

OSA records revealed that no previous professional archaeological surveys have been conducted within the proposed project area. Five previous archaeological surveys have been conducted within a 2 km radius of the current project area. One previously recorded archaeological site (15Cp63) is located within a 2 km radius of the current project area, but it is not within or adjacent to the proposed force main or pump station area.

Previous Archaeological Surveys

Between July 15 and August 9, 1968, The University of Louisville Archaeological Survey conducted an archaeological survey and preliminary test excavations for the proposed Section 9 of Interstate 275 in Boone, Kenton, and Campbell Counties, Kentucky (Rodeffer 1968). The survey was conducted at the request of the Commonwealth of Kentucky Highway Department. The project area measured 39.4 km (24.5 mi) in length and was surveyed in its entirety. Fieldwork consisted of intensive pedestrian survey supplemented with local informant interviews. Ten archaeological sites (15Be11, 15Be64–15Be66, and 15Be69–15Be74) were identified during the survey (Rodeffer 1968). None of the sites are located within a 2 km radius of the current project area.

On October 2, 1991, CRA personnel conducted a cultural resource survey of three alternative pumping station locations in Campbell County, Kentucky (Niquette 1991). The survey was conducted at the request of the Northern Kentucky Area Development District on behalf of the City of Melbourne, Kentucky. The project consisted of three possible water tank locations, each measuring .02 ha (.05 acres) in size. Fieldwork consisted of intensive pedestrian survey supplemented with shovel testing. No sites or historic properties were located as a result of the survey, and cultural resource clearance was recommended (Niquette 1991).

On July 20, 1998, Gray & Pape, Inc. conducted an archaeological survey of a proposed cellular tower location in Campbell

County, Kentucky (Purtill 1998). The survey was conducted at the request of Tilford, Dobbins, Alexander, Buckaway, & Black, Attorneys at Law. The project area measured approximately 418 sq m (4,500 sq ft) in size and was surveyed in its entirety. Fieldwork consisted of intensive pedestrian survey supplemented with shovel testing. No sites or historic properties were located as a result of the survey, and cultural resource clearance was recommended (Purtill 1998).

During April, May, and September of 2003, Gray & Pape, Inc., conducted an archaeological survey of a proposed sewer line in Alexandria and Campbell Counties, Kentucky (Picklesimer II and Pritchard 2003). The survey was conducted at the request of Tetra Tech, Inc., on behalf of the Northern Kentucky Sanitation District No. 1. The project area consisted of 13.1 km (8.2 mi) of gravity fed sewer lines, 3.4 km (2.1 mi) of force main lines, and 6 pumping stations. The survey acreage was not specified. Fieldwork consisted of intensive pedestrian survey supplemented with shovel testing. Four previously unrecorded archaeological sites (15Cp62–15Cp65) were identified during the survey. One of the sites, 15Cp63, is located within a 2 km radius of the current project area. Site 15Cp63 consisted of an isolated stone foundation that appeared to be the remains of an outbuilding. A low density historic artifact scatter associated with the foundation was also identified. Due to the paucity of artifacts and the lack of integrity, Site 15Cp63 was recommended as not eligible for inclusion in the NRHP, and cultural resource clearance was recommended (Picklesimer II and Pritchard 2003).

During November 2007, the University of Kentucky Program for Archaeological Research, Department of Anthropology conducted an archaeological survey of a proposed bridge replacement in Campbell County, Kentucky (Swintosky and Ahler 2007). The survey was conducted at the request of the Kentucky Transportation Cabinet (KYTC). The project area measured 1.25 ha (3.09 acres) in size and was surveyed in its entirety. Fieldwork consisted of intensive

pedestrian survey supplemented with shovel testing. One previously unrecorded archaeological site (15Cp80) was identified during the survey (Swintosky and Ahler 2007). The site is not located within a 2 km radius of the current project area.

Archaeological Site Data

According to site information obtained from the OSA, 73 archaeological sites have been recorded in Campbell County, Kentucky. Table 2 provides a summary of selected information for previously recorded sites in the county. The table indicates that the majority of archaeological sites recorded in Campbell County consist of historic farm/residences (n = 28; 38.36 percent) and prehistoric open habitations without mounds (n = 25; 34.25 percent). The remaining site types in Campbell County include cemeteries (n = 4; 5.48 percent), earth mounds (n = 2; 2.74 percent), other special activity areas (n = 1; 1.37 percent), other (n = 6; 8.22 percent), and undetermined (n = 4; 5.48 percent).

Table 2. Summary of Selected Information for Previously Recorded Archaeological Sites in Campbell County, Kentucky. Data Obtained from OSA and May Contain Coding Errors.

Site Type:	N	%
Cemetery	4	5.48
Earth Mound	2	2.74
Historic Farm/Residence	28	38.36
Military	3	4.11
Open Habitation Without Mounds	25	34.25
Other	6	8.22
Other Special Activity Area	1	1.37
Undetermined	4	5.48
Total	73	100
Time Periods Represented:	N	%
Paleoindian	0	0
Archaic	10	12.5
Woodland	4	5
Late Prehistoric	4	5
Indeterminate Prehistoric	21	26.25
Historic	40	50
Unspecified	1	1.25
Total	80*	100
Landform:	N	%
Dissected Uplands	10	13.7
Floodplain	12	16.44
Terrace	33	45.21
Undissected Uplands	2	2.74
Unspecified	16	21.92
Total	73	100

* One site may represent more than one time period.

The landform locations of sites in Campbell County were also examined to determine the likelihood of encountering sites on similar landforms within the project area. The majority of sites in Campbell County are located along terraces (n = 33; 45.21 percent), followed by unspecified (n = 16; 21.92 percent), floodplains (n = 12; 16.44 percent), dissected uplands (n = 10; 13.7 percent), and undissected uplands (n = 2; 2.74 percent).

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:

1888 *Atlas of Boone, Kenton, and Campbell Counties, Kentucky* (D.J. Lake & Co. 1888);

1898 East Cincinnati, Ohio-Kentucky, 15-minute series topographic quadrangle (United States Geological Survey [USGS]);

1900 East Cincinnati, Ohio-Kentucky, 15-minute series topographic quadrangle (USGS);

1914 East Cincinnati, Ohio-Kentucky, 15-minute series topographic quadrangle (USGS);

1936 Alexandria, Ohio-Kentucky, 15-minute series topographic quadrangle (USGS);

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

1952 General Highway Map of Campbell County, Kentucky (Kentucky State Highway Department [KSHD]);

1952 Newport, Kentucky-Ohio, 7.5-minute series topographic quadrangle (USGS);

1953a New Richmond, Kentucky-Ohio, 7.5-minute series topographic quadrangle (USGS);

1953b Withamsville, Ohio-Kentucky, 7.5-minute series topographic quadrangle (USGS).

The historic maps indicated that 44 structures (MS 1–44) were located within or directly adjacent to the project area (Figure 9; Table 3). MS 1–10 originally appear on the *1888 Atlas of Boone, Kenton, and Campbell Counties, Kentucky*. MS 11–21 originally appear on the 1898 East Cincinnati, Ohio-Kentucky, 15-minute series topographic

quadrangle map. MS 22 originally appears on the 1914 reprint of the East Cincinnati, Ohio-Kentucky, 15-minute series topographic quadrangle map. MS 23–25 were originally depicted on the Highway and Transportation Map of Campbell County, Kentucky. MS 26–32 were first depicted on the 1952 Newport, Kentucky-Ohio, 7.5-minute series topographic quadrangle. MS 33–35 were originally depicted on the 1952 General Highway Map

of Campbell County, Kentucky. MS 36–41 were first depicted on the 1953 New Richmond, Kentucky-Ohio, 7.5-minute series topographic quadrangle. MS 42–44 were originally depicted on the 1953 Withamsville, Ohio-Kentucky, 7.5-minute series topographic quadrangle. Where possible, the current disposition of each MS and its depiction on subsequent maps is given in Table 3.

Table 3. Historic Map Structures.

Name	MS Num	1888	1898	1900	1914	1936	1937H	1952	1953H	1953NR	1953W	Extant	1888_Owner
1888 Atlas of Boone, Campbell, etc	1	X					X					No	C. Webber
1888 Atlas of Boone, Campbell, etc	2	X		X								No	H. Helm
1888 Atlas of Boone, Campbell, etc	3	X	X									No	W. Nagel
1888 Atlas of Boone, Campbell, etc	4	X		X									F. Kort
1888 Atlas of Boone, Campbell, etc	5	X		X									N. Einhaus
1888 Atlas of Boone, Campbell, etc	6	X	X	X								Yes (house)	J. Wittmann
1888 Atlas of Boone, Campbell, etc	7	X											N. Reitmann
1888 Atlas of Boone, Campbell, etc	8	X										Yes	St. Joseph's Catholic
1888 Atlas of Boone, Campbell, etc	9	X										No	J. Blenke
1888 Atlas of Boone, Campbell, etc	10	X										No	N. Reitmann
1898 East Cincinnati, OH-KY, 15-min	11		X										
1898 East Cincinnati, OH-KY, 15-min	12		X									No	
1898 East Cincinnati, OH-KY, 15-min	13		X	n								Yes (house)	
1898 East Cincinnati, OH-KY, 15-min	14		X	n								No	
1898 East Cincinnati, OH-KY, 15-min	15		X									Yes (house)	
1898 East Cincinnati, OH-KY, 15-min	16		X									No	
1898 East Cincinnati, OH-KY, 15-min	17		X									Yes	
1898 East Cincinnati, OH-KY, 15-min	18		X										
1898 East Cincinnati, OH-KY, 15-min	19		X									Yes (house)	
1898 East Cincinnati, OH-KY, 15-min	20		X	n								No (Modern)	
1898 East Cincinnati, OH-KY, 15-min	21		X	n								No (Modern)	
1914 East Cincinnati, OH-KY, 15-min	22				X								
1936 Alexandria, KY-OH, 15-min	23					X						Yes	
1936 Alexandria, KY-OH, 15-min	24					X							
1936 Alexandria, KY-OH, 15-min	25					X						Yes (house)	
1952 Newport, KY-OH, 7.5-min	26							X				No	
1952 Newport, KY-OH, 7.5-min	27							X				Yes	
1952 Newport, KY-OH, 7.5-min	28							X					Yes (36 WPA PS)
1952 Newport, KY-OH, 7.5-min	29							X				Yes	
1952 Newport, KY-OH, 7.5-min	30							X				No (fndtn)	
1952 Newport, KY-OH, 7.5-min	31							X				Yes	
1952 Newport, KY-OH, 7.5-min	32							X				No	
1952 Highway Map of Campbell County	33								X				
1952 Highway Map of Campbell County	34								X				
1952 Highway Map of Campbell County	35								X				
1953 New Richmond, KY, 7.5-min	36									X			
1953 New Richmond, KY, 7.5-min	37									X			
1953 New Richmond, KY, 7.5-min	38									X		Yes	
1953 New Richmond, KY, 7.5-min	39									X		No (fndtn)	
1953 New Richmond, KY, 7.5-min	40									X			
1953 New Richmond, KY, 7.5-min	41									X			
1953 Withamsville, KY, 7.5-min	42										X		
1953 Withamsville, KY, 7.5-min	43										X		
1953 Withamsville, KY, 7.5-min	44										X		

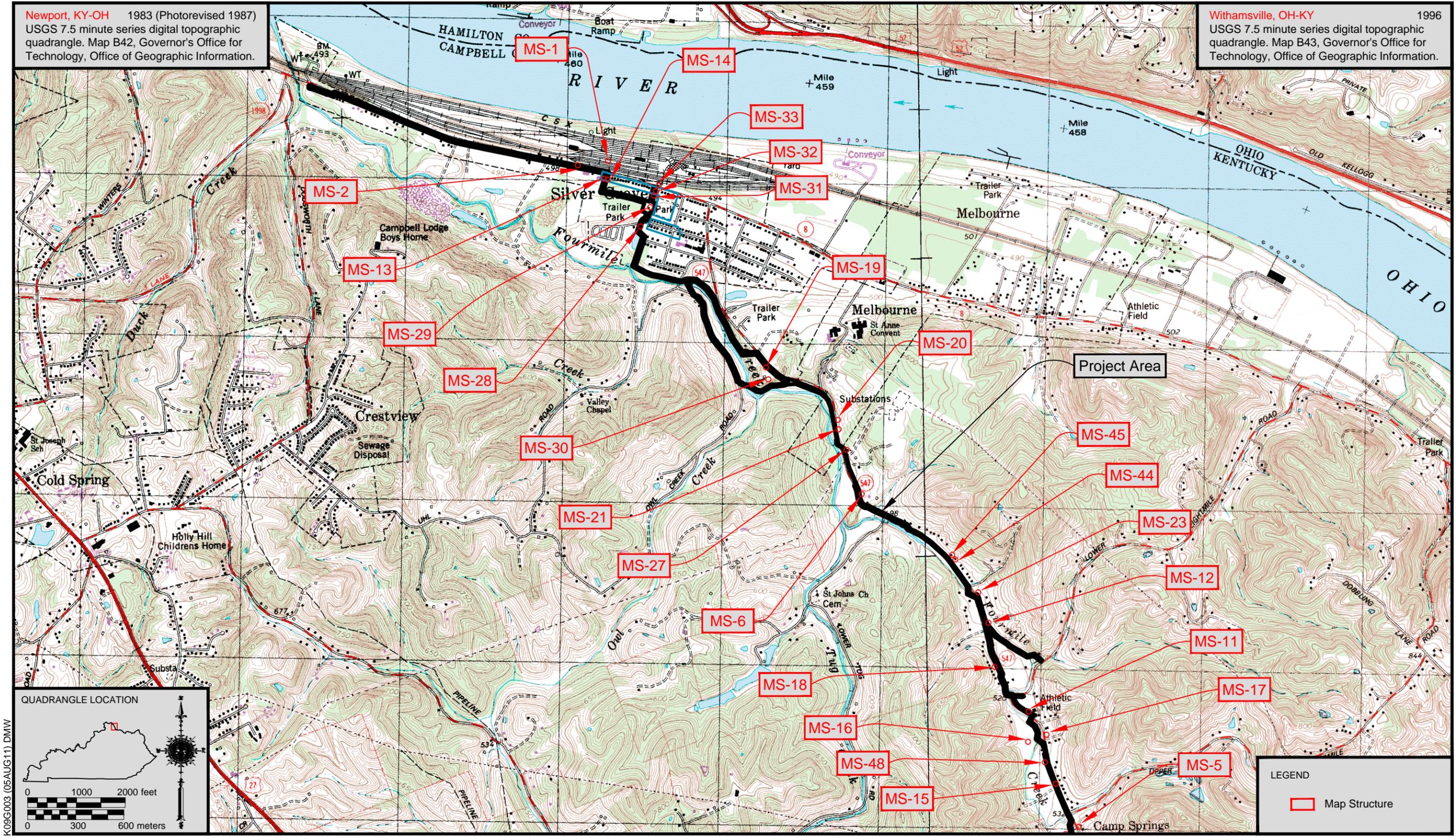


Figure 9a. Topographic map indicating the locations of map structures.

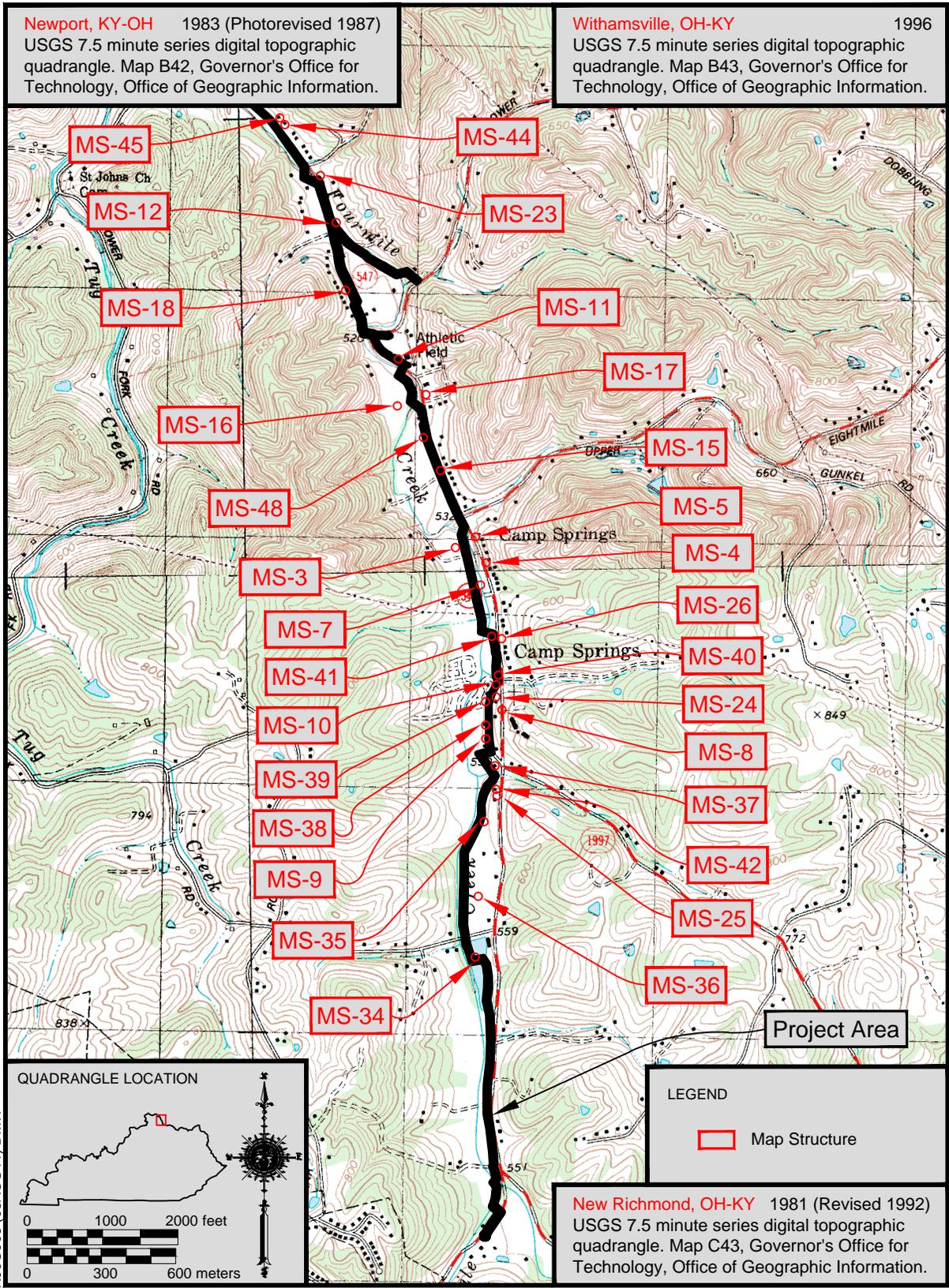


Figure 9b. Topographic map indicating the locations of map structures.

Cultural Historic Resources

In December 2009, CRA completed a cultural historic records review of a 500 ft buffer surrounding the proposed route of the force main and of a .5 mi radius surrounding the proposed pump station site (FY10_0749). The records review revealed that a total of 15 cultural historic sites (CP-51, CP-52, CP-59, CP-60, CP-61, CP-62, CP-63, CP-71, CP-72, CP-81, CP-83, CP-91, CP-94, CP-107, and CP-173) located within the study area had been previously surveyed. Ten of these sites (CP-51, CP-52, CP-59, CP-60, CP-61, CP-62, CP-63, CP-71, CP-81, and CP-91) are listed in the National Register of Historic Places (NRHP) as contributing resources to the German Settlement Properties in the Four Mile Creek Area of Campbell County, Kentucky, Thematic Group Resources (TR) nomination. Five of the sites (CP-72, CP-83, CP-94, CP-107, and CP-173) have not been evaluated for listing in the NRHP. Following the records review, the specific alignment of the force main was designed to avoid impacts to historic properties. Thus only one of the previously-recorded sites identified by the records review fell within the project area easement and viewshed surveyed in 2011.

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. Historic residences were the primary site types expected since several structures appeared on historic maps. Prehistoric open habitation sites were also considered a possibility.

Historic Context

The first Europeans to visit Kentucky included explorers, trappers, traders, and surveyors. It was in the 1750s, when the English Crown attempted to colonize the Ohio Valley, that the first organized attempt to settle Kentucky occurred. This attempt

stimulated the formation of land companies that sent surveyors into the area (McBride and McBride 2008:909). One of these, the Ohio Land Company, sent Christopher Gist into Kentucky in 1751. The French and Indian War that erupted in 1754 disrupted this early exploration (Talbert 1992:689).

In 1763, England's King George III set aside the land west of the Appalachians for native populations and English fur traders and closed the area to permanent settlement. His decree was ignored, and further colonial exploration and development could not be stopped. One man who took advantage of the commercial expansion westward was Daniel Boone. Boone first explored Kentucky in 1767, and by 1769, he had explored much of the Red and Kentucky River valleys. Harrodsburg was established soon after in 1774 followed by Boonesboro in 1775. The western movement of the American frontier pushed the Native Americans further and further west, and Kentucky was one of the places where they decided to take a stand. In response, Governor Dunmore (of Virginia) waged two large campaigns in the Ohio Valley (later known as Dunmore's War), and the Native Americans were defeated. Dunmore's War opened Kentucky for settlement, although some hostilities continued after this time (Nickell 1992:96-98; Stone 1992:571).

Kentucky was originally a part of Virginia called the Kentucky District. The Kentucky District, originally composed of three counties, Fayette, Lincoln, and Jefferson, became the Commonwealth of Kentucky on June 1, 1792. Fayette, Lincoln, and Jefferson Counties were later divided and subdivided into the 120 counties that make up present-day Kentucky (Clark 1988:66, 77, 92).

Historical Overview of Campbell County, Kentucky

Campbell County was created by the Kentucky General Assembly on December 17, 1794, from portions of Harrison, Mason, and Scott Counties. The nineteenth county created in the state, Campbell County was named for Colonel John Campbell, an Irishman who

served in the Revolutionary War. Located in northern Kentucky, Campbell County is part of the Bluegrass region cultural landscape. The county covers 394 sq km (152 sq mi) and is bordered by the Ohio River on the north and east, Pendleton County on the south, and Kenton County on the west. The county seat is Alexandria (Bryant 1992:155).

In 1750, Christopher Gist surveyed a 404,685-ha (500,000-acre) grant in the area on behalf of the Ohio Company, but because of the rugged topography, Native-American threats, and inaccessibility, the area was not settled. Later, the U.S. Congress preempted the claims made by the company (Belue 1992:375–376). In 1789, Major David Leitch established the first permanent settlement in present day Campbell County by constructing a station near the river. In 1803, Newport Barracks, an army outpost, was established in Newport to supply soldiers during European-American and Native-American conflicts (Campbell County Historical Society [CCHS] 1994:3; Kleber 1992a:12).

In the 1790s, Frank Spilman and his family left King George County, Virginia, and settled on land near modern day Alexandria. The city of Alexandria was incorporated in 1834 (Kleber 1992a:12). James Taylor, Jr., brought several settlers to the confluence of the Licking and Ohio Rivers and settled Newport in the 1790s. This city was named after Christopher Newport, the commander of the first ship to reach Jamestown, Virginia (Steely 1992a:680). Early on, Newport served as a major military center for the War of 1812. This city also experienced a large influx of German and Irish immigrants in the 1840s (CCHS 1994:3; Kleber 1992a:12; Steely 1992a:680).

Throughout the nineteenth century, Newport continued to grow and was positioned to dominate the river trade along that section of the Ohio. Cincinnati, however, eclipsed the Kentucky town, but Newport remained an important river port throughout the nineteenth century. The Newport Barracks continued to be an important military facility for processing soldiers during the War for

Texas Independence and the Mexican War (Bryant 1992:155; CCHS 1994:4).

Newport served as the seat of government until 1827, when it was moved to Visalia, which is on the west bank of the Licking River. It was too isolated, however, and the seat was returned to Newport after just a few months. In 1840, Alexandria was made the county seat, and its citizens financed the construction of a new courthouse in 1842. In 1883, the citizens of Newport raised money to construct another courthouse, and the county offices were then split between the two towns (Bryant 1992:155; Kleber 1992a:12). The two county seats were finally consolidated into one when a 2009 court ruling affirmed that Alexandria is indeed the county seat (The Kentucky Enquirer [TKE] 12 May 2009).

Campbell County enjoyed steady growth throughout the first half of the nineteenth century. Five years after its creation it had only 1,534 inhabitants, but by 1810 it had 3,608. Over the next decade the population more than doubled when it reached 7,022 people, and it grew another 40.7 percent in the next decade, reaching 9,883 inhabitants in 1830. Campbell County lost a large percentage of its population when Kenton County was created on the west side of the Licking River. In 1840, the county's population slipped to 5,214 people, a 47.2 percent drop (United States Bureau of the Census [USBC], Washington, D.C., 1800–1840).

Fueled by industrialization and immigration, Campbell County grew rapidly after 1840. Much of the growth was around Newport, which was a village of 717 people in 1830 but had grown to a city of 5,895 residents by 1850. Between 1840 and 1850 the county grew more than 150 percent to 13,127 inhabitants, and it grew another 59.2 percent to a population of 20,909 by 1860. In 1850 the population included 177 enslaved African Americans, and in 1860 it included 116 slaves and 88 free African Americans, which constituted less than 1 percent of the population (Collins 1882:260, 263; USBC 1840–1860).

The Civil War had little direct effect on Campbell County because of its extreme northern location. The Union Army constructed several fortifications to defend and protect the southern approaches to Cincinnati. Fort Thomas was built in the northern portion of the county near the Ohio River. Several hundred civilian militiamen occupied the trenches when the Confederates invaded Kentucky in 1862, but the area was never seriously threatened by Rebel forces (Bryant 1992:155; Kleber 1992b:347).

The war did little to slow the industrial growth of Campbell County. Industries such as steel, meat processing, and brewing were created. This gave residents of Campbell County steady employment. The Swift Iron and Steel Company was formed during the war, and it manufactured armor for the iron-clad gunboats used on the Ohio and Mississippi River systems. The business grew rapidly, and the company was able to produce all types of products in its 32 puddling furnaces, rail mills, blast furnaces, and foundry (Bryant 1992:155; CCHS 1994:110).

In 1880, the company was purchased by a Cincinnati pig iron merchant named E.L. Harper, but financial misdealing resulted in Harper being sent to the Ohio state penitentiary. Swift Iron was forced to cool its furnaces. The mill was then purchased by H.B. Schriver and Adam Wagner, but financial problems continued to plague the company. In 1889 it was purchased by a group of businessmen that included brewing magnate George Wiedemann. They renamed it Newport Rolling Mill Company and transformed it into a successful manufacturing firm (CCHS 1994:110).

In 1866, John Butcher opened the Jefferson Street Brewery in Newport and developed it into a successful business. In 1870, George Wiedemann, Sr., became Butcher's partner, and in 1878, Wiedemann bought out the company's founder. Later in 1882, he bought out Constans Brewery, a rival operation in Newport. Wiedemann continued to expand his brewery until it was one of the largest in the nation (CCHS 1994: 121).

In the 1830s, a road between Newport and Winchester was built by the state. This road was very crude, and residents of Campbell County formed a turnpike association to promote better road construction. A road was completed in the 1850s and was eventually called Alexandria Pike. This road contained two toll-gates until the 1900s, when farmers and other residents fought for a free road for access to markets in Newport, Covington, and Cincinnati (Kleber 1992a:12).

The completion of the Covington-Cincinnati Bridge (today it is known as the Roebling Suspension Bridge, named for its designer and builder John A. Roebling) across the Ohio River had a major impact on Newport and northern Kentucky. The bridge, which opened on January 1, 1867, connected Cincinnati and Covington, and although it was not a direct link to Newport, it allowed many to work in Ohio and live in Kentucky. When streetcar service was provided across the bridge, the influx of suburban dwellers into Newport and Campbell County increased. In the 1880s and 1890s bridges were built across the river that connected Newport directly to Cincinnati, further enhancing the county's growth (Steely 1992a:680; Tenkotte 1992:779-780).

The county's population increased throughout the last half of the nineteenth century until it was among the largest in the state. By 1870, the county had 27,406 inhabitants, and it grew by over 36 percent in the next decade to a population of 37,440. In the last 20 years of the century, Campbell County's population grew another 44.8 percent until it was 54,223 by 1900 (USBC 1870-1900).

In the twentieth century, Campbell County continued to develop as a manufacturing area and as a residential community. The region along the river expanded into a larger industrial area, while the highlands in the northern section of the county developed into suburbs of Newport and Cincinnati. Many of the residential areas had their origins in the nineteenth century (Bryant 1992:155).

The Wiedemann Brewery expanded until the ratification of the Eighteenth Amendment prohibited the manufacture, distribution, and sale of alcoholic beverages. During Prohibition (1919–1933), organized crime became a dominant force in Campbell County. Illegal gambling was prevalent, and illicit liquor was widely available in Newport. After the repeal of Prohibition in 1933, many of the crime syndicates turned solely to illegal bookmaking and casino style gambling. Under the pressure of the Protestant Ministerial Association and a group of local businessmen called the Committee of 500, the Commonwealth of Kentucky finally prosecuted and shut down the syndicates in the early 1960s (Steely 1992a :680).

The Wiedemann Brewing Company resumed operation after prohibition ended and expanded into distilling scotch, vodka, and gin. G. Heilman Brewing purchased Wiedemann, which had developed into the largest brewery in the South, in 1967 and operated it until 1983 (CCHS 1994:121; Kleber 1992b:680).

The Beverly Hills Supper Club at Southgate had once been one of the largest organized gambling establishments at the height of the organized crime era, but the zealous prosecution and eradication of the illegal operations forced the establishment to close. In 1970, Richard Schilling, a local developer, reopened the club, featuring fine food and Las Vegas-style entertainment. On May 28, 1977, 165 people lost their lives in a massive fire that resulted from faulty wiring and construction. It was the second worst fire disaster in U.S. history, beside the 1942 Coconut Grove fire in Boston that killed over 400 people (Wallace 1992:74).

In 1968, the Kentucky General Assembly created Northern Kentucky State College, which replaced the University of Kentucky's Northern Community College in Covington. In 1971, the college started to develop a campus in Campbell County, and it added a third year of academic classes. That year it had an enrollment of more than 3,000 students, and by 1975 it had topped 6,000. The next

year, the institution received university status from the state legislature, and by 1989 its enrollment had exceeded 10,000 students (Steely 1992b:684–685).

The current public school system in Campbell County is run by both the Campbell County school district and the Newport Independent school system. Each of these systems contains several elementary schools, middle schools, and high schools (Campbell County Schools 2009; Newport Kentucky Independent Schools 2009).

Campbell County has grown steadily throughout much of the twentieth century. By 1910, 59,369 people were living in the county, and by 1920, it had grown to 61,868. By 1930, it had grown another 18.6 percent to 73,391 inhabitants. After dropping slightly to 71,918 people in 1940, the county's population rebounded to 76,196 in 1950, and it grew by nearly 14 percent to 86,803 inhabitants by 1960. In 1970, the county achieved its largest population with 88,704 residents, and it was the fourth most populated county in the state behind Jefferson, Fayette, and Kenton Counties. Its population dropped to 83,317 in 1980 but rebounded to 83,866 in 1990. In 2000, the population of Campbell County was 86,616 and in 2006 it was 86,866 (USBC 1910–2006).

IV. METHODS

This section describes the methods used during the survey.

Cultural Historic Methods

Through consultation with Jill Howe, Environmental Review Coordinator at the Kentucky Heritage Council, CRA developed a project-specific approach for the survey and evaluation of cultural historic (above-ground) resources with the potential to be impacted by the proposed pump station and force main sewer line. The survey of the pump station site included recordation of all cultural historic resources located within the project area for the pump station. In addition, based on field

observations of the area surrounding the pump station site, two distinct groups of buildings were identified within the viewshed of the proposed project. Per agreement with Ms. Howe, each of these groups was recorded and evaluated as a potential district. For the survey of the sewer line, it was determined that since the project will be located entirely underground, it is unlikely to impact historic properties adversely unless it directly impacts a resource. Thus, only those buildings and structures located within the easement for the proposed sewer line were recorded and evaluated. In total, the survey identified one resource located within the project area for the pump station (Site 1), two groups of resources located within the viewshed of the pump station (Sites 2–17 and Sites 18–35), and four resources (Sites 36–39) located within the project area for the sewer line. One of these resources (Site 36) is listed in the NRHP as a contributing element of the Reitman's St. Joseph House (CP-60) property, which was listed in the NRHP as part of the German Settlement Properties of the Four Mile Creek Multiple Property Nomination.

Archaeological Field Methods

The entire project area was subjected to intensive pedestrian survey supplemented by screened shovel testing, which was conducted by walking parallel transects along natural contours. Steep sideslopes were inspected for natural benches and overhangs. Dirt roads and all exposed areas were walked and visually examined for indications of cultural material and features. If the ground visibility was less than 50 percent and slope was less than 15 percent, STPs were excavated on a 20 m grid. Several STPs were excavated within previously disturbed areas to confirm disturbance. In all cases, STPs measured not less than 35 cm in diameter and extended well into the subsoil. All fill removed from the tests was screened through .64 cm (.25 in) mesh hardware cloth, and the sidewalls and bottoms were examined for cultural material and features. Approximately 135 STPs were excavated throughout the project area.

Bucket Augering

Stafford (1995) notes the usefulness of bucket augering in the examination of site sediments and determination of buried cultural materials. Bucket augers are useful because they: 1) allow access to areas that might not be accessible for trenching with a backhoe; 2) are capable of obtaining samples to a considerable depth (greater than 3 m); 3) are less destructive than backhoe trenching; 4) extract measurable intervals of sediment; 5) are useful for examining the strata; and 6) allow for the recovery of artifacts, especially in areas with low artifact density (Stafford 1995:86–87). Stein (1986) advocates the use of Oakfield probes on sites to examine subsurface sediments; however, the small size of the probes (1.6 cm) precludes their usefulness for extracting sufficient quantities of artifactual material. With respect to the current project, bucket augering is a more appropriate method than Oakfield probes. One problem Stafford notes with bucket augers, however, is that they are less useful in evaluating some sediment and soil characteristics because they extract disturbed samples (Stafford 1995:87). For the current project, this was not a major concern. The main objectives of the current project were to identify major soil horizons, locate possible site areas, and recover samples of cultural material from these deposits.

For this project, bucket augering was not employed as a site discovery method. The main goal was to determine the depositional characteristics of the sediments in the area in order to determine the potential for buried archaeological materials. The examination of buried deposits for archaeological sites is best conducted with a deep testing program consisting of close interval (5–10 m) systematic bucket augering, systematic backhoe trenching, or both. Subsurface investigation of complex depositional environments should be done in consultation with a geomorphologist or geoarchaeologist. Such investigation was beyond the scope of the current project.

Bucket augering during the current survey was conducted primarily in alluvial soils to

determine the possibility of buried deposits. A hand-operated bucket auger with a 4-inch opening was used to excavate augers on transects with 20 m intervals between tests. Sediments were removed in approximately 10 cm levels. All soil was screened through .25-inch mesh hardware cloth. The presence of charcoal and general soil characteristics (e.g., texture, Munsell colors) were recorded by individual level.

Map Structures

As previously mentioned, 44 map structures (MS 1–44) were depicted on the reviewed historic maps. During the course of the field survey, these areas were investigated using accepted archaeological methods. The majority of the structures were determined to be well outside the proposed project area and only appeared to be close to it due to the scale of the maps involved. Those structures that were within, or directly adjacent to, the project area are discussed in Section V below.

Universal Transverse Mercator (UTM) coordinates were recorded with a MobileMapper 6 global positioning system (GPS) unit manufactured by Magellan to verify locations within the project area. All UTM positions recorded by the GPS unit during the project were taken under both very cloudy and sunny conditions, with typically three to five satellites being tracked. This unit is capable of accuracy to less than 3 m.

V. CULTURAL HISTORIC RESOURCE DOCUMENTATION

As noted above, the proposed pipeline traverses several areas with cultural historic resources, including the Four Mile Creek Multiple Property Nomination. A description of the cultural historic resources is given in this section.

Site 1

KHC Survey #: CP-200

Photographs: Figures 10–12

Property Address: Ash Street, approximately 405 ft south of Mary Ingles Highway

Map: Figures 2 and 3

Zone: 16

Quad: Newport KY-OH 1983 (Revised 1987)

UTMs: E: 725517 N: 4324057

Description: Resource 1 is a reinforced concrete sewage pumping station oriented toward the south on the west side of Ash Street, approximately 405 ft south of its intersection with Mary Ingles Highway (Figures 10–12). The pump house is sited on gently sloping terrain to the east of a heavily wooded cropping of trees. A community park lies across Ash Street from the pumping station.

The structure exhibits a raised concrete form, elevating it above the floodplain. The form, measuring approximately 21 ft x 15 ft, is nearly rectangular with a narrow platform extending southward from the primary mass. Walls are exposed, smooth-finished concrete. A tooled concrete coping course caps the structure. The pedestrian level walls have been painted on all elevations to conceal graffiti that has been painted on the structure. As depicted in a historic photograph of the structure, a metal—likely steel—staircase characterized by a short ground level flight and long return flight of stairs was initially bolted to the east elevation, providing access to the raised platform. The stairwell exhibited a double handrail of rolled metal tubing (Goodman-Paxton Photographic Collection, 1934–1942). Fronting the wall space historically located at the stair landing is a rectangular cast metal sign stating “CONSTRUCTED IN COOPERATION WITH THE WORKS PROGRESS ADMINISTRATION IN KENTUCKY 1936.”



Figure 10. North-northwesterly view of the south and east elevations of the pump house at Site 1.



Figure 11. Easterly view of the west elevation of the pump house at Site 1.



Figure 12. Westerly view of the WPA plaque on the east elevation of the pump house.

The elevated platform leads to a single-leaf pedestrian entry enclosed by a steel door with riveted bracing plates. Embedded in the concrete structural walls and projecting southward from above the entry is a steel girder supported at the terminus of the platform by an integrated steel bracing arm, which extends through the façade wall. It is not evident from the exterior if the girder was used as a lift winch or if it served as a portion of the interior mechanism's framework.

The east and west elevations each exhibit a single opening at the platform level. Each is secured by a steel grate exhibiting 16 gridded divisions. From historic photographs, it appears that the outer grid historically held a semi-transparent material, while the inner six blocks remained open. The north elevation is punctuated by one rectangular opening, which is secured by a 12 block steel grid.

NRHP Evaluation: Not Eligible. Although Campbell County is not geographically within the New Deal era context, *The New Deal Builds: A Historic Context of the New Deal in East Kentucky, 1933 to 1943*, the context still

provides a general framework for sewage treatment facilities constructed by the Works Progress Administration. According to the context, the “construction of sewer treatment facilities was considered essential to the preservation of public well-being throughout the New Deal Era” (Kennedy and Johnson 2005:146). Government projects of the era helped revitalize existing systems and to install systems where they had not previously existed. The context, however, did not set eligibility or integrity thresholds for water treatment facilities, primarily because enough intact examples could not be located.

This particular pumping station, Site 1, is no exception. Although its general form remains, the structure's historic integrity has been compromised by the removal of the exterior staircase, which was historically one of the few character-defining features of the utilitarian structure. Vandalism and subsequent painting of portions of the structure have further compromised its integrity and its exposed concrete structural walls. In addition, the structure is largely

utilitarian and void of the Modern adornment that characterizes many architecturally significant WPA-era structures. It does not distinguish itself from other utilitarian structures of the period in design or innovation. As such, Site 1 is not eligible for listing in the NRHP under Criterion C. Likewise, although the structure is locally important as an example of New Deal era investment in the community, it does not rise to the level of significance warranting NRHP eligibility under Criterion A. It appears to be a typical example of improvements in community planning and infrastructure upgrades during the period and does not reflect innovative or influential practices that represent distinguished significance. Research has indicated no association with a significant architect or engineer, so the structure does not appear to be eligible for inclusion in the NRHP under Criterion B. Therefore, CRA recommends that Site 1 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A.

Sites 2–17: Mary Ingles Highway

KHC Survey #: N/A

Photographs: Figures 13–18

Property Addresses: See Table 4

Map: Figures 2 and 3

Zone: 16

Quad: Newport KY-OH 1983 (Revised 1987)

UTMs: E: 725236 N: 4324258

E: 725670 N: 4324140

Description: Sites 2–17 include 2 commercial resources, 1 park, and 13 residential resources located along Mary Ingles Highway/Route 8 within the viewshed of the proposed sewage processing facility (Figures 13–18). The majority of these resources are representative of Silver Grove’s early-twentieth-century growth and development and do not appear to be individually or collectively significant.

They are located outside of the project area for the proposed pipeline but within the viewshed of the proposed pump station. As such, based on consultation with the KHC, these resources were documented as a group.

Of the built structures, the typical resource in this grouping is a circa 1920, one-and-one-half-story, frame structure set on a concrete block foundation beneath a front or side-gabled roof with walls clad in vinyl siding and windows exhibiting replacement sashes. One-and-one-half-story buildings are the most commonly represented form (approximately 40 percent; n = 6). Two story forms represent approximately 27 percent (n = 4), while two-and-one-half-story resources account for 20 percent (n = 3) of resources. Approximately 13 percent (n = 2) of resources are one story. Eighty percent (n = 12) of all resources exhibit concrete block foundations. One resource (approximately 7 percent) has a brick foundation. The foundations of two resources (approximately 13 percent) are paraged or unknown.

Both front-gabled and side-gabled roofs represent approximately 47 percent (n = 7) of all resources. One resource (approximately 7 percent) exhibits a gambrel roof. Cladding materials within the area are primarily vinyl replacement siding (approximately 80 percent; n = 12), while the remainder are clad in aluminum siding (approximately 7 percent; n = 1) or wood (approximately 7 percent; n = 1) siding. Only one resource (approximately 7 percent) retains a portion of its historic windows. The remainder (approximately 93 percent; n = 14) have exclusively replacement sashes.

According to Campbell County assessment records, the majority of resources (60 percent; n = 9) date to 1920. One resource (approximately 7 percent) dates to 1900; two resources (approximately 13 percent) date to 1905; one resource (approximately 7 percent) to 1923; and two resources (approximately 13 percent) date to 1925.



Figure 13. Southeasterly view of 5052-54 and 5058 Mary Ingles Highway, showing typical front-gabled forms.



Figure 14. Southeasterly view of 5072 Mary Ingles Highway, showing the character of commercial additions to residential properties.



Figure 15. Southwesterly view of 5084 Mary Ingles Highway, showing a representative bungalow.



Figure 16. Southwesterly view of 5024 Mary Ingles Highway, showing common alterations to properties.



Figure 17. Southerly view of the park across from the proposed pumping station.



Figure 18. Southerly view near 4999 Mary Ingles Highway showing the proposed line of the force main.

The park included as part of this area is an undistinguished landscape that does not possess significant qualities. Its land is occupied for modern recreational purposes such as for basketball courts and playground equipment.

NRHP Evaluation: Not Eligible. Sites 2-17 do not appear to be individually or collectively eligible for inclusion in the NRHP. The buildings date to the early years of Silver Grove, which was established as a planned railroad town in the 1910s. The town was established by the Chesapeake and Ohio Railway Company (C&O), which made plans to establish a rail yard and terminal. On October 18, 1911, the Silver Grove Land and Building Company was incorporated in order to buy, sell, trade, and rent land, as well as to build and sell residences and associated buildings. The C&O purchased all the stock in this company for the cost of \$919,373, after which it offered lots to railroad employees and then to the public (Chesapeake and Ohio Historical Society 1992:10). By 1914, Silver Grove was noted as the “most modern city in Northern Kentucky,” based largely on the availability of electric lights, city water, and a dedicated sewage plant (City of Silver Grove).

The buildings along this portion of Mary Ingles Highway followed as part of the early growth that characterized the burgeoning town and, as such, are representative of the early land development and community growth patterns of Silver Grove. However, although the buildings are locally important as part of the story of Silver Grove’s history, they do not rise to the level of significance warranting inclusion in the NRHP under Criterion A. They do not represent significant or distinctive patterns of community planning theory, nor do they retain their association with the rail yard, which historically spurred the residential development of the town. Research has indicated no association between Sites 2–17 and persons of historical significance. They have not been credited to a particular planner or individual at the C&O Railroad who might have been responsible for their construction. Architecturally, the resources do not warrant inclusion under Criterion C. The residential resources are representative examples of common vernacular building forms, such as front-gabled dwellings and small non-descript

cottages. Such dwellings have been well documented throughout the region, and only those examples that possess distinctive architectural qualities are eligible for inclusion. In addition, these resources do not possess the architectural integrity necessary for NHRP eligibility. All of the houses exhibit replacement windows, and nearly all of the resources are clad in vinyl siding. The commercial properties within the area have been formed by the construction of additions on historically residential buildings and do not possess architectural significance. Research has not indicated any association with master architects, builders, or craftsmen. The park in this area is an undistinguished landscape that does not possess significant, denotative characteristics. Therefore, CRA recommends that Sites 2–17 are not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A.

Sites 18–35: West 2nd Street

KHC Survey #: N/A

Photographs: Figures 19–23

Property Addresses: See Table 5

Map: Figures 2 and 3

Zone: 16

Quad: Newport KY-OH 1983 (Revised 1987)

UTMs: E: 725509 N: 4323963

E: 725685 N: 4323930

Description: Sites 18–35 include 17 residential resources and 1 religious resource located along West Second Street that are located primarily between Ash Street and Oak Street; the religious resource is located at the southeast corner of Oak Street and Ash Street (Figures 19–23). These resources are common examples representative of Silver Grove’s early-twentieth-century growth and development and do not appear to be individually or collectively significant. They are located outside of the direct APE for the proposed pipeline but within the viewshed of the proposed pump station. As such, based on consultation with the KHC, these resources were documented as a group.



Figure 19. Northeasterly overview of West Second Street showing the typical examples of predominantly bungalow forms found in the area.



Figure 20. West-northwesterly overview of West Second Street from Oak Street.



Figure 21. Southwesterly view of 202 West Second Street showing the range of typical alterations, including the installation of vinyl siding and replacement of windows.



Figure 22. Northeasterly view of 216 West Second Street showing typical bungalow forms.