# AN ADDENDUM TO AN ARCHAEOLOGICAL SURVEY OF THE PROPOSED RECONSTRUCTION OF KY 56 WEST OF MORGANFIELD IN UNION COUNTY, KENTUCKY (ITEM NO. 2-310.2)



by James Heideman and H. William Goodman

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CRA Project No.: K15K012

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#### **ABSTRACT**

On September 10 and October 6, 2015, Cultural Resource Analysts, Inc., personnel conducted an addendum archaeological survey for the reconstruction of KY 56 west of the city of Morganfield in Union County, Kentucky (Item No. 2-310.2). The addendum survey was conducted at the request of David Waldner on behalf of the Kentucky Transportation Cabinet. The current project consisted of the survey of five parcels of land for which landowner permission was denied during initial field investigations conducted in June 2015 for the project. In total, the addendum project area encompassed approximately 1.7 ha (4.1 acres).

As part of the initial survey, a records review was conducted at the Office of State Archaeology for a 2.0 km (1.2 mi) radius around the entire 1.7 ha project area. The review indicated that four previous professional archaeological surveys had been conducted, during which 13 archaeological sites were previously recorded within 2 km of the current project area. None of the surveys or previously recorded archaeological sites are located within the current project area.

Field investigations consisted of intensive pedestrian survey supplemented by systematic screened shovel testing. The majority of the land comprising the addendum project area was used for commercial or residential purposes, while some portions consisted of forested areas and pasture. Survey methods varied according to topographic setting and/or past and current land use practices. Significant portions of the project area had been disturbed by road construction/maintenance, buried utilities, residential construction/landscaping, and commercial developments.

The addendum archaeological survey for the proposed project did not result in the discovery of any new archaeological sites. As currently planned, the proposed project will result in no effect on any archaeological sites listed in, or eligible for inclusion in, the National Register of Historic Places. Therefore, archaeological clearance is recommended.

# TABLE OF CONTENTS

ABSTRACT
LIST OF FIGURESII
LIST OF TABLESII
I. INTRODUCTION
II. DESCRIPTION OF THE PROJECT AREA
III. RESULTS OF THE FILE AND RECORDS SEARCH AND SURVEY PREDICTIONS
IV. METHODS15
V. RESULTS AND CONCLUSIONS18
REFERENCES CITED18
LIST OF FIGURES
Figure 1. Map of Kentucky showing the location of Union County
Figure 2. Location of project area on topographic quadrangle
Figure 3a. Project area plan map (map key)
Figure 3b. Project area plan map
Figure 3d. Project area plan map.
Figure 3d. Project area plan map
KY 56 and KY 109 junction.
Figure 5. Overview of western parcels of the project area facing west-northwest. View from southwest side of the KY 56 and KY 109 junction.
Figure 6. Example of mid-to-late twentieth-century outbuilding directly adjacent to the western parcels of the
project area, facing southeast10
Figure 7. Overview of central parcel of the project area facing west-northwest
Figure 8. Example of vegetation within forested portions of the central parcel of the project area facing east-southeast
Figure 9. Overview of eastern portion of the project area along Old Shawneetown Road facing west11
Figure 10. Section of the 1880 historical atlas of Henderson and Union Counties showing MS 1
Figure 11. Section of the 1953 USGS Grove Center 7.5-minute series topographic quadrangle map showing MS
1 and MS 2
LIST OF TABLES
Table 1. Summary of Selected Information for Previously Recorded Archaeological Sites in Union County, Kentucky. Data Obtained from OSA and May Contain Coding Errors

#### I. INTRODUCTION

n September 10 and October 6, 2015, Cultural Resource Analysts, Inc. (CRA), personnel conducted an addendum archaeological survey for the reconstruction of KY 56 west of the city of Morganfield, in Union County, Kentucky (Figures 1 and 2). The addendum survey was conducted at the request of David Waldner on behalf of the Kentucky Transportation Cabinet (KYTC [Item No. 2-310.2]), and fieldwork was only performed once landowner permission was obtained. Fieldwork was conducted by James Heideman, Marshall Wilson, and Thomas McAlpine and required approximately 10 complete. Office Archaeology (OSA) Geographic Information Systems (GIS) data requested by CRA on May 26, 2015, was returned on May 29, 2015. The results were researched by Heather Barras of CRA at the OSA on June 10, 2015. The OSA project registration number is FY15 8469.

# **Background**

The purpose of the KY 56 reconstruction project is to provide a second section of a route between the city of Morganfield/U.S. 60 and the Shawneetown Bridge over the Ohio River that will meet the "AAA" truck standards allowing KY 56 to be added to the National Trucking Network. The need for this project arises because the current route has sight distance and geometric deficiencies, poor pavement strength, and narrow shoulder-less lanes that limit truck traffic to a "AA" rating. Without this route, all "AAA" trucking loads and oversized trucks are required to travel an extra 16.1 km (10.0 mi) from U.S. 60 to the Shawneetown Bridge. This is not just an economic concern; it is also a safety concern since this existing route forces all "AAA" trucks through the small community of Sturgis using KY 109.

## **Project Description**

The proposed project consists of five of land associated with parcels reconstruction of KY 56 beginning 8.0 km (5.0 mi) west of the city of Morganfield, in Union County, Kentucky (Figure 3). Three of the parcels (14, 16, and 19) were owned by Gateway One Stop, LLC, one parcel (24) was owned by Phyllis J. Sherrod, and one parcel (33) was owned by Mary Patricia French. The addendum project area was generally located on commercial and residential lots. Some portions of the project area were located in forested areas and pasture. The majority of the commerical lots were noted to be highly disturbed by past construction activities: however, the residential lots were relatively undisturbed aside from road maintenance in the areas immediately adjacent to KY 56.

The three western parcels (14, 16, and 19) of the project area were situated along both sides of KY 56 near the junction with KY 109 and encompassed approximately .9 ha (2.1 acres). The central parcel (24) was located on the south side of KY 56 near the junction with C.C. Buckman Road. The eastern parcel (33) was also situated along the south side of KY 56, and was generally located along Old Shawneetwon Road approximately 24 m (80 ft) west of Bald Hill Road West. The central and western parcels each encompassed approximately .4 ha (1.0 acre). All five parcels that comprised the addendum project area encompassed a total of approximately 1.7 ha (4.1 acres).

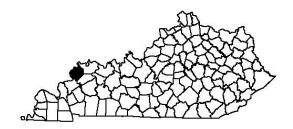


Figure 1. Map of Kentucky showing the location of Union County.

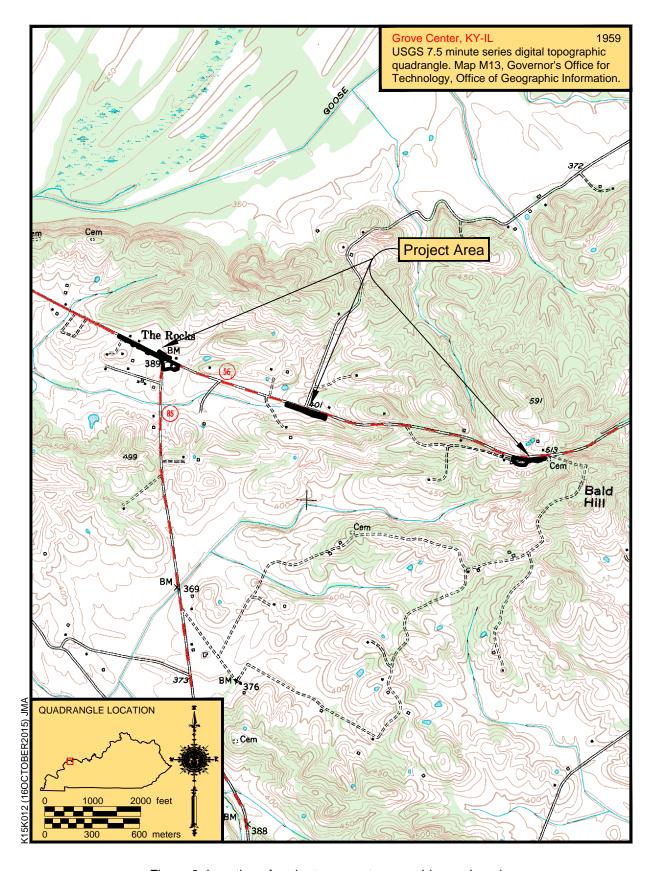


Figure 2. Location of project area on topographic quadrangle.

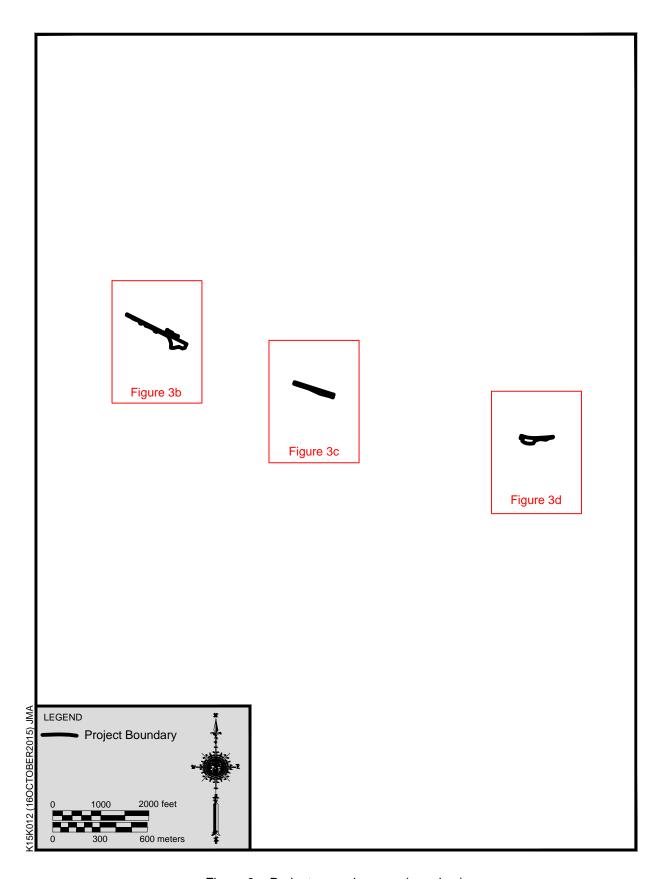


Figure 3a. Project area plan map (map key).

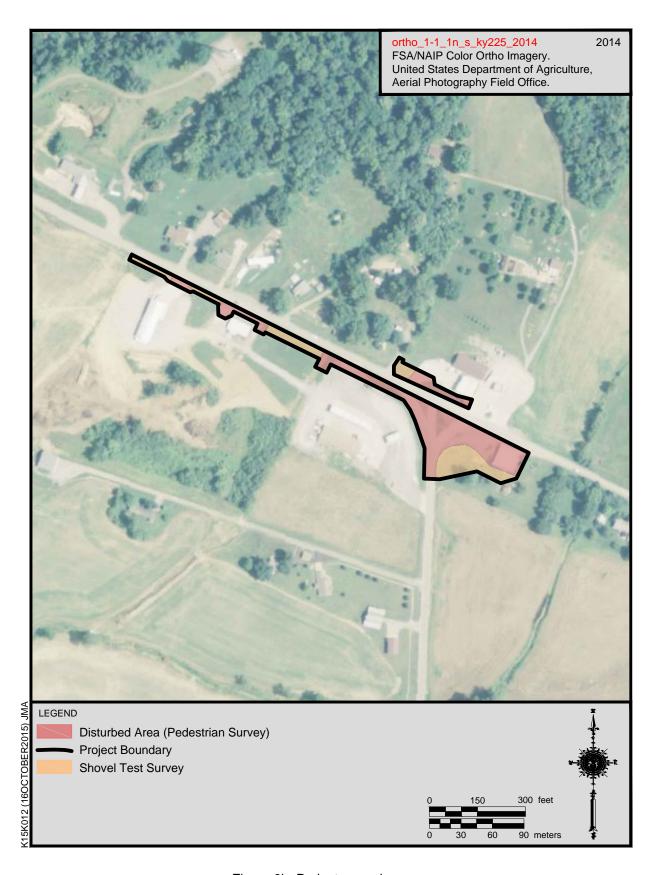


Figure 3b. Project area plan map.

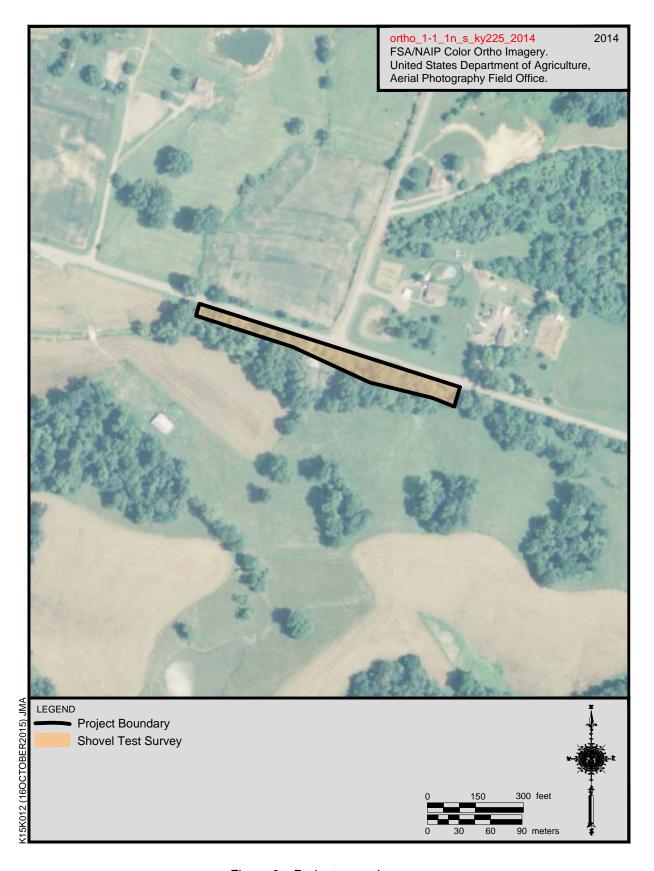


Figure 3c. Project area plan map.

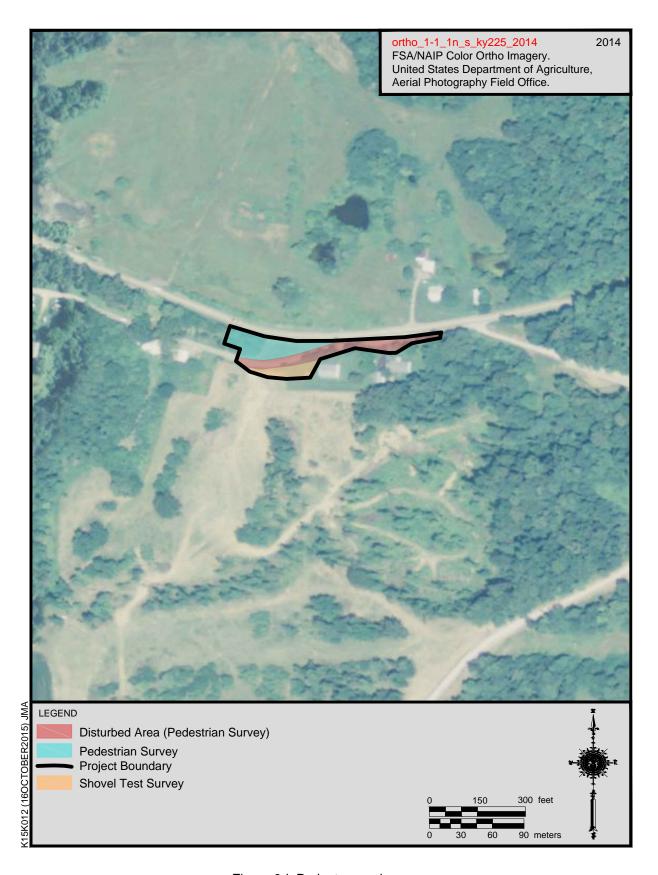


Figure 3d. Project area plan map.

## Purpose of Study

During the initial archaeological survey for the proposed reconstruction of KY 56 in Union County conducted by CRA in June 2015 (Goodman 2015), land access was denied for five parcels of land within that project area. Once land owner access was acquired, those five parcels of land required archaeological survey in order to comply with Section 106 of the National Historic Preservation Act. This transportation project is federally funded, and therefore considered an undertaking subject to 106 review.

The purpose of this survey was to assess any potential effects the right-of-way (ROW) expansion might have on identified cultural resources. To do this, we pursued these objectives:

identify prehistoric and historic archaeological sites located within the project area;

determine, to the extent possible, the age and cultural affiliation of sites;

establish the vertical and horizontal boundaries of sites; and

establish the degree of site integrity and potential for intact cultural deposits to be present.

For the purposes of this assessment, a site was defined as "any location where human behavior has resulted in the deposition of artifacts or other evidence of purposive behavior at least 50 years of age" (Sanders 2006:2). Cultural deposits less than 50 years of age were not considered sites in accordance with "Archeology and Historic Preservation: the Secretary of the Interior's Standards and Guidelines" and were not assessed as part of this study (National Park Service 1983).

The following is a description of the project area, previous research, and cultural history of the area, field and laboratory methods, materials recovered, and results of this study. It conforms to the *Specifications for Conducting Fieldwork and Preparing Cultural Resource Assessment Reports* (Sanders 2006).

## **Summary of Findings**

As part of the initial investigations, a records review was conducted at the Office of State Archaeology for a 2.0 km (1.2 mi) radius around the entire 1.7 ha project area. The review indicated that four previous professional archaeological surveys had been conducted, during which 13 archaeological sites were previously recorded within 2 km of the current project area. None of the surveys or previously recorded archaeological sites are located within the current project area.

The addendum archaeological survey of the proposed project did not result in the discovery of any new archaeological sites. As currently planned, the proposed project will result in no effect on any archaeological sites listed in, or eligible for inclusion in, the National Register of Historic Places (NRHP). Therefore, archaeological clearance is recommended.

# II. DESCRIPTION OF THE PROJECT AREA

The proposed project area consists of five parcels of land located along KY 56 west of the town of Morganfield in Union County, Kentucky (see Figures 2 and 3). The proposed project involves adjustments to the road alignment on KY 56 between the intersections of KY 360 and KY 109. The project area encompassed approximately 1.7 ha. Elevations in the project area ranged from 119 m (390 ft) above mean sea level (AMSL) near the junction of KY 56 and KY 109, to approximately 158 m (520 ft) AMSL in the dissected uplands along Bald Hill Road West. The Ohio River and its tributaries drain the project area.

Three of the parcels in the west portion of the project area are owned by Gateway One Stop, LLC. These three parcels consisted of commercial properties situated along KY 56 near the junction of KY 109, and included two gas stations, a fireworks store, and other warehouse/storage buildings (Figures 4 and 5).



Figure 4. Overview of western parcels of the project area facing west-northwest. View from northeast side of the KY 56 and KY 109 junction.



Figure 5. Overview of western parcels of the project area facing west-northwest. View from southwest side of the KY 56 and KY 109 junction.

Significant portions of the parcels in the western portion of the project area were either paved or gravel covered. Two mid- to late-twentieth-century outbuildings associated with residential structures formerly situated on the south side of KY 56 were located directly adjacent to the project area to the southeast of the KY 56 and KY 109 junction (Figure 6). No archaeological remains were found in association with either of these outbuildings.

The parcel in the central portion of the project area, owned by Phyllis J. Sherrod, consisted of a residential property on the south side of KY 56 near the junction with C.C. Buckman Road (Figure 7). The land surrounding the residential portion of the property was forested and contained relatively thick secondary growth (Figure 8).

The eastern parcel of the project area was located on the south side of KY 56 along Old Shawneetown Road just west of Bald Hill Road West (Figure 9). Owned by Mary Patricia French, this portion of the project area consisted of a residential lot, forested hillside, and some pasture.

All five parcels of the addendum project area were located in upland settings. Land use for the project area consisted of commercial and residential lots, pasture, and forested areas. Slope was minimal in the project area and was only predominant in the eastern parcel between KY 56 and Old Shawneetown Road. In general, ground surface visibility was less than 10 percent throughout the project area. Ground surface visibility was obscured by grass cover, weeds, brush, briars, and/or leaf litter. Disturbance noted throughout the area included project construction/maintenance, overhead power lines and power line poles, buried utilities, and commercial and residential developments.

Two soil series have been defined in the project area. They consist of Alford and Uniontown. The soil series are classified by the amount of time it has taken them to form and the landscape position they are found on (Birkeland 1984; Soil Survey Staff 1999). This information can provide a relative age of the soils and can express the potential for buried

archaeological deposits within them (Stafford 2004). The soil order and group classifications for each soil series are used to assist with determining this potential.

The Alford and Uniontown soil series are defined as Alfisols, which are found on landforms that formed during the late Pleistocene or earlier (Soil Survey Staff 1999:163–165). Archaeological deposits would only be found on or very near the ground surface on landforms mapped with Alfisols.

The majority of the soils encountered in the project area were noted to be disturbed by past construction activities associated with developments commercial and maintenance. In undisturbed portions of the project area, sediments observed in shovel probes generally conformed to the descriptions for the Uniontown series soils. A typical profile exhibited a surface layer of brown (10YR 5/3) to grayish brown (10YR 5/2) silt loam to depths between 8 and 15 cm (3 and 6 in) below ground surface (bgs). This was followed by a yellowish brown (10YR 5/6) silty clay loam subsoil. Discrepancies in the depths of the surface layers of the shovel probes throughout the project area were generally dependent upon the degree of slope or disturbance on which they were conducted.

# III. RESULTS OF THE FILE AND RECORDS SEARCH AND SURVEY PREDICTIONS

# Previous Research in Union County

Prior to initiating fieldwork, a search of records maintained by the NRHP (available online at: http://nrhp.focus.nps.gov/natreghome.do?searc htype=natreghome) and the OSA (FY15\_8469) was conducted to: 1) determine if the project area had been previously



Figure 6. Example of mid-to-late twentieth-century outbuilding directly adjacent to the western parcels of the project area, facing southeast.



Figure 7. Overview of central parcel of the project area facing west-northwest.



Figure 8. Example of vegetation within forested portions of the central parcel of the project area facing east-southeast.



Figure 9. Overview of eastern portion of the project area along Old Shawneetown Road facing west.

surveyed for archaeological resources; 2) identify previously recorded any archaeological sites that were situated within the project area; 3) provide information concerning what archaeological resources could be expected within the project area; and 4) provide a context for any archaeological resources recovered within the project area. A search of the NRHP records indicated that no archaeological sites listed on the NRHP were situated within the current project area; however, 13 archaeological sites have been recorded within a 2 km radius of the project area. The OSA file search was conducted between May 26 and June 10, 2015. The work at OSA consisted of a review of professional survey reports and records of archaeological sites for an area encompassing a 2 km radius of the project footprint. To further characterize the archaeological resources in the general area, the OSA archaeological site database for the county was reviewed and synthesized. The review of professional survey reports and archaeological site data in the county provided information on types basic the archaeological resources that were likely to occur within the project area and the landforms that were most likely to contain these resources. The results are discussed below.

OSA records revealed that four previous professional archaeological surveys have been conducted within a 2 km radius of the project area. Thirteen archaeological sites have been recorded in this area also. The 13 previously recorded archaeological sites included one farm/residence (15Un259), historic cemetery (15Un261), one prehistoric open habitation with mounds (15Un32), two multicomponent (15Un206 and 15Un260), two earth mounds (15Un71 and 15Un111), two petroglyphs/pictographs (15Un112 and 15Un152), and four prehistoric open without mounds habitations (15Un138, 15Un139, 15Un143, and 15Un144). The 2 km radius of the file search area included areas within the Grove Center quadrangle.

# Previous Archaeological Surveys

Heather Barras

n May and June, 2007, Gray & Pape, Inc., personnel conducted an archaeological survey for the proposed Gary Lovell Wetlands Reserve Program easement in Union County, Kentucky (Trader and Niemel 2007). At the request of the United States Department of Agriculture (USDA) Natural Resources Conservation Services, 55.6 ha (137.4 acres) were investigated with pedestrian survey supplemented with screened shovel testing and deep testing. One previously recorded site (15Un136) and five previously unrecorded sites (15Un203-15Un206 and 15Un208) were documented during the survey. One of these sites (15Un206) is located within the 2 km radius of the current project.

Site 15Un206 is a multi-component prehistoric open habitation without mounds with a Late Woodland/Mississippian component and a nineteenth and twentieth century historic farm/residence. The site contained a dense scatter of prehistoric and historic artifacts with the potential for subplow zone features. Avoidance was recommended for the site, and NRHP eligibility was not assessed (Trader and Niemel 2007).

On July 2, 2007, Active Environmental Services, Inc., personnel conducted an archaeological survey for the proposed The Rocks telecommunications tower site in Union County, Kentucky (Adderley 2007). The survey was conducted at the request of Professional Services Industries, Inc., on behalf of Verizon Wireless. Approximately .14 ha (.34 acre) was investigated via pedestrian survey supplemented with screened shovel testing. No sites were encountered during the investigation, and no further work was recommended.

From May 4 to 7, 2010, Environment and Archaeology, LLC personnel conducted an archaeological survey for the proposed restoration of wetlands on the Lovell Heirs

Wetlands Reserve Program Easement in Union County, Kentucky (Crider 2010). At the request of the USDA Natural Resources Conservation Services, 81 ha (200 acres) were surveyed via pedestrian survey supplemented with screened shovel testing and deep testing. Three previously recorded sites (15Un143, 15Un205, and 15Un206) and three previously unrecorded sites (15Un219–15Un221) were encountered.

Sites 15Un143 and 15Un206 are located within the 2 km radius of the current project. Site 15Un143 was originally documented in 1983 as an open habitation without mounds of indeterminate temporal affiliation by Sherry Hilgeman based on the maps of local amateur archaeologist E. Hastings. Crider (2010) recovered diagnostic artifacts that suggested the site contained an Early Woodland and Late Woodland/Mississippian component. The site contained a high density of cultural materials and had the potential for thermal features. Avoidance or further work to assess its NRHP eligibility was recommended.

As noted, Site 15Un206 was originally recorded as a multi-component historic and prehistoric site. Only a small portion of this site was revisited and no historic materials were recovered (Crider 2010). Only a small amount of lithic materials was recovered, and no evidence of intact deposits or features was observed. The portion of the site that extended beyond the project boundaries was not assessed for NRHP eligibility. The portion within the project boundary was not recommended for further work (Crider 2010).

Sites 15Un32. 15Un71, 15Un111. 15Un112, 15Un138, 15Un139, 15Un144, and 15Un152 did not have associated reports. According to the site forms found in the OSA records, Sites 15Un111 and 15Un112 were recorded as prehistoric open habitations without mounds by Perry Harrell of the University of Louisville in 1980. Middle Woodland and Mississippian components were recorded for Site 15Un111, and a Late Woodland/Mississippian component recorded for Site 15Un112. The NRHP status for Site 15Un111 was not assessed at the time,

while Site 15Un112 was considered an inventory site and not eligible for inclusion in the NRHP.

15Un32, 15Un71, Sites 15Un105, 15Un112, 15Un138, 15Un139, and 15Un144 were visited by amateur archaeologist E. Hastings in August 1983. These visits were volunteered reports recorded by Sherri Hilgeman of OSA. Site 15Un32 was recorded as a Late Woodland/Mississippian open habitation with mounds. Site 15Un71 was recorded as a Late Woodland/Mississippian earth mound. The revisit of Sites 15Un105 and 15Un112 did not offer any new information about the sites. and the occupation assignments remained the same. Sites 15Un138, 15Un139, and 15Un144 were recorded as prehistoric open habitations without mounds with indeterminate temporal affiliations. The NRHP statuses of the sites visited by E. Hastings were not assessed at the time.

Site 15Un152 was recorded as a petroglyph of indeterminate temporal affiliation by James Swauger of Carnegie Museum's Petroglyph Studies on June 14, 1984. It was considered to be an inventory site and not eligible for NRHP inclusion at the time.

From June 8 to 17, 2015, CRA conducted an archaeological survey for the reconstruction of KY 56 west of the city of Morganfield, in Union County, Kentucky (Item No. 2-310.2) (Goodman 2015). The survey was conducted at the request of David Waldner on behalf of the KYTC. Approximately 44.5 ha (110.0 acres) were investigated via pedestrian survey supplemented with screened shovel testing. The five parcels of land being investigated under the current addendum survey were part of Goodman's project area. However, all five parcels were denied access at the time of the field investigations. Three previously unrecorded archaeological sites (15Un259-15Un261) were documented during field investigations for the project and all of the sites are located within the 2 km radius of the current project area.

Site 15Un259 was recorded as a latenineteenth- to mid-twentieth-century historic farm/residence, and Site 15Un260 was a multicomponent site that consisted of a prehistoric open habitation without mounds of indeterminate temporal affiliation and an early- to mid-twentieth-century historic farm/residence. Sites 15Un259 and 15Un260 were determined to be not eligible for inclusion in the NRHP. Site 15Un261 was an African-American cemetery containing both historic and modern burials. Based on its proximity to the construction activities along KY 56, it was recommended that a geophysical survey and/or archaeological monitoring be conducted to ensure that no unmarked burials would be disturbed.

# **Archaeological Site Data**

OSA records show that prior to this survey, 220 archaeological sites had been recorded in Union County (Table 1). Just over half of the sites recorded in the county are prehistoric open habitations without mounds ( $n=112;\ 50.91$  percent). Other commonly recorded site types in the county include historic farms/residences ( $n=30;\ 13.64$  percent), undetermined ( $n=14;\ 4.91$  percent), cemeteries ( $n=10;\ 4.55$  percent), rockshelters ( $n=8;\ 3.64$  percent), isolated finds ( $n=8;\ 3.64$  percent), and earth mounds ( $n=7;\ 3.18$  percent).

The landform locations of sites in Union County were examined to determine the likelihood of encountering sites on similar landforms within the project area. The majority of sites in Union County are located on floodplains (n = 110; 50 percent) and dissected uplands (n = 68; 30.91 percent). Most of the sites situated on the floodplains were open habitation sites without mounds (n 68.18 percent) and historic 75: farms/residences (n = 8; 7.27 percent). Cemeteries, open habitations with mounds, and undetermined sites are also found on floodplains in the county. The most commonly recorded site types located on dissected uplands include historic farms/residences (n = 23; 33.82 percent), open habitations without mounds (n = 20; 29.41 percent), and cemeteries (n = 8; 11.76 percent). Earth mounds, rockshelters, and undetermined sites have also been recorded on dissected uplands in the county.

Table 1. Summary of Selected Information for Previously Recorded Archaeological Sites in Union County, Kentucky. Data Obtained from OSA and May Contain Coding Errors.

Site Type:	N	%
Cemetery	10	4.55
Earth Mound	7	3.18
Historic Farm/Residence	35	15.9
Isolated Find	8	3.64
Mound Complex	2	0.91
Open Habitation with Mounds	4	1.82
Open Habitation without Mounds	112	50.9
Other	1	0.45
Other Special Activity Area	1	0.45
Petroglyph/Pictograph	2	0.91
Rockshelter	8	3.64
Undetermined	30	13.6
Total	220	100
Time Periods Represented	N	%
Time Periods Represented Paleoindian		% 0.35
	N	, ,
Paleoindian	N 1	0.35
Paleoindian Archaic	N 1 24	0.35 8.3
Paleoindian Archaic Woodland	N 1 24 35	0.35 8.3 12.1
Paleoindian Archaic Woodland Late Prehistoric	N 1 24 35 47	0.35 8.3 12.1 16.3
Paleoindian Archaic Woodland Late Prehistoric Indeterminate Prehistoric	N 1 24 35 47 114	0.35 8.3 12.1 16.3 39.5
Paleoindian Archaic Woodland Late Prehistoric Indeterminate Prehistoric Historic	N 1 24 35 47 114 70	0.35 8.3 12.1 16.3 39.5 24.2
Paleoindian Archaic Woodland Late Prehistoric Indeterminate Prehistoric Historic Total Landform	N 1 24 35 47 114 70 289*	0.35 8.3 12.1 16.3 39.5 24.2
Paleoindian Archaic Woodland Late Prehistoric Indeterminate Prehistoric Historic Total	N 1 24 35 47 114 70 289* N	0.35 8.3 12.1 16.3 39.5 24.2 100
Paleoindian Archaic Woodland Late Prehistoric Indeterminate Prehistoric Historic Total Landform Dissected Uplands	N 1 24 35 47 114 70 289* N	0.35 8.3 12.1 16.3 39.5 24.2 100 %
Paleoindian Archaic Woodland Late Prehistoric Indeterminate Prehistoric Historic Total Landform Dissected Uplands Floodplain	N 1 24 35 47 114 70 289* N 68 110	0.35 8.3 12.1 16.3 39.5 24.2 100 % 30.9 50

<sup>\*</sup>One site may represent more than one time period.

# **Survey Predictions**

Considering the known distribution of sites in the county, the available information on site types recorded, and the nature of the present project area, certain predictions were possible regarding the kinds of sites that might be encountered within the project area. Prehistoric open habitation sites were the primary site types expected, but historic farms/residences and cemeteries also were considered a possibility.

## Map Data

In addition to the file search, a review of available maps was initiated to help identify potential historic properties (structures) or historic archaeological site locations within the proposed project area. The following maps were reviewed.

1880 Historical atlas of Henderson and Union Counties, Kentucky (Lake and Company 1880)

1916 Shawneetown, Illinois-Kentucky, 15-minute series topographic quadrangle (USGS)

1928 Preliminary Map of the Areal and Structural Geology of Union County, (Kentucky Geologic Survey [KGS])

1937 Highway and Transportation Map of Union County, Kentucky (Kentucky Department of Highways [KDOH])

1950 General Highway Map of Union County, Kentucky (Kentucky State Highway Department [KSHD])

1953 Grove Center, Kentucky-Illinois, 7.5-minute series topographic quadrangle (USGS)

1957 General Highway Map of Union County, Kentucky (KDOH)

1959 Shawneetown, Illinois-Kentucky, 15-minute series topographic quadrangle (USGS)

The available historic maps depicted two map structures (MS) located within or directly adjacent to the current project area. The first available historic map used to help identify structure locations was the 1880 atlas. Only one structure (MS 1) is depicted within the current project area on this map (Figure 10). MS 1 is a residential structure located south of an unnamed road in an area that would later be near the junction of modern-day KY 56 and KY 109 in the western portion of the project area. The atlas depicts the residence as being owned by a Dr. Colbert.

The next map examined for the presence of historic structures was the 1916 USGS Shawneetown quadrangle map. This map also depicts only one structure (MS 1), and it is consistent in presence and location with the 1880 historic atlas.

When the 1953 USGS Grove Center quadrangle was reviewed for the presence of historic structures, four structures (MS 1 and MS 2) were depicted within or directly adjacent to the current project area (Figure 11). Three of the structures from this map were depicted in the same general vicinity as MS 1 from previous maps, and therefore, were subsumed within the MS 1 designation. The late-twentieth-century two midto outbuildings located just outside of the current project area, and discussed above, likely were associated with one of the three residential structures designated as MS 1. MS 2 is depicted as a single residential structure just west of the junction of KY 56 and Bald Hill Road West on the south side of KY 56.

The final map examined for the presence of historic structures was the 1959 USGS Shawneetown quadrangle map. This map depicts the same four structures (MS 1 and MS 2) as shown on the 1953 USGS Grove Center quadrangle map. Again, three residential structures depicted to the east of the KY 56 and KY 109 junction account for the MS 1 designation, and MS 2 is depicted as a single residential structure to the west of the KY 56 and Bald Hill Road West junction.

In summary, only two map structures (MS 1 and MS 2) were located within, or directly adjacent to, the current project area. None of the structures were extant at the time of the current survey, and none had associated cultural remains.

### IV. METHODS

The project area boundaries were determined by maps provided by the client and by a Magellan MobileMapper 6 Global Positioning System (GPS) handheld unit in the field. The project area consists of five separate and privately owned land parcels that are in the process of being acquired by the KYTC. Land owner permission was acquired for all five land parcels before initiating field work.



Figure 10. Section of the 1880 historical atlas of Henderson and Union Counties showing MS 1.

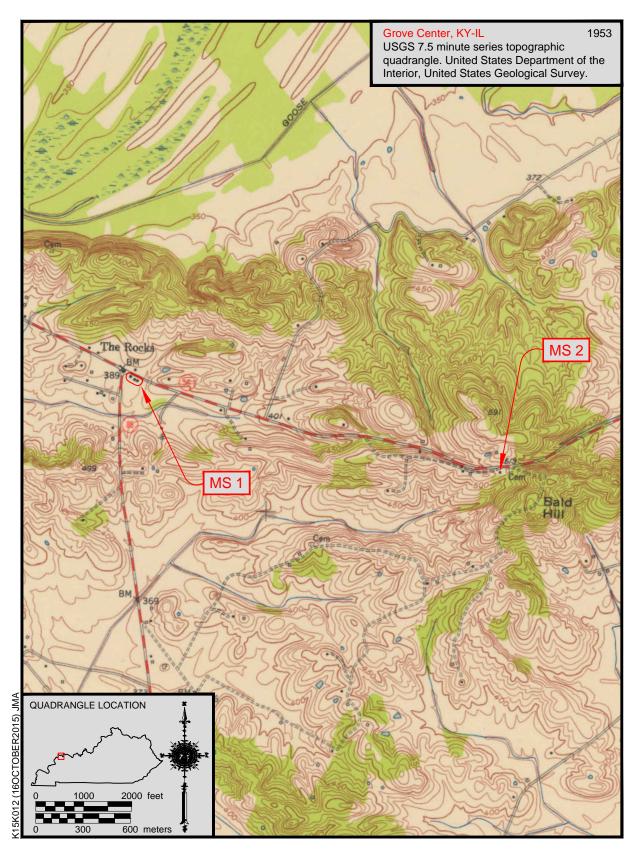


Figure 11. Section of the 1953 USGS Grove Center 7.5-minute series topographic quadrangle map showing MS 1 and MS 2.

The majority of the project area was subjected to systematic screened shovel testing at 20 m (66 ft) intervals. Shovel testing was used to investigate all portions of the project area except those that were on landforms with slope greater than 15 percent and/or in areas that were noted to be highly disturbed. In all cases, shovel tests measured not less than 35 cm in diameter and extended well into subsoil. All fill removed from the tests was screened through .64 cm (.25-inch) mesh hardware cloth, and the sidewalls and bottoms were examined for cultural material and features.

Intensive pedestrian survey was used to examine steep sloping terrain, areas with ground surface visibility above 50 percent, and/or areas noted to be highly disturbed. Pedestrian survey was conducted by walking parallel transects, spaced no more than 20 m apart, along natural contours. Dirt roads and all exposed areas were walked and visually examined for indications of cultural material and features.

# V. RESULTS AND CONCLUSIONS

Note that a principal investigator or field archaeologist cannot grant clearance to a project. Although the decision to grant or withhold clearance is based, at least in part, on the recommendations made by the field investigator, clearance may be obtained only through an administrative decision made by the Federal Highway Administration and KYTC, Division of Environmental Analysis (DEA), in consultation with the State Historic Preservation Office (the KHC).

The addendum archaeological study for the proposed KY 56 reconstruction project in Union County, Kentucky, consisted of intensive pedestrian survey supplemented by systematic screened shovel testing. The current field investigations were conducted on five parcels of land for which access was denied by landowners during the initial field investigations conducted for the project during June 2015. In total, the addendum project area encompassed approximately 1.7 ha (4.1 acres).

As part of the initial investigations, a records review was conducted at the Office of State Archaeology for a 2.0 km (1.2 mi) radius around the entire 1.7 ha project area. The review indicated that four previous professional archaeological surveys had been conducted, during which 13 archaeological sites were previously recorded within 2 km of the current project area. None of the surveys or previously recorded archaeological sites are located within the current project area.

The archaeological survey of the proposed project did not result in the discovery of any new archaeological sites. As currently planned, the proposed project will result in no effect on any archaeological sites listed in, or eligible for inclusion in, the NRHP. Therefore, archaeological clearance is recommended.

If any previously unrecorded archaeological materials are encountered during construction activities, the KHC should be notified immediately at (502) 564-6662. If human skeletal material is discovered, construction activities should cease, and the Kentucky Heritage Council (KHC), the local coroner, and the local law enforcement agency must be notified, as described in KRS 72.020.

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