jones and Sullivan 1985). This method involves two stages. Glass is blown into a mold that imparts the rudimentary shape and decoration to the vessel. Usually the decorations are simple ribs, panels, and stars. The partially blown vessel is then removed from the parison and its final shape is free blown. The enlargement of the vessel causes the decorations to become very diffuse.

Although these methods of manufacture alone are not useful in determining chronology, decorative style can be used to temporally place a vessel. Decorative styles changed over time in table glass. For example, after 1870 naturalistic designs featuring animals and flowers became popular, eclipsing the geometric motifs of the earlier part of the nineteenth century (Innes 1976).

One piece of glass tableware was recovered. It was too small to determine vessel form or manufacture.

5.1.2.1.4 Ceramics

Domestic ceramics are one of the most important chronologically diagnostic artifact categories from archaeological sites. In addition, these materials offer important clues to functional and social status variation among sites and cultural or ethnic components. For this reason, the ceramics are described in detail in the following chapter. Typically, ceramics are divided into two major groups: refined and unrefined earthenware. Refined earthenware was primarily used as serving vessels, such as dinner and tea services, or toiletry items. Refined wares treated here included delft or Tin-enameled ware, porcelain, creamware, pearlware, whiteware, and ironstone. Unrefined earthenware was used for storage and food preparation, such as mixing bowls, churns, and milk pans.

5.1.2.1.4.1 Whiteware

Whitewares are non-vitreous and semi-vitreous, white-paste earthenwares usually having a clear, colorless glaze. Whitewares were first manufactured in England circa 1800, had become popular by 1820, remained common throughout the 1800s, and are still being manufactured today. The period of greatest popularity of whiteware was 1830 to 1890 (Majewski and O'Brien 1987:119-125; Miller 1980:16-17; Noel-Hume 1969:130-131; Price 1982). Whiteware occurs in virtually every decorative type that was available in the nineteenth century, and decoration type and style can be used as relative temporal indicators.

Six undecorated whiteware sherds were recovered during the Phase I investigations (Figure 5-1).

5.1.2.1.4.2 Ironstone

Ironstone refers to a semi-vitreous white-paste ware that contains china stone (petunse). Charles Mason began producing "Mason's Ironstone China" in England in 1813. Mason claimed his ware contained iron slag. . English ironstone began appearing on American sites during the 1840s. These heavy-bodied vessels often were decorated to imitate Chinese porcelain. After 1850, ironstone predominantly was undecorated, or was decorated with molded geometric, floral, or foliate motifs. American manufacturers began making refined, white-paste wares, including ironstone, during the Civil War. Two varieties of ironstone from the mid-to-late nineteenth century are now recognized: blue-bodied and white-bodied. Blue-bodied ironstone was manufactured by British, and perhaps, by American firms. White-bodied ironstone was made by both British and American firms, but primarily by British ones. The period of greatest popularity of embossed ironstone was 1840 to 1907 (Majewski

and O'Brien 1987:20-21). The difficulties of assigning fragmentary ceramics to either whiteware or ironstone can result in an under-enumeration of ironstone and an over-enumeration of whiteware.

One piece of undecorated ironstone was recovered during the Phase I investigations (Figure 5-1).

5.1.2.1.4.3 Redware

Redwares are non-vitreous wares with red, buff, or brown paste. Although redwares can occur unglazed (such as flower pots), the vessels may have a clear or mottled lead glaze or a black or brown glaze resulting from iron additions to the lead glaze. Redware was manufactured in Kentucky during the early 1800s, and continued to be commonly used until about the mid-1800s. Due to the abundance of redware makers and the lack of distinguishing characteristics that would identify the maker, redware is a poor temporal indicator.

Six pieces of redware were recovered during the Phase I investigations (Figure 5-1).

5.1.2.1.5 Bone

This category includes faunal material recovered from the archaeological investigations. The assemblage consists of three specimens. There was evidence of butchering on one of the specimens. The specimen is shown in Figure 5-1 above.

5.1.2.2 Architecture Group

Artifacts assigned to this group include all items associated with construction and hardware furnishings. Specimens include bricks, mortar, cement, window glass, doorknobs, faucet parts, and various nails. The major categories of this group are described below.

Three hundred and forty-nine architectural artifacts were recovered during this survey. Table 5-1 shows all architectural artifacts recovered and a representative sample are illustrated in Figure 5-2.

Table 5-4. Architectural Artifacts.

Group	Type	Total
Architecture	Flat Glass	3
	Cut Nails	5
	Wire Nails	3
	Unid Nails	10
	Brick	298
	Slate	7
	Mortar	13
	Hardware	1
	Tile	2
	Drain Pipe	1
	Fence Wire	3
	Wire	2
	Fence Staple	1
Total		**349**

Figure 5-2. Architecture Group Artifacts: A) Brick Fragments; B) Cut Nail; C) Wire Nail.

5.1.2.2.1 Flat Glass

Flat glass fragments are presumed to have been used in window panes if no other function can be determined, such as for mirrors, table tops, picture frames, etc. Given a large assemblage from a site, flat glass has the potential to comprise an important, chronologically sensitive artifact. During the eighteenth century, flat glass appropriate for windows was cut from a large disk of glass which was then cut into panes. By the early nineteenth century, glass manufacturers produced broad glass, which may be distinguished by a slight thickening toward the plate margin, one surface slightly more opaque than the other, and bubbles in the glass usually distorted in straight lines. In the late nineteenth century, machine-made glass, characterized by a uniform thickness, with occasional wavy lines of bubbles, was widely produced. In the early twentieth century, production of sheet pane glass eclipsed other manufacturing processes.

Three window glass fragments were recovered from the Phase I investigations. Although there was a small sample of window glass, the Moir (1987) formula (Date= 84.22 (Thickness) + 1712.7) was used to determine construction dates. The flat glass fragments had the following thicknesses and dates: 1906 (2.3); 1947 (2.79); 1833 (1.43).

5.1.2.2.2 Nails

Nails form one of the most widespread categories of artifacts recovered from historic sites. As with many other materials, increasing industrialization has had a major impact on the manufacturing of nails and associated hardware. Archaeologists have devoted considerable attention to nails in order to identify their chronologically significant characteristics (Nelson 1968). These are identified by manufacturing process (wrought, cut, wire) and, when possible, by size.

Wrought nails are the earliest form of iron nails, and were made by hand, usually in a local smithy or forge. Typically these nails are square or rectangular in cross section, and taper on all four sides towards the point. Wrought nails were in common use until approximately the 1830s and 1840s.

All nails were assigned to one of these three major categories; unidentified fragments were assigned to a miscellaneous category. The presence of cut nails at a site suggests a mid-nineteenth century occupation rather than an early nineteenth century occupation; the presence of significant numbers of wire nails indicates that some portion of a site occupation postdates the 1880s and continues into the twentieth century.

Eighteen nails were recovered from the survey (Table 5-2 above, and Figure 5-2). Five unidentified cut nail fragments were recovered. Two of these fragments were distal; one was a complete 4d size. One was a complete 7d, and one was a complete 9d. Ten unidentified nails were recovered. Seven were distal and three were medial. Three wire nails were recovered. The wire nails consisted of two 12d and one 16d.

5.1.2.2.3 Brick

Two hundred and ninety-eight brick fragments were recovered from the Phase I investigations (Table 5-4 and Figure 5-2, above). The manufacturing of bricks changed from locally crafted, handmade varieties to machine-produced during the nineteenth century. With this chronological information in mind, bricks are classified according to method of manufacture (Gurke 1987). The nature of most brick fragments often precludes an accurate assessment of age. The bricks recovered were too fragmentary to determine the method of manufacture.

5.1.2.2.4 Mortar

Thirteen pieces of mortar were recovered from the survey. The combined weight of the mortar fragments was 26.1 grams.

5.1.2.2.5 Miscellaneous Architecture

Miscellaneous architecture artifacts include fence wire, fence staple, drainpipe, hardware, roofing slate, tile, and wire. The fence wire includes barbed and non-barbed wire. The drainpipe is a salt-glazed stoneware. The tile has a glaze similar to whiteware, but the paste is harder than typical refined earthenware.

5.1.2.3 Fuel Group

This category includes items such as coal, coal cinders, ash, slag, and charcoal. Coal was adopted as a primary fuel in the middle to late nineteenth century, prior to which firewood and charcoal were used both domestically and commercially as an energy sources.

One hundred and twenty-two fuel artifacts were recovered from the survey. There were 51coal fragments recovered , 65 cinder fragments recovered, three charcoal fragments recovered and three other coal fuel recovered (Figure 5-3).

5.1.2.4 Clothing Group

This category of artifacts consists of artifacts associated with clothing, such as buttons, collar studs, buckles, shoe leather, irons, eyelets, garter snaps, thimbles, straight and safety pins, and hooks and eyes.

One shell button was recovered during the Phase I investigations (Figure 5-4).

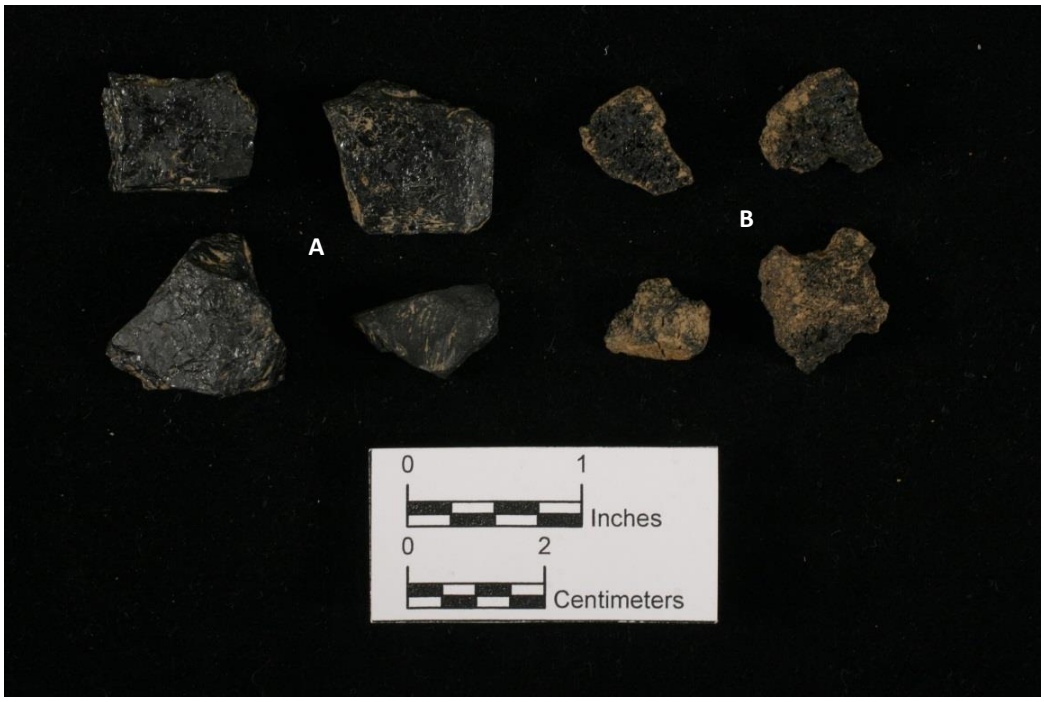

Figure 5-3. Fuel Group Artifacts: A) Coal; B) Cinder.

Figure 5-4. Clothing Group, Activities Group, and Transportation Group Artifacts: A) Bucket Fragment; B) Shell Button; C) Animal Shoe Nail.

5.1.2.5 Activity Group

This category includes items associated with any type of job activity that occurs on a site such as tools associated with agricultural activities, woodworking, and general farm maintenance.

One activity group artifact, a metal bucket fragment, was recovered from the Phase I investigations (Figure 5-4, above).

5.1.2.6 Transportation Group

Artifacts assigned to this category include those associated with any form of wheeled transport, and those associated with horse, mule, or ox harnessing and shoeing (Light 2000).

One transportation artifact, an animal shoe nail, was recovered from the Phase I investigations (Figure 5-4, above).

5.1.2.7 Furniture Group

A variety of artifacts associated with furnishings and household fixtures are often recovered in small numbers from historic sites. Examples of these include lamp globe or chimney parts, mirror glass, faucet parts, fireplace equipment, clock parts, draw pulls, flower pots and similar items (Thuro 1976).

One glass chimney fragment, one light bulb filament fragment, and two light bulb fragments were recovered during Phase I investigations.

5.1.2.8 Other Group

This category includes all materials that are not readily assignable to a major group or that are unidentifiable. Items in this category include, for example, unidentified rusted metal artifacts and fragments of synthetic materials such as plastic, etc.

Twenty-eight Other Group artifacts were recovered. Fifteen of the artifacts were unidentified metal fragments and the other thirteen artifacts in the group were unidentified plastic fragments. One unidentified shell was also recovered.

Section 6 -

Results

Five archaeological sites (15Ni66, 15Ni66, 15Ni68, 15Ni69, and 15Ni70), seven isolated finds, and one non-site were located within the APE. The non-site, CDMS 10, consisted of modern material associated with a 1950 farmstead, and after analysis, it was deemed not worthy of a site number or isolated find number due to its modern context and large amount of disturbance. The following is a description of the remaining findings. Their location is shown in Figure 6-1 and Figure 6-2. The following is a description of the findings.

6.1 Site 15Ni66

Site 15Ni66 consists of a small unaffiliated prehistoric component and a historic component which dates from the early 1800s to the present based on artifacts and archival data. The APE covers only part of the historic component based property boundaries and architectural features. The site is part of the XXXXXX farmstead. The original brick house was built by XXXXXXX XXXXXXXX in 1812. In 1815, Barton W. Stone conducted gospel meetings under a red oak tree on the XXXXXX property. This began the Great Revival in Nicholas County. The XXXXXX family still owns the property.

6.1.1 Location

Site 15Ni66 can be found on the USGS Carlisle, Kentucky, 7.5' quadrangle map (Figure 6-3 and Figure 6-4). The UTM coordinates (Zone 16 NAD 27) for the center of the site are XXXXXXXXXX. The site area is 0.32 acres (0.13 hectares). Figure 6-5 though Figure 6-8 shows the site area.

6.1.2 Site Description

The site is located along KY36 where it crosses Brushy Fork. The site extends along the right-of-way boundary within the XXXXXX property for about 60 meters and extents to the south to the fence in an area near KY36. Vegetation across the site was mowed grass at the time of the survey. The site was initially identified by the presence of artifacts recovered during Phase I investigations and of the presence of the XXXXXX house, which is on the National Register, and a stone wall which surrounds the house area. A monument within the site area indicates that the Gospel meetings during the Great Revival were on the XXXXXX farm and located within the site boundaries. A garage is to the north of the site and other farm outbuildings extend to the north and northwest.

6.1.3 Artifacts Recovered

Forty-five artifacts were recovered from 21 positive shovel test probes. Forty-four historic artifacts were recovered (Table 6-1 and Figure 6-9). One prehistoric artifact, a secondary flake, was recovered from STP 24-4 (Table 6-2 and Figure 6-9). The artifacts were recovered from the side and front yard of the house.

6.1.4 Stratigraphy

Eighteen shovel test probes were excavated during the Phase I investigations. Eight of the STPs were positive with historic and/or prehistoric artifacts. A profile is illustrated in Figure 6-10. The soil for the site consists of Elk silt loam (ErB) and Nolin silt loam (No). Soil profiles for the site are similar to profiles described for STP 24-1.

Figure 6-1. Location of Archaeological Sites and Isolated Finds on USGS Topography Map.

Figure 6-2. Location of Archaeological Sites and Isolated Finds on Aerial Photograph.

Figure 6-3. Location of Archaeological Site 15Ni66 USGS Topography Map.

Figure 6-4. Location of Archaeological Site 15Ni66 on Aerial Photograph.

Figure 6-5. Site 15Ni66 North of KY36, looking Northeast.

Figure 6-6. Site 15Ni66 north of KY 36, looking West.

Figure 6-7. Site 15Ni66.

Figure 6-8. Site 15Ni66 Outbuildings, looking West.

Table 6-1. Site 15Ni66 Historic Artifacts

Type	STP								Total
	24-7-R2	24-1	24-3	24-3-R1	24-4	24-5	24-5-R1	24-7	
Bucket/Pail Part			1						1
Brick			1		5	10	2	5	23
Flat Glass			1						1
Mortar						4			4
Nail	1			1					2
Charcoal						2			2
Lamp Chimney			1						1
Bone		2							2
Bottle/Jar		2							2
Ironstone		1							1
Redware				1					1
Whiteware					2				2
unidentified metal					1				1
Animal shoe nail					1				1
Total	**1**	**5**	**4**	**2**	**9**	**16**	**2**	**5**	**44**

Figure 6-9. Sample of Site 15Ni66 Artifacts: A)Bone Fragment; B) Bucket/Pail Fragment; C) Secondary Flake; D) Whiteware; E) Flat Glass; F) Wire Nail; G) Animal Shoe Nail; H) Cut Nail; I) Redware; J) Bottle Glass Fragment; and K) Ironstone.

Table 6-2. Site 15Ni66 Prehistoric Artifacts.

Type	STP	Total
	24-4	
Secondary Flake, Boyle Chert	1	1
Total	**1**	**1**

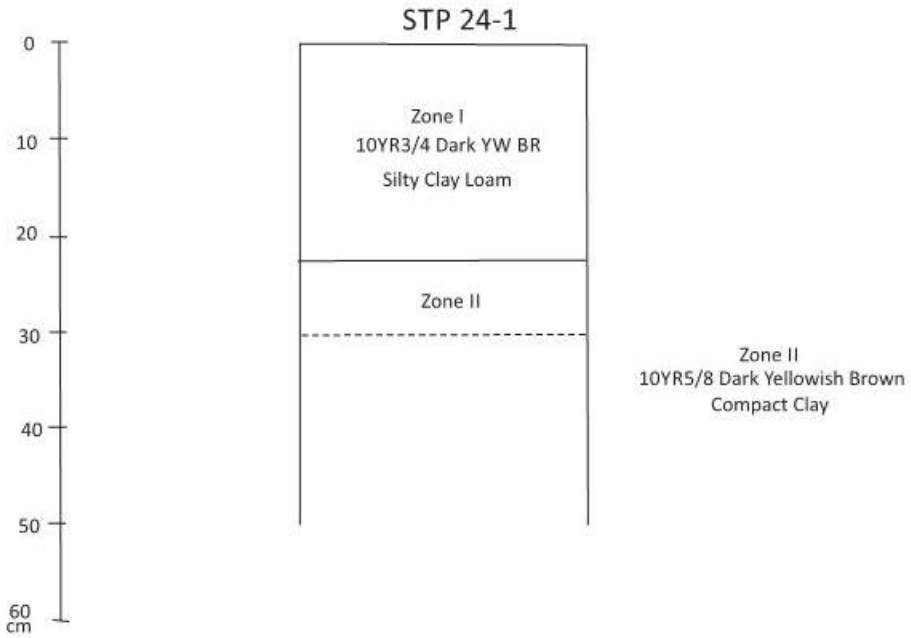

Figure 6-10. Shovel Test Probe from Site 15Ni66.

6.1.4.1 STP 24-1

STP 24-1 was located at the western part of the site in the side yard (Figure 6-4, above). The shovel probe consisted of two zones extending from the surface to 30 cmbs. Zone I consisted of a 10YR3/4 dark yellowish brown silty clay loam and extended from surface to 23 cmbs. Zone II consisted of a 10YR5/8 compact clay and extended from 23 to 30 cmbs. The material recovered from the STP consisted of two large mammal bones, one ironstone ceramic fragment, and two bottle/jar glass fragments.

6.1.5 Features

No features were located during the Phase I archaeological investigations.

6.1.6 Prehistoric Discussion

The prehistoric component consists of one Stage 1 secondary flake recovered from STP 24-4. The flake, made of Boyle chert, is not diagnostic of any cultural or temporal period. Based on the limited amount of material the prehistoric component is unlikely to provide important information and is of limited research potential. The presence of historic artifacts in the STP suggests there is limited integrity for the prehistoric component.

6.1.7 Historic Discussion

The historic component represents a historic farmstead that dates to between the 1812 and the present. XXXXXX XXXXXX built the original part of the house about 1812. In 1815, the Great Revival came to Nicholas County. Barton W. Stone held services on the XXXXXX property under the great red oak tree, according to a monument on the property (Figure 6-7, above). XXXXXX named his son XXXXXXXXX. XXXXXX XXXXX is listed on the 1810 census with a white female and a male child, who are probably his wife XXXXXX and son XXX (U. S. Census 1810).

Until 1850, the census provides limited information. It is not until 1830 that XXXXXXX is recorded to have slave. He owns two males slaves in 1830, and two male slaves and a female slave in

1840. In 1850, XXXXXX XXXXX has three slaves, a 55 year old woman, a 28 year old man, and an eight year old boy. XXXXX XXXX had four slaves the same year. There was one 43 year old woman, a 23 year old man, and two 16 year old boys, who appear to be twins. In the 1860 Slave schedule, XXXX XXXXX had the same four slaves. XXXX XXXXX died in 1858, and XXXX XXXXXX took over the family farm. The addition to the house dates to XXXX XXXXX occupation. In the 1860 U.S. Census, XXXX XXXXX is listed with his wife XXXX, his son XXXX and his mother XXXXX. The census also lists the farm as worth $10,250 and XXXX XXXXX personal property as $4,744. In 1870, the value of XXXXX land increased to $15,000 and his personal property value increased to $5,000. Also in 1870, XXXX XXXXXX, age 61, is listed as a farmer, his wife XXX, age 64, is listed as keeping house, his son XXX W, age 24, is listed as working a farm. There were also four African-Americans listed on the census. They included Henry XXX, age 35, listed as working farm; Martha XXX, age 50, no occupation listed; John XXX, age 35, listed as working farm; and Rosalie XXXX, age 64, no occupation listed. XXXXX XXXXXX died in 1889, and XXXX XXXXX continued to farm the property until his death in 1925 (U.S. Census 1850, 1960, 1870, 1900, 1910, 1920; U.S. Slave Schedules 1850, 1860).

The site area is shown over a 1950 aerial photo (Figure 6-11) and on a 1958 USGS topographical map (Figure 6-12).

Forty-four historic artifacts were recovered during the Phase I investigations (Table 6-1, above). The artifacts consisted of activity group (n=1), architecture group (n=30), fuel group (n=2), furniture group (n=1), kitchen group (n=8), other group (n=1), and transportation (n=1). The temporally diagnostic artifacts consisted of a window glass fragment, a cut nail, a wire nail, a piece of ironstone, a piece of redware, and two pieces of whiteware. The window glass fragment dates to 1833 based on the Moir (1987) formula. An unspecified cut nail was recovered which dates to the nineteenth century and the wire nail dates to the twentieth century (Nelson 1968). The Ironstone dates from 1840 to the present and the whiteware dates from 1830 to the present (Majewski and O'Brien 1987). Redware was common on sites from the late eighteenth century to the mid-nineteenth century.

The artifact assemblage represents a midden of primarily architecture and kitchen material. The material may date to the XXXX occupation or to the construction of the main addition around 1858 when XXX became the head of the household. The soil profiles of the shovel test probes are similar and do not indicate any disturbances. In spite of the relatively low density of artifacts and the presence of a twentieth century nail, the site appears to contain important information to research questions related to site organization and activity areas of nineteenth century farmsteads (McBride 2008).

According to a monument on the property, the Great Revival meetings that took place on the XXXX Farm in 1815 are within the APE and Site 15Ni66. The meetings were part of the Great Revival of the early nineteenth century. The Great Revival was an important event in local and state history, and the meetings are eligible for listing on the National Register under Criterion A. An archaeological component of the Revival meetings was not recovered during the Phase I investigations. The archaeological component may be too low density to be visible in shovel probes. Other methods, such as metal detecting or 1 x 1 meter test units, may be able to recover archaeological evidence of the revival meetings.

Figure 6-11. Aerial Photograph from 1950 showing Site 15Ni66.

Figure 6-12. USGS Topographical map from 1953 showing Site 15Ni66.

6.1.8 National Register Eligibility

Site 15Ni66 consists of a prehistoric and a historic component. The prehistoric component consists of a single piece of debitage. The limited amount of material and the lack of cultural and temporal affiliation indicate that there is limited research potential for the prehistoric component. The association of prehistoric and historic artifacts indicates a lack of integrity for the prehistoric component. The historic component consists of a farmstead dating to between the 1812 and present. The area with in the APE consists of the side yard and front yard of the house. Artifacts recovered primarily consist of architectural and kitchen material. Upon completion of concurrent review for the assessment and recommendation for Site 15NI66, FHWA, SHPO, and KYTC are in agreement that the site does not qualify for nomination to the National Register under Criterion D. Therefore, no additional work will be undertaken at this site.

6.1.9 Recommendations

Upon completion of concurrent review for the assessment and recommendation for Site 15NI66, FHWA, SHPO, and KYTC are in agreement that the site does not qualify for nomination to the National Register under Criterion D. Therefore, no additional work will be undertaken at this site.

6.2 Site 15Ni67

Site 15Ni67 consists of a historic component which dates from the 1890 to the present based on artifacts and archival data. The site is a historic house which is now part of the Nicholas County Board of Education.

6.2.1 Location

Site 15Ni67 can be found on the USGS Carlisle, Kentucky, 7.5' quadrangle map (Figure 6-13 and Figure 6-14). The UTM coordinates (Zone 16 NAD 27) for the center of the site are XXXXXXXXXXX. The site is located along KY36 near the intersection with KY32. The site measures 0.22 acres (0.09 hectares). Figure 6-15 shows the site area.

6.2.2 Site Description

The site consists of an area that encompasses part of the side yard of the Board of Education Office and an area to the east across a small unnamed creek. The area to the east of the site has been disturbed by utility line construction. The side yard, STP's 2, 5, and 7 were disturbed, probably by school building construction. The area north of STP 7 was landscaped and sloped from construction and was not tested.

6.2.3 Artifacts Recovered

Thirty artifacts were recovered from five positive shovel test probes (Table 6-3). The material recovered included bottle/jar glass, flat glass, cut nails, redware, whiteware, brick, coal, unidentified metal, and unidentified plastic (Figure 6-16).

6.2.4 Stratigraphy

Nine shovel test probes were excavated in the area near Site 15Ni67. Five of the probes (STPs 1, 2, 3, 5, and 7) were disturbed. The soil for the site is Nolin silt loam (No). Two shovel test probes are described below (Figure 6-17 and Figure 6-18).

6.2.4.1 STP 2

Shovel test probe 2 consisted of one zone (Figure 6-14 and Figure 6-17). Zone I extended from surface to 35 cmbs and consisted of a 10YR3/4 dark yellowish brown silty clay and a 10YR5/6 yellow brown silty clay. The zone appears to be fill. Below Zone I is rocks at 35 cmbs. Artifacts recovered included whiteware, bottle/jar glass, cinder, a rubber seal, and mortar.

6.2.4.2 STP 4

Shovel test probe 4 consisted of three zones (Figure 6-14 and Figure 6-18). Zone I extended from surface to 17 cmbs and consisted of a 10YR3/3 dark brown clay loam. Zone II extended from 17 cmbs to 28 cmbs and consisted of a 10YR5/6 yellowish brown clay loam. Zone III extended from 28 to 36 cmbs and consisted of a 10YR6/8 brownish yellow clay loam. Artifacts recovered from the STP included brick fragments, a cut nail and a bottle/jar fragment.

6.2.5 Features

No features were located during the Phase I archaeological investigations.

6.2.6 Historic Interpretation

Site 15Ni67 is associated with a house built around 1890. The house is now an office of the Nicholas County Board of Education. The property has been landscaped and a parking lot has been constructed

Figure 6-13. U.S.G.S. Topographic Map Showing 15Ni67.

Figure 6-14. Aerial Photograph Showing Site 15Ni67.

Figure 6-15. Site 15Ni67, Looking Northwest.

Table 6-3. Site 15Ni67 Artifacts.

Type	STP				Total
	2	4	5	6	
Brick		12			12
Flat Glass			1	1	2
Hardware	1				1
Mortar	1				1
Nail		1		2	3
Coal			1		1
Other Coal Fuel	3				3
Bottle/Jar	1	1	1		3
Redware				1	1
Rubber Seal	1				1
Whiteware	1				1
Unidentified				1	1
Total	**8**	**14**	**3**	**5**	**30**

Figure 6-16. Sample of Site 15Ni67: A) Coal Fragments; B) Bottle Glass Fragment; C) Redware; D) Cut Nail: E) Wire Nail; F) and Flat Glass.

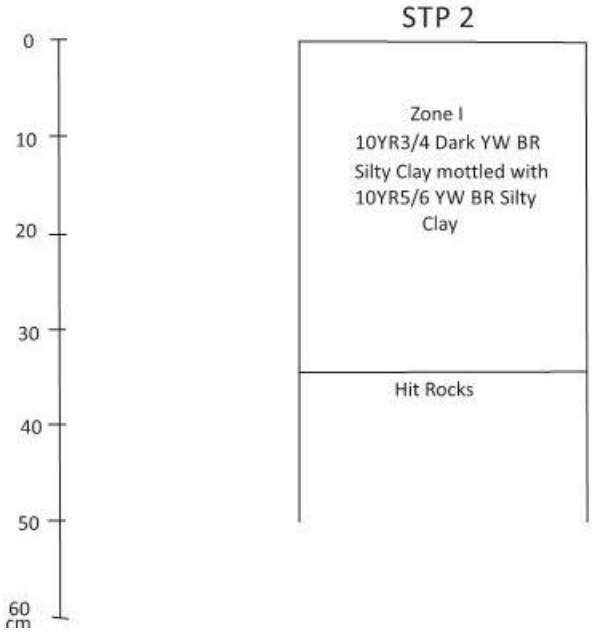

Figure 6-17. Shovel Test Probe from Site 15Ni67.

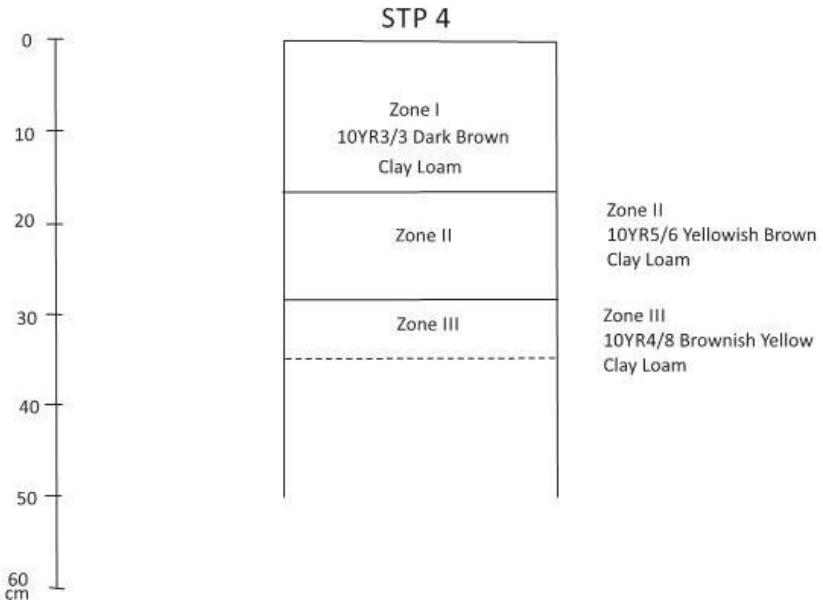

Figure 6-18. Shovel Test Probe from Site 15Ni67.

over what was the back yard. The area to the north has been modified by landscaping and construction of Nicholas County elementary, middle school and high school buildings. In the 1950 aerial photograph, the site area is part of a farm. The barn to the northeast of the house is still standing. The remainder of the farm is under school buildings and parking lots.

Most of the diagnostic artifacts were recovered from disturbed contexts. These artifacts include 7d and 9d unspecified cut nails, redware, and undecorated whiteware. Two pieces of flat glass were also recovered and date to 1906 and 1947.

Artifacts from the undisturbed STP 4 consisted of 12 brick fragments, an amber bottle/jar fragment, and the medial fragment of a cut nail.

The site area is shown on a historic aerial photo in Figure 6-19 and on a historic topographical map in Figure 6-20.

The evidence of disturbance, probably by the construction of the school building, indicates a lack of integrity of the site. The area of the site that was not disturbed consisted of only STP 4 and STP 6. The areas to the west, east, and south appear to be disturbed. The material recovered from STP 4 and STP 6 is not likely to yield information important in history.

6.2.7 National Register Eligibility

Site 15Ni67 consists of a historic component. The historic component consists of a house dating to between the 1890s and the present. The site represents part of the yard for the house. The yard has been disturbed by construction for Nicholas County school buildings. The backyard of the house has an asphalt parking lot constructed over it. The site lacks integrity and has limited research potential. Therefore, Site 15Ni67 has limited research potential and is not considered potentially eligible for listing on the NRHP under Criterion D.

6.2.8 Recommendations

No further archaeological work is recommended for Site 15Ni67.

Figure 6-19. Historic Aerial Photograph Showing Site 15Ni67.

Figure 6-20. USGS Topographical map from 1953 showing Site 15Ni66.

6.3 Site 15Ni68

Site 15Ni68 consists of a historic house site. The house was built between 1895 and 1905 and is still occupied. The positive shovel probe is located in the front yard of the house.

6.3.1 Location

Site 15Ni68 can be found on the USGS Carlisle, Kentucky, 7.5' quadrangle map (Figure 6-21). The UTM coordinates (Zone 16 NAD 27) for the center of the site are XXXXXXXXXXXXX (Figure 6-22). The site is located along KY36 near the intersection with KY32. The site measures 0.019 acres (0.008 hectares). Figure 6-23 shows the site area.

6.3.2 Site Description

The site consists of the front yard of a house built between 1895 and 1905 (Ball 2014). The house is shown on the 1950 aerial photograph of the site. In 1950, the house was in an urban context, although there were agricultural field to the rear of the house. The fields appear to be divided by property based on fence lines and appear to be associated with the houses along KY32.

6.3.3 Artifacts Recovered

Seven artifacts were recovered from one positive shovel test probe (Table 6-4). The material recovered consisted of four brick fragments, one piece of coal, one piece of bottle/jar glass, and one undecorated whiteware rim fragment (Figure 6-24). Only the bottle base and the whiteware are diagnostic. The bottle base is aqua and a base fragment from a medicine bottle. Since it is a fragment it lacks mold seams and other manufacturing marks. It may date to the early twentieth century. The ceramic is an undecorated whiteware rim fragment. It may be a bowl fragment. It dates between 1830 and the present.

6.3.4 Stratigraphy

One shovel test probe was excavated at Site 15Ni68. The soil for the site is Faywood silt loam (FwC) with a 6 to 12 percent slope. The positive shovel test probe is described below (Figure 6-25).

6.3.4.1 STP 19-1

Shovel test probe 19-1 consisted of two zones (Figure 6-22 and Figure 6-25). Zone I extended from surface to 19 cmbs and consisted of a 10YR3/2 very dark grayish brown clay loam. Zone II extended from 19 to 30 cmbs and consisted of a 10YR4/6 dark yellow brown clay loam. Artifacts recovered consisted of four brick fragments, one piece of coal, one piece of bottle/jar glass, and one piece of whiteware.

6.3.5 Features

No features were located during the Phase I archaeological investigations.

6.3.6 Historic Interpretation

Site 15Ni68 is associated with a house built between 1895 and 1905. The artifacts recovered consisted of four brick fragments, one coal fragment on bottle base fragment, and one whiteware rim fragment. They were found in a shovel test probe in the yard. The material recovered corresponds to the occupation of the site from 1895 to the present. The low density of the artifacts recovered and the limited nature of the diagnostic material indicates that the site would not yield information important to history.

Figure 6-21. Location of Archaeological Site 15Ni68 USGS Topography Map.

Figure 6-22. Aerial Photograph of Site 15Ni68.

Figure 6-23. Site 15Ni68 looking West.

Table 6-4. Site 15Ni68 Artifacts.

Type	STP	Total
	19-1	
Brick	4	4
Coal	1	1
Bottle/Jar	1	1
Whiteware	1	1
Total	**7**	**7**

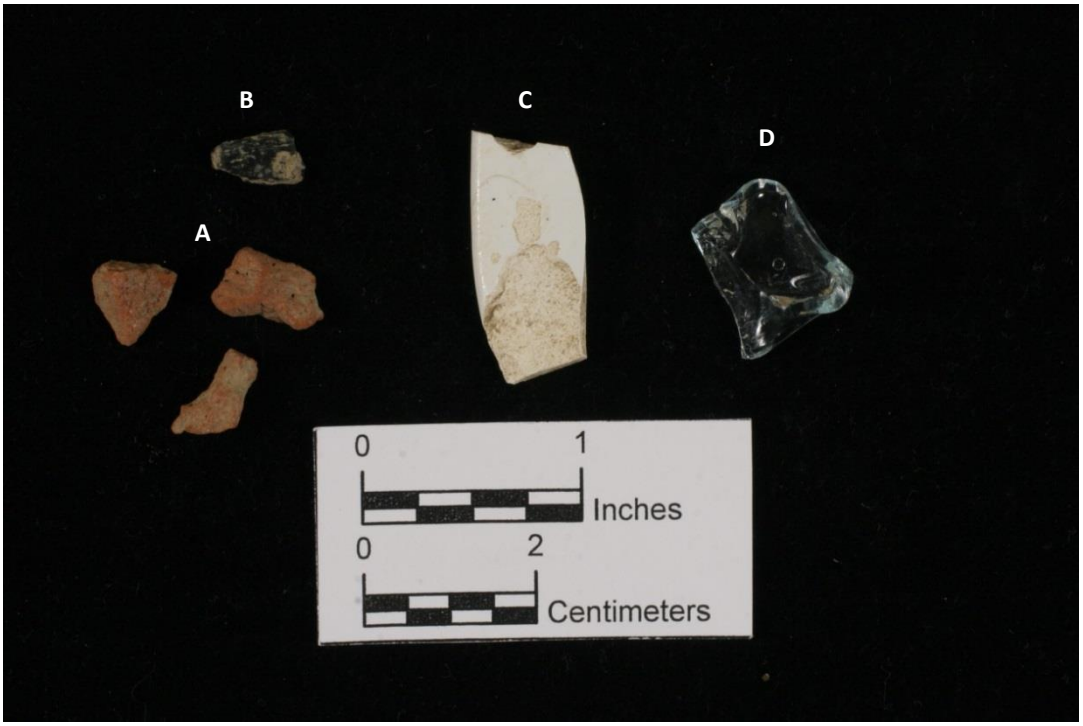

Figure 6-24. Sample of Site 15Ni68 Artifact: A) Brick Fragments; B) Coal Fragment; C) Whiteware; D) and Glass Bottle Jar Fragment.

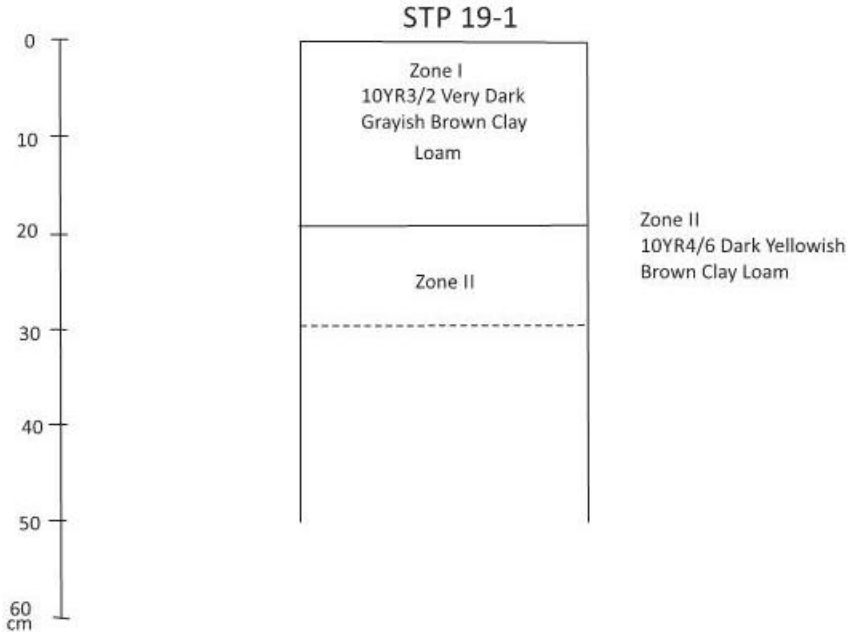

Figure 6-25. Shovel Test Probe from Site 15Ni68.

The site area is shown on a historic aerial photograph in Figure 6-26 and on a historic topo in Figure 6-27.

Figure 6-26. Historic Aerial Photograph Showing Site 15Ni68.

Figure 6-27. USGS Topographical map from 1953 showing Site 15Ni68.

6.3.7 National Register Eligibility

Site 15Ni68 consists of a historic component. The historic component consists of a house built between 1895 and 1905. The site represents part of the front yard for the house. Only seven artifacts were recovered from the excavations, and none are likely to yield information important to history. Therefore, Site 15Ni68 has limited research potential and is not considered potentially eligible for listing on the NRHP under Criterion D.

6.3.8 Recommendations

No further archaeological work is recommended for Site 15Ni68.

6.4 Site 15Ni69

Site 15Ni69 is a multi-component site with a small lithic scatter and a historic artifact scatter in an agricultural field. The site is part of the XXXXX farm discussed above in Site 15Ni66.

6.4.1 Location

Site 15Ni69 can be found on the USGS Carlisle, Kentucky, 7.5' quadrangle map (Figure 6-28). The UTM coordinates (Zone 16 NAD 27) for the center of the site are N XXXXXXXXXXXXX (Figure 6-29). The site is located along KY32 and KY36. The site measures 1.16 acres (0.47 hectares). Figure 6-30 shows the site area.

6.4.2 Site Description

The site consists of an area to the north of KY36 and Brushy Fork and to the northeast of the XXXXX house. The site is in pasture, but was in crops according to the 1950 historic aerial photograph. The site is to the south of a spring and cinderblock outbuilding. No evidence of other buildings was located on other maps. Two features were located. Feature 1 appears to be a trash pit for brick debris. Feature 1 is located on the slope to the south of the outbuilding. Feature 2 is a cluster of rocks that may be part of a building foundation or footing (Figure 6-31). It may not be related to Feature 1. Most of the artifacts recovered were brick fragments (89%).

6.4.3 Artifacts Recovered

Two hundred and eighty-one historic artifacts were recovered from 18 positive shovel test probes (Table 6-5). Four prehistoric artifacts were recovered from four positive shovel test probes (Table 6-6).

The historic material recovered included bottle/jar glass (n=3), brick (n=250), coal (n=13), cinder (n=12), and light bulb parts (n=3) (Figure 6-32). Most of the artifacts recovered were brick fragments (n=250). One hundred and ninety-three brick fragments were recovered from STP 24-19. Two of the bottle/jar glass fragments were non-diagnostic body fragments. The other bottle/jar fragment was a complete screw lip condiment jar. The light bulb parts appear to be modern (Figure 6-33).

The prehistoric material recovered consisted of debitage. Two of flakes were recovered from mixed deposits.

6.4.4 Stratigraphy

Twenty-eight shovel test probes were excavated in the area near Site 15Ni69. Eighteen of the probes were positive. Figure 6-34, Figure 6-35, and Figure 6-36 illustrate three of the positive shovel probe profiles. Figure 6-34 and Figure 6-35 describe the profiles of the two features located during the survey. Figure 6-36 describes the typical stratigraphy for the site.

6.4.4.1 STP 24-19

Shovel test probe 24-19 consisted of two zones (Figure 6-29 and Figure 6-34). Zone I extended from surface to 24 cmbs and consisted of a 10YR3/3 dark brown silt loam and mottled with brick. Zone II extended from 24 to 68 cmbs and consisted of 10YR3/3 dark brown silt loam with heavy concentrations of brick fragments. The brick concentration prevented excavation below 68 cmbs. The STP was designated as Feature 1. Only brick fragments were recovered.

Figure 6-28. U.S.G.S. Topographic Map with Site 15Ni69.

Figure 6-29. Aerial Photograph showing Site 15Ni69.

Figure 6-30. Site 15Ni69, looking Southwest.

Figure 6-31. STP 24-26, Feature 2.

Table 6-5. Site 15Ni69 Historic Artifacts.

Type	STP																Total
	24-19 E	24-19 W	24-19 S	24-19 W	24-21	24-21 W	24-21 N	24-22	24-24	24-26	24-30	24-30 S	24-35 S	24-37	24-54	24-19	
Brick	6	2	1	8	8	1	2	1	20	4				4		193	250
Cinder				1							7	2			1	1	12
Coal		1		5									6	1			13
Light Bulb Part								3									3
Bottle/Jar									2	1							3
Total	**6**	**3**	**1**	**14**	**8**	**1**	**2**	**4**	**22**	**5**	**7**	**2**	**6**	**5**	**1**	**194**	**281**

Table 6-6. Site 15Ni69 Prehistoric Artifacts.

Type	STP				Total
	24-18	24-27	STP 24-35 S	24-37	
Secondary Flake	1	1	1		3
Undetermined Flake				1	1
Total	**1**	**1**	**1**	**1**	**4**

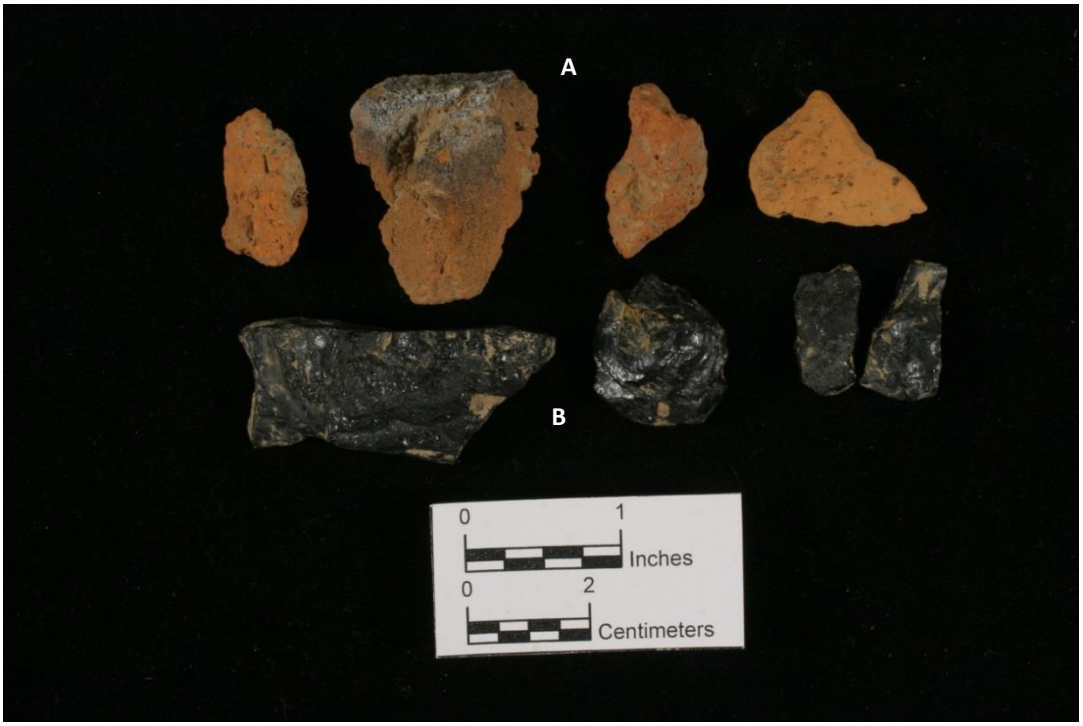

Figure 6-32. Sample of Site 15Ni69 Artifacts: A) Brick Fragments; and B) Coal Fragments.

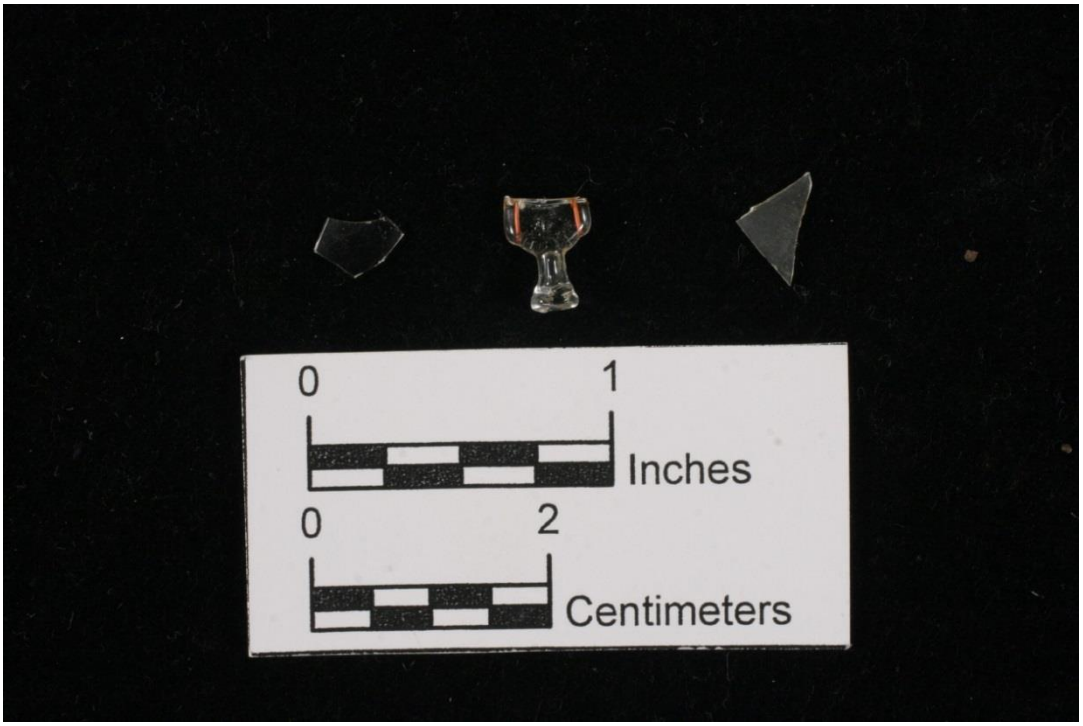

Figure 6-33. Light Bulb Part from Site 15Ni69.

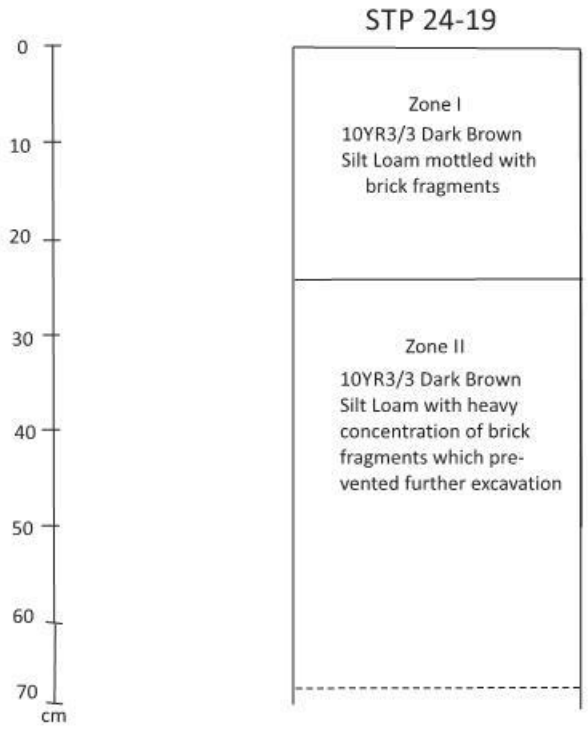

Figure 6-34. Shovel Test Probe from Site 15Ni69.

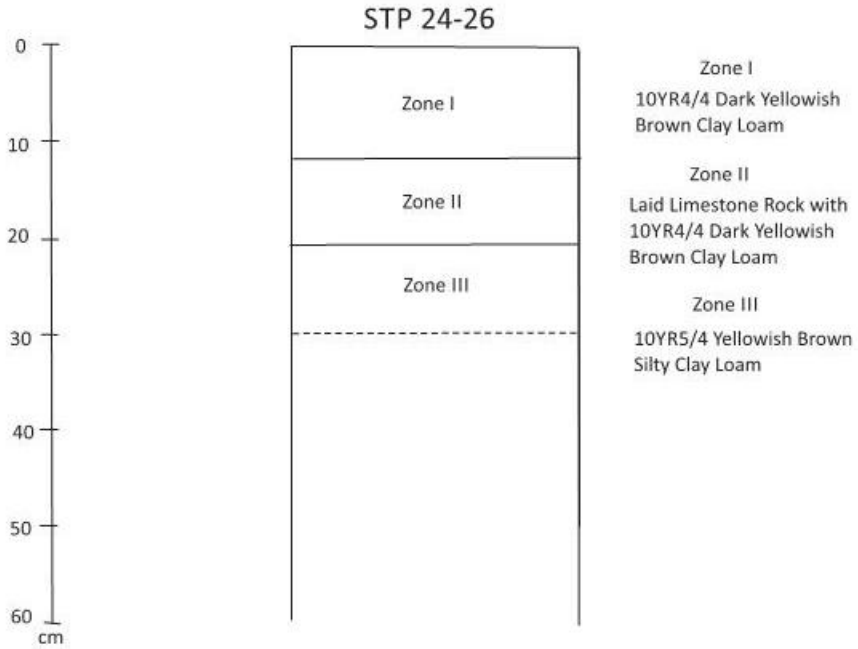

Figure 6-35. Shovel Test Probe from Site 15Ni69.

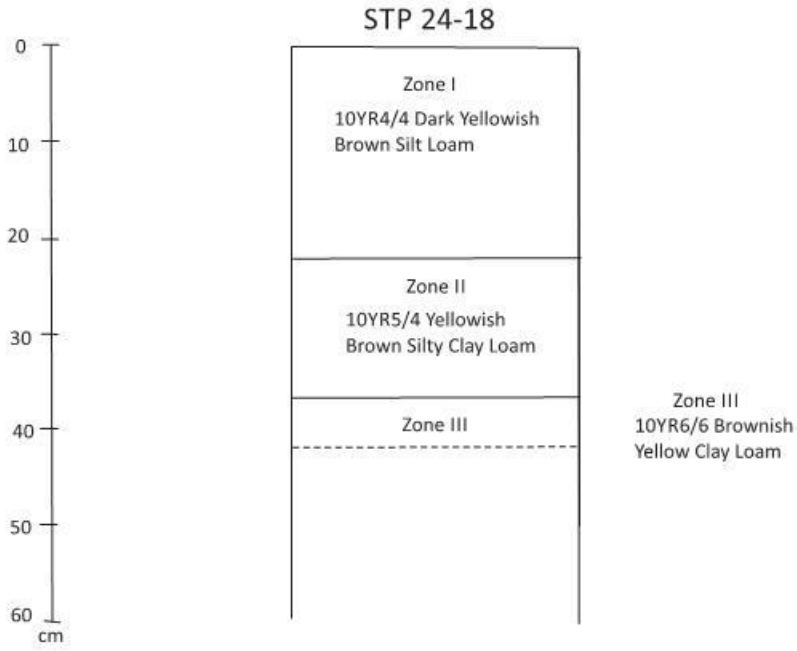

Figure 6-36. Shovel Test Probe from Site 15Ni69.

6.4.4.2 STP 24-26

Shovel test probe 24-26 consisted of three zones (Figure 6-29, Figure 6-31, and Figure 6-35). Zone I extended from surface to 12 cmbs and consisted of a 10YR4/4 dark yellowish brown clay loam. Zone II extended from 12 to 21 cmbs and consisted of a 10YR4/4 dark yellowish brown clay loam. Limestone rocks were encountered at this level. They may be cultural, perhaps related to an outbuilding foundation or footing. Zone III extended from 21 to 30 cmbs and consisted of a 10YR5/4 yellowish brown silty clay loam. Artifacts recovered from the STP included brick fragments and a bottle/jar fragment.

6.4.4.3 STP 24-18

Shovel test probe 24-18 consisted of three zones (Figure 6-29 and Figure 6-36). Zone I extended form the surface to 22 cmbs and consisted of 10YR4/4 dark yellowish brown silt loam. Zone II extended from 22 to 37 cmbs and consisted of 10YR5/4 yellowish brown silt clay loam. Zone III extended from 37 to 42 cmbs and consisted of 10YR6/6 brownish yellow clay loam. One prehistoric flake was recovered form Zone I.

6.4.5 Features

Two features were located during the Phase I archaeological investigations.

6.4.5.1 Feature 1

Feature 1 appears to be a trash pit filled with brick fragments. Shovel test probes were excavated five meters from STP 24-19 did not encounter the feature. The shovel probes around the feature had normal profiles and lower densities of brick fragments. Core probes at 2.5 meters did not encounter the feature. The feature appears to be a small pit for brick debris. No complete bricks were recovered. There is no evidence of a building in the area. The bricks may be from the destruction of an earlier building or brick manufacture for the construction of the main house.

6.4.5.2 Feature 2

Feature 2 is a rock concentration (Figure 6-31). It is possible that the rock represent an architectural feature such as a footing or part of a foundation. One fragment of non-diagnostic bottle glass and four brick fragments were recovered from the STP. The rock concentration extended for a few centimeters beyond the probe.

6.4.6 Historic Interpretation

Site 15Ni69 is a historic site located in a pasture which is part of the XXXXX farm. The historic artifact assemblage consists mostly of brick (n=250, 89%). Fuel group artifacts account for 8.9% of the historic assemblage. These artifacts suggest the presence of some kind of structure. The lack of kitchen group artifacts suggests the structure may have been a farm outbuilding. A cinderblock outbuilding is located to the north of the site and also up slope. The assemblage could be related to an earlier structure at this location. The concentration of brick in STP 24-19, Feature 1, and brick in surrounding units suggests that brick fragments were deposited at the location. The brick fragments could also be related to a brick-making and the construction of the XXXXX house either for the original construction in 1812 or the addition in the 1850s.

The site area is shown on a historic aerial Figure 6-37 and on a historic topographical map Figure 6-38.

Site 15Ni69 consists of a historic component, which include two features and an artifacts assemblage that includes primarily brick fragments. The two features indicate that the site has integrity. The site could provide information on the organization of a farm. The diagnostic artifacts recovered are limited. The complete bottle and light bulb fragments date to the twentieth century and may relate to more modern farm activities. The presence of a building near Feature 1 or the presence of a brick manufacturing area has potential for yielding information on farm organization and history.

6.4.7 Prehistoric Interpretation

Site 15Ni69 has a small prehistoric component. It consists of three lithic secondary flakes and one undetermined flake. The specimens were all Size Grade 1. The three secondary flakes were made of Boyle chert while the undetermined flake was made of Cane Run chert. They were recovered from STP 24-18; STP 24-27; STP 24-35, R 10 S; and STP 24-37. The debitage has little to no integrity and would not yield important information to prehistory.

6.4.8 National Register Eligibility

Site 15Ni69 consists of a historic component and a prehistoric component. The prehistoric component consists of four flakes and lacks integrity. It would not yield important information to prehistory. The historic component consists of a historic artifact scatter in an agricultural field associated with the XXXXX farm. The farm dates from the early 1800s to the present. Two features were identified. The two features indicate that the site has integrity. The site could provide information on the organization of a farm. The diagnostic artifacts recovered are limited. The complete bottle and light bulb fragments date to the twentieth century and may relate to more modern farm activities. Upon completion of concurrent review for the assessment and recommendation for Site 15NI69, FHWA, SHPO, and KYTC are in agreement that the site does not qualify for nomination to the National Register under Criterion D. Therefore, no additional work will be undertaken at this site.

Figure 6-37. Historic Aerial Photograph Showing Site 15Ni69.

Figure 6-38. USGS Topographical map from 1953 showing Site 15Ni69.

6.4.9 Recommendations

Upon completion of concurrent review for the assessment and recommendation for Site 15NI69, FHWA, SHPO, and KYTC are in agreement that the site does not qualify for nomination to the National Register under Criterion D. Therefore, no additional work will be undertaken at this site.

6.5 Site 15Ni70

Site 15Ni70 consists of a historic site in the side yard of a house built around 1900.

6.5.1 Location

Site 15Ni70 can be found on the USGS Carlisle, Kentucky, 7.5' quadrangle map (Figure 6-39). The UTM coordinates (Zone 16 NAD 27) for the center of the site are XXXXXXXXXXXXXXXXX (Figure 6-40). The site is located along KY32 near an unnamed creek. The site measures 0.09acres (0.04 hectares). Figure 6-41 shows the site area.

6.5.2 Site Description

The site is in the side yard of a circa 1900 frame house (Figure 6-41). The site is in mowed grass. The site measures approximately 20 by 20 meters and consists of 0.09 acres (0.04 hectares). It is located on the east side of KY32. The house is to the southeast of the site. There is a frame outbuilding to the east of the site. The 1950 aerial photograph does not indicate that there was another building within the site boundaries. There appears to be a barn to the east of the site and agricultural fields farther to the east. The house, outbuilding and older barn are outside the APE.

6.5.3 Artifacts Recovered

Thirty-nine artifacts were recovered from four positive shovel test probes (Table 6-7). The material recovered consisted of brick (n=21), drain pipe (n=1), nails (n=5), fuel (n=31), and bottle/jar glass (n=1) (Figure 6-42).

6.5.4 Stratigraphy

Four shovel test probes were positive for site 15Ni70 (Figure 6-43). The stratigraphy for the probes was similar for all the shovel probes. The soil for the site is Faywood silt loam (FwC) and has a 6 to 12 percent slope. One shovel test probe is described below.

6.5.4.1 STP T27 P7

Shovel test probe T27 P7 consisted of three zones (Figure 6-40 and Figure 6-43). Zone I extended from surface to 10 cmbs and consisted of a 10YR4/4 dark yellowish brown silty loam. Zone II extended from 10 to 32 cmbs and consisted of 10YR 4/6 dark yellowish brown silty loam. Zone III extended from 32 to 36 cmbs and consisted of 10YR5/4 yellowish brown silty clay loam. Twenty-seven artifacts were recovered and consisted of stoneware drain pipe (n=1), cinder (n=9), and coal (n=17).

6.5.5 Features

No features were located during the Phase I archaeological investigations.

6.5.6 Historic Interpretation

Site 15Ni70 is a historic site in the side yard of a circa 1900 house. The site area is shown on a historic aerial in Figure 6-44 and on a historic topographic map in Figure 6-45. Thirty-nine artifacts were recovered. Thirty-one of the artifacts were coal or cinder. Five nails were recovered. One of the nails was a cut nail and the other four were unidentified. The one kitchen group artifact was a machine-made glass bottle/jar lid. Based on the stratigraphy and artifacts the site appears to be a refuse midden. The limited number of diagnostic material suggests that midden dates to the early twentieth century. The range of artifacts is rather limited. Based on the dominance of fuel group artifacts in the assemblage and the limited range of artifacts, it is unlikely that the site would yield important information to history.

Figure 6-39. U.S.G.S. Topographic Map, Showing Location of 15Ni70.

Figure 6-40. Aerial Photograph Showing Location of 15Ni70.

Figure 6-41. Site 15Ni70, Looking Southeast.

Table 6-7. Site 15Ni70 Artifacts.

Type	STP				Total
	T27, P7	T27, P7 N	T27, P7 E	T27 NE	
Brick			1		1
Drain Pipe	1				1
Nail		4		1	5
Cinder	9		4		13
Coal	17			1	18
Bottle/Jar		1			1
Total	**27**	**5**	**5**	**2**	**39**

Figure 6-42. Sample of Site 15Ni70 Artifacts: A) Coal Fragments; B) Redware; C) Cut Nail; D) Unidentified Nail Fragments; E) and Machine-Made Glass Bottle Jar Fragment.

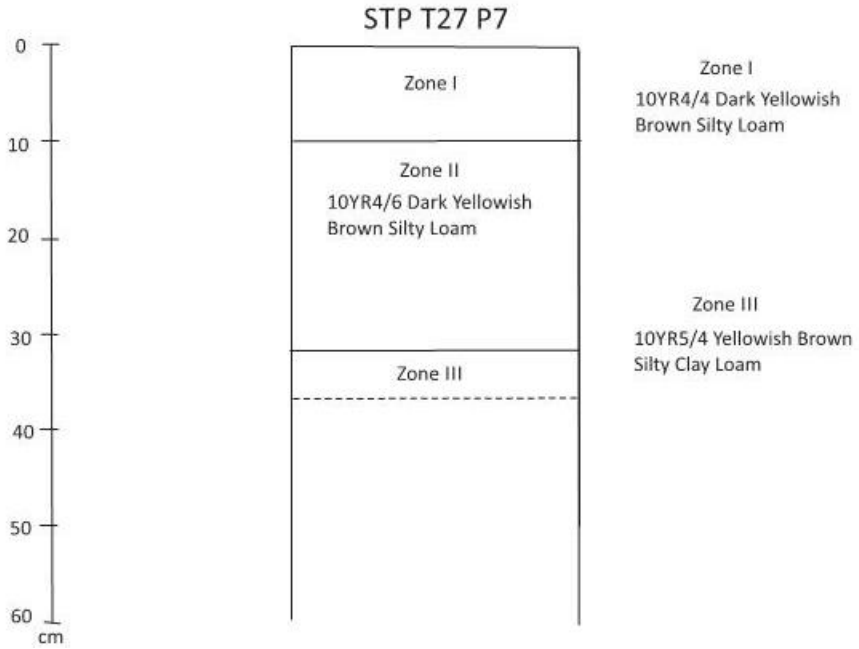

Figure 6-43. Shovel Test Probe from Site 15Ni70.

Figure 6-44. Historic Aerial Photograph Showing Site 15Ni70.

Figure 6-45. USGS Topographical map from 1953 showing Site 15Ni70.

6.5.7 National Register Eligibility

Site 15Ni70 consists of a historic site consisting of a midden related to a circa 1900 house. Although there appears to be integrity, the artifact assemblage does not have a range of artifacts and the site is unlikely to yield important information to history. Therefore, Site 15Ni70 is not considered potentially eligible for listing on the NRHP under Criterion D. Criteria A, B, and C are not applicable.

6.5.8 Recommendations

No further archaeological work is recommended for site 15Ni70.

6.6 Isolated Find # 1

Isolated Find # 1 (IF #1) consists of a small brick fragment recovered in the front yard of a house along KY32.

6.6.1 Location

IF #1 can be found on the USGS Carlisle, Kentucky, 7.5' quadrangle map (Figure 6-46). The UTM coordinates (Zone 16 NAD 27) for the center of the isolated find are N4244782.1, E 758621.7. IF #1 is located to the east of KY32 (Figure 6-47).

6.6.2 Description

IF #1 consists of an area that is relatively flat. IF #1 consists of a small brick fragment.

6.7 Isolated Find # 2

Isolated Find # 2 (IF #2) consists of one historic faunal fragment from a front yard to house along KY 32.

6.7.1 Location

Isolated Find 2 can be found on the USGS Carlisle, Kentucky, 7.5' quadrangle map (Figure 6-48). The UTM coordinates (Zone 16 NAD 27) for the center of the isolated find are N4244677, E 758757. IF #2 is located north of KY32 in the front yard of a house (Figure 6-49).

6.7.2 Description

IF #2 consists of an area that is gradually sloping. The isolated find consists of a single historic faunal fragment.

6.8 Isolated Find # 3

Isolated Find # 3 (IF #3) consists of a historic component. No temporally diagnostic artifacts were recovered. IF #3 is potentially associated with a house that dates to 1925 which is located within the same property boundary.

6.8.1 Location

Isolated Find #3 can be found on the USGS Carlisle, Kentucky, 7.5' quadrangle map (Figure 6-50). The UTM coordinates (Zone 16 NAD 27) for the center of the site are N4244176.9, E 758510.8. IF #3 is located along KY36 near the intersection with KY32 (Figure 6-51).

6.8.2 Description

IF # 3 consists of an area that encompasses part of the side yard of a house built before 1950. Five shovel probes were excavated and only one of the probes was positive. Three artifacts were recovered from one positive shovel test probe. The material recovered consisted of three pieces of coal. Due to the paucity of the artifacts, the material was deemed an isolated find.

6.9 Isolated Find # 4

Isolated Find # 4 (IF #4) consists of a historic scatter mixed with modern material. The isolated find is potentially associated with a historic house site located on the same property. A modern house is also on the property. The historic house construction dates to around 1925.

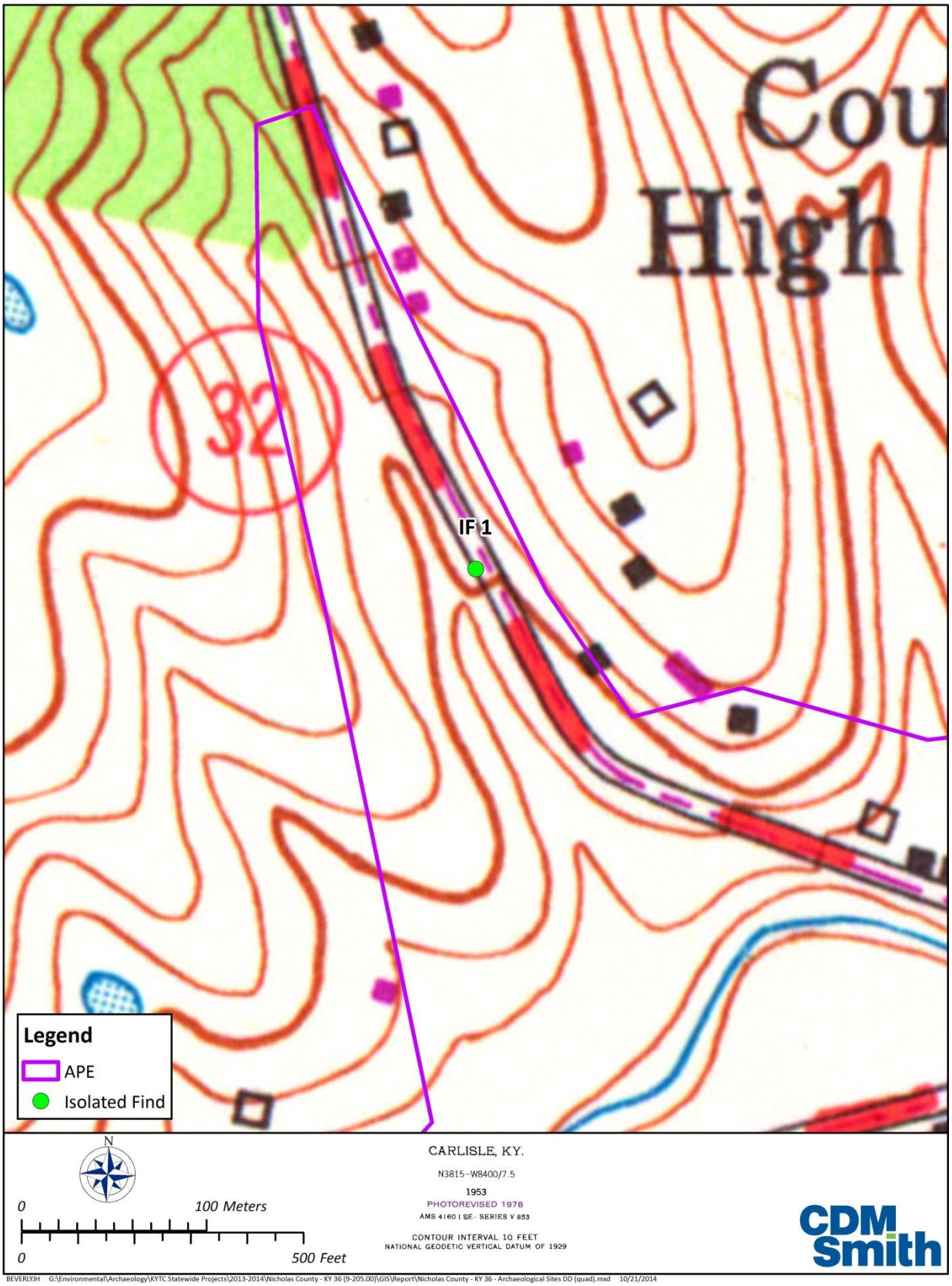

Figure 6-46. U.S.G.S. Topographic Map, Showing Location of IF #1.

Figure 6-47. Aerial Photograph Showing IF #1.

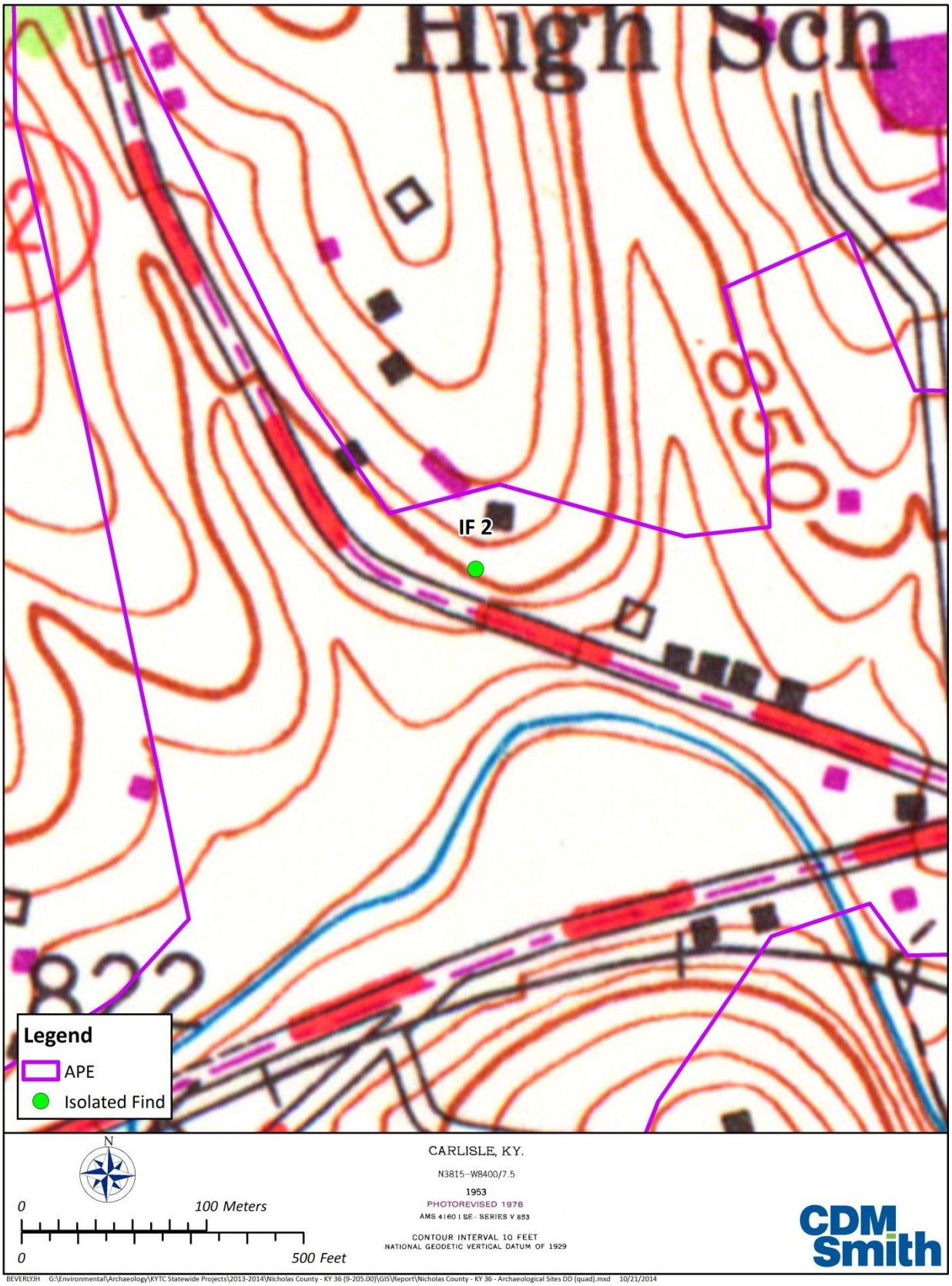

Figure 6-48. U.S.G.S. Topographic Map, Showing Location of IF #2.

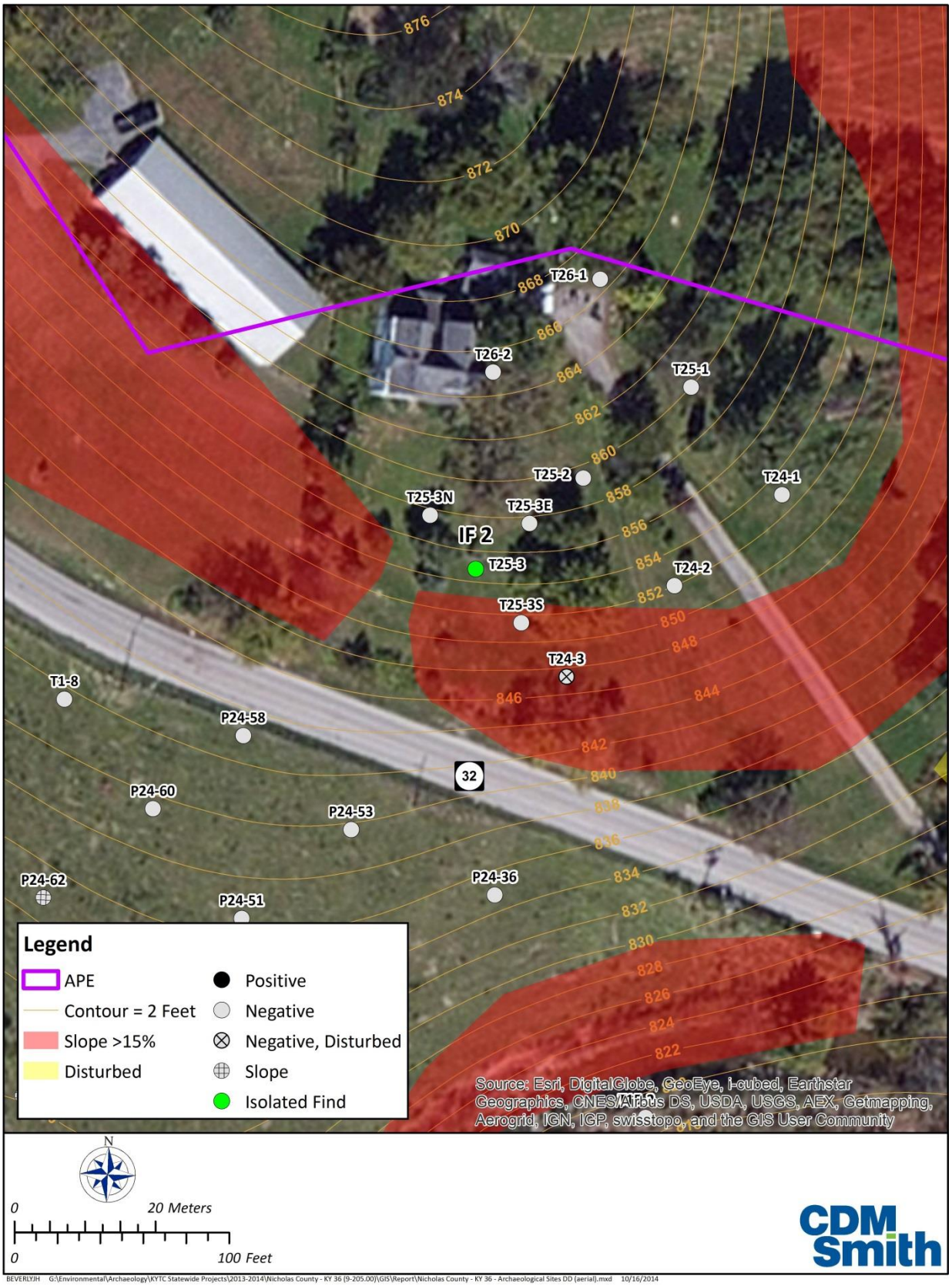

Figure 6-49. Aerial Photograph Showing IF #2.

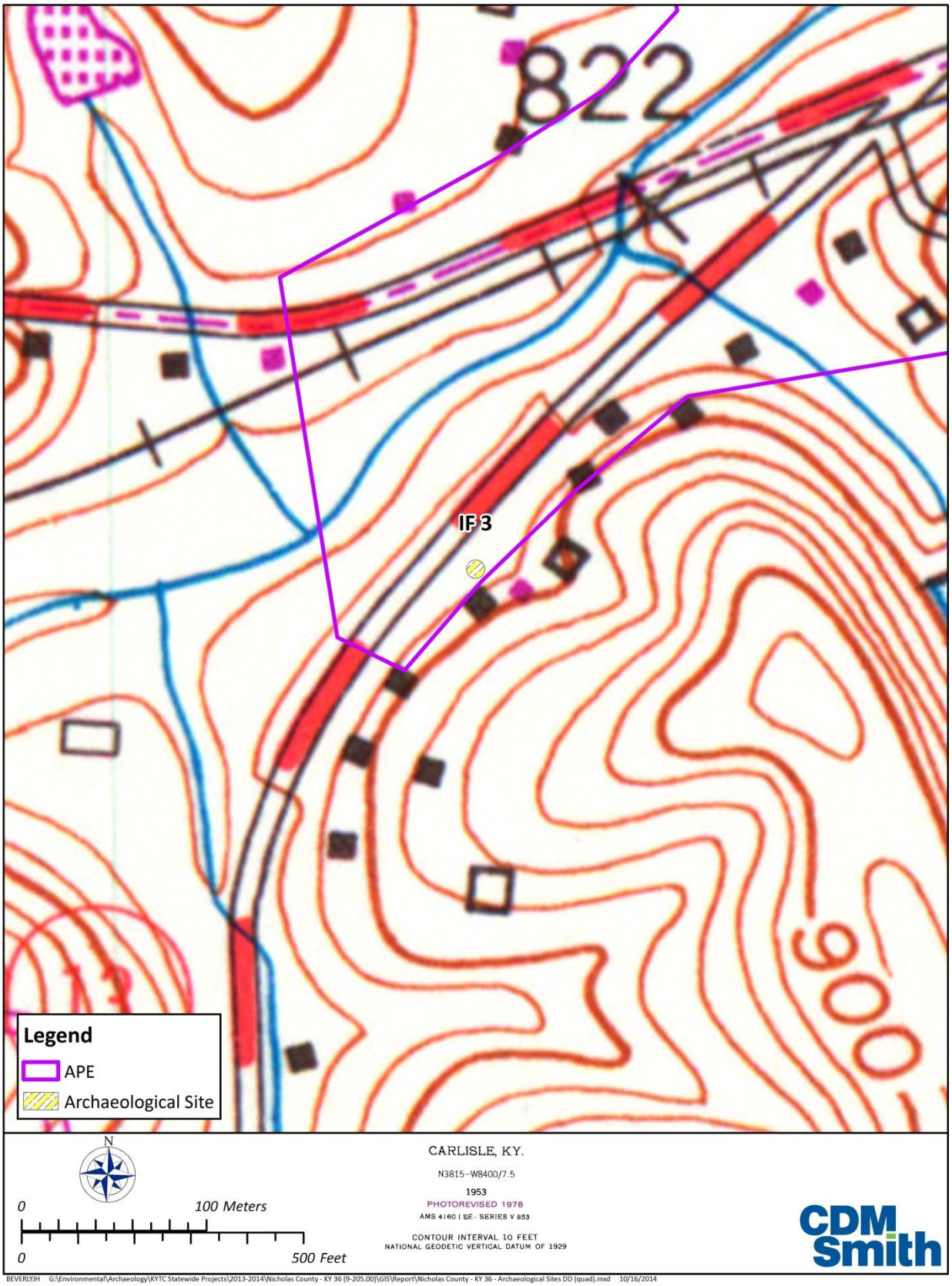

Figure 6-50. U.S.G.S. Topographic Map, Showing Location of IF #3.

Figure 6-51. Aerial Photograph of IF #3.

6.9.1 Location

IF #4 can be found on the USGS Carlisle, Kentucky, 7.5' quadrangle map Figure 6-52). The UTM coordinates (Zone 16 NAD 27) for the center of the find are N4244154.3, E 758495.6. The isolated find is located along KY13 near the intersection with KY36 (Figure 6-53).

6.9.2 Description

IF #4 consists of an area that encompasses the side yard of the house. Eighteen artifacts were recovered from two positive shovel test probes. The material recovered consisted of eight pieces of coal, five pieces of bottle/jar glass, one piece of unidentified metal, three pieces of unidentified plastic, and part of a plastic toy watch. The presence of modern material suggests a mixed deposit and limited integrity and as a result, the material was treated as an isolated find.

6.10 Isolated Find #5

Isolated Find # 5 (IF #5) consists of a historic artifact scatter from a pasture on the XXXXX farm.

6.10.1 Location

IF #5 can be found on the USGS Carlisle, Kentucky, 7.5' quadrangle map (Figure 6-54). The UTM coordinates (Zone 16 NAD 27) for the center of the isolated find are N4244766.9, E 758566.8. The isolated find is located along KY32 near an unnamed creek (Figure 6-55).

6.10.2 Description

IF #5 consists of an area that is relatively flat and had once been an agricultural field according to the 1950 aerial photograph. IF #5 is to the west of KY32 and an unnamed creek. To the west of the IF #5, the land becomes more sloped. Four artifacts were recovered from three positive shovel test probes. The material recovered included a brick fragment, a fence staple, an unidentified medial nail fragment, and a piece of charcoal. The artifacts are not diagnostic and could potentially be modern. The property has remained in continual use up to today. Due to the paucity of the artifacts, the material was deemed best treated as an isolated find.

6.11 Isolated Find #6

Isolated Find # 6 (IF #6) consists of a historic artifact scatter from a pasture on the XXXXX farm. IF #6 is also adjacent to an unnamed stream and a culvert.

6.11.1 Location

IF #6 can be found on the USGS Carlisle, Kentucky, 7.5' quadrangle map (Figure 6-56). The UTM coordinates (Zone 16 NAD 27) for the center of the isolated find are N4244838.4, E 758563.8. IF #5 is located along KY32 near an unnamed creek (Figure 6-57).

6.11.2 Description

IF #6 consists of an area near KY32 that had once been an agricultural field according to the 1950 aerial photograph. The isolated find is to the west of KY32 and east unnamed creek. It is also adjacent to a culvert. IF #6 was in pasture at the time of the survey. One hundred and nine artifacts were recovered from three positive shovel test probes. The material recovered included a Fuel group (n=13), Kitchen group (n=76), other (n=17), brick fragments (n=2), and a shell button. The material could be result of refuse due to proximity to roadside and other material may have been deposited by alluvial activity by

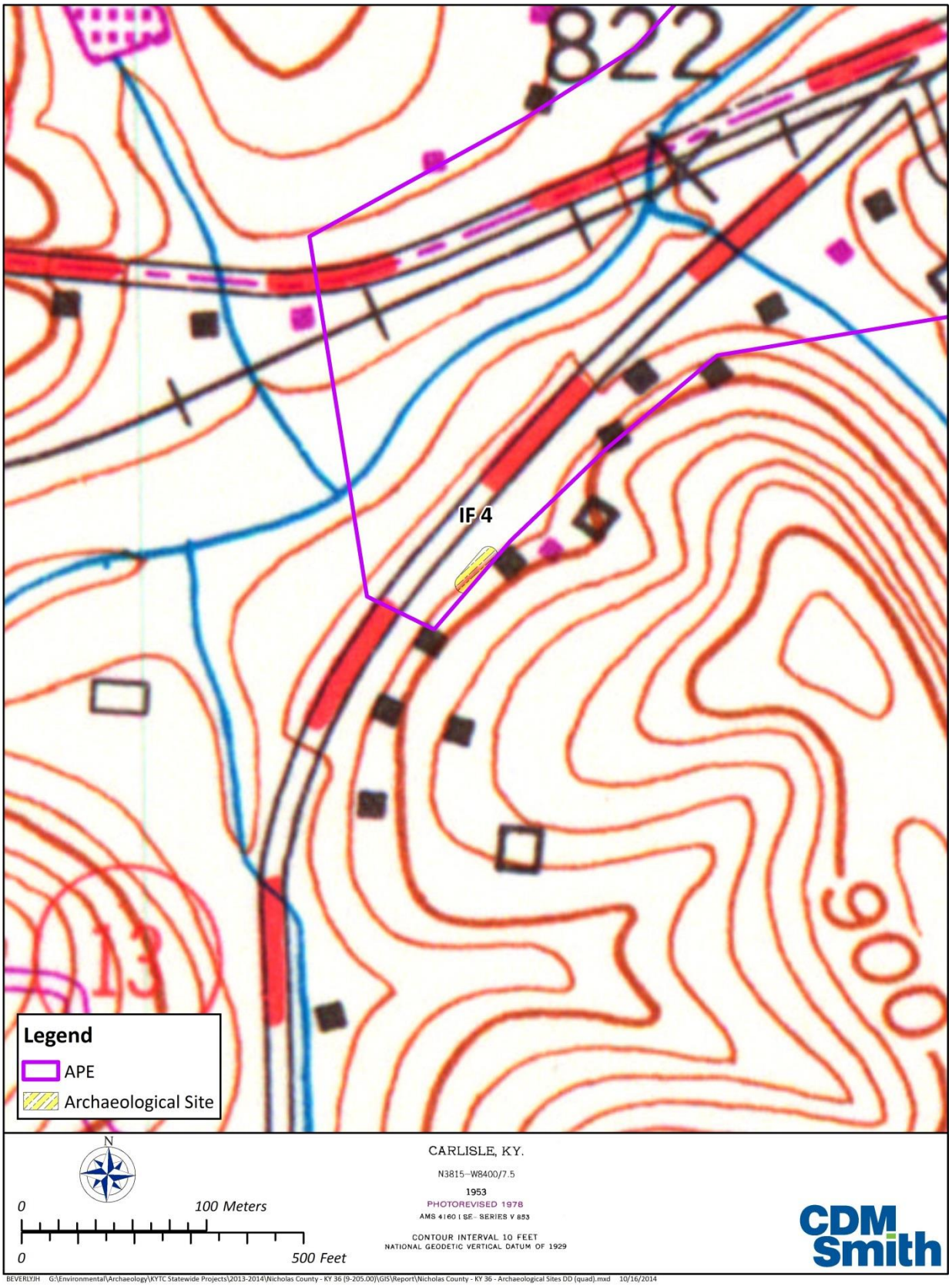

Figure 6-52. U.S.G.S. Topographic Map Showing IF #4.

Figure 6-53. Aerial Photograph of IF #4.

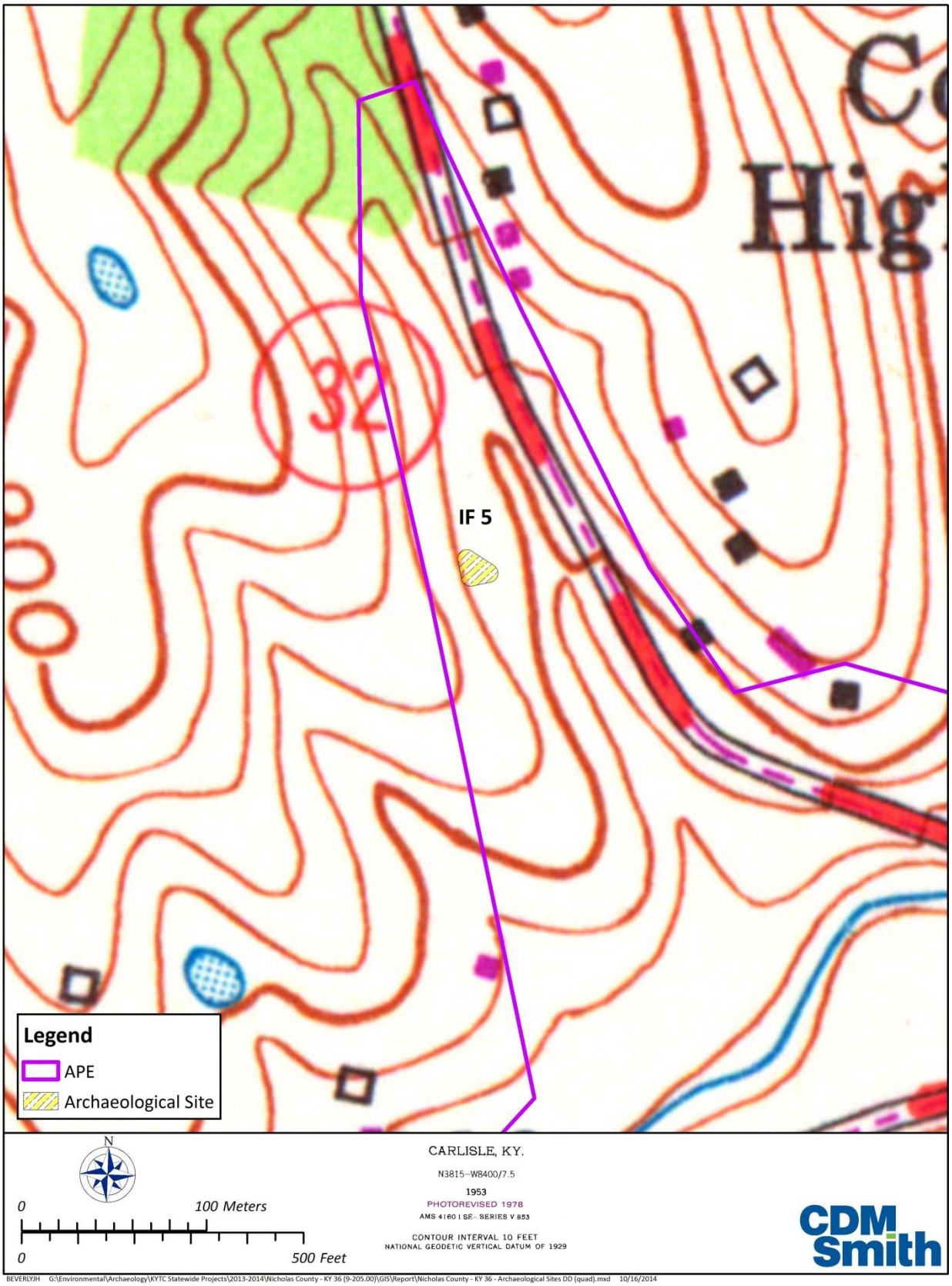

Figure 6-54. U.S.G.S. Topographic Map Showing IF #5.

Figure 6-55. Aerial Photograph of IF #5.

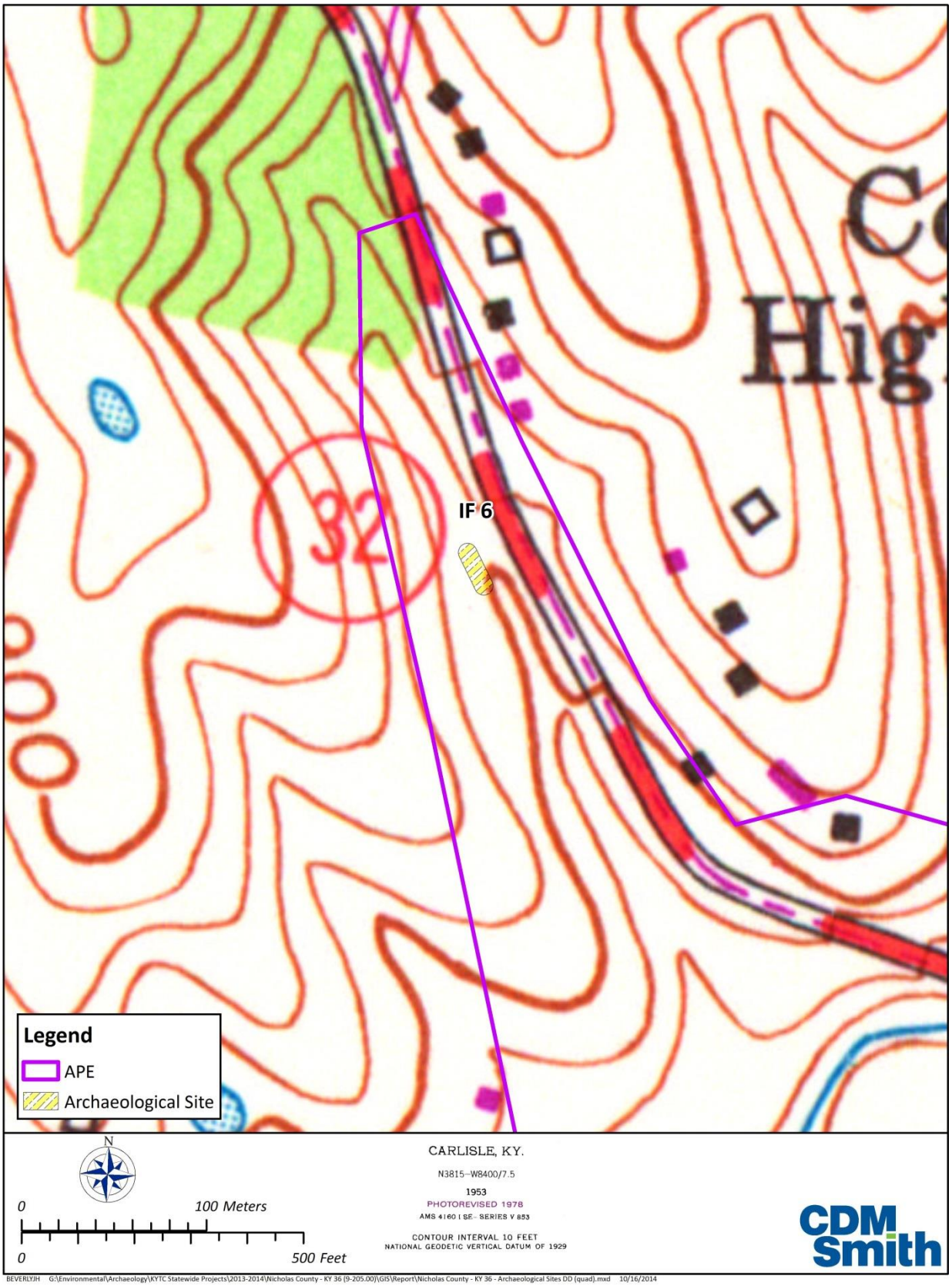

Figure 6-56. U.S.G.S. Topographic Map Showing IF #6.

Figure 6-57. Aerial Photograph Showing IF #6.

the stream from the north or the culvert to the east. Therefore, the material has limited integrity and is likely the result of refuse and secondary deposits.

6.12 Isolated Find # 7

Isolated Find # 7 (IF #7) consists of a historic artifact scatter located on a relatively flat area of grass along an unnamed creek.

6.12.1 Location

IF #7 can be found on the USGS Carlisle, Kentucky, 7.5' quadrangle map (Figure 6-58). The UTM coordinates (Zone 16 NAD 27) for the center of the isolated find are N4244766.9, E 758566.8. IF #7 is located on the south side of KY 13 along an unnamed creek (Figure 6-59).

6.12.2 Site Description

IF #7 consists of an area that is relatively flat. IF #7 is located on the south side of KY 13 along an unnamed creek. The county water reservoir is located southeast and the unnamed creek is to the southwest. A house dating to the 1940s is situated across the creek and a waterline leading from the reservoir to the road is located to the northeast. According to the 1950 aerial map, a barn was once located to the east. Three positive shovel probes were excavated, and eighteen artifacts were recovered. The material recovered included a fence wire (n=1), wire fragments (n=2), an unidentified medial nail fragment (n=1), cinder fragment (n=1), bottle/jar glass fragment (n=9), shell fragment (n=2), and a piece of unidentified metal (n=2). Diagnostic material included one cut nail and machine-made bottle fragment. However, the disturbance from the water line construction and the removal of the barn indicate that the site has limited integrity. It is difficult to conclude whether the material is associated with the domestic activities from the 1940s house, farming activities from the barn, or construction activities related to the water reservoir and water line. The material is potentially primarily all secondary deposits, and therefore, is treated as an isolated find.

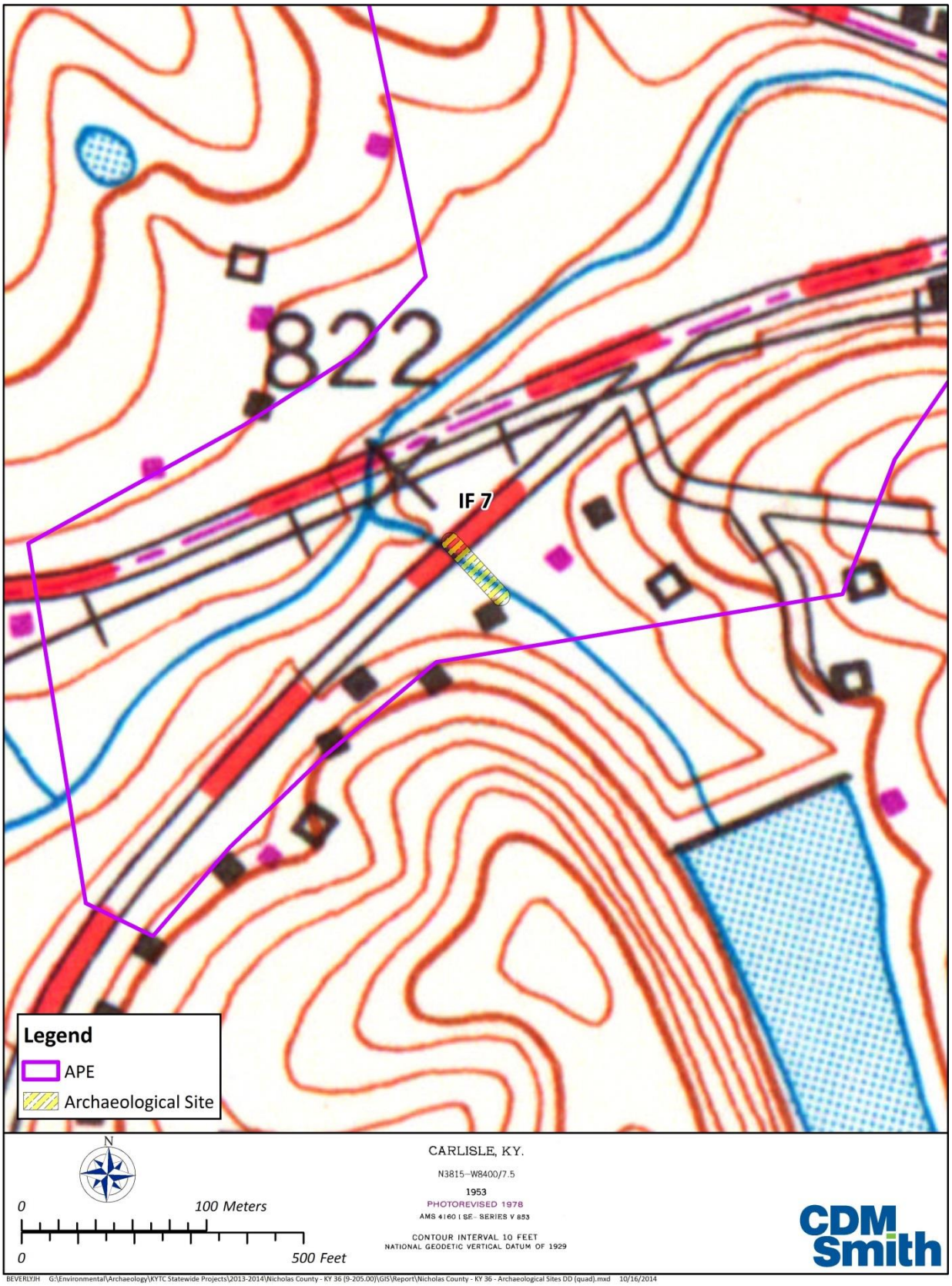

Figure 6-58. U.S.G.S. Topographic Map Showing IF #7.

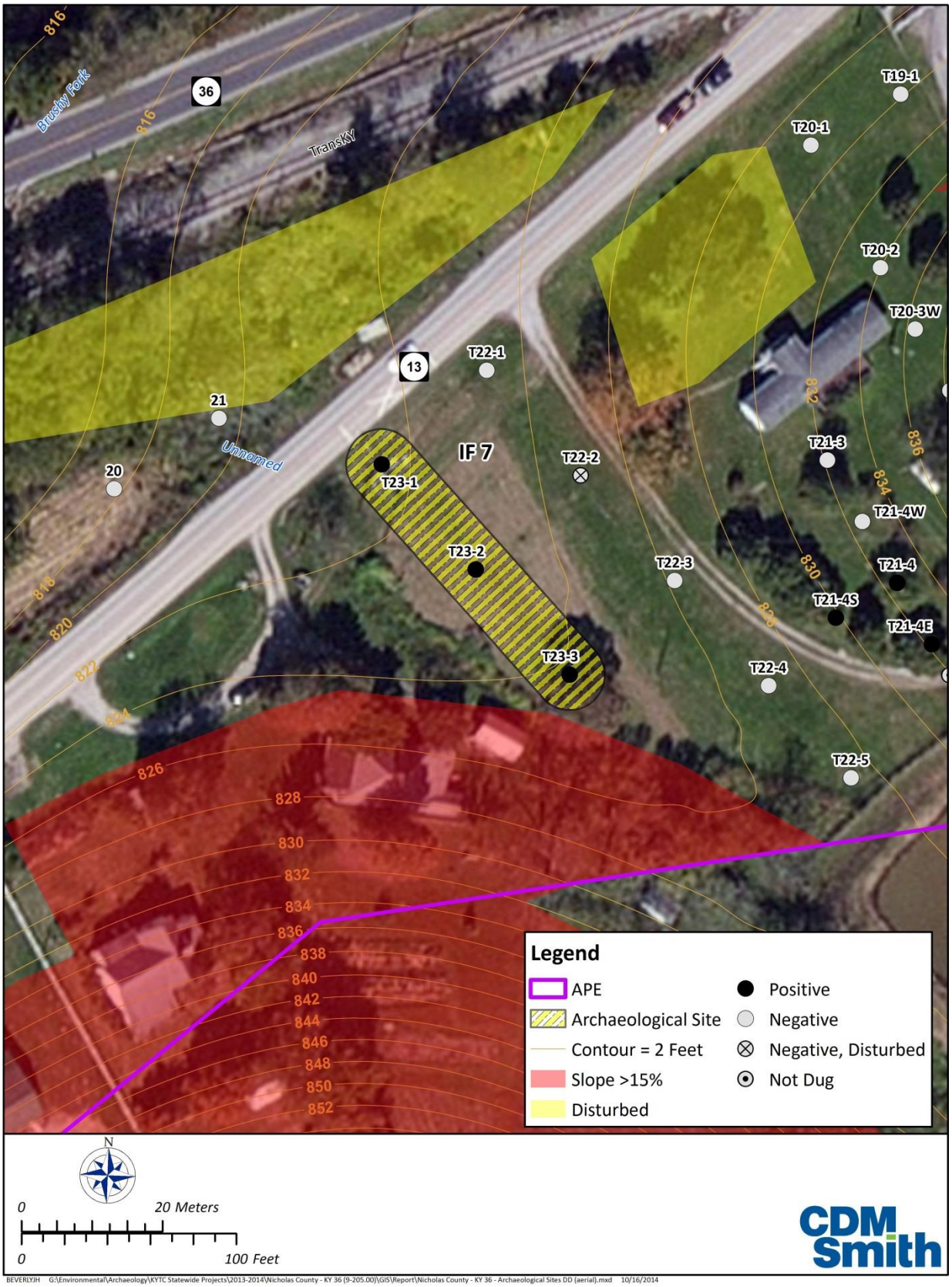

Figure 6-59. Aerial Photograph Showing IF #7.

Section 7 -

Recommendations and Summary

Recommendations

7.1 Site 15Ni66

Site 15Ni66 consists of a small unaffiliated prehistoric component and a historic component which dates from the early 1800s to the present based on artifacts and archival data. The prehistoric component consists of one artifact, a secondary flake. The historical component consisted of forty-four artifacts. The artifacts consisted of activity group (n=1), architecture group (n=30), fuel group (n=2), furniture group (n=1), kitchen group (n=8), other group (n=1), and transportation (n=1). The artifact assemblage represents a midden of primarily architecture and kitchen material. The material may date to the XXXXX XXXXX occupation or to the construction of the main addition around 1858 when XXXX XXXXX became the head of the household. The associated house and multiple outbuildings are outside of the right-of-way along with portions of a stone fence. According to a monument on the property, the Great Revival meetings that took place on the XXXXX Farm in 1815 are within the site area. The meetings were part of the Great Revival of the early nineteenth century.

7.1.1 National Register Eligibility

Site 15Ni66 consists of a prehistoric and a historic component. The prehistoric component consists of a single piece of debitage. The limited amount of material and the lack of cultural and temporal affiliation indicate that there is limited research potential for the prehistoric component. The association of prehistoric and historic artifacts indicates a lack of integrity for the prehistoric component. The historic component consists of a farmstead dating to between the 1812 and present. The area with in the APE consists of the side yard and front yard of the house. Artifacts recovered primarily consist of architectural and kitchen material. Upon completion of concurrent review for the assessment and recommendation for Site 15NI66, FHWA, SHPO, and KYTC are in agreement that the site does not qualify for nomination to the National Register under Criterion D. Therefore, no additional work will be undertaken at this site.

7.1.2 Recommendations

Upon completion of concurrent review for the assessment and recommendation for Site 15NI66, FHWA, SHPO, and KYTC are in agreement that the site does not qualify for nomination to the National Register under Criterion D. Therefore, no additional work will be undertaken at this site.

7.2 Site 15Ni67

Site 15Ni67 consists of a historic component which dates from the 1890 to the present based on artifacts and archival data. The site is a historic house which is now part of the Nicholas County Board of Education. The property has been landscaped and a parking lot has been constructed over what was the back yard. The area to the north has been modified by landscaping and construction of Nicholas County elementary, middle school and high school buildings. In the 1950 aerial photograph, the site area is part of a farm. The barn to the northeast of the house is still standing. The remainder of the farm is under school buildings and parking lots. The site consisted of thirty-one artifacts. The material recovered included bottle/jar glass, flat glass, cut nails, redware, whiteware, brick, coal, unidentified metal, and

unidentified plastic. Most of the diagnostic artifacts were recovered from disturbed contexts. These artifacts include 7d and 9d unspecified cut nails, redware, and undecorated whiteware. Two pieces of flat glass were also recovered and date to 1906 and 1947. The evidence of disturbance, probably by the construction of the school building, indicates a lack of integrity of the site.

7.2.1 National Register Eligibility

Site 15Ni67 consists of a historic component. The historic component consists of a house dating to between the 1890s and the present. The site represents part of the yard for the house. The yard has been disturbed by construction for Nicholas County school buildings. The backyard of the house has an asphalt parking lot constructed over it. The site lacks integrity and has limited research potential. Therefore, Site 15Ni67 has limited research potential and is not considered potentially eligible for listing on the NRHP under Criterion D.

7.2.2 Recommendations

No further archaeological work is recommended for Site 15Ni67.

7.3 Site 15Ni68

Site 15Ni68 consists of a historic house site. The house was built between 1895 and 1905 and is still occupied. The house is shown on the 1950 aerial photograph of the site. In 1950, the house was in an urban context, although there were agricultural field to the rear of the house. The fields appear to be divided by property based on fence lines and appear to be associated with the houses along KY32. The site consisted of seven artifacts. The artifacts recovered consisted of four brick fragments, one coal fragment on bottle base fragment, and one whiteware rim fragment. They were found in a shovel test probe in the yard. The material recovered corresponds to the occupation of the site from 1895 to the present.

7.3.1 National Register Eligibility

Site 15Ni68 consists of a historic component. The historic component consists of a house built between 1895 and 1905. The site represents part of the front yard for the house. Only seven artifacts were recovered from the excavations, and none are likely to yield information important to history. Therefore, Site 15Ni68 has limited research potential and is not considered potentially eligible for listing on the NRHP under Criterion D.

7.3.2 Recommendations

No further archaeological work is recommended for Site 15Ni68.

7.4 Site 15Ni69

Site 15Ni69 is a multi-component site with a small lithic scatter and a historic artifact scatter in an agricultural field. The site is part of the XXXXX farm discussed in Site 15Ni66. The farm dates from the early 1800s to the present. The site consists of an area to the north of KY36 and Brushy Fork and to the northeast of the XXXXX house. The site is in pasture, but was in crops according to the 1950 historic aerial photograph. The site is to the south of a spring and cinderblock outbuilding. No evidence of other buildings was located on other maps. The site consisted of 281 artifacts. The historic artifact assemblage consists mostly of brick (n=250, 89%). Fuel group artifacts account for 8.9% of the historic assemblage. These artifacts suggest the presence of some kind of structure. The lack of kitchen group artifacts suggests the structure may have been a farm outbuilding. The site also included two features. Feature 1

appears to be a trash pit filled with brick fragments. Feature 2 is a cluster of rocks that may be part of a building foundation or footing. The two features indicate that the site has integrity. The prehistoric component consists of three lithic secondary flakes and one undetermined flake. The debitage has little to no integrity and would not yield important information to prehistory.

7.4.1 National Register Eligibility

Site 15Ni69 consists of a historic component and a prehistoric component. The prehistoric component consists of four flakes and lacks integrity. It would not yield important information to prehistory. The historic component consists of a historic artifact scatter in an agricultural field associated with the XXXXX farm. The farm dates from the early 1800s to the present. Two features were identified. The two features indicate that the site has integrity. The site could provide information on the organization of a farm. The diagnostic artifacts recovered are limited. The complete bottle and light bulb fragments date to the twentieth century and may relate to more modern farm activities. Upon completion of concurrent review for the assessment and recommendation for Site 15NI69, FHWA, SHPO, and KYTC are in agreement that the site does not qualify for nomination to the National Register under Criterion D. Therefore, no additional work will be undertaken at this site.

7.4.2 Recommendations

Upon completion of concurrent review for the assessment and recommendation for Site 15NI66, FHWA, SHPO, and KYTC are in agreement that the site does not qualify for nomination to the National Register under Criterion D. Therefore, no additional work will be undertaken at this site.

7.5 Site 15Ni70

Site 15Ni70 consists of a historic site in the side yard of a house built around 1900.

The site consisted of thirty-nine artifacts. The material recovered consisted of brick (n=21), drain pipe (n=1), nails (n=5), fuel (n=31), and bottle/jar glass. One of the nails was a cut nail and the other four were unidentified. The one kitchen group artifact was a machine-made glass bottle/jar lid. Based on the stratigraphy and artifacts the site appears to be a refuse midden. The limited number of diagnostic material suggests that midden dates to the early twentieth century. The range of artifacts is rather limited.

7.5.1 National Register Eligibility

Site 15Ni70 consists of a historic site consisting of a midden related to a circa 1900 house. Although there appears to be integrity, the artifact assemblage does not have a range of artifacts and the site is unlikely to yield important information to history. Therefore, Site 15Ni70 is not considered potentially eligible for listing on the NRHP under Criterion D. Criteria A, B, and C are not applicable.

7.5.2 Recommendations

No further archaeological work is recommended for site 15Ni70.

7.6 Isolated Finds

The survey identified seven isolated finds. IF #1 consists of a small brick fragment recovered in the front yard of a house along KY 32. IF #2 consists of a historic faunal fragment recovered in a front yard of a house along KY 32. IF #3 consists of three coal fragments located in a side yard of a house that dates to around 1925 and due to the paucity of artifacts, the material was deemed an isolated find. IF #4 consists

of historic scatter of coal, bottle/jar glass fragments, unidentified metal, three plastic fragments, and a part of a plastic toy watch associated with a house that dates to around 1925 and is located along KY 13 near the intersection with KY 36. The material was recovered from two shovel probes and consisted of a mixed context. IF #5 consists of a one brick fragment, a fence staple, charcoal fragment, and an unidentified medial nail fragment. IF #5 is located within a pasture on the XXXXX farm and could be historical but the artifacts are not diagnostic and could potentially be modern as the property continues to be occupied today. IF #6 is a historic artifact scatter in a pasture on the XXXXX farm along KY 32 and adjacent to an unnamed stream and culvert. IF #6 is likely the result of refuse and secondary deposits. IF #7 is a historic scatter that has been heavily disturbed, making it difficult to determine the source of the deposit.

7.7 Summary

At the request of the Kentucky Transportation Cabinet (KYTC), archaeologists from CDM Smith conducted a Phase I archaeological survey for reconstruction of the intersection of KY 36 and KY 32 in Carlisle, in Nicholas County, Kentucky (Item Number 9-205.00). The area of potential effect (APE) consisted of 65 acres (26.3 ha) along KY 36 and 32. The APE was visited by a CDM Smith archaeology crew on March 14th through 22nd, 2014, at which time approximately 100 percent of the APE was either in pasture grasses or mowed lawns that offered zero ground surface visibility. The archaeological survey involved systematic shovel test excavation and visual inspection over the entire APE.

Five previously unrecorded archaeological sites, 15Ni66-15Ni70, seven previously unrecorded isolated finds, and one non-site, CDMS 10, were identified within the project bounds. The non-site, CDMS 10, consisted of modern material associated with a 1950 farmstead, and after analysis, it was deemed not worthy of a site number or isolated find number due to its modern context and large amount of disturbance. Upon completion of concurrent review for the assessment and recommendation for Sites 15NI66 and 15NI69, FHWA, SHPO, and KYTC are in agreement that the sites do not qualify for nomination to the National Register under Criterion D. Therefore, no additional work will be undertaken at these sites.

Section 8 -

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Appendix A -

Artifact Inventory

Table A-1. Prehistoric Lithic Catalog.

Catalog #	Field Site	Site	Date	Unit	Level	Tool Type	Subtype	Deb SG	Deb Type	Raw Material	Cortex	HT	Length	Width	Thickness	Weight	Number
11	CDMS 1	15NI66	4/1/2014	STP 24-4		Chipped Stone	Debitage	1	Secondary Flake	Boyle	n	n				0.4	1
17	CDMS 6	15Ni69	4/8/2014	STP 24-18		Chipped Stone	Debitage	1	Secondary Flake	Boyle	n	n				0.7	1
31	CDMS 6	15Ni69	4/9/2014	STP 24-27	0-34	Chipped Stone	Debitage	1	Secondary Flake	Boyle	n	n				0.2	1
33	CDMS 6	15Ni69	4/9/2014	STP 24-35 R 10 S		Chipped Stone	Debitage	1	Secondary Flake	Boyle	2	n				0.2	1
34	CDMS 6	15Ni69	4/9/2014	STP 24-37	0-15	Chipped Stone	Debitage	1	Undetermined Flake	Cane Run	n	n				0.1	1

Table A-2. Historic Artifact Catalog.

Site #	Field Site #	Cat. #	STP/UNIT #	Level	Functional Group	Material Class	Type	Sub Type 1	Subtype 2	Subtype 3	Color	#	Thick (mm)	Weight (gm)	Comments	Vessel
15Ni66	CDMS #1	9	STP 24-3		Activity	Metal	Bucket/Pail Part					1		6.5		
15Ni66	CDMS #1	14	STP 24-5-R1		Architecture	Ceramic	Brick	unidentified				2		36.2		
15Ni66	CDMS #1	13	STP 24-7		Architecture	Ceramic	Brick	unidentified				5		44		
15Ni66	CDMS #1	12	STP 24-5		Architecture	Ceramic	Brick	unidentified				10		13.3		
15Ni66	CDMS #1	11	STP 24-4		Architecture	Ceramic	Brick	unidentified				5		14.7		
15Ni66	CDMS #1	9	STP 24-3		Architecture	Ceramic	Brick	Glazed Fragment				1		15.1		
15Ni66	CDMS #1	9	STP 24-3		Architecture	Glass	Flat Glass				Green	1	1.43			
15Ni66	CDMS #1	15	STP 24- 7- R2		Architecture	Metal	Nail	Wire Nail	16d			1				
15Ni66	CDMS #1	10	STP 24-3-R1		Architecture	Metal	Nail	Cut Nail Unspecified	distal			1				
15Ni66	CDMS #1	12	STP 24-5		Architecture	Stone	Mortar					4		18.2		
15Ni66	CDMS #1	12	STP 24-5		Fuel	Biological	Charcoal					2		0.5		
15Ni66	CDMS #1	9	STP 24-3		Furniture	Glass	Lamp Chimney					1				
15Ni66	CDMS #1	8	STP 24-1		Kitchen	Biological	Bone					2		3.5	Butchering marks	
15Ni66	CDMS #1	8	STP 24-1		Kitchen	Ceramic	Ironstone	Undecorated Blue/Gray	Body			1				
15Ni66	CDMS #1	10	STP 24-3-R1		Kitchen	Ceramic	Redware	unidentified	body			1				
15Ni66	CDMS #1	11	STP 24-4		Kitchen	Ceramic	Whiteware	undecorated	unidentified			2				
15Ni66	CDMS #1	8	STP 24-1		Kitchen	Glass	Bottle/Jar	unidentified	body		Clear	1				
15Ni66	CDMS #1	8	STP 24-1		Kitchen	Glass	Bottle/Jar	unidentified	unidentified		Aqua	1				
15Ni66	CDMS #1	11	STP 24-4		Other	Metal	unidentified metal					1		0.3		
15Ni66	CDMS #1	11	STP 24-4		Transportation	Metal	Animal shoe nail					1				
	CDMS #10	47	STP T21 P5		Architecture	Ceramic	Brick	unidentified				2		0.6		
	CDMS #10	46	STP T20 P4		Architecture	Ceramic	Brick					2		0.3		
	CDMS #10	55	STP T21 P24		Architecture	Ceramic	Tile					2		4.4		
	CDMS #10	55	STP T21 P24		Architecture	Metal	Fence wire	barbed				1		2.4		
	CDMS #10	38	STP T21 P4 R S		Architecture	Metal	Fence wire					1		1		
	CDMS #10	47	STP T21 P5		Architecture	Metal	Nail	unidentified	distal			4				
	CDMS #10	44	STP T21 P1		Architecture	Metal	Nail	Wire Nail	12d			1				
	CDMS #10	38	STP T21 P4 R S		Architecture	Metal	Nail	Wire Nail	12d			1				
	CDMS #10	46	STP T20 P4		Architecture	Stone	Mortar					8		6.5		
	CDMS #10	55	STP T21 P24		Architecture	Stone	roofing slate					7		5.9		
	CDMS #10	47	STP T21 P5		Fuel	Biological	Cinder					3		0.7		
	CDMS #10	46	STP T20 P4		Fuel	Biological	Cinder					28		45.5		
	CDMS #10	46	STP T20 P4		Fuel	Biological	Coal					2		1.7		
	CDMS #10	47	STP T21 P5		Kitchen	Ceramic	Redware	unglazed	Rim			1			jar or flower pot	
	CDMS #10	47	STP T21 P5		Kitchen	Ceramic	Redware	unglazed	Body			1			jar or flower pot	
	CDMS #10	55	STP T21 P24		Kitchen	Ceramic	Redware	Lead Glazed Black Tint	Body			2				

Site #	Field Site #	Cat. #	STP/UNIT #	Level	Functional Group	Material Class	Type	Sub Type 1	Subtype 2	Subtype 3	Color	#	Thick (mm)	Weight (gm)	Comments	Vessel
	CDMS #10	55	STP T21 P24		Kitchen	Ceramic	Unidentified Refined Eathenware	unidentified	undecorated			3				
	CDMS #10	47	STP T21 P5		Kitchen	Ceramic	Whiteware	Body	undecorated			2				
	CDMS #10	47	STP T21 P5		Kitchen	Glass	Bottle/Jar	unidentified	unidentified		Aqua	2				
	CDMS #10	47	STP T21 P5		Kitchen	Glass	Bottle/Jar	unidentified	unidentified		Clear	2				
	CDMS #10	55	STP T21 P24		Kitchen	Glass	Bottle/Jar	Machine Made	Body	embossed	Milk Glass	1				
	CDMS #10	38	STP T21 P4 R S		Kitchen	Glass	Bottle/Jar	unidentified	neck		Blue	1				
	CDMS #10	46	STP T20 P4		Kitchen	Glass	Burned/Melted unidentified	unidentified	unidentified			1				
	CDMS #10	55	STP T21 P24		Other	Metal	unidentified metal					2		2.6		
	CDMS #10	55	STP T21 P24		Other	Plastics	Unidentified Plastic					1		0.1		
IF 7	CDMS #11	40	STP T23 P2		Architecture	Metal	Fence wire	Barbed				1		4.7		
IF 7	CDMS #11	40	STP T23 P2		Architecture	Metal	Nail	Cut Nail Unspecified	distal			1				
IF 7	CDMS #11	40	STP T23 P2		Architecture	Metal	Wire					1		8.8		
IF 7	CDMS #11	42	STP T23 P3		Architecture	Metal	Wire					1		2.7		
IF 7	CDMS #11	42	STP T23 P3		Fuel	Biological	Cinder					1		2.5		
IF 7	CDMS #11	40	STP T23 P2		Kitchen	Glass	Bottle/Jar	unidentified	unidentified		Clear	1				
IF 7	CDMS #11	42	STP T23 P3		Kitchen	Glass	Bottle/Jar	unidentified	body		Clear	6				
IF 7	CDMS #11	42	STP T23 P3		Kitchen	Glass	Bottle/Jar	Machine Made	body		Clear	1			Duraglass	
IF 7	CDMS #11	39	STP T23 P1		Kitchen	Glass	Bottle/Jar	unidentified	Body		Clear	1			prop 30	
IF 7	CDMS #11	42	STP T23 P3		Other	Biological	shell					2		0.1	small mullusk type shell, pair	
IF 7	CDMS #11	42	STP T23 P3		Other	Metal	unidentified metal					1		0.4		
IF 7	CDMS #11	42	STP T23 P3		Other	Metal	unidentified metal					1		0.5		
15Ni67	CDMS #2	4	STP 4		Architecture	Ceramic	Brick	unidentified				12		155.5		
15Ni67	CDMS #2	5	STP 5		Architecture	Glass	Flat Glass				Clear	1	2.3			
15Ni67	CDMS #2	6	STP 6		Architecture	Glass	Flat Glass				Clear	1	2.79			
15Ni67	CDMS #2	3	STP 2		Architecture	Metal	Hardware	unidentified				1				
15Ni67	CDMS #2	4	STP 4		Architecture	Metal	Nail	unidentified	medial			1				
15Ni67	CDMS #2	6	STP 6		Architecture	Metal	Nail	Cut Nail Unspecified	7d			1				
15Ni67	CDMS #2	6	STP 6		Architecture	Metal	Nail	Cut Nail Unspecified	9d			1				
15Ni67	CDMS #2	3	STP 2		Architecture	Stone	Mortar					1		1.4		
15Ni67	CDMS #2	5	STP 5		Fuel	Biological	Coal					1		1		
15Ni67	CDMS #2	3	STP 2		Fuel	Biological	Other Coal Fuel					3		2.4		
15Ni67	CDMS #2	6	STP 6		Kitchen	Ceramic	Redware	Lead Glazed Brown Tint	Body			1				
15Ni67	CDMS #2	3	STP 2		Kitchen	Ceramic	Whiteware	undecorated	undetermined			1				
15Ni67	CDMS #2	3	STP 2		Kitchen	Glass	Bottle/Jar	unidentified	unidentified		Blue	1				
15Ni67	CDMS #2	4	STP 4		Kitchen	Glass	Bottle/Jar	unidentified	unidentified		Amber	1				
15Ni67	CDMS #2	5	STP 5		Kitchen	Glass	Bottle/Jar	unidentified	unidentified		Aqua	1				

Site #	Field Site #	Cat. #	STP/UNIT #	Level	Functional Group	Material Class	Type	Sub Type 1	Subtype 2	Subtype 3	Color	#	Thick (mm)	Weight (gm)	Comments	Vessel
15Ni67	CDMS #2	3	STP 2		Kitchen	Plastics	Rubber seal					1				
15Ni67	CDMS #2	6	STP 6		Other	Metal	Unidentified					1		4.6		
IF 3	CDMS #3	2	STP 34-1		Fuel	Biological	Coal					3		22.7		
15Ni68	CDMS #4	1	STP 19-1		Architecture	Ceramic	Brick	unidentified				4		1		
15Ni68	CDMS #4	1	STP 19-1		Fuel	Biological	Coal					1		0.1		
15Ni68	CDMS #4	1	STP 19-1		Kitchen	Ceramic	Whiteware	Rim	undecorated			1				bowl
15Ni68	CDMS #4	1	STP 19-1		Kitchen	Glass	Bottle/Jar	unidentified	base		Aqua	1				medicine bottle
IF 4	CDMS #5	7	STP 44-1		Fuel	Biological	Coal					1		5.2		
IF 4	CDMS #5	16	STP 44-2		Fuel	Biological	Coal					7		23.6		
IF 4	CDMS #5	7	STP 44-1		Kitchen	Glass	Bottle/Jar	unidentified	unidentified		Clear	3				
IF 4	CDMS #5	16	STP 44-2		Kitchen	Glass	Bottle/Jar	unidentified	unidentified		Blue	1			modern	
IF 4	CDMS #5	16	STP 44-2		Kitchen	Glass	Bottle/Jar	unidentified	unidentified		Green	1			modern	
IF 4	CDMS #5	7	STP 44-1		Other	Metal	unidentified metal					1				
IF 4	CDMS #5	7	STP 44-1		Other	Plastics	Unidentified Plastic					1		0.1		
IF 4	CDMS #5	16	STP 44-2		Other	Plastics	Unidentified Plastic					2		0.1	thin red plastic	
IF 4	CDMS #5	7	STP 44-1		Personal	Plastics	Toy Watch					1				
15Ni69	CDMS #6	22	STP 24-22		Architecture	Ceramic	Brick	unidentified				1		0.1		
15Ni69	CDMS #6	21	STP 24-21 RN		Architecture	Ceramic	Brick	unidentified				2		7.5		
15Ni69	CDMS #6	20	STP 24-21		Architecture	Ceramic	Brick	Glazed Fragment				3		145		
15Ni69	CDMS #6	20	STP 24-21		Architecture	Ceramic	Brick	unidentified				5		8.6		
15Ni69	CDMS #6	19	STP 24-19-RW		Architecture	Ceramic	Brick	Glazed Fragment				1		14.3		
15Ni69	CDMS #6	19	STP 24-19-RW		Architecture	Ceramic	Brick	unidentified				7		12.7		
15Ni69	CDMS #6	18	STP 24-19		Architecture	Ceramic	Brick	unidentified				5		109.9		
15Ni69	CDMS #6	23	STP 24-24		Architecture	Ceramic	Brick	unidentified				19		29.4		
15Ni69	CDMS #6	23	STP 24-24		Architecture	Ceramic	Brick	Glazed Fragment				1		5.3		
15Ni69	CDMS #6	24	STP 24-26		Architecture	Ceramic	Brick	unidentified				2		6.7		
15Ni69	CDMS #6	24	STP 24-26		Architecture	Ceramic	Brick	Glazed Fragment				1		38.9		
15Ni69	CDMS #6	25	STP 24-26	21-30	Architecture	Ceramic	Brick	unidentified				1		3.3		
15Ni69	CDMS #6	27	STP 24-19 R 10m W		Architecture	Ceramic	Brick	unidentified				2		0.4		
15Ni69	CDMS #6	28	STP 24-19 R10m S		Architecture	Ceramic	Brick	unidentified				1		4.6		
15Ni69	CDMS #6	29	STP 24-19 R 10 E		Architecture	Ceramic	Brick	unidentified				6		42.8	sample	
15Ni69	CDMS #6	30	STP 24-21 R 10 W		Architecture	Ceramic	Brick					1		9.9	sample	
15Ni69	CDMS #6	35	STP 24-37	15-30	Architecture	Ceramic	Brick					4		2.6		
15Ni69	CDMS #6	18	STP 24-19	0-51	Architecture	Ceramic	Brick	unidentified				188		568.7		

Site #	Field Site #	Cat. #	STP/UNIT #	Level	Functional Group	Material Class	Type	Sub Type 1	Subtype 2	Subtype 3	Color	#	Thick (mm)	Weight (gm)	Comments	Vessel
15Ni69	CDMS #6	19	STP 24-19-RW		Fuel	Biological	Cinder					1		0.6		
15Ni69	CDMS #6	18	STP 24-19		Fuel	Biological	Cinder					1		0.2		
15Ni69	CDMS #6	26	STP 24-30		Fuel	Biological	Cinder					7		1.4		
15Ni69	CDMS #6	32	STP 24-30 R 10 S		Fuel	Biological	Cinder					2		1.8		
15Ni69	CDMS #6	36	STP 24-54		Fuel	Biological	Cinder					1		0.7		
15Ni69	CDMS #6	19	STP 24-19-RW		Fuel	Biological	Coal					5		18.3		
15Ni69	CDMS #6	27	STP 24-19 R 10m W		Fuel	Biological	Coal					1		0.4		
15Ni69	CDMS #6	33	STP 24-35 R 10 S		Fuel	Biological	Coal					6		10		
15Ni69	CDMS #6	35	STP 24-37	15-30	Fuel	Biological	Coal					1		0.5		
15Ni69	CDMS #6	22	STP 24-22		Furniture	Glass	Light Bulb Part	glass filiment				1				
15Ni69	CDMS #6	22	STP 24-22		Furniture	Glass	Light Bulb Part	Bulb				2				
15Ni69	CDMS #6	23	STP 24-24		Kitchen	Glass	Bottle/Jar	Machine made	complete	screw lip	Clear	1			Condiment jar Ball 9-3, 609-6,A7	
15Ni69	CDMS #6	23	STP 24-24		Kitchen	Glass	Bottle/Jar	unidentified	base		Green	1				
15Ni69	CDMS #6	25	STP 24-26	21-30	Kitchen	Glass	Bottle/Jar	unidentified	body		Clear	1				
IF 5	CDMS #7	51	STP T8 P2		Architecture	Ceramic	Brick	unidentified				1		3.2		
IF 5	CDMS #7	37	STP T8 P2 R E		Architecture	Metal	Fence Staple					1				
IF 5	CDMS #7	53	STP T8 P2 N	0-19	Architecture	Metal	Nail	unidentified	medial			1				
IF 5	CDMS #7	51	STP T8 P2		Fuel	Biological	Charcoal					1		2.3		
IF 6	CDMS #8	50	STP T7 P11		Architecture	Ceramic	Brick	unidentified				2		0.4		
IF 6	CDMS #8	50	STP T7 P11		Clothing	Biological	Shell Button					1	13.03		two holes	
IF 6	CDMS #8	50	STP T7 P11		Fuel	Biological	Cinder					1		0.1		
IF 6	CDMS #8	41	STP T7 P11 R S		Fuel	Biological	Cinder					7		3		
IF 6	CDMS #8	50	STP T7 P11		Fuel	Biological	Coal					1		1.3		
IF 6	CDMS #8	41	STP T7 P11 R S		Fuel	Biological	Coal					4		2.4		
IF 6	CDMS #8	50	STP T7 P11		Kitchen	Glass	Bottle/Jar	unidentified	body		Amber	1				
IF 6	CDMS #8	50	STP T7 P11		Kitchen	Glass	Bottle/Jar	unidentified	body		Clear	3				
IF 6	CDMS #8	54	STP T7 P11 RN		Kitchen	Glass	Bottle/Jar	Machine Made	Base		Clear	1			"D401", "33", whiskey pint bottle	
IF 6	CDMS #8	54	STP T7 P11 RN		Kitchen	Glass	Bottle/Jar	unidentified	unidentified		Clear	27				
IF 6	CDMS #8	54	STP T7 P11 RN		Kitchen	Glass	Bottle/Jar	unidentified	unidentified		Amber	30				
IF 6	CDMS #8	54	STP T7 P11 RN		Kitchen	Glass	Bottle/Jar	Machine Made	body	Embossed	Amber	3			Beer Bottle	
IF 6	CDMS #8	54	STP T7 P11 RN		Kitchen	Glass	Bottle/Jar	unidentified	Body		Green	7				
IF 6	CDMS #8	54	STP T7 P11 RN		Kitchen	Glass	Bottle/Jar	unidentified	body		Aqua	2				
IF 6	CDMS #8	41	STP T7 P11 R S		Kitchen	Glass	Bottle/Jar	unidentified	unidentified		Clear	1				
IF 6	CDMS #8	54	STP T7 P11 RN		Kitchen	Glass	Tableware	unidentified	Body		Red	1			Embossed design too small to id	

Site #	Field Site #	Cat. #	STP/UNIT #	Level	Functional Group	Material Class	Type	Sub Type 1	Subtype 2	Subtype 3	Color	#	Thick (mm)	Weight (gm)	Comments	Vessel
IF 6	CDMS #8	54	STP T7 P11 RN		Other	Metal	unidentified metal					8		14.1		
IF 6	CDMS #8	54	STP T7 P11 RN		Other	Plastics	unidentified plastic				Cream	4		0.7	flower design	
IF 6	CDMS #8	54	STP T7 P11 RN		Other	Plastics	Unidentified Plastic				Green	1		0.1		
IF 6	CDMS #8	54	STP T7 P11 RN		Other	Plastics	Unidentified Plastic				White	3		0.1		
IF 6	CDMS #8	54	STP T7 P11 RN		Other	Plastics	Unidentified Plastic				Clear	1		0.1	wrapper?	
16Ni70	CDMS #9	49	STP T27 P7 R E		Architecture	Ceramic	Brick	unidentified				1		2.9		
16Ni70	CDMS #9	52	STP T27 P7		Architecture	Ceramic	Drain Pipe	Salt glazed stoneware				1			Drain pipe?	
16Ni70	CDMS #9	43	STP T27 R NE		Architecture	Metal	Nail	Cut Nail Unspecified	4d			1				
16Ni70	CDMS #9	45	STP T27 P7 R 10 N		Architecture	Metal	Nail	unidentified	distal			3				
16Ni70	CDMS #9	45	STP T27 P7 R 10 N		Architecture	Metal	Nail	unidentified	medial			1				
16Ni70	CDMS #9	52	STP T27 P7		Fuel	Biological	Cinder					9		8.4		
16Ni70	CDMS #9	49	STP T27 P7 R E		Fuel	Biological	Cinder					4		8.3		
16Ni70	CDMS #9	52	STP T27 P7		Fuel	Biological	Coal					17		21.8		
16Ni70	CDMS #9	43	STP T27 R NE		Fuel	Biological	Coal					1		11.3		
16Ni70	CDMS #9	45	STP T27 P7 R 10 N		Kitchen	Glass	Bottle/Jar	Machine Made	Lid		Clear	1			ATL... ED...	
IF 1	IF 1	48	STP T27 P1		Architecture	Ceramic	Brick	unidentified				1		0.2	IF	
IF 2	IF 2	56	STP 25 P3		Kitchen	Biological	Bone	Cut bone/large mammal				1				