

**PHASE I ARCHAEOLOGICAL SURVEY  
FOR PROPOSED RECONSTRUCTION  
OF A PORTION OF KY-377 BETWEEN KY 32  
AND THE LEWIS COUNTY LINE,  
ROWAN COUNTY, KENTUCKY**

**STATE ITEM NO. 9-8406.00**

**UK-PAR PROJECT No. 15-2**

**KENTUCKY OFFICE OF STATE ARCHAEOLOGY  
PROJECT REGISTRATION No. FY14-8302**



**UK** University of Kentucky **PAR**  
**Program for Archaeological Research**  
**Department of Anthropology**

**Technical Report No. 762**

**Revised and Corrected**

**18 August 2015**



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**Technical Report No. 762**



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## ABSTRACT

At the request of the Kentucky Transportation Cabinet, staff from the University of Kentucky Program for Archaeological Research (UK-PAR) conducted Phase I field investigations for the proposed reconstruction of a portion of KY 377 between KY 32 and the Lewis County line in Rowan County, Kentucky. The survey corridor comprised existing and proposed right-of-way and temporary easements on both sides of KY 377 for a distance of about 8.2 mile (13.2 km). The total project area is about 45.3 hectares (111.8 acres). Survey methods included visual inspection of ground surfaces, shovel testing (n=697), and deep auger testing (n=32). As a result, the survey documented five new archaeological sites (15Ro226 through 15Ro230) and six isolated finds. One previously reported site (15Ro194) that falls just outside the project area was revisited. All archaeological investigations were confined to the project area corridors.

Site 15Ro226 is an isolated historic grave located in a plowed field on the east side of KY 377. The site consists of single large carved truncated obelisk burial monument engraved on one surface with “Thomas P. Johnsons, b. Feb 18, 1866, d. July 28, 1895”. Given the site’s location within a plowed field, the degree to which the site has been disturbed is unknown. The site boundary is arbitrarily defined as a two-meter radius around the obelisk, for an area of 13 m<sup>2</sup>. Because the monument is located 15 meters outside the project right-of-way, and due to the nature of the site as a grave, no shovel tests were excavated. Examination of the area around the site did not identify any other grave markers or depressions, and nearby shovel testing within the project area did not reveal any evidence of an associated structure or other features. Historic maps did not show any cemeteries or residential structures near this site. Given the approximately 10-meter distance between the obelisk and the proposed new ROW, it is unlikely that this site will be disturbed. Given that there is apparently only a single grave UK-PAR finds that 15Ro266 is not eligible for listing on the National Register of Historic Places (NRHP) under Criterion D and recommends no additional work at this site.

Site 15Ro227 is the remains of a late-19<sup>th</sup> to early 20<sup>th</sup> century outbuilding located roughly 12 m west of KY 377. The site measures 20 m north-south by 15 m east-west, and is positioned on a level terrace at an elevation of 244 m AMSL. The site may extend outside the project area. The site area is defined by the distributions of one positive shovel test and visible architectural features (a metal chimney flue, roof timber remains, dressed sandstone foundation slabs, corrugated metal roof panels, and asphalt roof shingles, barbed wire, a “Moore’s” furnace, and a tire. A single wire nail was obtained from the positive shovel test. The Morehead 7.5’ USGS quadrangle map (1970 photorevised 1978) shows an outbuilding in the location of the site. Given the low artifact density and lack of subsurface cultural deposits, plus the modern age of at least some of the artifacts, the research potential of 15Ro227 is low. UK-PAR finds this site to not be eligible for listing on the NRHP and recommends no additional archaeological work at this location.

Site 15Ro228 is a late 19<sup>th</sup> to mid-20<sup>th</sup> century historic scatter situated in an open pasture just west of KY 377. The site occupies a relatively flat stream terrace at an elevation of 252 m AMSL and measures 15 m north-south and 5 m east-west (75 m<sup>2</sup>). The site may extend farther west outside the project ROW. About one meter east of the site is a linear depression that appears to be an old roadway. The site is defined by three positive shovel tests which yielded one milk glass fragment, three clear container glass fragments, and one solarized amethyst pressed table glass fragment. The 1937 and 1954 Kentucky Department of Highways maps show at least one residential structure near the site location, and the 1970 Cranston 7.5’ USGS quadrangle map shows a residential structure at the site location. The late 19<sup>th</sup> to early 20<sup>th</sup> century assemblage likely relates to the residential structure that once stood at this location. Given the low artifact density, lack of subsurface cultural deposits, and absence of structural remains the research potential of 15Ro228 is low, and the site is not considered eligible for listing on the NRHP. UK-PAR recommends no additional archaeological work at this location.

Site 15Ro229 is a temporally unassigned prehistoric lithic scatter located on the east side of KY 377 near the intersection of KY 799 with KY 377. It is in a pasture on a level terrace at an elevation of 247 m AMSL. The site measures about 20 m north-south by 5 m east-west (100 m<sup>2</sup>) and may extend farther east outside the ROW corridor. The site is defined by three positive shovel tests yielding four prehistoric flakes

(a fifth flake was observed but lost during recovery). Three flakes were recovered from the plow zone (0-30 cm below surface) and two were recovered from an auger test at 60-70 cm below surface within subsoil. All bracketing auger tests were negative. The site is potentially disturbed by construction of a water main that parallels KY 377 about 1.5 meters east of the site. Given the low number of artifacts, the apparent absence of a buried A horizon with cultural materials, probable site area disturbance, and no evidence of subsurface features, the research potential of 15Ro229 is low. UK-PAR finds 15Ro229 to be ineligible for listing on the NRHP and recommends no additional archaeological work at this location.

Site 15Ro230 is a probable late 19<sup>th</sup> to early 20<sup>th</sup> century residential location represented by cut sandstone well and a keyhole springhouse. These features are located about 15 m west of KY 377. The structures are situated in secondary woods on a level terrace at an elevation of 238 m AMSL. The site measures about 25 m north-south by 15 m east-west, and it extends west outside the surveyed ROW corridor. Only the visible above-ground features were recorded. No artifacts were observed or recovered from the site. These structures include a sawn wood springhouse with a corrugated metal roof, a keyhole springhouse foundation of cut and stacked sandstone slabs, and a concentration of cut, dressed, and stacked sandstone slabs identified as a possible well housing. The wood springhouse structure is partially collapsed and displaced from its keyhole foundation. The well is about 12 meters northeast of the springhouse and exhibits four courses of dressed sandstone; it has been filled and is covered in vegetation. The Morehead 7.5' USGS topographic quadrangle map (1970, photorevised 1978) shows one house structure north of the site location. The 1937 Kentucky Department of Highways map does not show any structures nearby. Any residential structure that was once on the site appears to have been disturbed by construction of KY 377. Given the lack of artifacts, and probable site disturbance, the research potential of 15Ro230 is low. UK-PAR finds the portion of 15Ro230 within the proposed ROW to be ineligible for listing on the NRHP and recommends no additional archaeological work at this site, provided that construction is confined to the proposed new ROW.

Site 15Ro194 was revisited. This site is a single historic grave consisting of a square headstone at the west end and a triangular footstone at the east end, both made of sandstone. The ROW corridor is about 10 m west of 15Ro194. The site data documented during this survey confirms the previously recorded site inventory form. No artifacts were collected or observed at the site. The revisit did not identify any headstones or footstones in the surrounding area, supporting the idea that this is an isolated burial. The west side of the headstone exhibits carved letters that were indecipherable at the time of this revisit. The east side of the footstone has "W. T. H" carved on the surface. As a single isolated grave, UK-PAR finds the research potential of 15Ro194 to be low, and does not interpret the site to be eligible for listing on the NRHP. UK-PAR recommends avoiding impact near the site by establishing a 10-meter buffer zone around the marker.

UK-PAR also identified six isolated finds, four prehistoric and two historic. The artifacts from IF 2, IF 3, IF 5, and IF 6 consist of single prehistoric flakes. All bracketing shovel tests were negative, and no evidence of subsurface cultural features or midden were found at any of these locations. The material from IF1 includes one wire nail, five nail fragments, and one tin alloy snap/button fragment, while the material from IF4 consists of one nail and one container glass fragment. No structures are depicted present at these locations on historic maps. The IF locations found during this survey do not meet the current OSA criteria for archaeological sites. The research potential is extremely low for all isolated finds, and no additional archaeological work is recommended at any of these six locations.

UK-PAR also identified three historic resources (Structures 1-3) within the ROW corridor. Structure 1 is an abandoned wood residence with two wooden sheds, one wooden outhouse, and a well. Structure 2 is a sandstone outbuilding. Structure 3 is a small log outbuilding. Shovel tests near these structures did not produce any artifacts, and these locations are not considered to be archaeologically significant.

UK-PAR recommends no additional archaeological work at any of the archaeological sites or the six isolated finds, provided that construction activities are confined to the investigated ROW corridors. If construction activities extend beyond the areas surveyed for this project, additional archaeological investigation may be required, especially at 15Ro194, 15Ro226, and 15Ro230.

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# CHAPTER 1

## INTRODUCTION

At the request of the Kentucky Transportation Cabinet (KYTC) archaeologists from the University of Kentucky Program for Archaeological Research (UK-PAR) performed a Phase I survey of the proposed reconstruction of a portion of KY 377 between KY 32 and the Lewis County line in Rowan County, Kentucky (Figure 1.1). The survey corridor comprised existing and proposed rights-of-way (ROW) and temporary easements on both sides of KY 377, which runs generally north-south for 8.2 mile (13.2 km); the corridor encompasses approximately 45.3 hectares (111.8 acres). The purpose of this work was to identify any archaeological resources within the proposed project area and to assess their potential eligibility for nomination to the National Register of Historic Places (NRHP).

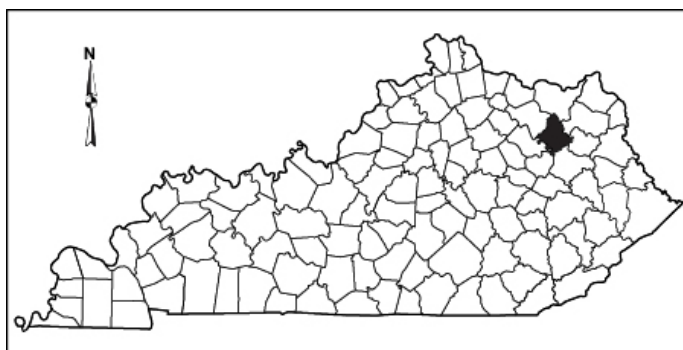


Figure 1.1. Location of Rowan County, Kentucky.

The survey was conducted in compliance with provisions of the National Historic Preservation Act of 1966 (as amended), the National Environmental Policy Act of 1969, Procedures of the Advisory Council on Historic Preservation, Executive Order 11593 (Protection and Enhancement of the Cultural Environment), and the Kentucky Heritage Council's *Specifications for Conducting Fieldwork and Preparing Cultural Resource Assessment Reports* (Sanders et al. 2006).

The project was carried out under the supervision of UK-PAR director Dr. Steven R. Ahler. Field work was directed by Bruce L. Manzano, with field assistance from Christopher M. Gunn, Monica L. Chism, Leslie Combs, Michelle Massey, Emily Rinker, and Jonathan Keith. Field work was conducted between 26 January and 13 February 2015 and required 448 person-hours to complete. Emily Rinker is the primary author of the technical report; Tiffany Little completed the historic artifact analysis; and Monica L. Chism completed the analysis of prehistoric materials. Hayward Wilkerson prepared the figures for the report, and Ahler edited the report.

## PROJECT AREA DESCRIPTION

The project area is located in Rowan County, which is part of the Gorge Section of the Upper Kentucky/Licking Archaeological Management Area (Pollock 2008:12). The Gorge section has received relatively heavy archaeological attention compared to most of the Commonwealth, and it contains many recorded rock shelter and open-air prehistoric sites. The archaeological survey coverage, however, is irregular as development and infrastructure projects are not common in this part of the state; most surveys involve US Forest Service property within the Daniel Boone National Forest.

The project area is located in northern Rowan County and its southern end is along KY 377, about 2.4 miles (3.9 km) north of Morehead. It encompasses an 8.2-mile (13.2 km) section of KY 377 that lies between KY 32 and KY 799, near the Lewis County line (Figures 1.2 and 1.3). The project area includes additional right-of-way (ROW) and construction easements (both temporary and permanent) along both east and west

Figure 1.2. General Project Area and Locations of Archaeological Sites, Isolated Finds, and Structures in the Southern Portion of the KY 377 Project Area in Rowan County, Kentucky. The base map shows a portion of the Morehead USGS 7.5' USGS topographic quadrangle map.



Figure 1.3. General Project Area and Locations of Archaeological Sites, Isolated Finds, and Structures in the Northern Portion of the KY 377 Project Area in Rowan County, Kentucky. The base map shows a portion of the Cranston USGS 7.5' USGS topographic quadrangle map.



Figure 1.4. Shovel Testing on Dissected Terraces with Flood Plain to the Left in Image (looking north).



Figure 1.5. Shovel Testing on the Grassy Lick Branch Flood Plain (looking south).

sides of the existing KY 377 (Figures 1.2 and 1.3). This corridor is generally confined to the valley of the North Fork of Triplett Creek, and it also crosses the valleys of multiple small ephemeral and permanent tributary streams, the principal of which is Rock Fork situated near the north end of the project corridor. Consequently, much of the project area is in valley settings (alluvial terraces and flood plains) that may contain buried cultural deposits or sites (Figures 1.4 and 1.5).

Some portions of the project area had no additional ROW or easements, while most others involve widening and acquisition of either new ROW or easements. Documents provided to UK-PAR by KYTC staff indicate that a total of about 107.6 acres of new ROW and easements will be acquired on both east and west sides of KY 377. Most new ROW is in the form of long, narrow strips of land, generally between 20 and 180 feet (6 and 55 m) wide, parallel to the existing KY 377 ROW. In addition to the highway ROW and temporary or permanent easements, the survey required testing along several small stream diversion channels



Figure 1.6. Low-slope Wooded Upland Section within Project Area (looking northeast).

adjacent to the ROW/easements. These diversions, numbering about 15, generally were in disturbed/drainage areas that required excavation of no additional shovel tests. Other additions to the survey area include wider ROW for possible relocation of the KY 799 intersection (about 2.0 acres) and a pullout for a historical marker (about 1.0 acres). These additions make the total archaeological survey area about 111.8 acres (45.3 ha), distributed over about 22,300 linear meters, including both sides of KY 377. However, initial reconnaissance of the project area indicated that about 6500 linear meters (about one third of the total corridor length) have been visibly disturbed or is on steeply sloping ground that contains no evidence of rock shelters. This inspection reduced the survey corridor distance to about 15,800 linear meters. Due to the linear shape of the project corridor, archaeological survey was most effectively accomplished by excavation of transects of shovel tests oriented parallel to the existing KY 377 corridor.

About 41.1 acres of the project area (36.8 percent) have been severely disturbed by construction of houses, barns, and utility lines. These disturbed areas were not systematically surveyed for archaeological resources. Steep slopes and waterlogged landscapes cover an additional 6.7 acres or 6.0 percent of the project area. Previously surveyed land comprises 5.5 acres (4.9 percent of project area). The remaining 58.5 acres (23.7 ha), comprising 52.3 percent of the project area, are on broad alluvial fans, footslopes, stream terraces, or flood plain landforms. These areas are primarily used for cultivation of row crops or are in pasture, and there are only a few scattered sections on low-slope wooded upland landforms (Figure 1.6). All of these low-slope landforms required systematic archaeological survey, and all archaeological investigations were confined to the project corridors.

## **SUMMARY OF FINDINGS AND RECOMMENDATIONS**

As a result of this survey effort, UK-PAR crew excavated 697 shovel tests including bracketing tests to define site boundaries. Additionally, 39 deep auger tests were placed at the base of shovel tests to test for buried cultural deposits or paleosols. The archaeological survey documented five previously unknown



archaeological sites (15Ro226 through 15Ro230), and six isolated finds within the project area (Figures 1.2). One previously reported site (15Ro194) that falls just outside the project area was revisited during the survey. Finally, three standing structures were documented within the project area. These cultural resources are briefly described below, discussed in south to north order. Their general locations are shown on Figure 1.2.

Site 15Ro226 is an apparently isolated historic grave located within a plowed field 0.27 km northeast of the intersection of Farm Road and KY 377, on the east side of KY 377. The site consists of single carved, truncated obelisk burial monument. It is engraved on one face with the inscription “Thomas P. Johnsons, b. Feb 18, 1866, d. July 28, 1895”. The monument appears to be granite or sandstone. A relief carving shows an open book resting upon a cloth shroud at the top of the truncated obelisk. The obelisk rests at an angle upon a plinth, indicating that it has been moved or partially disturbed. This interpretation is supported by impact marks near the base of the obelisk that suggest farm equipment periodically hits the monument, disturbing its original placement orientation. Given the site’s location within a plowed field, the degree to which the site has been disturbed is unknown. The site boundary is arbitrarily defined as a two-meter radius around the obelisk, for an area of 13 m<sup>2</sup>. Because the monument is located 15 m outside the project ROW, no shovel tests were excavated. Visual examination of the area around the monument did not reveal any other grave markers or depressions, and shovel testing nearby but within the project boundary did not reveal any artifact or evidence of additional burials. The historic maps examined for this survey did not show any cemeteries or residential structures near this site. Given the approximately 10-meter distance between the obelisk and the proposed new ROW, it is unlikely that this site will be disturbed. Given that there is apparently only a single grave UK-PAR finds that 15Ro266 has very low research potential and is not eligible for listing on the National Register of Historic Places (NRHP) under Criterion D. UK-PAR recommends no additional work at this site.

Site 15Ro227 is a late 19<sup>th</sup> to early 20<sup>th</sup> century historic outbuilding located roughly 12 m west of KY 377. The site is situated on a level terrace at an elevation of 244 m AMSL, about 450 m west of Triplett Creek. Currently, the site is enclosed by overgrown secondary vegetation, with pasture surrounding the overgrowth. A large dirt-embanked pond is situated about 50 m northwest of the site, outside the survey corridor. The site measures 20 m north-south by 15 m east-west, bounded by the large pond and by KY 377. The site may extend farther west, but shovel tests were confined to the ROW. The site area is defined by the distributions of one positive shovel test and visible architectural features (a metal chimney flue, roof timber remains, dressed sandstone foundation slabs, corrugated metal roof panels, and asphalt roof shingles). Items also present on the surface but not collected include barbed wire, a tire, a furnace with the label “Moore’s”, and a bird bath post. A single wire nail was collected from the positive shovel test. The Morehead 7.5’ USGS quadrangle map (1970, photorevised 1978) shows an outbuilding at the site location. The 1937 Kentucky Department Highways map of Rowan County also shows a structure at this location. Given the low artifact density, lack of subsurface cultural deposits, and the probable modern age of at least some of the artifacts, the research potential of 15Ro227 is low. Consequently, UK-PAR recommends no additional archaeological work at this location.

Site 15Ro228 is a late 19<sup>th</sup> to mid-20<sup>th</sup> century historic scatter situated in an open pasture about 0.6 km north of DeBard Branch Road and 10 m west of KY 377. The site occupies a relatively flat stream terrace at an elevation of 252 m AMSL and measures only about 15 m north-south and 5 m east-west (75 m<sup>2</sup>). The site may extend farther west, but shovel testing was confined to the proposed new ROW corridor. One meter east of the site is a linear depression oriented northeast-southwest that appears to be an old roadway. The site is defined by three positive shovel tests, which yielded one milk glass fragment, three clear container glass fragments, and one amethyst pressed table glass fragment, all from plow zone contexts. The 1937 and 1954 Kentucky Department of Highways maps show at least one residential structure near the site location, but the small scale for these maps prevents correlating any specific structure with this small site area. The 1970 Cranston 7.5’ USGS topographic quadrangle map shows a residential structure at the site location with a barn about 75 m to the north. At the time of this survey, the barn was present but no residential structure or remnants thereof were evident. Overall, the artifact assemblage appears to be late 19<sup>th</sup> to early 20<sup>th</sup> century in age, and it likely relates to the residential structure that once stood at this location. Given the low artifact

density, lack of subsurface cultural deposits, and absence of structural remains the research potential of 15Ro228 is low. Consequently, UK-PAR recommends no additional archaeological work at this location.

Site 15Ro229 is a temporally unassigned prehistoric lithic scatter located on the east side of KY 377, about 170 m south of the intersection of KY 799 with KY 377. It is positioned in a pasture on a level terrace at an elevation of 247 m AMSL, about 235 m west of Triplett Creek. The site measures about 20 m north-south by 5 m east-west (100 m<sup>2</sup>). It is bounded on the west by KY 377. The site may extend farther east, but shovel tests were confined to the proposed new ROW corridor. The site is defined by three positive shovel tests yielding five prehistoric flakes. Three were from plow zone contexts (one was lost in the field), and two were from subsoil at 60-70 cm below surface. Bracketing shovel/auger tests were negative. The site is potentially disturbed by construction of a water main that parallels KY 377 and runs only about 1.5 m east of the site. Given the low number of artifacts, the apparent absence of a buried A horizon containing cultural materials, absence of temporally diagnostic artifacts, and no evidence of subsurface features, the research potential of 15Ro229 is low. Consequently, UK-PAR recommends no additional archaeological work at this location.

Site 15Ro230 includes two late 19<sup>th</sup> to early 20<sup>th</sup> century in-ground features represented by a cut sandstone well and a keyhole stone and wood springhouse. These features are located about 15 m west of KY 377 and about 110 m north of Pond Lick Road. The structures are in secondary woods on a level terrace at an elevation of 238 m AMSL, and about 115 m northwest of Triplett Creek. The site measures about 25 m north-south by 15 m east-west and is bounded on the east by KY 377. The site extends west outside the surveyed ROW corridor, into an area that was not shovel tested. Only the visible features were recorded; no artifacts were observed or recovered from the site. The sawn wood springhouse superstructure is partially collapsed and has a corrugated metal roof. It is offset from its keyhole foundation and is situated a few feet from a small unnamed tributary to Weaver Branch. The well is about 12 m northeast of the springhouse. The well foundation has four visible courses of dressed sandstone on two sides, but the well opening is filled with stone and is heavily covered in vegetation. The Morehead, KY 7.5' USGS topographic quadrangle map (1970, photorevised 1978) shows two barns south of the site area and one residence north of the site. The 1937 and 1954 Kentucky Department of Highways maps do not show any structures near the site location. Based on the 1978 USGS map and field observations, any residential structure that may have been present appears to have been disturbed by construction activities associated with KY 377. Given the lack of artifacts, the research potential of 15Ro230 is low, though most of the site may lie outside the investigated ROW corridor. Consequently, UK-PAR recommends no additional archaeological work at this location provided that construction is confined to the proposed new ROW. If construction disturbance extends outside the investigated area to impact the structure areas, additional archaeological work may need to be conducted.

Site 15Ro194 was revisited during survey. This site is a single historic grave consisting of a square headstone at the west end and a triangular footstone at the east end, both made of sandstone. The proposed new ROW corridor is about 10 m west of 15Ro194. The site data documented during our revisit agrees with the earlier site inventory form. No artifacts were collected or observed at the site. The revisit did not identify any other headstones or footstones in the immediate area. The west side of the headstone exhibits carved letters that were indecipherable at the time of our survey. The east side of the footstone has "W. T. H" carved on the surface. The original site inventory form notes that the headstone reads "W.M. Trumbo son of Alfred & Susannah Hurst died July 31, 1851 aged 1 year and 14 days" while the footstone reads "W.T.H. 1851". Additionally, the inventory form noted that the site might be potentially eligible for nomination to the NRHP under Criterion C, particularly as it may pertain to the health and diseases of children in the mid-19<sup>th</sup> century. UK-PAR does not concur with that statement, as Criterion C pertains to architectural styles. In addition, the a site consisting of a single historic grave generally has very low research potential and is not considered eligible for listing on the NRHP under Criterion D. UK-PAR recommends avoiding impact near the site by establishing a 10-meter buffer zone around the marker. If the named individual in the grave needs to be relocated due to construction, this will be done in accordance with provisions set forth in 600 KAR 3:020.

In addition to these five newly documented sites and one site revisit, UK-PAR also identified six

isolated finds. These include four prehistoric and two historic isolated finds. These are numbered from south to north along the project corridor (Figure 1.2). The artifacts recovered at IF2, IF3, IF5, and IF6 consist of single prehistoric flakes at each location. All bracketing shovel tests were negative, and no evidence of subsurface cultural features or middens were found at any of these locations. The two historic isolated finds (IF1 and IF4), each had a single positive bracketing shovel test. The material from IF1 includes one wire nail, five wire nail fragments, and one tin alloy snap/button fragment. The artifacts from IF4 include one nail and one container glass fragment. No structures are present on historic maps near these historic isolated find locations. These six isolated finds do not meet the current OSA criteria for archaeological sites, their research potential is extremely low, and no additional archaeological work is recommended at any of these locations.

Finally, UK-PAR identified three historic resources (Structures 1-3) within the proposed new ROW corridor. Structure 1 is an abandoned wood residence with two wooden sheds, one wooden outhouse, and a well located 620 m south of Old Sportsmans Road. Structure 2 is a sandstone outbuilding located west of Cranston Cemetery Road near the Friendship Community Fellowship Church. Structure 3 is a small log outbuilding situated approximately 450 m south of the intersection of KY 377 and KY 799. All of these are standing structures. Shovel tests near these structures did not yield any artifacts. After examining photographs of these structures, Senior Architectural Historian Janie-Rice Brother concluded that they are more than 50 years old and recommended that they be surveyed and evaluated as culture-historic resources, if they have not already been documented.

In summary, UK-PAR identified five archaeological sites (15Ro226, 15Ro227, 15Ro228, 15Ro229, and 15Ro230), six isolated finds, and revisited one previously recorded archaeological site (15Ro194) during the archaeological survey of proposed new ROW corridor for KY 377 in Rowan County. UK-PAR recommends no additional archaeological work at any of the archaeological sites or the isolated finds, provided that construction activities are confined to the investigated corridor. If construction activities extend beyond the areas surveyed for this project, additional archaeological investigation may be required, especially at 15Ro194, 15Ro226, and 15Ro230.

## **CHAPTER 2**

### **ENVIRONMENTAL SETTING**

This chapter provides background on the environmental setting of the project area, which includes information regarding the physiography, geology, soils, climate, flora, and fauna in the Rowan County area. This information seeks to provide a historical perspective on how the environment has changed in the time the project area has been affected by human inhabitation.

#### **PHYSIOGRAPHY**

Rowan County is located primarily within the Mountains and Eastern Coal Fields physiographic region of the Cumberland Plateau Physiographic Province, though the western edge of the county lies within the Knobs region (Avers et al. 1974:84). The county is part of the Gorge Section of the Upper Kentucky/Licking Archaeological Management Area (Pollack 2008:12) and based on the U.S. Census Bureau (2010) has an area of 740 km<sup>2</sup>. The county is characterized by a highly dissected landscape, deeply entrenched permanent streams, and eroded knob remnants (Avers et al. 1974:2). The project area is located in the Mountains and Eastern Coal Fields physiographic region at the northern portion of the Daniel Boone National Forest.

#### **GEOLOGY**

The geology of the project area is described and shown on the Cranston, KY ((Philly et al. 1974) and Morehead, KY (Hoge and Chaplin 1972) geologic quadrangle maps. The project corridor is primarily positioned on valley floors, which are underlain by Quaternary alluvium. Pennsylvanian-age rocks can be found on the ridges and upper side slopes of eastern Rowan County, while Mississippian-age rocks cover most of the rest of the county. Devonian and Silurian rocks occur only in the southwestern edge of Rowan County (Avers et al. 1974:84), relatively remote from the project area. The sediments within the project area consist of silt, sands, clays, and gravels derived from weathering of rocks of the Lower and Middle Pennsylvanian Breathitt Formation. Underlying bedrock in the project area is almost entirely composed of the Breathitt Formation. This formation consists of interbedded sandstones, siltstones, shale, flint clay, and coal zones (Hoge and Chaplin 1972; Philly et al. 1974).

#### **SOILS**

Soils in the project area along the North Fork of Triplett Creek valley are primarily assigned to the Tilsit-Clifty-Morehead association, which is formed in deep alluvium and range from rarely to frequently flooded. However, most soils are only occasionally flooded, which would not greatly affect patterns of historic or prehistoric land use. Actual flood plain soils, however, make up a relatively low proportion of the survey area, as do soils found on steeply sloped uplands. Tilsit silt loam and Morehead silt loam occur on stream terraces with slopes ranging from 0 to 12 percent, and they are rarely to occasionally flooded (Avers et al. 1974). Alluvial fans are not flooded in general and are commonly mapped as Cranston gravelly silt loam on 2 to 60 percent slopes. Additional soil series within the project area include Bonnie, Clifty, Cuba, and Stendal silt loams, all of which are found mainly on flood plain settings and have slope ranges from 0 to 4 percent (Avers et al. 1974).

#### **CLIMATE**

The climate of Rowan County is temperate. The winters are moderately cold and the summers are

warm and humid. Seasons are marked by weather fronts and associated centers of high and low pressure, which can cause significant variation in temperature between areas with more hilly terrain (Avers et al. 1974:83). Precipitation is fairly evenly distributed throughout the year, with the most rainfall occurring in July. Total rainfall for the year is approximately 45.9 inches. During the winter, snowfall is variable, with some years having very little snowfall. Average depth of snowfall totals around 3 inches per year (Avers et al. 1974: 84). The climate in Rowan County supports a variety of plant and animal life. The growing season averages 166 days until the temperature drops to 32 degrees F (Avers et al. 1974:83).

## **FLORA AND FAUNA**

Rowan County is part of the larger Mixed Mesophytic Forest regime (Braun 2001). This forest regime includes a wide variety of tree species regulated by elevation, slope, and aspect including red and white oaks, chestnut, tulip tree, basswood, beech, birch, black cheery, sugar and red maples, pines and hemlocks (Braun 2001).

Local fauna consist mostly of small mammals, such as the cottontail rabbit, opossum, and squirrel. Other fauna currently residing in the area include raccoon, turkey, striped skunks, muskrats, minks, red foxes, eastern chipmunks, woodchucks, river otter, beaver, white-tailed deer, and a variety of waterfowl. Historic records suggest animals formerly common in eastern Kentucky, but now considered absent or rare, include elk, wolf, mountain lion, black bear, and passenger pigeon (Shelford 1963).



## **CHAPTER 3**

# **BACKGROUND RESEARCH AND SURVEY PREDICTIONS**

This chapter summarizes the regional prehistory and history of central Kentucky as well as the basic information on the history of Rowan County. Additionally, this chapter covers the previous archaeological research conducted within a 2-km buffer zone of the project area and historic map review undertaken prior to field work, and the predictive model drawn from that research.

### **PREHISTORIC CONTEXT**

The prehistoric cultural chronology of the eastern United States is divided into a series of periods that broadly correspond to major shifts in subsistence and procurement strategies, social organization, and settlement patterns. These periods (Paleoindian [more than 10,000 years ago], Archaic [10,000 to 3,000 years ago], Woodland [3,000 to 1,000 years ago], and Late Prehistoric [1,000 to 450 years ago]) are linked to distinct material culture styles, especially in projectile point morphology and, in later times, ceramic vessel form and decoration. These periods form a general framework for discussing the prehistoric chronology of the study area and for identifying temporally diagnostic artifacts found during the survey. Unfortunately, no temporally diagnostic artifacts were recovered in the course of this survey, so additional discussion of these temporal periods is not relevant for interpreting the current artifact assemblage.

### **HISTORIC CONTEXT**

Kentucky's historic settlement was achieved amidst conflicting Native American land claims and the tumultuous events of the Revolutionary War as the American colonies strove to become independent. Following early exploration by hunters from the east in the 1760s, active settlement of the Kentucky frontier began in the 1770s (McBride and McBride 2008). The beginning of the Revolutionary War created a dangerous climate for settlement in Kentucky because many Native American groups in the Ohio River valley allied with the British and viewed the settlers as interlopers. Kentucky settlers responded to dangers of warfare by building defensive residences called "stations" in which several families typically lived (O'Malley 1987). The men also were members of loosely organized militia units that were responsible for patrolling the frontier for evidence of impending Indian attacks, defending the settlements when attacks occurred, and participating in retaliatory raids against Indian villages north of the Ohio River.

Rowan County was formed in 1856 from portions Fleming and Morgan counties. It is named after John Rowan, an early United States representative (1807-1809) and senator (1825-1831) for Kentucky (Kleber 1992:784). The Triplet Creek area reportedly was first surveyed in the summer of 1773 by Pennsylvanians led by George William Thompson (Sprague 1986:784). Settlers mainly from Virginia later came into the area to claim land grants for their service in the Revolutionary War. The first two communities established in the county were Farmer and Clearfield, while Morehead was established as the seat of government when the county was founded in 1856. Corn was the dominant county crop until it was replaced by tobacco in the 1950s, while timbering, quarrying, brick making, and mining represent the major historic industries (Kleber 1992:784). The county is noted for the Martin-Tolliver feud, also known as the Rowan County War, which was Kentucky's bloodiest feud. It even surpassed the Hatfield-McCoy conflict in the number killed (20 men) and wounded (16) between 1883 and 1887 (Williams 1992:784). The establishment of various rail lines in the late 1800s and 1900s plus Interstate 64 in 1969 proved vital to the industrial growth of the county. Morehead State University derived from Morehead Normal School and Teacher's College, which was founded in 1887 through a donation by Confederate General William T Withers to Phoebe Button. Frank Button, Phoebe's son, became the first principal of the school. Morehead State University is currently the major employer in the county (Kleber 1992:784).

## **PRE-FIELD RESEARCH AND SURVEY PREDICTIONS**

In order to assess the archaeological potential of the project area, a search of several databases was made to determine the extent of previous research both within and near the project area. This search included examination of USGS geological and topographic maps, highway maps of Rowan County, state archaeological site forms, and reports on file for survey projects conducted within two kilometers of the project area.

Rowan County is included within the Gorge section of the Upper Kentucky/Licking Management Area (Pollack 2008:12). Archaeological site density for this section is generally high, and the most common site types in order of abundance are prehistoric rock shelters, historic farmstead/residences, and open habitation without mounds (Stackelbeck and Mink 2008:92). Previous archaeological work in the section and management area has been irregularly distributed, most with surveys and sites deriving from both systematic and nonsystematic surveys within the Daniel Boone National Forest and from a variety of cultural resource management projects.

## **PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS**

The GIS database at the Kentucky Office of State Archaeology (OSA) was consulted on 29 January 2015 for information about previously conducted surveys and sites recorded within two kilometers of the current project area (OSA Project Registration Number FY15-8302). The results of this search listed 42 formal surveys that had been carried out within that 2-km radius and documented a total of 11 archaeological sites. These surveys are discussed below in chronological order, along with the sites identified during each investigation.

In 1977, archaeologists with Archaeological Services, Inc. conducted test excavations and a Phase I cultural resource survey within 15Ro35 and the surrounding area in advance of construction and development. Field methods consisted of systematic subsurface testing. This investigation revisited one site (15Ro35) and recorded one new site (15Ro36). Neither is within 2 km of the current project area (Turnbow and Allen 1977).

Barber (1978) reported his cultural reconnaissance of 171 acres within the Morehead Ranger District of the Daniel Boone National Forest. These investigations did not document any archaeological resources.

In 1980, U.S. Forest Service archaeologist Gary D. Knudsen conducted a series of Phase I cultural resource inventory surveys on about 3,000 acres in the Daniel Boone National Forest as part of the Forest's Cultural Resource Management Program. Field methods consisted of systematic subsurface testing. This investigation recorded 17 new rock shelter sites (15MCY73-15MCY76, 15JA29-15JA33, 15BH44, 15Ro47-15Ro50, 15RK26, and 15MF198-15MF199). None of these sites are within 2 km of the current project area (Knudsen 1980).

In 1980, archaeologists with the University of Kentucky Department of Anthropology conducted a Phase I cultural resource survey on about 3.4 acres along U.S. Forest Service Tracts 3094AQ and 711 in Daniel Boone National Forest in advance of construction of a road and pipeline right-of-way. Field methods consisted of systematic subsurface testing. This investigation did not document any archaeological resources (Turnbow 1980).

In 1981, archaeologists with Cultural Resource Analysts, Inc. conducted a Phase I cultural resource survey on approximately 7,065 acres within the Daniel Boone National Forest to identify archaeological, historical, and architectural resources. Field methods consisted of systematic subsurface testing in 227 sections. This investigation recorded 36 new sites (15BH31-15BH32, 15CY22, 15JA34-15JA39, 15L172-15L174, 15LS5, 15MCY78-15MCY83, 15MF200-15MF202, 15MO74-15MO75, 15PO114, 15RK27,

15Ro51-15Ro56, and 15WH44-15WH47). None are within 2 km of the current project area (Bartnik et al. 1981).

In 1982, a small land survey was conducted by US forest service employee J. Keller and a site form was submitted for 15Ro65; no report was filled. This site is within the 2-km radius of the project area, and a brief description is provided below, derived from the site form information.

Site 15Ro65 is a historic site, possibly used for water collection, located on a terrace. The site measures 10 m<sup>2</sup>. No artifacts were collected or associated with the area, though the presence of a circle of placed stones suggests historic use. Overall, the site was not deemed eligible for nomination to the NRHP, and no additional work was recommended for this resource.

In 1983, archaeologists with the University of Kentucky Department of Anthropology and US Forest Service Archaeological Technician Janna Keller conducted a Phase I cultural resource survey on approximately 645 acres within the Daniel Boone National Forest. Field methods consisted of systematic subsurface testing. This investigation did not revisit or record any archaeological resources (Knudsen 1985).

In 1983, archaeologists with the University of Kentucky Department of Anthropology conducted a Phase I cultural resource survey on a flood plain in Rowan County in advance of construction and extension of a sewer pipeline. Field methods consisted of systematic subsurface testing. This investigation did not document any archaeological resources (Rossen 1983).

In 1984, a Phase I cultural resource survey was conducted on approximately 1.8 acres along a ridge crest in advance of construction of a road way. Field methods consisted of systematic subsurface testing. This investigation did not document record any archaeological resources (Niquette 1984).

In 1985, archaeologist Charles M. Niquette conducted a Phase I cultural resource survey on approximately 52 acres in Rowan County at locations of proposed water tank sites and associated access points. Field methods consisted of systematic subsurface testing and visual inspection. This investigation did not document any archaeological resources (Niquette 1985).

In 1986, US Forest Service archaeologist Gary D. Knudsen conducted a Phase I cultural resource survey on tracts within the Daniel Boone National Forest in Rowan County. Field methods consisted of systematic subsurface testing. This investigation did not document any archaeological resources (Knudsen 1986).

In 1990, a Phase I cultural resource survey was conducted on approximately 1516 acres of US Forest Service lands in Rowan County. Field methods consisted of systematic subsurface testing. This investigation recorded four sites (15Ro79-15Ro82), but none of these are within 2 km of the current project area (Fouts 1990).

In 1991, archaeologists with Janzen Inc. conducted a Phase I cultural resource survey in Rowan County in advance of construction of an electrical substation. Field methods consisted of interviewing local residents, which established that the project area was completely disturbed, and no original context remained. This investigation did not document any archaeological resources (Janzen 1991).

In 1991, Phase I cultural resource surveys were conducted on approximately 13.4 acres of the Morehead Ranger District of the Daniel Boone National Forest in advance of proposed road construction. Field methods consisted of systematic subsurface testing and visual inspection. This investigation did not document any archaeological resources (Bodkin 1991a).

In 1991, archaeologist Frank M. Bodkin conducted a Phase I cultural resource survey on approximately 334.4 acres of US Forest Service lands within the Morehead Ranger District in association

with wildlife projects. Field methods consisted of systematic subsurface testing. This investigation revisited three previously recorded sites (15BH130, 15MF23, and 15Ro8), and recorded 10 new sites (15MF387-15MF393, 15BH60, 15BH62, 15MO114). However none of these are within 2 of the current project area (Bodkin 1991b).

In 1992, archaeologist Frank M. Bodkin conducted cultural resource surveys on a total of 52.3 acres distributed over 44 small project areas in the Daniel Boone National Forest. These tracts were related to wildlife preservation and restoration, rest area construction, and small land leveling projects. Field methods consisted of systematic subsurface testing. This investigation recorded six new sites (15MF451, 15MF465-15MF466, 15Ro67, and 15Ro122-15Ro123). Of these, only one site (15Ro122) is within 2 km of the current project area (Bodkin 1992a).

Site 15Ro122 is a historic farmstead/residence with a temporally undefined prehistoric component located on a flat terrace. The site measures about 6,060 m<sup>2</sup> or 1.5 acres in extent. Artifacts collected include two prehistoric flakes, one file, one metal spoon, seven glass fragments, six whiteware sherds, one stoneware sherd, and two machine-cut nails. The temporary diagnostic artifacts indicate a historic occupation between 1880 and 1960. Some disturbance was reported due to construction of Interstate 64 as well as modern cultivation. The site was not deemed eligible for nomination to the NRHP, and Bodkin (1992a) recommended no additional work for this resource.

In 1992, archaeologist Frank M. Bodkin conducted a Phase I cultural resource survey 813.2 acres distributed over several timber sale and road construction projects in the Daniel Boone National Forest (Bodkin 1992b and 1993b). Field methods consisted of systematic subsurface testing. This investigation revisited one previously recorded site (15BH130), and recorded 15 new sites (15Ro116-15Ro120 and 15BH166-15BH175). However, none of these are within 2 km of the current project area.

In 1992, archaeologists with the University of Kentucky Program for Cultural Resource Assessment conducted a Phase I cultural resource survey of approximately 53 acres on a terrace above Big Bushy Creek in advance of construction and development. Field methods consisted of systematic subsurface testing. This investigation did not document any archaeological resources (Sussenbach 1992).

In 1993, archaeologists with the University of Kentucky Program for Cultural Resource Assessment conducted a Phase I cultural resource survey of approximately 7 acres on a terrace above Big Bushy Creek in advance of additional construction and development. Field methods consisted of systematic subsurface testing. This investigation did not document any archaeological resources (Sussenbach 1993).

In 1993, archaeologist Frank M. Bodkin conducted Phase I cultural resource survey of total of 228.5 acres within the Daniel Boone National Forest in advance of proposed road construction and timber sales. Field methods consisted of systematic subsurface testing. This investigation did not document any archaeological resources (Bodkin 1993a).

In 1993, archaeologist Frank M. Bodkin conducted a Phase I cultural resource survey of a total of 1,286.9 acres on 47 separate timber tracts and associated roadways in Rowan, Bath, Menifee, and Morgan counties, all within the Daniel Boone National Forest. Field methods consisted of systematic subsurface testing. This investigation revisited one previously recorded site (15Ro103), and recorded 32 new sites (15BH176-15BH183, 15MF468-15MF484, 15MO116-15MO119, and 15Ro124-15Ro126). Of these, only 15Ro124 is within 2 km of the current project area (Bodkin, 1993c).

Site 15Ro124 is a historic farmstead/residence located on a flat terrace. The site measures about 2,025 square meters or one half acre in extent. Artifacts collected include two ironstone fragments, one porcelain fragment, and 3 manganese glass container fragments. No diagnostic materials were recovered, though the artifacts suggest occupation at least 50 old. The site was not deemed eligible for nomination to the NRHP, and Bodkin (1993c) recommended no additional further work for this resource.

In 1995, Dr. Jack M. Schock of Arrow Enterprises conducted a Phase I cultural resource survey in Rowan County related to the proposed development. Field methods consisted of systematic subsurface testing. This investigation did not document any archaeological resources (Schock 1995).

In 1995, archaeologists Frank M. Bodkin and George Morrison conducted a number of small cultural resource surveys on a total of 199.3 acres distributed among 94 wildlife preservation and recreational project areas within the Daniel Boone National Forest in Rowan, Bath, Menifee, and Morgan counties. Field methods consisted of systematic subsurface testing and visual inspection. This investigation revisited one previously recorded site (15Ro130), and recorded 13 new sites (15BH195-15BH199, 15MF540-15MF541, and 15Ro146-15Ro151). None of these are within 2 km of the current project area (Bodkin and Morrison 1995).

In 1997, archaeologist Frank M. Bodkin conducted a Phase I cultural resource surveys over a total of 702.9 acres within the Morehead Ranger District in Bath, Menifee, and Rowan counties related to construction of proposed Off Highway Vehicle trail routes. Field methods consisted of systematic subsurface testing. This investigation revisited one previously recorded site (15BH148), and recorded 23 new sites (15Ro175-15Ro176, 15BH244-15BH255, and 15MF623-15MF631). None of these are within 2 km of the current project area (Bodkin 1997a).

In 1997, archaeologist Frank M. Bodkin conducted a Phase I cultural resource survey of a total of 12.85 acres within the Morehead Ranger District in Bath, Menifee, Morgan, and Rowan counties related to wildlife preservation projects. Field methods consisted of systematic subsurface testing. This investigation did not document any archaeological resources (Bodkin 1997b).

In 1997, Cultural Resource Analysts, Inc. conducted a Phase I cultural resource survey on approximately 3.5 acres in advance of development and construction of a new bank. Field methods consisted of systematic subsurface testing. This investigation did not document any archaeological resources (Richmond 1997).

In 1998, archaeologist Frank M. Bodkin conducted Phase I cultural resource survey within the Morehead Ranger District related to wildlife preservation projects. Field methods consisted of systematic subsurface testing. A "No Cultural Resources Form" was filed, and it can be inferred that this investigation did not document any archaeological resources (Bodkin 1998).

In 1999, a small land survey was conducted by KYCT Division of Environmental Analysis staff. A site form was submitted for 15Ro185, but no report was filed. This site is within the 2-km radius of the current project area. Site 15Ro185 is a historic cemetery consisting of multiple complete and partial headstones and footstones. The site measures 3750 m<sup>2</sup> or 0.93 acres in extent. No artifacts were collected or associated with the area, though the footstones and headstones suggest a date range from 1851 to 1950. The site was not deemed eligible for nomination to the NRHP (site form for 15Ro185, on file at OSA).

In 2000, a Phase I cultural resource survey was conducted over a total of approximately 34.7 acres in Rowan County for the proposed realignment of Kentucky 32. Field methods consisted of systematic subsurface testing and visual inspection. This investigation did not document any archaeological resources (Hixon 2000).

In 2000, Environment and Archaeology, LLC conducted a Phase I cultural resource survey 1.4 acres within the Daniel Boone National Forest in Rowan County for a proposed parking lot. Field methods consisted of systematic subsurface testing. This investigation did not document any archaeological resources (Mozzi and Breetzke 2000).

In 2002, archaeologist Frank M. Bodkin conducted Phase I cultural resource survey of a total of 49.6 acres within the Daniel Boone National Forest in Menifee, Morgan, and Rowan counties related to

construction of various power and water services. Field methods consisted of systematic subsurface testing. This investigation recorded two new sites (15Mo138-15Mo139). Neither is within 2 km of the current project area (Bodkin 2002).

In 2002, Dr. Jack M. Schock of Arrow Enterprises conducted a Phase I cultural resource survey of 1.7 acres in Rowan County for the Rock Fort Housing Project. Field methods consisted of systematic subsurface testing. This investigation did not document any archaeological resources (Schock 2002).

In 2002, Wilbur Smith Associates and Palmer Engineering conducted a Phase I cultural resource survey related to the proposed US 60 and I-64 connector. Field methods consisted of systematic subsurface testing. This investigation recorded seven new sites (15Ro189-15Ro195). Of these, six are within the 2-km radius of the current project area (Ball 2002).

Site 15Ro189 is a historic site of undetermined temporal affiliation located on a slope. The site measures 576 m<sup>2</sup>. There were no artifacts collected or associated with the site, though remnants of a stone fence and a possible filled well suggest an occupation of at least 50 years prior to the survey date. The site was not deemed eligible for nomination to the NRHP, and Ball (2002) recommended no additional work for this resource.

Site 15Ro190 is a historic farm/residence located on a footslope. This site measures 4140 m<sup>2</sup> or 1.02 acres in extent. No artifacts were collected or associated with the site, but remnants of a foundation, cistern, and fencing suggest an occupation between 1890 and 1949. The site was not deemed eligible for nomination to the NRHP, although Ball (2002) recommended additional work to determine if intact deposits are present.

Site 15Ro191 is a historic farm/residence located on a flood plain. The site measures 2640 m<sup>2</sup> or 0.65 acres in extent. Artifacts from the site include one brick, 16 wire nails, three machine-cut nails, and 14 window glass fragments. Diagnostic artifacts include the machine-cut nails, dating after 1840, and the wire nails, dating after 1880. The site was not deemed eligible for nomination to the NRHP, although Ball (2002) recommended additional work at the site to determine if intact deposits are present.

Site 15Ro192 is a prehistoric open habitation without mounds located on a sloped pasture. The site measure 800 m<sup>2</sup> in extent. Artifacts collected include 11 chert flakes and three chunk/shatter chert fragments. No temporally diagnostic materials were recovered. The site was not deemed eligible for nomination to the NRHP, and Ball (2002) did not recommend any additional work.

Site 15Ro194 is a historic burial site consisting of isolated burials. The site measures 1.5 m<sup>2</sup> in extent and is positioned on a wide terrace remnant. No artifacts were collected or associated with the site, but the headstones and footstones suggest a date range of 1851 to 1900. The site was not deemed eligible for nomination to the NRHP, but Ball (2002) recommended additional work at the site to determine if intact deposits are present.

Site 15Ro195 is a historic cemetery consisting of 200 marked graves and numerous unmarked graves. The site measures 3345 m<sup>2</sup> or 0.83 acres in extent. No artifacts were collected or associated with the site, but the headstones and footstones indicate a date range of 1826 to 2001. The site was not deemed eligible for nomination to the NRHP, although Ball (2002) recommended additional work to determine if the site may contain intact deposits.

In 2004, AMEC Earth and Environmental, Inc. conducted a Phase I cultural resource survey over approximately 150 acres in Rowan County related to proposed access roads and construction in the area. Field methods consisted of systematic subsurface testing. This investigation did not document any archaeological resources (Schatz and Miner 2004).

In 2004, archaeologists Dwight Cropper, Cecil Ison, and Bet Ison conducted a small Phase I cultural

resource survey of about 5.2 acres in Rowan County related to local development. Field methods consisted of systematic subsurface testing. This investigation did not document any archaeological resources (Ison et al. 2004).

In 2005, archaeologists with Cultural Resource Analysts Inc. conducted a Phase I cultural resource survey of 0.8 acres in Rowan County related to construction of a cellular tower. Field methods consisted of systematic subsurface testing. This investigation did not document any archaeological resources (Bybee 2005).

In 2006, archaeologists with Cultural Resource Analysts Inc. conducted a Phase I cultural resource survey in Rowan County related to the construction of a Walmart Supercenter. Field methods consisted of systematic subsurface testing. This investigation recorded one new site (15Ro208), which is within the 2-km radius of the current project area (Davies and Kerr 2006). Site 15Ro208 is a prehistoric open habitation without mounds located on level dissected uplands. The site measures 12,000 m<sup>2</sup> or 3 acres in extent. Artifacts from the site include one biface fragment, one chert chunk/shatter, and 31 chert flakes. No temporally diagnostic materials were recovered. Davies and Kerr (2006) deemed the site not eligible for listing on the NRHP and did not recommend any additional work due.

In 2007, archaeologists with Cultural Resource Analysts Inc. conducted a Phase I cultural resource survey of about 1.4 acres in Rowan County related to the construction of a cellular tower (McMahan and Kerr 2007). Field methods consisted of systematic subsurface testing. This investigation did not document any archaeological resources (McMahan and Kerr 2007).

In 2007, archaeologist Frank M. Bodkin conducted a Phase I cultural resource survey over 1,160 acres in the Morehead Ranger District in Rowan County as a result of severe damage done by heavy ice storms in the area. Field methods consisted of systematic subsurface testing and visual inspection. This investigation revisited one previously recorded site (15Ro109) and documented six new sites (15Ro210-15Ro215). None of these are within 2 km of the current project area (Bodkin 2007).

In 2008, archaeologist Frank M. Bodkin conducted a Phase I cultural resource survey over a total of 39.4 acres within the Daniel Boone National Forest in Rowan and Morgan counties as part of the Daniel Boone National Forest's Cultural Resource Management Program. Field methods consisted of systematic subsurface testing. This investigation recorded one new site (15MO154), but it is not within 2 km of the current project area (Bodkin 2008).

In 2013, a Phase I cultural resource survey was conducted over 69.6 acres within the Daniel Boone National Forest in Rowan County in advance of construction and road extensions. Field methods consisted of systematic subsurface testing. This investigation did not document any archaeological resources (Bodkin 2013).

## **ARCHAEOLOGICAL RESOURCE POTENTIAL AND SURVEY PREDICTIONS**

The review of archival sources, including surveys and previously identified sites, archival maps, and historical information about Rowan County, suggests that both prehistoric and historic archaeological resources should be expected in the project area. The previous surveys covered landforms similar to those within the current project area, and site location data suggest that historic archaeological sites have the highest potential on upland and terrace landforms. At least three potential historic residence or outbuilding locations on terrace landforms were identified from inspection of historic maps and a preliminary field assessment of the project area. The historical research suggests that Rowan County was occupied, albeit sparsely, during the early and mid-19<sup>th</sup> century, and that settlement density increased during the late 19<sup>th</sup> and early 20<sup>th</sup> centuries as rail lines provided easier access to markets for timber, stone, bricks, and coal. Consequently, late-19<sup>th</sup> and early 20<sup>th</sup> century remains likely will dominate the archaeological site assemblage. In contrast, the paucity of

prehistoric sites documented within 2 km of the project area suggests that prehistoric sites will be few and of low artifact density. If prehistoric sites are present they will most likely be located on undisturbed terrace landforms near the stream confluences.



## **CHAPTER 4**

### **FIELD AND LABORATORY METHODS**

The purpose of this survey was to identify any archaeological resources within the area to be impacted by the proposed widening and realignment of KY 377 in Rowan County. The area under consideration included narrow corridors generally paralleling the existing KY 377 roadway on both sides. These corridors include both proposed new right-of-way (ROW) and temporary construction easements. The corridor is an 8.2-mile (13.2 km) section of KY 377 that varies in width up to 80 meters. It extends between the junction of KY 377 and KY 32 on its southern end to slightly north of the intersection of KY 377 and KY 799 near the Lewis County line. Figure 4.1 shows the overall project area and is a key for the detailed maps that follow. In addition to locating archaeological resources, any identified resources were assessed for their potential eligibility for listing on the NRHP. The first section below describes the field methods used to locate and assess cultural resources within the project area. The second section discusses the laboratory and analytical methods used to evaluate the materials recovered. Curation is briefly described in a final section.

#### **FIELD METHODS**

Field survey was conducted by intensive pedestrian reconnaissance that included visual inspection, systematic shovel testing, and use of a bucket auger for deep soil examination. Choice of survey method was dictated by current land use, evidence of previous ground disturbance, surface visibility, and ground slope. Figures 4.2-4.11 show details of the current land use within the project area, arranged from north to south (see Figure 4.1 for index). These figures show areas that were subjected to systematic survey through either shovel and auger testing or visual inspection of exposed surfaces, visual inspection on slopes in excess of 20 percent, areas disturbed by historic modifications, and previously surveyed areas.

Shovel testing was employed in areas where ground surface visibility was less than fifty percent and ground slope was less than twenty percent. Shovel tests were excavated at 20-m intervals on transects placed within the narrow new right-of-way corridors that generally run parallel to the existing KY 377 roadway. When prehistoric or historic artifacts more than 50 years old were found, the sampling interval was decreased to 10 meters to help define the boundaries of artifact distributions. All soils from shovel tests were screened through ¼-inch hardware mesh to ensure consistent recovery of materials. Shovel tests generally extended only into the top of the B horizon, primarily sampling plow zone. Shovel tests were generally less than 30 cm deep. Of the 111.8 acres within the total project area, about 58.5 acres (52.3 percent) was subjected to systematic shovel testing.

In selected alluvial settings, a 10-cm diameter bucket auger was used to evaluate the potential for buried sites or buried landscapes throughout the project area. Deep auger test locations are shown on Figures 4.2-4.11. Augers were placed at the base of shovel tests, with only a few reaching the full depth permitted by the auger handle (about 160 cm). In soil areas that were frequently flooded, auger testing was performed at approximately 100-meter intervals. On less frequently flooded alluvial terraces, auger tests were spaced at closer intervals. Soils from auger tests were also screened for artifacts, and soil strata were recorded for all auger tests.

A few agricultural fields and smaller garden plots with adequate surface visibility were encountered within areas that were otherwise shovel tested. When these areas had surface visibility greater than fifty percent, they were subjected to visual inspection. Members of the survey crew walked along field rows at intervals of 3 meters or less and inspected the ground surface for artifacts. All observed artifacts were collected, and the spatial extent of these materials was used to define site boundaries. At least one shovel test was placed adjacent to visually inspected fields to document soil profiles.

Many small sections of the project area were not subject to either systematic shovel testing or visual

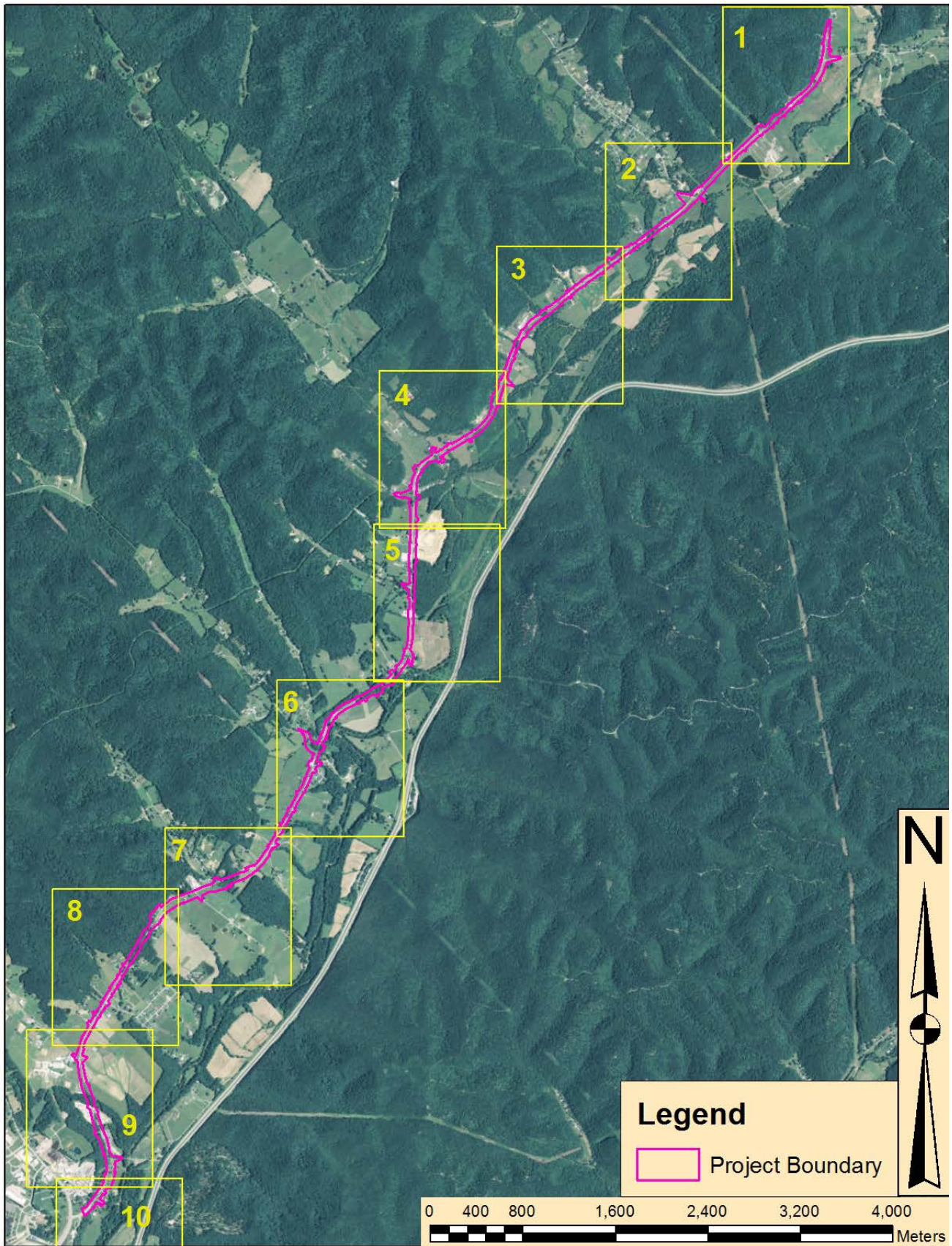


Figure 4.1. Index Map for KY 377 Survey Land Use. See Figures 4.2-4.11 for details.

Figure 4.2. Map of the Project Area (Section 1) Showing Landscape Condition, Sites, Isolated Finds, and Survey Methods.

Figure 4.3. Map of the Project Area (Section 2) Showing Landscape Condition, Sites, Isolated Finds, and Survey Methods.

Figure 4.4. Map of the Project Area (Section 3) Showing Landscape Condition, Sites, Isolated Finds, and Survey Methods.

Figure 4.5. Map of the Project Area (Section 4) Showing Landscape Condition, Sites, Isolated Finds, and Survey Methods.

Figure 4.6. Map of the Project Area (Section 5) Showing Landscape Condition, Sites, Isolated Finds, and Survey Methods.

Figure 4.7. Map of the Project Area (Section 6) Showing Landscape Condition, Sites, Isolated Finds, and Survey Methods.



Figure 4.8. Map of the Project Area (Section 7) Showing Landscape Condition, Sites, Isolated Finds, and Survey Methods.

Figure 4.9. Map of the Project Area (Section 8) Showing Landscape Condition, Sites, Isolated Finds, and Survey Methods.

Figure 4.10. Map of the Project Area (Section 9) Showing Landscape Condition, Sites, Isolated Finds, and Survey Methods.

Figure 4.11. Map of the Project Area (Section 10) Showing Landscape Condition, Sites, Isolated Finds, and Survey Methods.

inspection because they had been extensively modified by historic human activities. At several locations, bulldozers had been used to cut away portions of toe slope to create leveled areas to accommodate residences or outbuildings. These modifications were easily identified, and were visually inspected for archaeological resources. In other locations, house lots had been filled and later graded to create level areas for houses and trailers. Typically, fill was brought in to raise houses above flood-prone settings near waterways. Mottled soils indicative of fill were noted on shovel tests forms, but no augers were placed in shovel tests displaying such soil profiles. Most of the temporary construction easements within the project area consisted of highly disturbed land that was often occupied by modern buildings. Additionally, several corridors modified by gas or water pipelines were not shovel tested. Finally, several large sections of ROW shown on Figures 4.2-4.11 are marked as disturbed but are apparently in open pasture or agricultural land. These areas have been disturbed by construction activities that post-date the world imagery coverage used in ArcGIS version 10.3. There were no sections where the UK-PAR crew was denied access, and the entire project area has been accounted for. The total area that was not systematically investigated due to disturbance factors is about 41.1 acres (36.8 percent of the project area).

In addition to areas impacted by historic human modification, some areas were excluded from systematic shovel testing due to steep slopes particularly where tributaries cut near or across upland ridges, creating ravines. Steeply sloped areas within the corridor were visually inspected for archaeological resources, but were not shovel tested or augered. The total area that was not systematically shovel tested due to steep slopes is about 6.7 acres (6.0 percent of the project area).

Finally, several segments of the proposed new ROW and construction easement corridors had been previously surveyed, most commonly in advance of timber sales conducted on US Forest Service lands (see Chapter 3). These previously surveyed areas had been investigated using modern field methods comparable to those employed here, and no sites or isolated finds had been recorded within the new ROW corridors as a result of these previous efforts. Consequently, UK-PAR did not investigate these previously surveyed segments of the project area. The total area that was not systematically investigated due to previous survey effort is about 5.5 acres (4.9 percent of the project area).

## **LABORATORY METHODS**

Artifacts were washed, catalogued, and analyzed at the laboratory facilities of UK-PAR in Lexington, Kentucky after completion of the field work. Following washing, the artifacts were separated into major material classes (e.g., historic ceramics, container glass) for more detailed description, identification, and analysis. Following analysis, an inventory was assembled using UK-PAR's standard descriptive typologies for prehistoric and historic artifacts. The following discussion of analytical methods describes only the artifact classes and categories represented in the project assemblage.

## **PREHISTORIC ARTIFACTS**

All of the prehistoric artifacts recovered during this Phase I survey are prehistoric chipped stone debitage. No prehistoric ceramics, modified chipped stone tools, or ground stone artifacts were recovered. Analysis of prehistoric lithic artifacts involved a typological classification of chipped stone materials that focused on identifying the production trajectory and stage of reduction (Andrefsky 1998; Collins 1975; Odell 2003). In addition to morphological classification and assignment to reduction stages, the raw material type was identified and the amount and type of cortex present on the dorsal surface of each flake was also recorded for all chipped stone artifacts. Monica L. Chism analyzed the prehistoric lithic artifacts recovered from the survey. Definitions for the debitage flake types that were recovered are provided below.

## **Debitage**

Though a full biface reduction sequence includes primary, secondary, interior, and biface thinning flakes (Collins 1975; Odell 2003), the project assemblage presents an incomplete series of flake types. In this assemblage, only secondary flakes are part of the classifiable biface reduction sequence. In addition, broken flakes and angular shatter were also recovered.

### *Secondary Flakes*

Partial cortical flakes, also called secondary flakes, represent early stages of reduction that involve removal of cortex from cores and tool blanks and preparation of cores and blanks for subsequent thinning and shaping. Attributes of secondary flakes include an obtuse-angled or right-angled platform that shows no lipping on the ventral surface, a noticeable bulb of percussion, and presence of cortex on less than 50 percent of the dorsal surface (including the platform as part of the dorsal surface)

### *Broken Flakes without Cortex*

Broken flakes without cortex, or flake fragments, are pieces of flakes that lack either an identifiable platform or a bulb of percussion. However, the specimen is still identifiable as a flake by its relative thinness, the presence of dorsal flake scars, and a smooth ventral surface. Broken flakes also lack cortex, and this indicates that many were produced later in the manufacturing process, in intermediate or late stages. Flake fragments that have cortex on the dorsal surface were placed into primary or secondary flake categories based on the amount of cortex visible, and were not included in the broken flake category.

### *Angular Shatter*

Shatter is a fragment of chert that has been culturally modified but lacks attributes that would allow it to be classified into any otherdebitage category. Angular shatter can be produced at any stage of reduction but is more likely a by-product of early stages.

## **Cortex**

The type of cortex was identified for alldebitage types that exhibit cortex. Nodular cortex is the only cortex present within this lithic assemblage and is identified by its thick, granular, and often chalky rind. This cortex type is indicative of extraction of chert raw materials from a primary geologic source location, such as residual weathered bedrock or bedrock outcrops.

## **Lithic Raw Material Types**

The lithic raw materials were identified by comparison to the type collection at the William S. Webb Museum of Anthropology with assistance from Eric Schlarb (Kentucky Archaeological Survey). Local geological quadrangle maps (Philly et al. 1974; Hoge and Chaplin 1972) were consulted to determine whether the raw material types identified were locally available to prehistoric inhabitants of the locality. Within the immediate survey area the underlying bedrock consists of Mississippian-age Borden and Newman Limestone formations with the latter formation containing a variety of chert resources suitable for production of stone tools. The lithic raw material types identified in the assemblage include Haney, Paoli, and Boyle. Unidentifiable (burned) chert was also present.

Haney chert can be distinguished by its high content of oolites, which can be observed by the naked eye. Oolites are spheroidal or ellipsoidal bodies that are usually calcareous or siliceous in composition and are suspended within the chert matrix. According to Meadows (1977:109), other than its oolitic appearance, Haney chert is essentially the same as Paoli chert, but more translucent. However, some Haney chert specimens do not appear to be highly oolitic. Haney chert varies in color from white and buff, to tan, brown, and dark brown. This material also may contain brownish and grayish bands. Haney chert is of high quality and fractures with ease. Haney underlies the project area, therefore it is a locally available raw material.

Paoli chert occurs as irregularly shaped and elongated nodules, and in thin discontinuous beds (Meadows 1977:108). This material is nonfossiliferous and highly silicified. Paoli is a colorful and variegated chert, sometimes displaying lines and swirls of red, brown, orange, yellow, and tan. It is vitreous, shiny, at times semi-translucent, and is a very high quality knapping material. Paoli also underlies the project area, and is a locally available raw material.

Boyle chert is derived from the Middle Devonian-age dolomites of the Boyle Formation. This formation is most often present in the Knobs region of central and eastern Kentucky, and occurs as nodules and discontinuous layers (Meadows 1977:102). The nodules are large and blocky, and often exhibit a white, chalky primary cortex. The interior color is highly variable, with a mottled mixture of tan, blue, yellow, gray, and different shades of brown. Boyle chert can range from earthy to waxy in appearance. It is generally opaque, but can be translucent. This material also can be highly fossiliferous, containing bryozoans, brachiopods, corals, crinoids, and echinoderms (Vento 1982) appearing as white inclusions. Boyle chert is considered to be a local raw material. Though the Boyle formation is not mapped within 30-40 km of the current project area, Devonian-age rocks are mapped within the Morehead geological quadrangle and become more prevalent to the south and west (McDowell 1975). Residual Boyle chert may be present in these formations, especially at the unconformity between the Mississippian and Devonian rocks. The Boyle formation itself may have been too thin or discontinuous to map.

## **HISTORIC ARTIFACTS**

The historic artifact identification system used by UK-PAR includes both functional and temporal dimensions. At the most general level, material is classified according to functional group, which would include the Kitchen, Architecture and Personal groups for this particular project. Subsumed within groups are artifact classes including, for example within the Kitchen group, Ceramic Cooking/Storage, Ceramic Tableware, and Container Glass. Within those classes specific artifact forms are also indicated. Temporally significant attributes, including both decorative elements and technological attributes, are also described (e.g., ironstone, stoneware, or decal printed). An additional descriptive level is provided that includes artifact-specific information such as glass color, vessel part, or maker's mark description. Each artifact category is further recorded by count. Once this information is entered into a computerized database or spreadsheet program, the results of analyses can be filtered, sorted, and tabulated into selected inventory subsets or presented as a comprehensive inventory arranged by context. The specific artifact groups and classes represented in the current historic assemblage are further described below.

### **Kitchen Group**

Artifacts assigned to the Kitchen group reflect activities conducted in and around domestic kitchens, including preparation, consumption, and storage of foods. As such, a variety of materials and artifact types are included in the kitchen group, including ceramics (bowls/plates for food consumption, bowls and crocks for food storage and preparation), and glass (tableware and container glass). The most commonly recovered classes of Kitchen group artifacts are container glass and ceramic tablewares.

#### *Container Glass*

Glass containers (bottles, jars, etc.) are included in this category. These materials were sorted by color and by manufacturing type when possible. Bottle finishes were hand-applied prior to about 1840. Rough-applied finishes date from about 1840 to 1870, while tooled finishes date from about 1870 to 1903 (Baughner-Perlin 1982). Machine-manufactured bottles date after 1903 when the Owens automated glass process was introduced (Deiss 1981). Machine-made bottles can be recognized by lips that have seams or by bases displaying suction scars; earlier lip finish types lack seams. Standardized screw threads typically date after about 1919 (Deiss 1981).

Many of the colors found in container glass are the result of the addition of chemicals used over

specific spans of time, but identification of color tints is subjective, and the use of color as a temporal diagnostic is often of dubious value. Only clear, amethyst, and milk glass was recovered for this project. True amethyst glass was produced from the 1840s into the 1880s. Clear glass that tints amethyst through solarization dates from about 1880 to 1914; the amethyst color in this case derives from the use of manganese in the glass formula (Society for Historical Archaeology 2011). Clear glass produced with a soda-lime formula superseded leaded glass by 1860 (Stelle 2001). Milk glass was used for cosmetic and toiletry bottles and jars between 1870 and the mid-20<sup>th</sup> century (Society for Historical Archaeology 2011).

Sherds of container glass may be marked to identify a commercial product, a container manufacturer, or both. Some of these methods, such as embossing or silk-screening, are temporally diagnostic. Embossing on glass has a long period of use, beginning in the 1700s, with letters carved into a mold (Baugher-Perlin 1982). By the late 1850s, plate molds were developed for embossing, which increased the availability of embossed bottles (Fike 1987:5; Pullin 1986:355). The advent of paper labeling led to a general decline in embossing by around 1920 (Fike 1987). Also developed during the 1920s, “applied color labeling” became common after 1930. This process created a heat-hardened printed label on the exterior surface of containers (Society for Historical Archaeology 2011).

#### *Table Glass*

Table glass, including tumblers and stemware, is differentiated from container glass by the use of presses or plungers in the manufacturing process. This creates an open-mouth vessel, and there are no constricted closures. The rim may be modified through a variety of treatments such as grinding, fire polishing, etc., and there is considerable variation on the types of molds used to produce the external surface. However, color and use of silk screening, embossing, and painting as decorative techniques generally parallel the same periods of use as for container glass.

### **Architecture Group**

Artifacts in this category are materials commonly used to construct buildings, as well as relatively permanent materials placed in structures to enhance their use. The only recovered items assigned to the Architecture group for this project are nails.

Hand-wrought nails have been present in North America since initial European settlement (Nelson 1968). Hand-wrought nails are manufactured entirely by hand and do not include any elements of machine manufacture. Special-purpose hand-wrought nails and spikes continued to be made into the late 19<sup>th</sup> century, but general-purpose hand-wrought nails began to be replaced by machine-cut nails with hand-finished heads between 1790 and 1810 (Nelson 1968). Machine-cut nails with machine-made heads first appeared in 1805 (Nelson 1968). From 1790 until about 1830, machine-cut nails may show a slight constriction just below the head, forming a noticeable shoulder. After the 1830s machine-cut nails taper evenly from the base of the head to the tip; these are considered late machine-cut nails. Machine-cut nails are still in use, but they were widely replaced by wire nails in the 1880s (Mansberger 1981, Nelson 1968).

### **Personal Group**

Artifacts in the Personal group include items associated with clothing and personal belongings. Examples include buttons, toys, keys and coins. The only personal item recovered from the project area is a tin alloy button snap fragment.

## **CURATION**

All artifacts recovered during this survey project were prepared for curation according to the standards of the University of Kentucky William S. Webb Museum of Anthropology and are curated at that facility. A copy of this report and all field notes, artifacts, and digital photographs pertaining to this



study is curated at the Webb Museum, in accordance with the standards outlined in 36 CFR Part 79 *Curation of Federally-Owned and Administered Archaeological Collections*. All artifacts were washed and placed in inert, labeled plastic bags. These bags were then placed in acid-free boxes for storage. Materials and records are available for inspection by qualified researchers upon written request.



## **CHAPTER 5**

### **DESCRIPTION AND ANALYSIS OF MATERIALS RECOVERED**

This chapter provides detailed descriptions and analyses of the cultural materials recovered during the Phase I survey of the KY 377 project area. The purposes of the materials recovered chapter are to present an overview of the temporal and functional classification of the artifacts recovered from the project using the classification schemes discussed in the previous chapter, and to present substantive interpretations of these materials as they relate to the historic or prehistoric occupations of the identified sites. However, both the prehistoric and historic assemblages are very sparse, and few interpretations can of the artifact assemblage can be offered.

#### **PREHISTORIC ARTIFACTS**

A total of eight prehistoric lithic artifacts were recovered during this Phase I survey (Table 5.1). All were classified as chipped stone debitage. Four artifacts (50 percent) were recovered from 15Ro229, and the remaining four were recovered as Isolated Finds (IF 2, IF 3, IF 5, and IF 6). Because the assemblage is so small, interpretations of site functions and the range of activities conducted at site and isolated find locations are limited. However, the overall site assemblage can still be discussed.

Prehistoric chipped stone debitage (n=8) accounts for 100 percent of the prehistoric assemblage. Debitage was analyzed with respect to flake types that are part of biface reduction trajectory and chert types. Table 5.1 presents summary data on chipped stone and material type by site and isolated find. The eight debitage represent only part of a biface reduction sequent. Broken flakes without cortex (n=5), is the most commonly represented debitage category (62.5 percent) which are produced in later stages of reduction. Angular shatter (n=2) and secondary flakes (n=1) complete the assemblage. The lithic sample is too small to characterize. The low artifact numbers and distribution of materials across five different locations on the landscape are attributes consistent with short-term and scattered use of the landscape throughout the prehistoric era. Recovery of materials in later stages of reduction suggest that most prehistoric occupations involved biface maintenance or tool finishing,

The identified raw material types include Haney (n=4), Paoli (n=2), Boyle (n=1) and unidentified (n=1) chert types. The unidentified chert is a burned fragment that lacks the morphological identifiers of the unmodified chert types. Haney and Paoli cherts both locally available to the project area, and the dominance of the assemblage by these material types is not unexpected. Boyle chert is not considered to be locally available. It may be derived from secondary stream deposits or its presence may indicate that prehistoric inhabitants of the region obtained materials (directly or indirectly) from more distant locations.

The cortex types present on flakes can indicate whether the chert was obtained from primary or secondary locations. Nodular cortex indicates chert was obtained from a primary geological source (outcrop or weathered residuum). Only one flake had cortex—a secondary flake made from Haney chert exhibited nodular cortex. Nodular cortex would be expected on locally available chert.

#### **HISTORIC ARTIFACTS**

Fifteen historic artifacts were recovered during the KY 377 archaeological survey. These artifacts are assigned to only three functional groups—Kitchen, Architecture, and Personal (Table 5.2). Historic artifacts are assigned to functional groups to facilitate site interpretation (South 1977), such as use of a site as a domestic residence, outbuilding, trash dump, or other function. These interpretations are particularly useful for the current project, though the assemblage again is small. Discussion of the assemblage is organized by functional group.

Table 5.1. Chipped Stone Artifacts from the Rowan County KY 377 Survey. Raw material types are abbreviated as follows: H=Haney; P=Paoli; B=Boyle; U=Unidentified. An asterisk (\*) indicates nodular cortex.

Provenience	Secondary Flakes	Broken Flakes without Cortex	Angular Shatter	Total
15Ro229	1H*	2H	1H	4
IF 2		1P		1
IF 3			1P	1
IF 5		1B		1
IF 6		1U		1
<b>Total</b>	<b>1</b>	<b>5</b>	<b>2</b>	<b>8</b>

Table 5.2. Historic Artifacts Recovered from the KY 377 Survey. All isolated finds are combined.

Group	Material	Artifact Description	15Ro227	15Ro228	Isolated Finds	Total
Kitchen	Glass	Clear, container body		3	1	4
		Milk, container body		1		1
		Amethyst pressed tableware		1		1
Architecture	Metal	Nails, wire	1		2	3
		Nails, unidentified			5	5
Personal	Tin alloy	Button snap fragment			1	1
<b>Total</b>			<b>1</b>	<b>5</b>	<b>9</b>	<b>15</b>

A temporal analysis of a historic assemblage generally includes estimation of manufacture dates from ceramic vessels and other temporally sensitive artifacts, terminus post quem (TPQ) assessment, and measurement of window glass thickness to help establish chronology. In the current project, the emphasis was of necessity on container glass and wire nails, as no other temporally sensitive artifacts were recovered. Some container glass had temporally sensitive attributes that would provide a narrow date range for manufacture. Temporal interpretations are offered when appropriate in the following sections that describe specific artifact groups and categories, but in most cases these interpretations are of necessity general, rather than specific. Terminus post quem assessment was also irrelevant, as all materials were recovered from either plow zone or nondepositional A horizon contexts.

## KITCHEN GROUP

The Kitchen functional group includes artifacts relating to the preparation, service, consumption, or storage of food. This functional group includes six specimens (30 percent of the total project assemblage; see Table 5.2). This group comprises two general categories of artifacts, consisting of container glass (n=5), and table glass (n=1) related to service of food and drink.

### Container Glass

Container glass fragments (n=5) are of two hues (clear and milk glass). The most common glass color is clear (n=4) which provides only a very general temporal range indicating manufacture between the mid-19<sup>th</sup> century and modern times. Milk glass (n=1) was commonly used for cosmetic, decorative, and toiletry containers from 1870 until the mid-20<sup>th</sup> century (Society of Historical Archaeology 2011).

Many of the container glass fragments are not temporally diagnostic, but one exhibits faint vertical mold seams indicating production by an automatic machine. Early machine-made bottle seams (1905-1920) are typically thicker and more rounded than the ones observed in this assemblage (Society for Historical Archaeology 2014). This suggests that the assemblage pieces were produced after 1920, and are possibly modern.

Though there is scant evidence, the container glass color and manufacturing attributes suggest that the assemblage primarily reflects late-19<sup>th</sup> to mid-20<sup>th</sup> century activities. However, there is also a probable admixture of modern refuse. When obvious, modern artifacts were noted in the field, and were discarded. A mixture of modern and archaeological materials is understandable, given that all sites and isolated finds are adjacent to an active highway, where trash is often casually discarded.

### **Table Glass**

Table glass is used in table and decorative settings in forms that include tumblers, pitchers, decanters and vases. Only one fragment of table glass was identified in the survey assemblage. This artifact is pressed solarized amethyst glass, likely part of the body of a bottle. This item provides a relatively narrow production range (ca. 1880 to 1914), for the site from which it was recovered (15Ro228).

### **ARCHITECTURE GROUP**

The Architecture functional group includes artifacts related to the construction and maintenance of buildings. Eight artifacts were assigned to the Architecture group, all of which are nails (Table 5.2). The preservation of metal artifacts in the project area was poor due to acidic soil conditions. Three whole nails were identified as wire nails. During the 1880s late machine-cut nails were largely replaced by wire nails, which are still used today. The remaining five nail fragments were unidentifiable.

### **PERSONAL GROUP**

The Personal group includes items associated with clothing and personal belongings such as musical instruments, toys, and smoking pipes. One Personal group artifact was recovered, which was identified as a possible tin alloy button or snap fragment (Table 5.2). Due to the fragmentary nature of the artifact, further identification could not be made.

### **DISCUSSION**

The historic artifact assemblage contained objects assigned to the Kitchen, Architecture, and Personal functional groups. These consist of only a few specific artifact types, such as amethyst pressed table glass, clear and milk container glass, and wire nails that exhibit late-19<sup>th</sup> and predominantly early to mid-20<sup>th</sup> century manufacturing attributes. This suggests that in general, the historic assemblage from the project area reflects rural farm and domestic life during the late 19<sup>th</sup> and early 20<sup>th</sup> centuries.

Container glass represents a common artifact class, and within this category, clear glass from beverage containers is most common. As such, they do not represent a full range of domestic activities, even when recovered from a site context. It is likely that they reflect occasional discard of refuse along KY 377, and the prevalence of container glass fragments in isolated finds supports this interpretation.



## CHAPTER 6

# SURVEY RESULTS

This chapter presents detailed results of the Phase I archaeological survey of the proposed widening and realignment along KY 377 in Rowan County. The proposed area of effect was examined through pedestrian survey, including visual inspection, shovel testing, and deep auger testing. As a result of this survey effort, the UK-PAR crew excavated 697 shovel tests including bracketing tests to define site boundaries. Additionally, 39 deep auger tests were placed in the bottom of shovel tests to test for buried cultural deposits or paleosols. Artifacts recovered from shovel testing and surface collection resulted in definition of five new sites (15Ro226 through 15Ro230) and six isolated finds. Additionally, one previously reported site that lies just outside the project area (15Ro194) was revisited. Lastly, this survey identified three historic standing resources (Structures 1-3) within the proposed new ROW corridor. Shovel tests excavated near these structures did not produce any artifacts, but the structures are briefly described here for informational purposes; they have not been evaluated for their historic or architectural significance. The archaeological sites are described below in numerical order, followed by the six isolated finds, and a brief discussion of the standing structures. Figures 1.2 and 1.3 show the locations of all resources.

Soils in the project area within the North Fork of Triplett Creek valley are primarily assigned to the Tilsit-Clifty-Morehead association, which are formed in deep alluvium and rarely to frequently flood. However, most soils are only occasionally flooded, which would not greatly affect patterns of historic or prehistoric land use. Actual flood plain soils make up a relatively low proportion of the survey area, as do soils found on steeply sloped uplands. Tilsit silt loam and Morehead silt loam occur on stream terraces with slopes ranging from 0 to 12 percent and rarely to occasionally flood (Avers et al. 1974).

Field methods varied based on landform, which correlated to soil series, elevation, and frequency of flooding. Examples of soil profiles for negative shovel tests represent the range of landforms and soil series present within the project area (see Figures 6.1 through 6.3). The most common soils encountered during this survey are Tilsit silt loams, 2 to 6 percent slopes, found in flood plain and terrace settings. These settings are exemplified by the soil profiles for negative ST 384 (Figure 6.1) and ST 333 (Figure 6.2). Most shovel test soil profiles were very similar to these examples, differing mainly in the depth of plow zone and how deep augers extended before encountering water or rock refusal. Negative flood plain ST 384 (Figure 6.1) showed a plow zone (Zone I) typically consisting of a yellowish brown (10YR5/4) silt loam mixed with sandstone gravel, extending to 29 cm below surface. The soil became increasingly gravelly with depth. Zone II was a yellowish brown (10YR5/6) silty clay with gravelly rock, which extended from 29 cm to 32 cm below surface, where there was rock refusal.

Because there was potential for buried sites or buried A horizons in flood plains and terraces in alluvial settings, deep auger tests were used to extend the depth of shovel tests at selected locations. Thirty-nine deep auger tests were excavated, with only some extending a meter or more in depth. Shovel/Auger Test 333 is representative of the soils found on terraces (Figure 6.2). Zone I was a dark grayish brown (10YR4/2) to yellowish brown (10YR4/3) silt loam, which extended only 6 cm below surface. Zone II was a dark yellowish brown (10YR4/6) silty clay, which extended from 6 cm to about 70 cm below surface. This zone likely represents accumulation of overbank sediments resulting in a deep AB soil horizon. The auger hit a sandstone rock layer at 70 cm below surface. Zone III was a yellowish brown (10YR5/8) mottled with light gray (10YR7/1) silty clay which extended from 70 cm to about 90 cm below surface.

Plowed and fallowed fields were common within the project area. Negative ST 482 is representative of the soils frequently found in plowed fields. The profile shows a yellowish brown (10YR5/4) silt loam plow zone (Zone I) extending to 20 cm below surface (Figure 6.3). The subsoil (Zone II) consisted of a brownish yellow (10YR6/6) silty clay, extending to about 28 cm below surface.

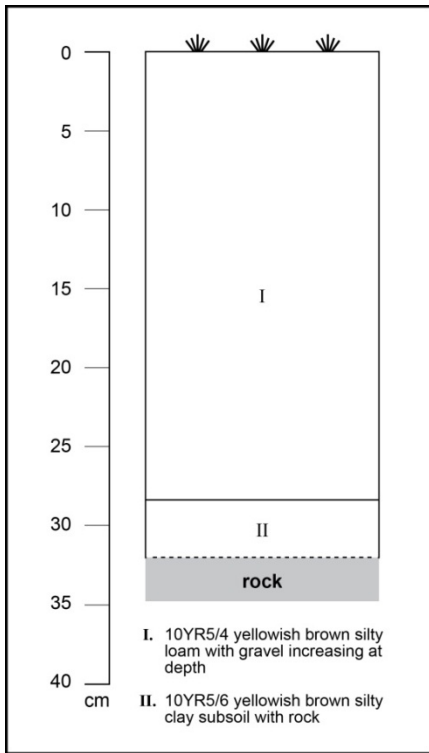


Figure 6.1. Soil Profile for ST 384, Representative of Flood Plain Landforms within the Project Area.

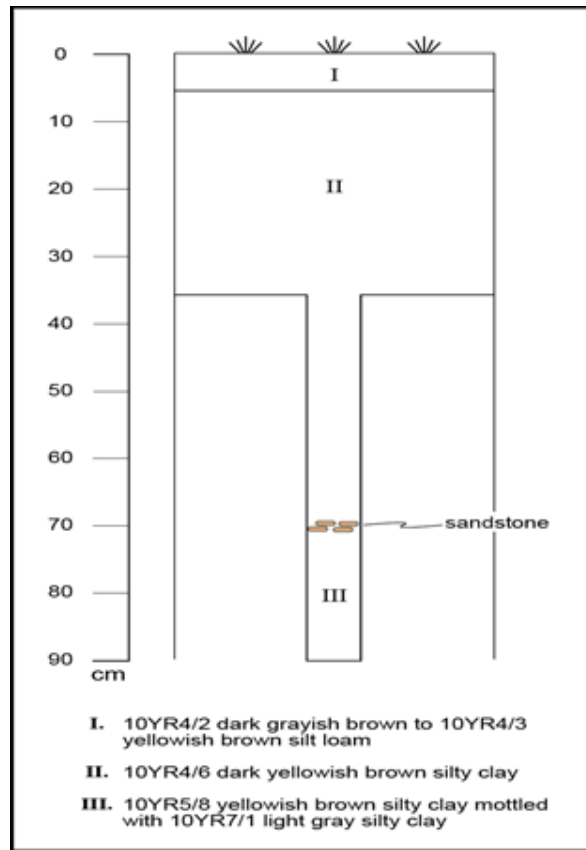


Figure 6.2. Soil Profile for ST/AT 333, Which is Representative of Terrace Landforms in the Project Area.

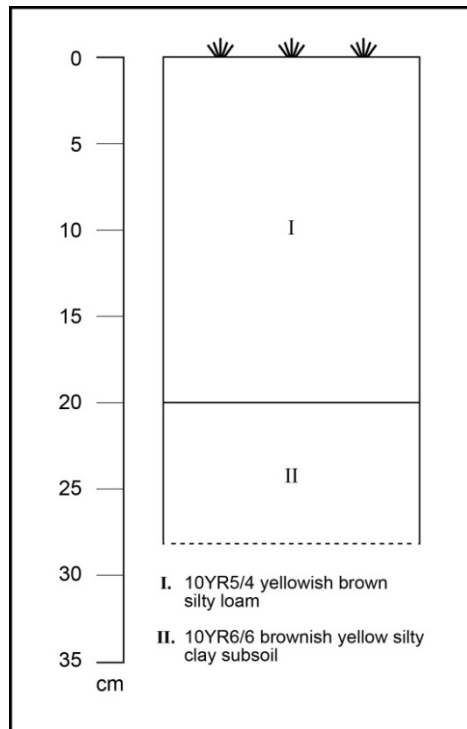


Figure 6.3. Soil Profile for ST 482, Representative of Plowed Sections of the Project Area.



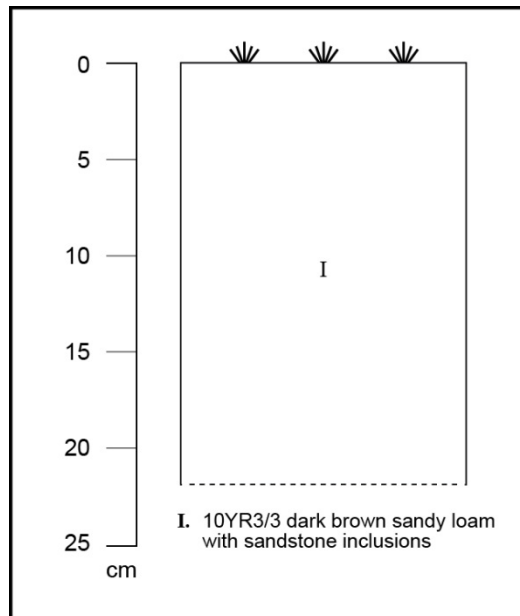


Figure 6.4. Soil Profile for ST 674, Representative of Alluvial Fan Landforms within the Project Area.

Alluvial fans within the project area are represented here by Cranston gravelly silt loams. Negative ST 674 is representative of the soil profiles found on alluvial fan within the project area. These typically show a Zone I of dark brown (10YR3/3) sandy loam, which extended to about 23 cm below surface (Figure 6.4). Soils become increasingly gravelly with depth, reaching refusal on rocky sediments between 10 and 40 cm below surface.

Numerous shovel tests within the project area exhibited disturbed soil, especially in wet areas. Disturbed soils were recognized by mottled plow zone and subsoil, truncated plow zones, and gravelly/rocky sediments. Most were not screened once disturbance was recognized.

## ARCHAEOLOGICAL SITES

The KY 377 archaeological survey defined five new archaeological sites (15Ro226 through 15Ro230), and one previously reported site (15Ro194) was revisited during the survey (see Figure 1.2). These sites are described below in numerical order.

### 15Ro194 REVISIT

Site Type	Isolated historic grave	Landform	Terrace
Elevation	244 m AMSL	Aspect	Level
Soil Type	Tilsit silt loam, 2-6 percent slope	Site Area	1.5 m <sup>2</sup>
Distance to Water	Triplett Creek 413 m east		

Site 15Ro194 is an isolated historic grave located in a plowed field about 0.5 km southwest of the KY 377 and Pond Lick Branch Road intersection (Figure 1.2). The site is at about Station 252+90/Right 70 based on the KYTC project plan maps. This isolated grave contains a square headstone at the west end and a triangular footstone at the east end (Figures 6.5 and 6.6). The inscription data indicate a date range of 1851 to 1900. The site was revisited 3 February 2015 and the data documented agree with the original site inventory regarding site size and location. Again, no artifacts were collected or observed to be in association with the site. The revisit did not identify any other headstones or footstones in the surrounding area; 15Ro194 is apparently an isolated grave. The west side of the headstone has a carved inscription that



Figure 6.5. View of 15Ro194 (facing south).



Figure 6.6. View of 15Ro194 (facing east).

was not decipherable, but the east side of the footstone has “W. T. H” carved into the surface. The original site inventory form notes that the headstone reads “W.M. Trumbo son of Alfred & Susannah Hurst died July 31, 1851 aged 1 year and 14 days” and the footstone reads “W.T.H. 1851”.

The original site inventory form noted that this site may be potentially eligible for nomination to the NRHP under Criterion C particularly as it may pertain to the health and diseases of children from the middle of the 19<sup>th</sup> century. UK-PAR does not concur with that statement, as Criterion C pertains to architectural styles. In addition, the scientific research potential under Criterion D is low because this is an isolated grave. UK-PAR does not consider 15Ro194 to be eligible for listing on the NRHP. The site is outside the proposed new right-of-way and construction easements, and it should not be affected by the road construction. UK-PAR recommends avoiding impact near the site by establishing a 10-meter buffer zone around the marker in the unlikely event that there are additional graves near the marker that might be impacted by construction.





Figure 6.7. View of 15Ro226 (facing northwest).

## 15Ro226

Site Type:	Isolated historic grave	Landform	Terrace
Elevation	836 feet AMSL	Slope Aspect	Level
Soil Type	Tilsit (TIB), 2-6 percent slope	Site Area	13 m <sup>2</sup>
Distance to Water	Unnamed tributary of Triplett Creek, 417 m east		

Site 15Ro226 is an isolated historic grave monument in a plowed field 0.27 km northeast of the intersection of Farm Road with KY 377, on the east side of KY 377 (Figure 1.2). The site is marked on the KYTC plan maps as a stone monument and single grave site at about Station 159+50/Right 100. This site is defined by a carved granite monument engraved with “Thomas P. Johnson, b. Feb. 18, 1866, d. July 28, 1895.” The relief carving shows an open book resting upon a cloth shroud at the top of the truncated obelisk (Figure 6.7). The stone obelisk is situated at an angle to its plinth. Impact marks near the base of the obelisk suggest that impact by farm equipment is likely the reason for its disturbed orientation.

Given the site’s location within a plowed field, the degree to which this burial site has been disturbed is unknown. The site boundary is arbitrarily defined as a two-meter radius around the obelisk, for an area of 13 m<sup>2</sup> (Figure 6.8). Because the monument is about 15 meters outside the project boundary, no shovel tests were excavated at this site. Visual examination of the area around the site did not identify any grave markers or depressions, and the shovel testing conducted nearby but within the project boundary did not reveal any evidence for additional burials. The historic maps examined for this survey did not show any cemeteries or residential structures near the site. Given that no archaeological testing occurred at this site the National Resister status for 15Ro226 was not formally assessed. However, we assume that at least one feature (the Johnson grave) is present. Even so, with the site consisting apparently of a single isolated historic grave of relatively recent age, the overall research potential of 15Ro226 is considered to be low. UK-PAR does not consider 15Ro226 to be eligible for listing on the NHRP under Criterion D. Given the 10-meter distance between the obelisk and the proposed new ROW, it is unlikely that this site will be disturbed. UK-PAR recommends no additional work at this site.

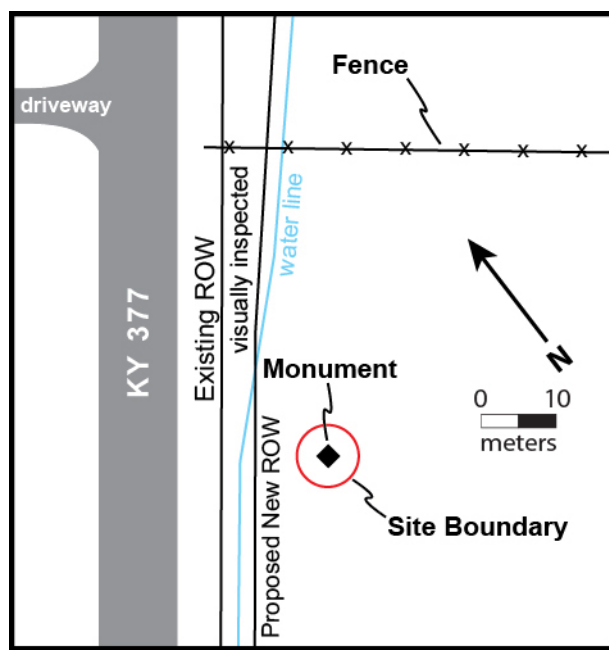


Figure 6.8. Sketch Map of 15Ro226 Burial Monument.



Figure 6.9. View of 15Ro227 in Vegetation in Background (facing north).

### 15Ro227

Site Type	Historic farm outbuilding	Landform	Terrace
Elevation	800 feet AMSL	Slope Aspect	Level
Soil Type	Tilsit silt loam, 2-6 percent slope	Site Area	300 m <sup>2</sup>
Distance to Water	Triplett Creek, 450 m		

Site 15Ro227 is the remains of a late 19<sup>th</sup> to 20<sup>th</sup> century historic outbuilding located along the west side of KY 377 (Figure 1.2). It is situated within a large overgrowth of brush, thorns, and secondary tree growth approximately 450 m west of Triplett Creek (Figures 6.9 and 6.10). The site is located at about Station 257+50/Left 50 based on the KYTC plan maps. The remainder of the landform is covered by pasture. The site measures approximately 20 m north-south by 15 m east-west and is bounded on the northwest by a large pond (approximately 50 m distant) and on the east by KY 377 (12 m east). The site may extend further east or west, but investigations were confined to the ROW corridor (Figure 6.11).





Figure 6.10. View of 15Ro227 with Vegetation Cover (facing west).

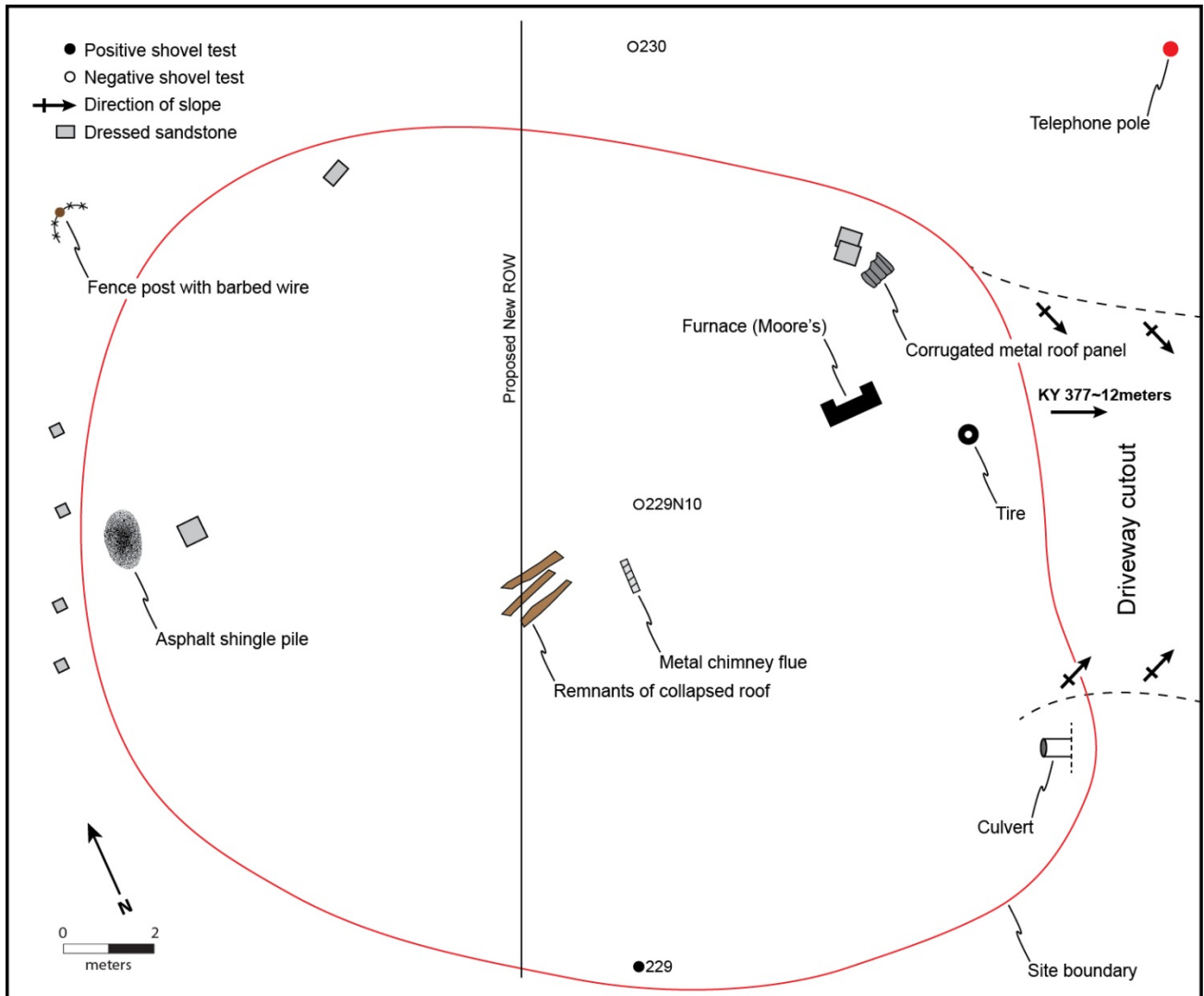


Figure 6.11. Detailed Sketch Map of 15Ro227.

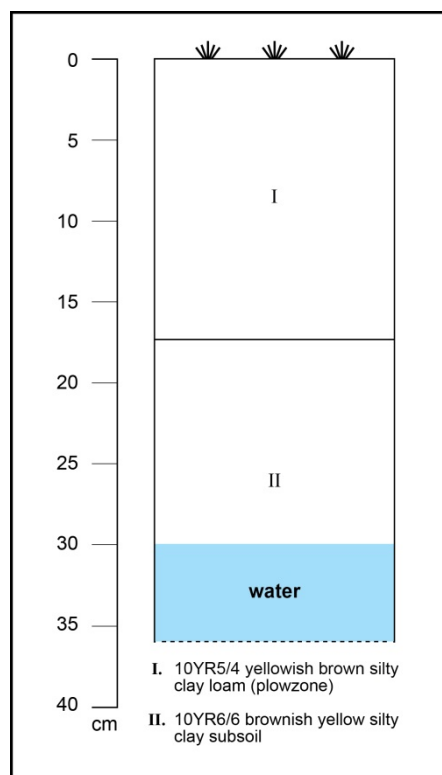


Figure 6.12. Soil Profile for Shovel Test 229 at 15Ro227.

The site is defined by one positive shovel test and visible landscape features, including a metal chimney flue, collapsed timber remains, stacked cut/dressed sandstone slabs, corrugated metal panels, asphalt shingles, barbed wire, a tire, and a furnace with the label “Moore’s”.

The soil profile from the single positive shovel test shows two soil zones (Figure 6.12). Zone I consisted of a yellowish brown (10YR5/4) silty clay loam that extended approximately 18 cm below surface. Zone II consisted of brownish yellow (10YR6/6) silty clay subsoil that quickly filled the shovel test with water at approximately 36 cm below surface. The historic artifact assemblage from the site consists of a single wire nail.

The Morehead, KY 7.5’ USGS topographic quadrangle map (1970, photorevised 1978) shows an outbuilding in the location of 15Ro227. A 1937 map from the Kentucky Department of Highways also shows a structure in the location of this site. There is a steep driveway access to KY 377 (Figure 6.11). No further historic map research or deed rese arch has been conducted at this time.

Given the low artifact density, lack of subsurface cultural deposits, and the probable modern age of at least some of the construction, the research potential of 15Ro227 is low. Consequently, UK-PAR recommends no additional archaeological work at this location.

### 15Ro228

Site Type:	Historic farm/residence	Landform	Terrace
Elevation	827 feet AMSL	Slope Aspect	Level
Soil Type	Tilsit silt loam, 2-6 percent slope	Site Area	75 m <sup>2</sup>
Distance to Water	Emory Branch, 208 m north		

Site 15Ro228 is a late 19<sup>th</sup> to mid-20<sup>th</sup> century historic scatter situated in an open pasture about 10 m west of KY 377 (Figures 1.2, 6.13, and 6.14). The site is located at about Station 344+00/Left 60 on the

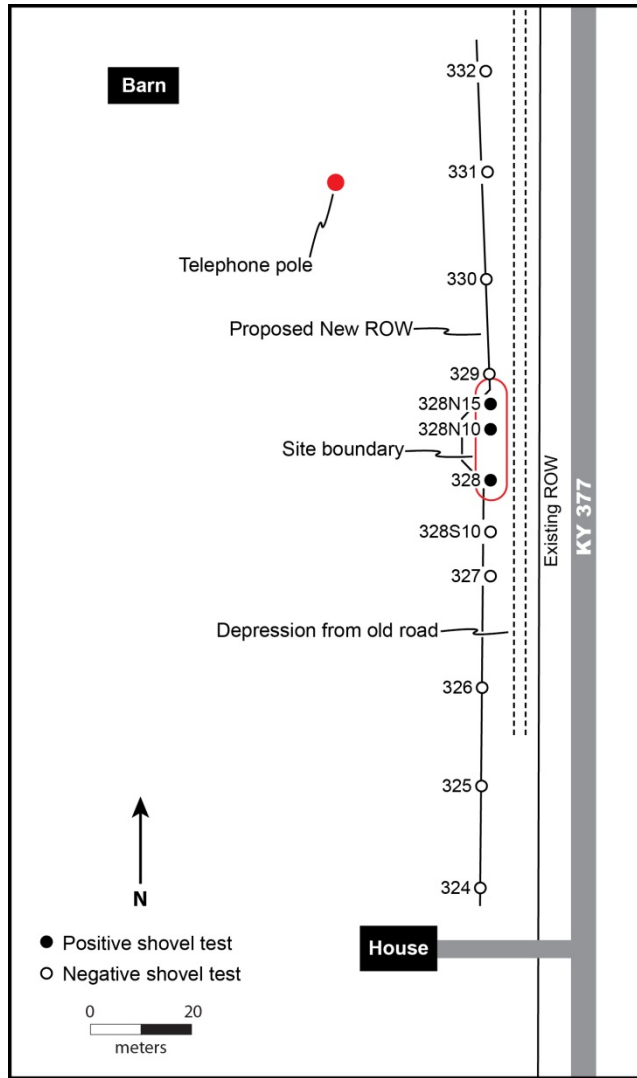


Figure 6.13. Sketch Map of 15Ro228.



Figure 6.14. View of 15Ro228 (facing north).

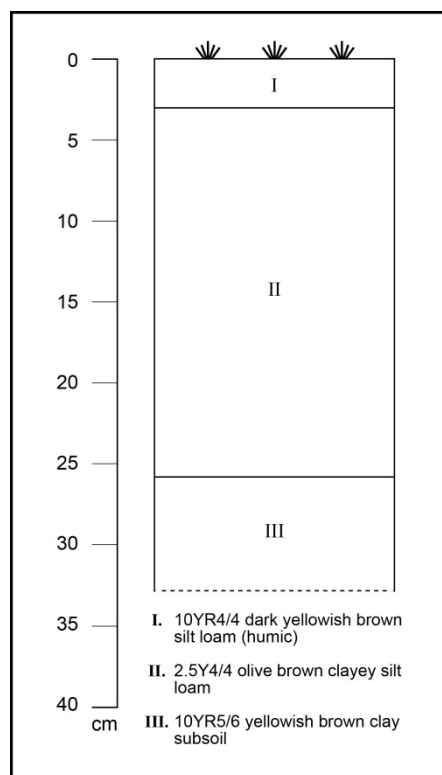


Figure 6.15. Soil Profile for Shovel Test 328 at 15Ro228.

current KYTC project plan maps. About one meter east of the site is a linear depression in the terrain that parallels KY 377; this is believed to be an old roadway. The site measures 15 m north-south by 5 m east-west, giving it a total area of only 75 square meters. However, shovel testing was restricted to the ROW project area adjacent to KY 377, so the site could possibly extend to the west into uninvestigated portions of the landscape.

The site is defined by three positive shovel tests, which yielded a low number of late 19<sup>th</sup> to mid-20<sup>th</sup> century artifacts. Positive Shovel Test 328 represents the typical soil profile for this site (Figure 6.15). The profile shows three soil zones. Zone I consisted of a dark yellowish brown (10YR4/4) silt loam (humic) topsoil and root zone that extended only 2 cm below surface. Zone II was a light olive brown (2.5Y 5/3) moist clayey loam mottled with reddish brown (2.5YR4/4) flecks that are likely root casts; this zone extended to about 26 cm below surface and represents the plow zone. Zone III consisted of a light olive brown (2.5Y5/6) wet clay subsoil, also mottled with reddish brown (2.5YR 4/4) possible root casts, that was excavated to a depth of approximately 33 cm below ground surface.

The artifact assemblage from 15Ro228 is sparse, consisting of only five artifacts. These include , one milk glass fragment, three clear container glass fragments, and one amethyst pressed table glass fragment (Table 6.1). The solarized amethyst table glass fragment provides a narrow time range for its manufacture, between about 1880 and 1914. The other artifacts have a broader date range for manufacture, but could still represent materials made in the late 19<sup>th</sup> to mid-20<sup>th</sup> centuries.

The 1937 and 1954 Kentucky Department of Highways maps show at least one residential structure near the site location. However, these maps lack precision due to small scales, which prevents associating the site with a specific structure/residence. The 1970 Cranston, KY 7.5' USGS topographic quadrangle map shows a residential structure at the site location with an outbuilding (probable barn) approximately 75 m to the north. The barn is still present, but no structure is at the site's location and no structural remains were found within the site area (see Figure 6.15). No further historic map or deed research has been conducted for this site.



Table 6.1. Historic Artifacts Recovered from 15Ro228.

Functional Group	Artifact Description	Date range	Shovel Test No.			Total
			328	328N10	328N15	
Kitchen	Table glass, amethyst	1880-1920			1	1
	Container glass, clear	Indeterminate		1	2	3
	Container glass, milk glass	Indeterminate	1			1
<b>Total</b>			<b>1</b>	<b>1</b>	<b>3</b>	<b>5</b>

In sum, 15Ro228 consists of late 19<sup>th</sup> to mid-20<sup>th</sup> century historic artifacts recovered from shovel testing within an area that corresponds closely to the location of a residential structure depicted on historic maps. Only a portion of this site was investigated, as the site likely extends further west beyond the project boundaries. The portion of the site examined yielded no evidence of intact cultural deposits. This information and the very low artifact density indicate that the site is not eligible for listing on the NRHP. It is unlikely that additional work within the proposed KY-377 ROW would produce additional archaeological information, and UK-PAR recommends no further archaeological work at 15Ro228. If the ROW should be extended farther west, additional evaluation of the site would be warranted.

### 15Ro229

Site Type:	Open habitation without mounds	Landform	Flood plain
Elevation	810 feet AMSL	Slope Aspect	Level
Soil Type	Tilsit silt loam, 2-6 percent slope	Site Area	100 m <sup>2</sup>
Distance to Water	Triplett Creek, 235 m		

Site 15Ro229 is a culturally unassigned prehistoric lithic scatter located along the east side of KY 377 about 235 m west of Triplett Creek (Figure 1.2). The site is located at about Station 464+90/Right 60 on the current KYTC project plan maps. The site measures about 20 m north-south by 5 m east-west and is bounded on the west by KY 377 (Figure 6.16). The site may extend further east, but shovel tests were only excavated within the ROW corridor (Figure 6.17). The area just west of the site is likely altered by construction related to KY-377.

A local resident indicated to the field crew that a low rise east of the site, near Triplett Creek, was a prehistoric mound location. However, brief examination of the landform (albeit from a distance, as it is well outside the proposed ROW), indicates that the rise is more likely an erosional remnant of a low upland ridge spur that extends into the valley setting (see Figure 6.18). The rise was not systematically investigated, but it is unlikely to be a prehistoric mound.

Only three positive shovel tests (each augered) defined the area of 15Ro229. Each yielded prehistoric flakes. The representative soil profile shown in Shovel Test/Auger Test 580 was made up of two soil zones (Figure 6.19). Zone I consisted of a dark yellowish brown (10YR4/4) silt loam plow zone with gravel that extended approximately 30 cm below surface. Zone II consisted of brownish yellow (10YR5/8) clay subsoil. A thin layer of subsoil was encountered in the upper portions of Zone I that likely derived from installation of a water line just east of and adjacent to the site (Figure 6.17). None of the auger profiles exhibited any indication of a buried A horizon.

The artifacts found at 15Ro229 consist of five flakes. Four flakes were collected and one flake was observed but lost during the recovery process. One flake was came from Shovel Test/Auger 580S10 in Zone I plow zone contexts (0-30 cm below surface), two came from Shovel Test/Auger 580N10 Zone I in plow zone contexts (10-20 cm below surface), and two came from subsoil in Shovel Test/Auger 580 Zone II (60-70 cm below surface). Bracketing auger tests were negative. The material for all four recovered flakes is Haney chert. There are one secondary flake, two broken flakes without cortex, and one angular shatter from this site (see Table 5.1).



Figure 6.16. View of 15Ro229 (facing north).

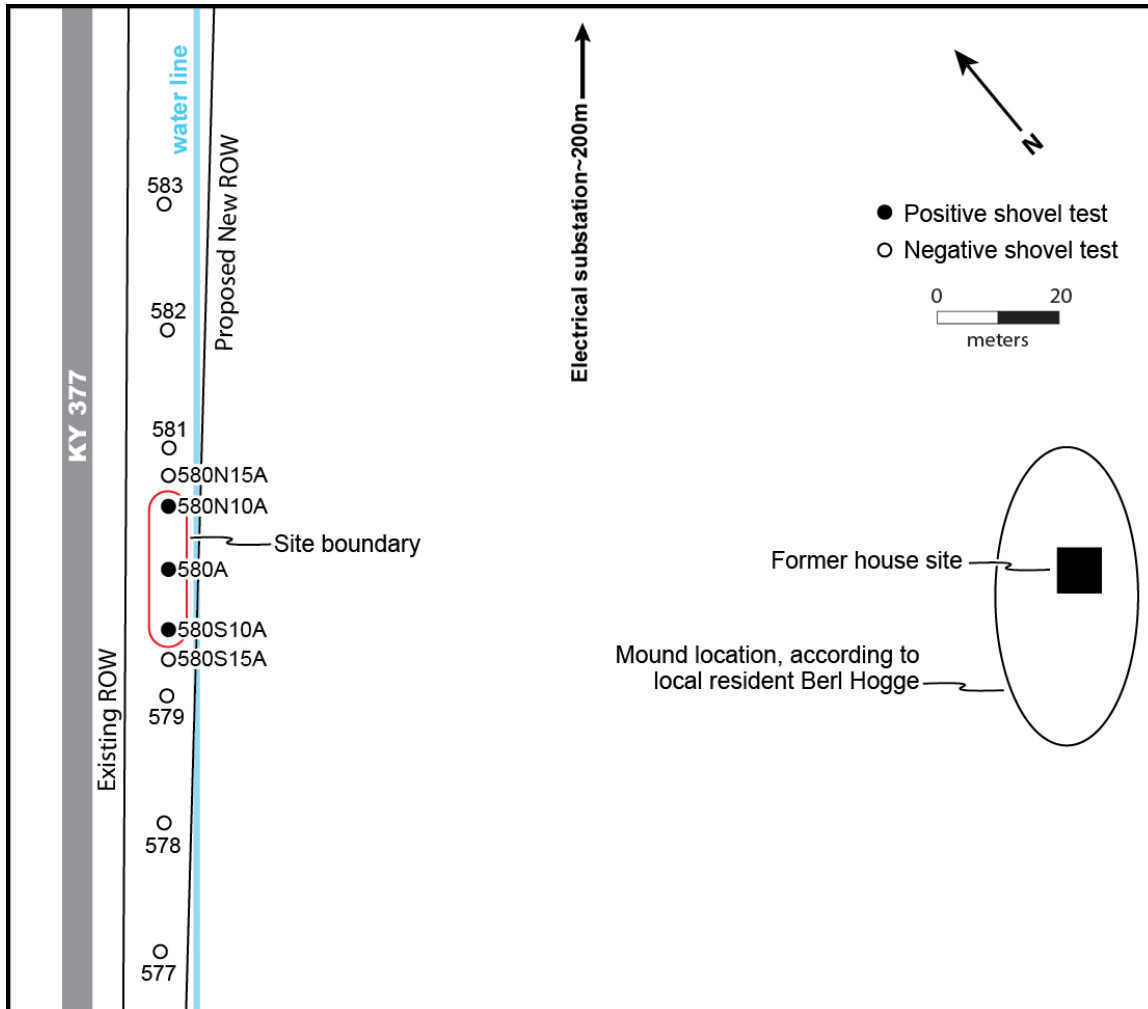


Figure 6.17. Sketch Map of 15Ro229.



Figure 6.18. View of 15Ro229 (facing east). Rise in background is a remnant ridge spur thought to be a mound by a local resident.

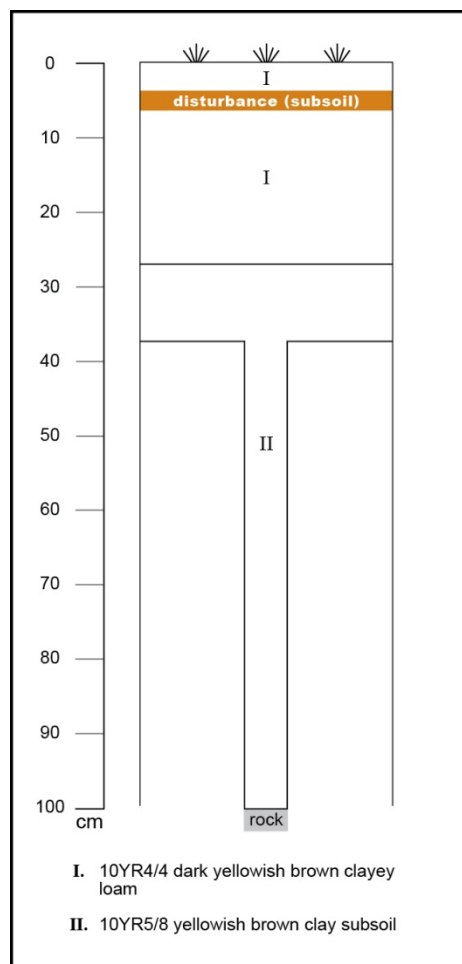


Figure 6.19. Soil Profile for Shovel Test/Auger 580 at 15Ro229.

Figure 6.20. Detailed Sketch Map of 15Ro230.

Given the low number of artifacts, the apparent absence of a buried A-horizon with cultural materials, and no evidence of subsurface features, the research potential for 15Ro229 is low. Consequently, UK-PAR recommends no additional archaeological work at this location. However, the site may continue farther east outside the investigated ROW corridor. If the ROW should be extended farther east, additional evaluation of the site would be warranted.

### 15Ro230

Site Type:	Historic farm/residence	Landform	Terrace
Elevation	780 feet AMSL	Slope Aspect	Level
Soil Type	Tilsit silt loam, 2-6 percent slope	Site Area	375 m <sup>2</sup>
Distance to Water	Weaver Branch of Triplett Creek, 5 m		

Site 15Ro230 is the remains of a late 19<sup>th</sup> to early 20<sup>th</sup> century farmstead/residence. The site includes a keyhole springhouse foundation, the displaced superstructure of the springhouse, and badly damaged structural foundation made of cut sandstone. The site is located on the west side of KY 377 about 115 m northwest of Triplett Creek (Figure 1.2), at about Station 276+00/Left 50 on the current KYTC project plan maps. The site measures about 25 m northeast-southwest by 15 m northwest-southeast. It likely extends outside the surveyed ROW corridor, but only the project corridor was investigated. Only the visible above-ground features were recorded (Figure 6.20).

The visible historic features that define 15Ro230 include the collapsed timber plank springhouse remains with a corrugated metal roof (Figure 6.21), a keyhole springhouse foundation of cut and stacked





Figure 6.21. Collapsed Wooden Springhouse Superstructure at 15Ro230 (facing southeast).



Figure 6.22. Keyhole Stone Springhouse Foundation at 15Ro230 (facing south).





Figure 6.23. Sandstone Foundation Remnant at 15Ro230 (facing north).

sandstone slabs (Figure 6.22), and dressed sandstone slabs that form a foundation corner (Figure 6.23). The collapsed springhouse remains and keyhole spring foundation are located on a small tributary to xxxxxxxxxxxx. The dressed and stacked sandstone that forms a foundational corner is located approximately 12 m northeast of the springhouse remains, and it comprises four courses of rock (Figure 6.23). This foundation remnant is believed to represent the remains of the former residence of O.T. Martin, which was razed during the construction of the existing KY 377. This information was gleaned from examination of the archived KYTC project plans for the 1938 construction of KY 377. Page 9 of these plans shows the O.T. Martin residence on the west side of the then-proposed KY 377 at about Station 182+50, adjacent to a small stream. This corresponds to the location of 15Ro230. Any cellar that was on the interior of the foundation is apparently filled, and the area is covered in vegetation.

No artifacts were observed at or recovered from the site, and all shovel tests excavated near the site were negative. Consequently, individual shovel test profiles are not illustrated, though Shovel Test 250 is representative of the soils within this area. The soil profile for ST250 was made up of two zones. Zone I was a brown (10YR5/3) silt loam that extended to about 30 cm below surface, and the underlying Zone II was yellowish brown (10YR5/6) clay loam subsoil.

Based on the Morehead, KY 7.5' USGS topographic quadrangle map (1970, photorevised 1978) two outbuilding structures are shown south of the site, while a house structure is located north of the site. The 1937 Kentucky Department of Highways road map does not show any structures near the site location. Based on these map and field observation, the residential structure appears disturbed by past construction activities associated with KY 377. No further historic map research or deed research was conducted.

Given the lack of artifacts and its apparently recent age (occupied in 1938), the archaeological research potential of 15Ro230 is low. As a result, UK-PAR recommends no additional archaeological work at this location provided that construction is confined to the proposed new ROW corridor. If, the proposed highway construction extends outside the investigated area to impact uninvestigated portions of 15Ro230, additional archaeological work may need to be conducted.

## ISOLATED FINDS

During the survey of the new ROW and construction easement corridors to be impacted by proposed modification along KY 377, six isolated finds were encountered. These finds were distributed throughout the project area and are numbered sequentially (IF 1 to IF 6) from south to north along the project area corridor (see Figure 1.2). These isolated finds represent four prehistoric (IF 2, IF 3, IF 5, and IF 6) and two historic (IF1 and IF 4) locations. Recovered artifacts are listed in Table 6.2 for each isolated find. In all cases, shovel tests indicated no evidence of subsurface cultural deposits, and all cultural materials were recovered from plow zone. Consequently, individual shovel test profiles are not illustrated, but representative profiles are described when appropriate. In all cases, either the low artifact numbers or the poor contexts precluded assignment of archaeological site numbers, based on current OSA guidelines.

### ISOLATED FIND 1

Isolated Find 1 is a late 19<sup>th</sup> to 20<sup>th</sup> century, low-density historic scatter situated in a horse pasture at about Station 234+10/Right 40 on the current KYTC project plans, about 15 m east of KY 377 (Figure 1.2). The isolated find is also adjacent to a water line and its construction could have been the source of the archaeological materials. The soil profile of Shovel Test 183 shows a thin humic layer of brown (10YR4/3) silt loam extending 10 cm below surface. The plow zone (Zone II) extends from 10 cm to 26 cm below surface and consisted of a yellow brown (10YR5/4) silt loam with manganese concretions. Zone III (subsoil) was a yellowish brown (10YR5/6) silty clay. This isolated find is defined by two positive shovel tests (Figure 6.24). No radial shovel tests were excavated outside the project area.

The artifact assemblage includes unidentified nail fragments (n=5), a whole wire nail (n=1), and a tin alloy snap/button fragment (n=1). The nail fragments were the only evidence of architectural remains noted for this site; no brick or building stone was found. There was no evidence of a structure at this location on archival maps of the project area. The artifact assemblage is probably 20<sup>th</sup> century in age, and may be the product of installation of the water main and meter situated about six meters west of the location. The low artifact count, nondiagnostic nature of the artifacts, and recovery of materials from potentially artificial fill deposits suggest that IF1 has no archaeological research potential. It is not considered eligible for listing on the NRHP. It was not assigned a site number, and UK-PAR recommends no further archaeological work at this location.

### ISOLATED FIND 2

Isolated Find 2 was a single prehistoric flake (Table 6.2) located at about Station 271+10/Right 60, on the east side of KY 377. The soil profile of Shovel Test 258 at the isolated find location showed a layer of yellowish brown (10YR5/4) silt loam extending 31 cm below surface. Zone II subsoil was a yellowish brown (10YR5/8) silty clay. No evidence of intact subsurface features was encountered, and no additional artifacts were recovered in the two excavated radial shovel tests placed within the proposed ROW corridor. The low artifact count, nondiagnostic nature of the artifact, and its context within plow zone suggest that IF 2 has no archaeological research potential and is not considered potentially eligible for listing on the NRHP. UK-PAR recommends no further archaeological work at this location.

### ISOLATED FIND 3

Isolated Find 3 was a single prehistoric flake (Table 6.2) located at about Station 272+50/Left 40, on the west side of KY 377, nearly opposite IF 2. The soil profile of Shovel Test 246 at the isolated find location showed a thin layer of yellowish brown (10YR5/4) silt loam extending 6 cm below surface. Zone II was a pale brown (10YR6/3) fine sandy loam extending from 6 to 44 cm below surface. Zone III was a

Table 6.2. Artifacts Recovered at Isolated Find Locations.

Group	Artifact Description	IF1	IF2	IF3	IF4	IF5	IF6	Total
Debitage	Flake fragment		1			1	1	3
	Shatter			1				1
Architecture	Nail fragments, unidentified	6			1			7
Personal	Tin alloy snap/button	1						1
Kitchen	Container glass, clear				1			1
<b>Total</b>		<b>7</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>13</b>

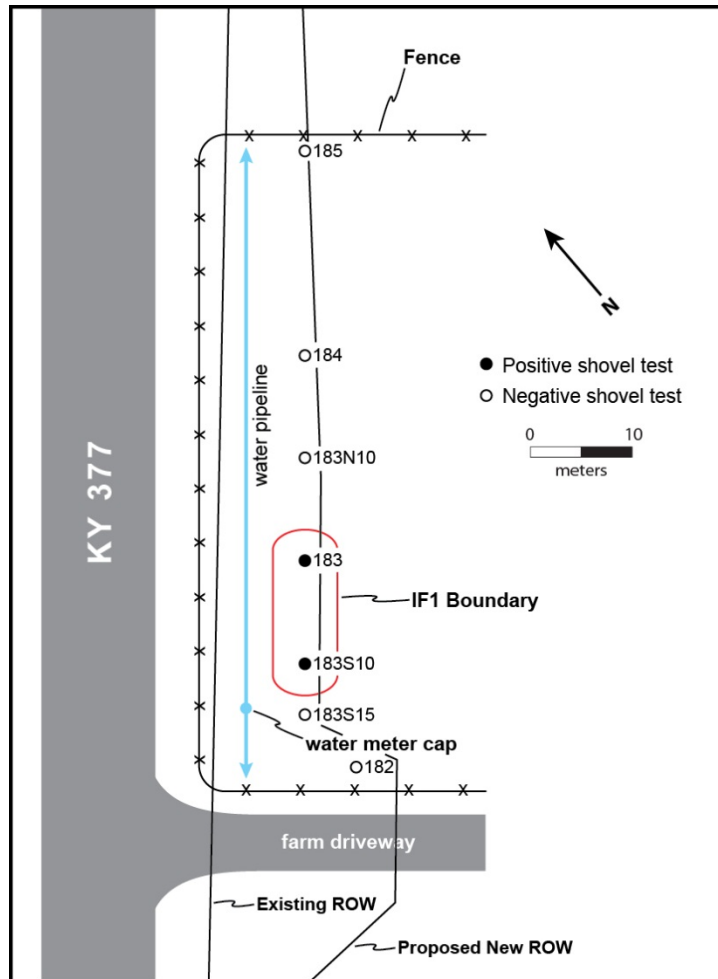


Figure 6.24. Sketch Map of Isolated Find 1.

pale olive (5Y6/3) sandy clay (subsoil), which extended from 44 cm to 47 cm below surface. No evidence of intact subsurface features was encountered in Shovel Test 246, and no additional artifacts were recovered in the two radial shovel tests excavated within the proposed ROW corridor. The low artifact count, nondiagnostic nature of the artifact, and its context within plow zone suggest that IF 3 has no archaeological research potential, and it is not considered eligible for listing on the NRHP. UK-PAR recommends no further archaeological work at this location.

#### ISOLATED FIND 4

Isolated Find 4 is located at about Station 407+50/Right 40, on the east side of KY 377. The assemblage includes one nail and one clear container glass fragment (Table 6.2). The soil profile of Shovel Test 439 at this location showed a layer of dark yellowish brown (10YR4/6) silt loam extending to



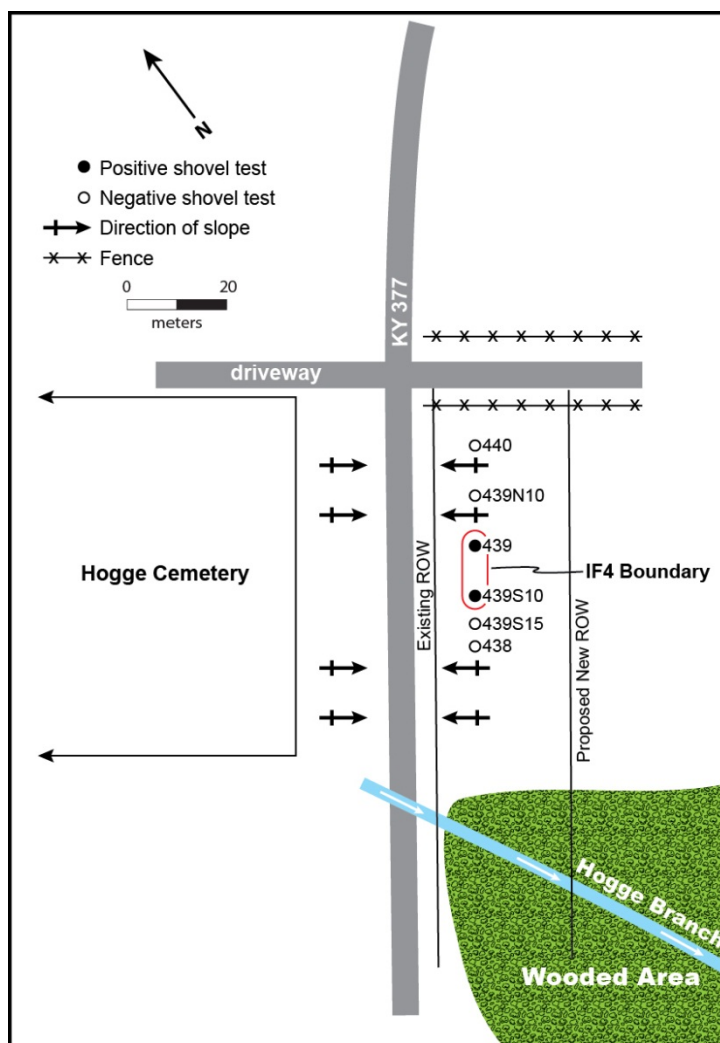


Figure 6.25. Sketch Map of Isolated Find 4.

14 cm depth; the Zone II subsoil was a yellowish brown (10YR5/6) loamy clay containing scattered pieces of sandstone, excavated to 29 cm below surface. This isolated find is defined by two positive shovel tests within the ROW corridor (Figure 6.25). These together yielded one unidentified nail fragment and one clear container glass fragment. No evidence of intact subsurface features was encountered. The soil profile of Shovel Test 439S10 showed a plow zone underlain by subsoil. The low artifact count, nondiagnostic nature of the artifacts, and their recovery from plow zone contexts suggest that IF 4 has no archaeological research potential. It is not considered eligible for listing on the NRHP, and UK-PAR recommends no further archaeological work at this location.

## ISOLATED FIND 5

Isolated Find 5 was a single prehistoric flake (Table 6.2), located at about Station 420+00/Right 60, on the east side of KY 377. The soil profile of Shovel Test 454 is representative of the area and exhibited a thin layer of brown (10YR5/3) silt loam with possible road gravel scattered throughout extending to 9 cm below surface. Zone II extended from 9 cm to 18 cm below surface and consisted of a yellowish brown (10YR5/8) silty clay with gravel scattered throughout. No evidence of intact subsurface features was encountered at this shovel test and no additional artifacts were recovered in the two radial shovel tests. Given the low artifact count, nondiagnostic nature of the artifact, and its context within probable disturbed fill IF 5 has no archaeological research potential. It is not considered eligible for listing on the NRHP, and UK-PAR recommends no further archaeological work at this location.



Figure 6.26. Structure 1 House and Outbuildings with Shovel Test 276 in Foreground (looking north).

## ISOLATED FIND 6

Isolated Find 6 was a prehistoric tertiary flake (Table 6.2) recovered from Shovel Test 472, which is located at about Station 422+10/Right 60, on the east side of KY 377. The soil profile for this shovel test showed a thin layer of dark yellowish brown (10YR4/6) silt loam extending 12 cm below surface. Zone II was a yellowish brown (10YR5/6) loamy clay with sandstone scattered throughout; it only 2 cm thick, extending from 12 to 14 cm below surface. The third zone is another dark yellowish brown (10YR4/6) clayey loam extending from 14 to 30 cm depth. Charcoal flecks were evident from 22 cm to 27 cm below surface. Zone IV is a yellowish brown (10YR5/6) loamy clay subsoil extending from 30 cm to 35 cm below surface. No evidence of intact subsurface features was encountered in Shovel Test 472, and no additional artifacts were recovered in two radial shovel tests excavated nearby. The charcoal flecking is considered to be a zone of disturbed sediment within the historic plow zone. The low artifact count, nondiagnostic nature of the artifact, and the presence of disturbed zones suggestive of artificial fill indicate that IF 6 has no archaeological research potential. It is not considered eligible for listing on the NRHP, and UK-PAR recommends no further archaeological work at this location.

## HISTORIC STRUCTURES

Finally, UK-PAR identified three above-ground historic resources (Structures 1-3) within or near the proposed new ROW corridor (Figure 1.2).

Structure 1 is an abandoned wood residence with two wooden sheds, one wooden outhouse, and a well located south of Old Sportsmans Road (Figures 6.26-6.28). The residence is at about Station 265+50/Right 60, east of KY 377. The Structure 1 area also includes a modern trash deposit about 50 m north of the house (Figure 6.29). Five shovel tests (ST276-ST280) were placed at the standard 20-meter intervals along the ROW corridor that intersected the Structure 1 location, but all were negative. The location of ST 276 is shown in Figure 6.26 relative to the residence location; ST 277 was near the near corner of the residence, ST 278 was on the far (north) side of the residence, and the scatter of metal and bottle trash was evident between ST 279 and 280 (see Figure 6.29). This structure does not appear on the 1937 *Highway and Transportation Map, Rowan County* (Kentucky Department of Highways 1937), but it





Figure 6.27. Structure 1 House and Well (looking east).



Figure 6.28. Structure 1 Area Showing Outhouse, Shed, and House (looking southwest).





Figure 6.29. Modern Bottle and Metal Trash Deposit Associated with Structure 1 (looking north). Shovel Test 280 is in foreground.



Figure 6.30. Structure 2 Stone Building with Shovel Test 376 in Foreground (looking east).

is present on a 1948 archived aerial photograph examined through Google Earth.

Structure 2 is a sandstone outbuilding located west of Cranston Cemetery Road near the Friendship Community Fellowship Church (Figure 6.30). Though the structure was just outside the project area, it is bounded by project area segments to the north and west. Four shovel tests (ST 374-ST377) were placed in these segments, but no artifacts were found. Dan Davis of the Kentucky Transportation Cabinet informed UK-PAR that this building is listed in the KHC Historic Structure Inventory as RW10, and that it is listed on the NRHP. However, it will not be disturbed, as the structure is





Figure 6.31. Structure 3, a Small Log Outbuilding (looking northeast).

outside the project area boundaries.

Structure 3 is a small log outbuilding situated about 450 m south of the intersection of KY 377 and KY 799 (Figure 6.31), on the east side of KY 377 at about Station 454+70/Right 90. As shown on the KYTC project plan maps, the construction corridor will apparently run just at the west edge of the structure, and a temporary construction easement surrounds this location. Two shovel tests (ST 567 and ST 568) were placed on the south and north sides of the structure, respectively, but both were negative.

All of the shovel tests excavated in the vicinity of these three structures were all negative for artifacts more than 50 years old, and none exhibited any subsurface midden or features. None of the structures were considered to have any archaeological research potential, and they were not assigned a site number or considered eligible for listing on the NRHP under Criterion D. Therefore UK-PAR recommends no further archaeological work at these locations.



## CHAPTER 7

### SUMMARY AND RECOMMENDATIONS

At the request of the Kentucky Transportation Cabinet (KYTC), archaeologists from the University of Kentucky Program for Archaeological Research (UK-PAR) performed a Phase I survey of proposed reconstruction of a portion of KY 377 between KY 32 and the Lewis County line in Rowan County, Kentucky. The purpose of this work was to identify any archaeological resources within the project area and to assess their potential eligibility for nomination to the National Register of Historic Places (NRHP). The survey corridor comprised existing and proposed rights-of-way and temporary easements on both sides of KY 377, which runs generally north-south, for a distance of about 8.2 miles (13.2 km). The corridors encompass approximately 45.3 hectares (111.8 acres) of land.

Some portions of the project area had no additional ROW or easements, while most others involve widening and acquisition of either new ROW or temporary construction easements. Maps provided to UK-PAR indicate that about 107.6 acres of new ROW and easements will be acquired on both east and west sides of KY 377. Most new ROW is in the form of long, narrow strips of land, generally between 20 and 180 feet (6 and 55 m) wide, parallel to the existing KY 377 ROW. In addition to the highway ROW and temporary or permanent easements, the survey required testing along several small stream diversion channels adjacent to the ROW/easements. These diversions, numbering about 15, generally were in disturbed ditch/drainage areas and many required excavation of no additional shovel tests. Other additions to the survey area include wider ROW for possible relocation of the KY 799 intersection (about 2.0 acres) and a pullout for a historical marker (about 1.0 acres). These additions make the total archaeological survey area about 111.8 acres (45.3 ha), distributed over about 22,300 linear meters on both sides of KY 377. Initial reconnaissance of the project area indicated that about 6500 linear meters (about one third of the total corridor length) have been visibly disturbed or is on steeply sloping ground that contains no evidence of rock shelters. This inspection reduced the survey corridor distance to about 15,800 linear meters. Due to the linear shape of the project corridor, archaeological survey was most effectively accomplished by excavation of shovel test transects oriented parallel to the existing KY 377 corridor.

About 41.1 acres of the project area (36.8 percent) have been severely disturbed by construction of houses, barns, and utility lines. These disturbed areas were not systematically surveyed for archaeological resources. Steep slopes and waterlogged landscapes cover an additional 6.7 acres or 6.0 percent of the project area. Previously surveyed land comprises 5.5 acres (4.9 percent of project area). The remaining 58.5 acres (23.7 ha), comprising 52.3 percent of the project area, are on broad alluvial fans, footslopes, stream terraces, or flood plain landforms. These areas are primarily used for cultivation of row crops or are in pasture, and there are only a few scattered sections on low-slope wooded upland landforms (Figure 1.6). All of these low-slope landforms required systematic archaeological survey, and all archaeological investigations were confined to the project corridors.

As a result of this survey effort, the UK-PAR crew excavated 697 shovel tests (including bracketing tests to define site boundaries). Additionally, 39 deep auger tests were placed in the bottom of shovel tests to test for buried cultural deposits or paleosols. The survey documented five new archaeological sites (15Ro226 through 15Ro230) and six isolated finds. One previously reported site (15Ro194) that falls just outside the project area was revisited during the survey.

Site 15Ro226 is an apparently isolated historic grave located within a plowed field on the east side of KY 377. The site consists of single carved, truncated obelisk burial monument. It is engraved on one face with the inscription "Thomas P. Johnsons, b. Feb 18, 1866, d. July 28, 1895". The monument appears to be granite or sandstone. A relief carving shows an open book resting upon a cloth shroud at the top of the truncated obelisk. The obelisk rests at an angle upon a plinth, indicating that it has been moved or partially displaced, probably by agricultural machinery. This interpretation is supported by impact marks near the base of the obelisk. The degree to which the site has been disturbed is unknown. The site boundary is arbitrarily

defined as a two-meter radius around the obelisk, for an area of 13 m<sup>2</sup>. Because the monument is located 15 m outside the project ROW, no shovel tests were excavated. Visual examination of the area around the monument did not reveal any other grave markers or depressions, and shovel testing nearby but within the project boundary did not reveal any artifacts or evidence of additional burials. Historic maps did not show any cemeteries or residential structures near this site. Given that no archaeological testing took place, the National Register status of 15Ro226 is not assessed. Nevertheless, the research potential of a single grave is considered to be low. UK-PAR recommends that the proposed construction work avoid the site, along with a 10-m buffer area around the obelisk. Such a buffer should be sufficient to protect the site, if it consists of only this single grave.

Site 15Ro227 is a late 19<sup>th</sup> to early 20<sup>th</sup> century historic outbuilding located roughly 12 m west of KY 377. The site is situated on a level terrace at an elevation of 244 m AMSL, about 450 m west of Triplett Creek. Currently, the site is covered by overgrown secondary vegetation, with pasture surrounding the overgrowth. A large dirt-embanked pond is situated about 50 m northwest of the site, outside the survey corridor. The site measures 20 m north-south by 15 m east-west. The site may extend farther west, but shovel tests were confined to the ROW. The site area is defined by the distributions of one positive shovel test and visible architectural features (a metal chimney flue, roof timber remains, dressed sandstone foundation slabs, corrugated metal roof panels, and asphalt roof shingles). Items also present on the surface but not collected include barbed wire, a tire, a furnace with the label "Moore's", and a bird bath post. A single wire nail was collected from the positive shovel test. The Morehead 7.5' USGS quadrangle map (1970, photorevised 1978) shows an outbuilding at the site location. The 1937 Kentucky Department Highways map of Rowan County also shows a structure at this location. Given the low artifact density, lack of subsurface cultural deposits, and the probable modern age of at least some of the artifacts, the research potential of 15Ro227 is low. Consequently, UK-PAR recommends no additional archaeological work at this location.

Site 15Ro228 is a late 19<sup>th</sup> to mid-20<sup>th</sup> century historic scatter situated in an open pasture about 0.6 km north of DeBard Branch Road and 10 m west of KY 377. The site occupies a relatively flat stream terrace at an elevation of 252 m AMSL and measures only about 15 m north-south and 5 m east-west (75 m<sup>2</sup>). The site may extend farther west. One meter east of the site is a linear depression oriented northeast-southwest that appears to be an old roadway. The site is defined by three positive shovel tests, which yielded one milk glass fragment, three clear container glass fragments, and one amethyst pressed table glass fragment, all from plow zone contexts. The 1937 and 1954 Kentucky Department of Highways maps show at least one residential structure near the site location, but the small scale for these maps prevents correlating any specific structure with the small site area. The 1970 Cranston 7.5' USGS topographic quadrangle map shows a residential structure at the site location with a barn about 75 m to the north. At the time of this survey, the barn was present but no residential structure or remnants thereof was evident. Overall, the artifact assemblage appears to be late 19<sup>th</sup> to early 20<sup>th</sup> century in age, and it likely relates to the residential structure that once stood near this location. Given the low artifact density, lack of subsurface cultural deposits, and absence of structural remains the research potential of 15Ro228 is low. Consequently, UK-PAR recommends no additional archaeological work at this location.

Site 15Ro229 is a temporally unassigned prehistoric lithic scatter located on the east side of KY 377, about 170 m south of the intersection of KY 799 with KY 377. It occupies a pastured level terrace at an elevation of 247 m AMSL. The site measures about 20 m north-south by 5 m east-west (100 m<sup>2</sup>); the site may extend farther east, but shovel tests were confined to the proposed new ROW corridor. The site is defined by three positive shovel tests yielding five prehistoric flakes. Three were from plow zone contexts (one was lost in the field), and two were from subsoil at 60-70 cm below surface. Bracketing shovel/auger tests were negative. The site is potentially disturbed by construction of a water main that parallels KY 377 and runs only about 1.5 m east of the site. Given the low number of artifacts, the apparent absence of a buried A horizon containing cultural materials, absence of temporally diagnostic artifacts, and no evidence of subsurface features, the research potential of 15Ro229 is low. Consequently, UK-PAR recommends no additional archaeological work at this location.



Site 15Ro230 includes two late 19<sup>th</sup> to early 20<sup>th</sup> century in-ground features represented by a cut sandstone well and a keyhole stone and wood springhouse. These features are located about 15 m west of KY 377 and about 110 m north of Pond Lick Road. The structures are in secondary woods on a level terrace at an elevation of 238 m AMSL, and about 115 m northwest of Triplett Creek. The site measures about 25 m north-south by 15 m east-west. The site extends west outside the surveyed ROW corridor, into an area that was not shovel tested. Only the visible features were recorded; no artifacts were observed or recovered from the site. The sawn wood springhouse superstructure is partially collapsed and has a corrugated metal roof. It is offset from its keyhole foundation and is situated a few feet from a small unnamed tributary to Weaver Branch. The well foundation is about 12 m northeast of the springhouse. It has four visible courses of dressed sandstone on two sides, but the well opening is filled with stone and is heavily covered in vegetation. The Morehead, KY 7.5' USGS topographic quadrangle map (1970, photorevised 1978) shows two barns south of the site area and one residence north of the site. The 1937 and 1954 Kentucky Department of Highways maps do not show any structures near the site location. Based on the USGS map and field observations, any residential structure that was present to have been disturbed by construction activities associated with KY 377. Given the lack of artifacts, the research potential of 15Ro230 is low, though most of the site may lie outside the investigated ROW corridor. Consequently, UK-PAR recommends no additional archaeological work at this location provided that construction is confined to the proposed new ROW. If construction disturbance extends outside the investigated area to impact the structure areas, additional archaeological work may need to be conducted.

Site 15Ro194 was revisited during survey. This site is a single historic grave consisting of a square headstone at the west end and a triangular footstone at the east end, both made of sandstone. The proposed new ROW corridor is about 10 m west of 15Ro194. The site data documented during our revisit agrees with the earlier site inventory form. No artifacts were collected or observed at the site, and the revisit did not identify any other headstones or footstones in the immediate area. The west side of the headstone exhibits carved letters that were indecipherable at the time of our survey. The east side of the footstone has "W. T. H" carved on the surface. The original site inventory form notes that the headstone reads "W.M. Trumbo son of Alfred & Susannah Hurst died July 31, 1851 aged 1 year and 14 days" while the footstone reads "W.T.H. 1851". Additionally, the inventory form noted that the site might be potentially eligible for nomination to the NRHP under Criterion C, particularly as it may pertain to the health and diseases of children in the mid-19<sup>th</sup> century. UK-PAR does not concur with that statement, as Criterion C pertains to architectural styles. Nevertheless we recommend avoidance of the site area and also suggest additional archaeological work if construction will unavoidably impact the site.

In addition to these five newly documented sites and one site revisit, UK-PAR also identified six isolated finds. These include four prehistoric and two historic isolated finds. These are numbered from south to north along the project corridor. The artifacts recovered at IF2, IF3, IF5, and IF6 consist of single prehistoric flakes at each location. All bracketing shovel tests were negative, and no evidence of subsurface cultural features or middens were found at any of these locations. The two historic isolated finds (IF1 and IF4), each had a single positive shovel test and a single positive bracketing test. The material from IF1 includes one wire nail, five wire nail fragments, and one tin alloy snap/button fragment. The artifacts from IF4 include one nail and one container glass fragment. No structures are present on historic maps near these historic isolated find locations. These six isolated finds do not meet the current OSA criteria for archaeological sites, their research potential is extremely low, and no additional archaeological work is recommended at any of these locations.

Finally, UK-PAR identified three historic resources (Structures 1-3) within the proposed new ROW corridor. Structure 1 is an abandoned wood residence with two wooden sheds, one wooden outhouse, and a well located 620 m south of Old Sportsmans Road. Structure 2 is a sandstone outbuilding located west of Cranston Cemetery Road near the Friendship Community Fellowship Church. Structure 3 is a small log outbuilding situated approximately 450 m south of the intersection of KY 377 and KY 799. All of these are standing structures. Shovel tests near these structures did not yield any artifacts. After examining photographs of these structures, Senior Architectural Historian Janie-Rice Brother concluded that they are

more than 50 years old and recommended that they be surveyed and evaluated as culture-historic resources, if they have not already been documented.

In summary, UK-PAR identified five archaeological sites (15Ro226, 15Ro227, 15Ro228, 15Ro229, and 15Ro230), six isolated finds, and revisited one previously recorded archaeological site (15Ro194) during the archaeological survey of proposed new ROW corridor for KY 377 in Rowan County. UK-PAR recommends no additional archaeological work at any of the archaeological sites or the isolated finds, provided that construction activities are confined to the investigated corridor. If construction activities extend beyond the areas surveyed for this project, additional archaeological investigation may be required, especially at 15Ro194, 15Ro226, and 15Ro230.

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