ENVIRONMENTAL INFORMATION DOCUMENT

For

Ash Street Pump Station and Force Main

Northern KY Sanitation District No. 1

KIA/SRF Loan No. A11-12

engineering | architecture | geospatial

SX21037110
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September 2013
Revised 9-30-2013

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Environmental Information Document (EID)
Ash Street Pump Station and Force Main
Northern KY Sanitation District No. 1
Revised September 30, 2013

A. Proposed Project and Funding Status

The project consists of construction of a 7 MGD Pump Station, 27,000 LF of 20" force main, 750 LF of 24" gravity sewer upstream of the existing Silver Grove pump station, 7,600 LF of new Silver Grove force main (12"), and 6,000 LF of low pressure sewer system for eleven homes. Currently, Melbourne and Silver Grove flow by gravity to the Silver Grove Pump Station, which pumps to the Highland Heights Pump Station, which conveys all flow to the Dry Creek WWTP sanitary sewer system. The current Ash Street Pump Station and Force Main project will intercept flows from the cities of Silver Grove and Melbourne and convey all flows to the Riley Road Pump Station, which will ultimately convey flows to the new 4 MGD Eastern Regional Water Reclamation Facility. In the future, the Highland Heights Pump Station will be redirected to the Silver Grove system and convey all flows to Ash Street When the Highland Heights pump station is diverted, in-line wastewater storage will be required to store peak wastewater flows. The proposed project will mitigate a typical yearly recurring CSO in the City of Silver Grove and is part of a master plan to provide more availability of capacity in the Dry Creek WWTP sanitary sewer system by diverting the flows to the Eastern Regional sanitary sewer system.

The pump station will be constructed in Silver Grove, KY (Campbell County), approximately 13' below the 100-year floodplain of the Ohio River and Four Mile Creek. The force mains, gravity sewer, and low pressure sewer are also located within the floodplains of the Ohio River or Four Mile Creek in Campbell County, KY. The pump station facility will consist of four (4) each wastewater pumps, pump control, odor control facilities, wastewater screening equipment, backup power generation, a building facility constructed above the 100 year floodplain, and other appurtenances. Exhibit 1 provides a locational map of the project. The Ash Street Pump Station will receive flows from the Silver Grove/Melbourne area and the Silver Grove pump station. Ultimately, the Highland Heights pump station will be redirected to the Silver Grove pump station and then to the Ash Street pump station. The Ash Street pump station will convey all flows to the Reilly Road pump station, located near the intersection of the AA Highway (KY 9) and Four Mile Rd. (KY 547). The Reilly Road pump station will convey all flows to the Eastern Regional Water Reclamation Facility. The Reilly Road pump station concept was designed to ultimately convey these flows to the Eastern Regional Water Reclamation Facility.

The total project cost estimate is $19,000,000. The project is funded by the Kentucky Infrastructure Authority Fund A, Federally Assisted Wastewater Loan Program in the amount of $15,187,500, with local funds providing the remainder of the project cost.

B. Existing Environment

An environmental study was completed concerning the existing environment. Third Rock Consultants issued the Technical Memorandum for that study on June 3, 2011. A copy of this report is provided in Appendix A. Cultural Resource Analysts conducted a "Cultural Resource Survey" of the project, resulting in a report dated August 8, 2011. They also performed a Cultural Historic Baseline Survey and issued that report in May, 2012. Additionally, Cultural Resource Analysts performed an archaeological survey, the report of which is dated April 17, 2012. A Tree Impact Assessment by Arborist Care Urban Forestry was commissioned, as well. These reports are included in Appendix B. In summary, the following observations were reported:

Surface Waters The project area is located in the watershed of Fourmile Creek, and a section of the force main runs along Fourmile Creek. Fourmile Creek (HUC 05100205030) is a perennial stream with a watershed area of 17.8 square miles.

Groundwater Underground storage tanks and hazardous materials have been researched. The pipeline location avoids areas of potential UST contamination. One hazardous spill site has been identified which is in the vicinity of the pipeline. The site has been mitigated, however, it is still being monitored.

Wetlands Three locations within the project area have been designated as wetlands. These are the Pump Station site, with 0.393 acres, an area south of Poplar Ridge Road about 25 feet east of the pipeline route, and an area west of Ash Street.

Air quality non-attainment areas The project area has no air quality issues. There will be several air release valves installed on the force main, with odor control devices to "scrub" the air that is released.

Endangered or threatened species The project area is identified as potential habitat for two federally listed endangered species, the Indiana bat and running buffalo clover. There are approximately 435 acres of potential bat summer foraging and roosting habitat, but no caves in the area. Based on current land use, previous construction and field observations, there is no running buffalo clover in the project area.

Prime agricultural lands There are prime agricultural lands located in the project area, but the implementation of the project will have no effect on them.

Recognized scenic, recreational areas There are no recognized scenic or recreational areas within the project area.

Archaeological An archaeological survey of the project area was performed by Cultural Resource Analysts, Inc. with no findings of archaeological significance.

Historic Over two hundred (200) sites were evaluated as part of the "Cultural Historic Baseline Survey", and ten (10) of those are listed on the National Register of Historic Places. Other structures were deemed to be significant enough to require special conditions during construction, in particular the restriction of blasting in some areas and the seismographic monitoring of other areas.

Valuable flora and fauna areas The study by Arborist Care Urban Forestry reports the observations and recommendations made in relation to the historic and significant trees affected by the project. These are located primarily in the historic Camp Springs area and along streambanks.

Wild or scenic rivers No wild or scenic rivers are identified in the project area.

Drinking water sources The source of the area's drinking water is the Ohio River. The CSOs that occur in the project area ultimately flow to the Ohio River.

Floodplains The pump station site and the lower part of the force main are in the floodplain of the Ohio River and are subject to backwater flooding. The remainder of the force main is in the floodplain of Fourmile Creek. It is anticipated that up to 25 stream crossings will occur.

Use of potential receiving streams The facilities included in this project will ultimately discharge wastewater to the Eastern Regional Water Reclamation Facility, which discharges to the Ohio River. The Ohio River is used as a navigable waterway, for recreation, and as the raw water source for the surrounding areas.

Parkland or other public lands Silver Grove's city park is located on Ash Street, north of West Second Street, approximately 200 feet from the pump station site. Morscher Park, a recreational facility with ball fields, is located on the south side of KY 8 in the north part of the project area.

Environmental justice The socioeconomic environment is described in detail in the report issued by Third Rock Consultants. Public meetings have been held with citizen groups in Camp Springs and the project area. The subject of environmental justice was reviewed and it was determined that no specific population is anticipated to be disproportionally affected by potential adverse effects of the project.

The scoping letters, as required by the KDOW, were issued and responses obtained from the appropriate agencies. The request to the Natural Resources and Conservation Service did not get a response. These requests and responses, along with the clearinghouse review letters, are provided in Appendix C. Based on the review of existing conditions, responses from regulatory agencies, and the aforementioned studies, it is apparent that some special conditions concerning construction methods and restoration will be required.

C. Existing Wastewater Facilities/Drinking Water System

The city of Melbourne discharges flow to the city of Silver Grove, which discharges flow through a 10" diameter gravity line to the Silver Grove pump station. Silver Grove pump station pumps to the Highland Heights pump station, which ultimately conveys flows to the Dry Creek Wastewater Treatment Plant. Melbourne's system is a separate wastewater collection system, but Silver Grove's system is a combined wastewater and storm water system. During wet weather events, the system surcharges and overflows. The Silver Grove pump station also experiences the effects of the inflow and infiltration and overflows. Average dry weather flow from Melbourne and Silver Grove is 0.17 MGD, with a peak flow of 0.3 MGD. The estimated wet weather peak flow is 6.19 MGD. The Highland Heights area also experiences combined sewer overflows. The construction of the Eastern Regional Water Reclamation Facility presented the option of rerouting the flows from the Silver Grove and, eventually, the Highland Heights pump stations to the new wastewater treatment plant.

The Ash Street pump station will receive flows from the diverted Silver Grove pump station and force main. In the future, the Highland Heights pump station flows will be diverted to the Silver Grove pump station. The proposed Ash Street pump station and force main will ultimately deliver flow to the Eastern Regional Water Reclamation Facility, via the Riley Road pump station and force main. A map of the proposed improvements is provided in Exhibit 1. Flow projections from the Ash Street Project, without future consideration of future Highland Heights pump station diversion are provided in Table C-1 below.

Table C-1
Flow Projections
Ash Street Pump and Station and Force Main
Silver Grove Pump Station and Force Main

Condition	Total Flow Silver Grove PS (MGD)	Total Flow Ash Street Pump Station (MGD)
Average Dry Weather Flow	0.41	0.57
Peak Dry Weather Flow	0.63	1.51
Peak Flow (5 min)	2.20	8.10
Peak Flow (30 min)	2.11	7.92
Peak Flow (1 Hour)	2.04	6.89

The Ash Street pump station is sized for 7 MGD. Available storage capacity exists in the wetwell for the peak flows (5 minutes and 30 minute) in excess of the pump station capacity. In-system storage facilities will be required when the Highland Heights pump station is diverted to the Silver Grove pump station.

The Riley Road pump station is a relatively new pump station and currently has a firm capacity of 9.36 MGD (2 pump sets), expandable to a firm capacity of 11.8 MGD with the addition of a fourth pump (3 pump sets in operation). The future projected average daily wet weather flows without the addition of the Ash Street pump station are 3.36 MGD. The Riley Road pump station was designed and constructed to accept future flows from the Ash Street project.

The Eastern Regional Water Reclamation Facility (ERWRF) is a new 4.0 MGD nominal capacity plant located on a "greenfield" site adjacent to the existing Alexandria Wastewater Treatment Plant on KY 10, just south of the City of Alexandria. The site was designed to accommodate a modular future expansion to 8 MGD design average flow, 24 MGD peak daily flow and 40 MGD peak hourly flow. The facility was placed into service in September 2007. In addition to normal domestic wastewater flow, the plant is designed to accommodate the wide range of existing wet weather flow due to infiltration/inflow and industrial users. The ERWRF design parameters are provided in Table C-2, and the current operating conditions are listed in Table C-3.

Table C-2
Design Parameters
Eastern Regional Water Reclamation Facility

Flow Rates in MGD	
Domestic	
Average Daily	3.583
Peak Daily	10.749
Peak Hourly	17.915
Peaking Factor	3
Industrial	
Average Daily	0.372
Peak Daily	1.116
Peak Hourly	1.86
Peaking Factor	3
I/I	
Average Daily	0.045
Peak Daily	0.135
Peak Hourly	0.225
Peaking Factor	3
Total Flow	
Average Daily	4
Peak Daily	12
Peak Hourly	20
Peaking Factor	3
Design Flow	
Average Daily	4
Peak Factor	
Average Daily	3
Average Concentration & Loading Rates	
Domestic Portion (pound/day)	
BOD	5,990
TSS	6,399
TKN	1,122
P	151
Industrial (pound/day)	
BOD	1,616
TSS	1,474
TKN	46
P	16
Total (mg/l)	
BOD	228
TSS	236
TKN	35
P	5
Total (pound/day)	
BOD	7,606
TSS	7,873
TKN	1,168
P	167

Table C-3 Eastern Regional Water Reclamation Facility Current Conditions – 2012			
Permit Limits			
	Monthly Avg. (mg/L)	Weekly Avg. (mg/L)	Daily Max. (mg/L)
cBOD	15	22.5	
TSS	30	45	
NH3 (5/1-10/31)	4.0		6.0
NH3 (11/1-4/30)	10.0		15.0
Chlorides	600		1200
Total Phosphorous (5/1-10/31)	1.0		2.0
Total Phosphorous (11/1-4/30)	2.0	4.0	
Current Influent Averages			
cBOD	592		
NH3	21		
TSS	187		
Current Effluent Averages			
cBOD	3.6		
NH3	<0.279		
TSS	6.1		

Flows			
Current Influent Flow Rate	1.70 mgd		
Current Influent Flow Rate	0.85 mgd		

The ERWRF is a secondary treatment facility. Flows greater than 12 MGD, but less than 20 MGD are diverted to an aerated equalization facility located on the WWTP site. The facility processes are:

- Flow Measurement (1)
- Mechanical Fine Screening (2) w/Screenings Press (1)
- Grit Removal (2)
- Influent Pumping (5)
- Aerated Equalization Basins (2)
- Oxidation Ditches (2)
- Final Clarifiers (2)
- Return/Waste Pumping Station
- UV Disinfection (2)
- Effluent Flow Measurement (1)
- Post Aeration – Concrete Steps(1)
- Sludge Holding Tanks (2)
- Belt Filter Presses (2)
- Sludge Chemical Feed Facility (1)
- Other Supporting Equipment Facilities

The diversion of the Silver Grove and future Highland Heights pump stations, via the new Ash Street pump station, will mitigate a CSO in the City of Silver Grove in a typical year. In addition, the diversion of these flows to the ERWRF will provide additional capacity in the Dry Creek WWTP collection system and lessen impact of combined sewer and sanitary sewer overflows. The diversion of flows to the ERWRF will also provide needed flow for process sustainment. Currently, a large industrial customer in the ERWRF collection system has a high chloride discharge that is close to the discharge limit of the facility. The received flows from the Ash Street project will assist in reduction of the chloride concentration through dilution with normal domestic wastewater.

D. Need for Proposed Actions and Facilities

The project is needed to mitigate an existing combined sewer overflow that occurs during a typical year storm in the Silver Grove area. Due to the drainage conditions surrounding that

particular CSO, sewer overflows remain on the surface, leaving solids in that location after the waters have abated. This is obviously a water quality and public health issue. The project will also reduce other overflows in the Highland Heights area. The Technical Memorandum (6/10/2009), as prepared by Hazen & Sawyer Environmental Engineers & Scientists, describes the need for proposed actions. The memorandum is provided in Appendix D. The report states: "the overall goal of the study is to remedy this public health concern, as well as to provide the benefits of reducing and/or eliminating other CSO's in the Highland Heights and Silver Grove areas and reducing flow to the Ohio River Interceptor in alignment with previous and current strategies.

E. Alternative Analysis

Initially, a study was performed (Hazen and Sawyer, described above) concerning the need to divert flows from the Dry Creek Wastewater Reclamation Facility to the Eastern Regional Wastewater Facility. A copy of the study is contained in Appendix D. The alternatives that were evaluated include:

1. Replace the 10" diameter gravity sewer from Silver Grove to the SG Pump Station with a 24" diameter line, and upgrade the pump station for the increased flows and to pump to the Eastern Regional WRF.

2. Construct new pump station to receive flow from the Silver Grove area, and sized to eventually receive flow from the Highland Heights area and to convey sewage to the Riley Road pump station and ultimately to the Eastern Regional WRC.

In summary, the diversion of flows from the Silver Grove area to the proposed Ash Street pump station will reduce sanitary sewer overflows in the Dry Creek drainage basin and also mitigate a typical year combined sewer overflow in the Silver Grove area.

As a result of preliminary engineering, the Ash Street Pump Station was upsized from a preliminary sized 6 MGD to a 7 MGD pump station to further reduce the future need for in-system wastewater storage when Highland Heights is diverted to this system. In addition, the force main was upsized from an 18" diameter pipeline to a 20" diameter pipeline to accommodate the additional pumping capacity and to allow for limited future connection of small sanitary sewer systems along the route to serve existing development, should local interest occur. The alternatives for analysis are separated into three separate phases:

1. Ash Street Force Pump Station – Silver Grove, KY
2. Ash Street 20" Force Main – Silver Grove to Riley Road Pump Station
3. Replacement Collector Sewer – Between the City of Silver Grove and Industrial Blvd on KY 8 (Mary Ingles Highway).

Ash Street Pump Station

The Ash Street Pump Station was originally sited at its current proposed location, on Ash Street in Silver Grove, KY, across the street from the existing local park. The site contains an abandoned large sewage pumping station constructed in 1936 under the Federal WPA program. The SD1 has agreed to demolish the pump station as part of an agreement with the City of Silver Grove. The City of Silver Grove donated the land to the SD1. Several alternative pump station locations were considered. The pump station location had to be within the vicinity of the existing gravity sewer route, between the City of Silver Grove and the existing Silver Grove Pump Station. At the request of SD1, a study was conducted to determine the optimum site for the pump station. A copy of the study is provided in Appendix E. The initially proposed site was the selected alternative, however, the pump station was moved to the rear of the site at the request of public comment. Visual landscape screenings, odor control, lighting pollution minimization, and noise control are incorporated into the design.

20" Ash Street Force Main

The selected route for the force main was initially along KY 547, Four Mile Road, as outlined in the 2009 Hazen and Sawyer report. Four Mile Creek closely follows the route of Four Mile Road and meanders adjacent to the selected route the entire way.

In follow up to requests by interested parties, eight alternative routes were investigated by SD1. Appendix F contains maps that summarize the considered routes. Detailed costs are also contained in Appendix F and the following is a brief synopsis of each route:

Route 1 — Route 1 is the original selected route along the corridor of Four Mile Rd. (KY 547). Numerous studies have been conducted to determine the effect this route would have on the environment and area. As a result of study and the findings, all Four Mile Creek crossings will either be directional drilled or bored, air release valves will be minimized, and construction near historical structures will be limited. The estimated opinion of cost for the Route 1 is $8,187,050.

Route 1A — Route 1A utilizes a portion of Route 1. At Tug Fork Rd., the force main routes away from Four Mile Rd., to Poplar Ridge Rd, and returning to Route 1, south of Camp Springs. The route would avoid Camp Springs. Another pump station costing $4,000,000 would be required due to the high drainage divide and resulting additional pumping. Tug Fork Rd. and Poplar Ridge Road are narrow and crooked county roads that require entire road closure to construct the force main due to the large amount of force main that would be in the pavement. A creek follows Tug Fork Rd. and would require crossing/mitigation along a significant amount of the route. Historical structure existence is unknown at this time. No studies have been conducted in this region. The road is unstable in several

locations by observation of visual pavement “slips”. Construction would be slow and difficult. Estimated opinion of construction cost is $16,001,575.

Route 1B

Route 1B utilizes a portion of Route 1, then routes cross country. It was hopeful that a current pipeline or powerline easement existed that could be paralleled. None exist at the current time. The route does require the pipeline to be routed through hilly terrain. As a minimum, a second lift set of pumps would be required at the Ash Street Pump Station and would cost approximately $2,000,000. In addition, total redesign of the pump station would be required. The route is not accessible for maintenance, completely divides parcels for the cross country route, requires slow construction in steep and rocky terrain, and requires excessive tree removal. Historical structure existence is unknown at this time. No studies have been conducted in this corridor. Estimated opinion of cost is $10,487,631.25.

Route 1C

Route 1C utilizes Uhl Rd., Messmer Hill Rd., a cross country segment, Alexandria Pike, and the right-of-way of the AA Highway (KY 9). Similar to Route 1A, narrow, crooked, and unstable county roads will be utilized. Accessibility is also a concern in the cross country segment. A considerable amount of road would be closed to construct the force main. Where private easement would be available, a considerable amount of tree removal will be required. In addition, due to the high elevation route, another $4,000,000 pump station would be required. Adjacent creeks to the road also result in the same difficulties as Route 1A. Historical structure existence is unknown at this time. No studies have been conducted in this region. Estimated opinion of cost is $15,691,750.

Route 2

Route 2 considers a western route along KY 8, Doddsworth Rd., East Alexandria Pike (East), and the AA Highway (KY 9) right-of-way. The route is considerably longer than Routes 1 through 1C. Another pump station costing $4,000,000 would be required due to the high drainage divide that would be pumped over. Doddsworth has numerous narrow and crooked areas and will require a substantial amount of road closure for construction. Substantially more easements will be required on this route. Similar concerns exist for tree removal. Historical structure existence is unknown at this time. No studies have been conducted in this region. Estimated opinion of cost is $18,987,062.

Route 2A

Route 2A is near identical to Route 2 and considers a western route along KY 8, Doddsworth Rd., East Alexandria Pike (West), and the AA Highway (KY 9) right-of-way. The route is considerably longer than Routes 1 through 1C. Another pump station costing $4,000,000 would be required

due to the high drainage divide that would be pumped over. Doddsworth has numerous narrow and crooked areas and will require a substantial amount of road closure for construction. Substantially more easements will be required on this route. Similar concerns exist for tree removal. Historical structure existence is unknown at this time. No studies have been conducted in this region. Estimated opinion of cost is $19,209,437.

Route 3 — Route 3 considers an eastern route through Melbourne. The route is along KY 8, Ten Mile Road, Kohls Rd., and Fender Rd. The right-of-way along KY 8 is congested and tight. Several utilities exist in the area. Obstructions of structures, signs, and etc. exist along this KY 8 route. Ten Mile Road is narrow and crooked and similar to these other county road considerations. The route is considerably longer than Routes 1 through 1C. Another pump station costing $4,000,000 would be required due to the high drainage divide that would be pumped over. Substantially more easements will be required on this route. Similar concerns exist for tree removal. Historical structure existence is unknown at this time. No studies have been conducted in this region. Estimated opinion of cost is $19,903,687.

Route 3A — Route 3A is near identical to Route 3 and considers an eastern route through Melbourne. The route is along KY 8, Ten Mile Road, and Fender Rd. The right-of-way along KY 8 is congested and tight. Several utilities exist in the area. Obstructions of structures, signs, and etc. exist along this KY 8 route. Ten Mile Road is narrow and crooked and similar to these other county road considerations. The route is considerably longer than Routes 1 through 1C. Another pump station costing $4,000,000 would be required due to the high drainage divide that would be pumped over. Substantially more easements will be required on this route. Similar concerns exist for tree removal. Historical structure existence is unknown at this time. No studies have been conducted in this region. Estimated opinion of cost is $19,682,687.

Both cost and non-cost factors have been considered for selection of the viable Ash Street Force Main Route. The non-cost criteria includes stream bank restoration, traffic maintenance, tree removal, cultural/historic elements, impact to properties (easements), and access for maintenance. Table E-1 provides a synopsis and scoring system of the non-cost factors. The alternative with the lowest sum total in the non-cost scoring is the highest rank alternative based on non-cost factors.

In review of Table E-1, the lowest capital cost is Route 1 and the highest ranked non-cost factor alternative is route 1C. Route 1 is the selected alternative. The Route 1 capital costs are near 50% of the Route 1C capital cost and it is the second ranked non-cost factor alternative. The criteria evaluation details are included in Appendix F.

Table E-1
Evaluation of Alternatives Matrix
Ash Street Force Main

Non-Cost Consideration	Route 1	Route 1A	Route 1B	Route 1C	Route 2	Route 2A	Route 3	Route 3A
Streambank Restoration	3.0	6.0	7.5	3.0	5.0	5.0	5.0	5.0
Traffic Maintenance	3.2	5.4	0.6	3.6	6.0	6.6	9.0	9.0
Tree Removal	0.9	1.4	8.5	2.5	2.0	2.5	5.0	5.0
Cultural/Historical	10	5.0	7.0	1.0	1.0	1.0	1.0	1.0
Impact to Residences/Business/Farms - Easements	5.0	7.0	4.0	5.0	8.5	8.5	9.5	9.5
Access to Maintenance	3.1	2.0	8.5	2.0	2.0	2.0	2.0	2.0
Sum Total	**25.2**	**26.8**	**36.1**	**17.1**	**24.5**	**25.6**	**31.5**	**31.5**
Cost in $ Million	**$8.2M**	**$16.0M**	**$10.5M**	**$15.7M**				

Replacement Collector Sewer and Silver Grove Force Main.

The sewer between Ash Street, in Silver Grove, and the Silver Grove Pump Station along KY 8 is being abandoned by this project. The existing sanitary sewer is in very poor shape with existing reverse grades and extremely deteriorated facilities. A majority of this sewer is located over 20' below the 100-year floodplain and results in excessive inflow/infiltration resulting in SSO occurrence in the area and downstream in the collection system. Refer to the Hazen and Sawyer study for the details on this matter.

The Silver Grove Pump Station will remain in service, however, its flows will be diverted to the new Ash Street Pump Station via a new Silver Grove Force Main. The route of the force main will be completely located in either the CSX Railroad right-of-way, the KY 8 right-of-way, or on existing City of Silver Grove right-of-way for future dedicated streets. The route of the force main was to be either side of the street in the available right-of-way. The southernmost right of way of KY 8 has water and gas utilities present.

A gravity sewer system with a small duplex pump station shall be constructed to reconnect nineteen (19) properties. These homes were originally connected to the sewer in the floodplain. The gravity sewer will now be reconstructed out of the floodplain and be specifically provided to serve these nineteen (19) properties.

Summary of Alternative Analysis

The alternative analysis was separated into three separate project locations, the Ash Street Pump Station, the Ash Street Force Main, and the Replacement Collector Sewer and Silver Grove Force Main. Considerable analysis has been conducted on available, affordable, and acceptable routes. The selected alternatives of the site consist of the following:

1. The Ash Street Pump Station is located on Ash Street, across from the local park and adjacent to the existing abandoned pump station that will be demolished.
2. The force main will route between the proposed Ash Street Pump Station and the Riley Road Pump Station located at the intersection of the AA Highway and KY 547. The force main will generally follow the Four Mile Road corridor (KY 547). The route does deviate farther away from Four Mile Road in areas where extreme grade change would occur and in areas to eliminate damage to streambanks.
3. Replacement Collector Sewer and the Silver Grove Force Main will be constructed in a combination of right-of-way and private property.

F. Environmental Consequences / Mitigative Measures

The environmental effect of the selected alternative has been documented in Section B, Existing Environment. Several mitigative measures have been taken to reduce or eliminate the effect of the project on the environment and/or cultural resources of the area. The following are the specific design parameters and features utilized to achieve the protection of the environment and the cultural resources:

1. **General:** The use of the public right-of-way of KY 547 was maximized to reduce encroachment on undisturbed properties. In addition, a large majority of the pipeline route is located within the 100-year floodplain to also minimize the disturbance to developable and farmable property.

2. **Water Quality Certification:**

   a) The project is authorized under the provisions of Nationwide Permits No. 12 and No. 33 and must comply with their terms and general conditions.
   b) Numerous creek crossings are required. Deep creek crossings will utilize “directional drilling” technology to eliminate the concern of streambank erosion. All crossings of Four Mile Creek shall have directional drill or boring technology utilized. The remainder of creek crossings will utilize natural streambank/riparian restoration with the use of live stakes and shrubs and erosion control matting. Construction timelines will be limited to avoid periods of high rainfall and stream flow.
   c) Effective erosion and sedimentation controls and a best management practices will be employed and the removal of vegetation will be minimized.
   d) Three wetland areas have been identified. The pipeline route is not encroaching on two of these areas, however, concern exists that the adjacent pipeline excavation could act as a French drain and cause damage. “Trench stops” will be utilized every 25’ in the bedding and backfill of the trench to prevent the flow of water in order to avoid the potential of damage to the wetlands. The third wetland is on the pump station site. The District will pay mitigation fees to the

Northern Kentucky Mitigation Bank for permanently affecting the wetland, and will observe all requirements listed in the WQC permit.

3. **Endangered Species:** Indiana bat habitat has been identified in the area. Removal of trees will be limited to the time period of October 15th to March 15th to avoid disturbance of possible roosting sites.

4. **All cultural resource concerns** have been avoided where possible and pipeline routes relocated where concerns existed. One historical significant structure, a smokehouse in Camp Springs, KY, is adjacent to the road and a local business. Since no other route is available, "directional drilling" technology is being utilized to avoid all possible disturbance of this structure. Blasting will not be performed within 200 feet of the other sites that were identified as being historically significant, and seismographic monitoring will be performed in other identified areas. Identified historically significant trees will be avoided or minimally impacted by the method of "directional drilling." All other requirements and recommendations that are included in the Cultural Historic Baseline Survey (Appendix B) and the letter from the State Historic Preservation Office to Lee Anne Devine, dated July 19, 2013 (Appendix C) will be implemented and followed.

5. **Green infrastructure** is utilized, where feasible. For example, a rain garden, bioswales, and permeable pavement are designed at the pump station site.

6. **Required Permits:**
   a) Kentucky Division of Water Permit to Construct
   b) Kentucky Transportation Cabinet Right-of-Way Encroachment Permit
   c) Kentucky 401 Water Quality Certification
   d) Nationwide Permit No. 12, Utility Line Activities
   e) Nationwide Permit No. 33, Temporary Construction, Access and Dewatering
   f) CSX Railroad Encroachment Permit

G. Public Participation / Sources Consulted

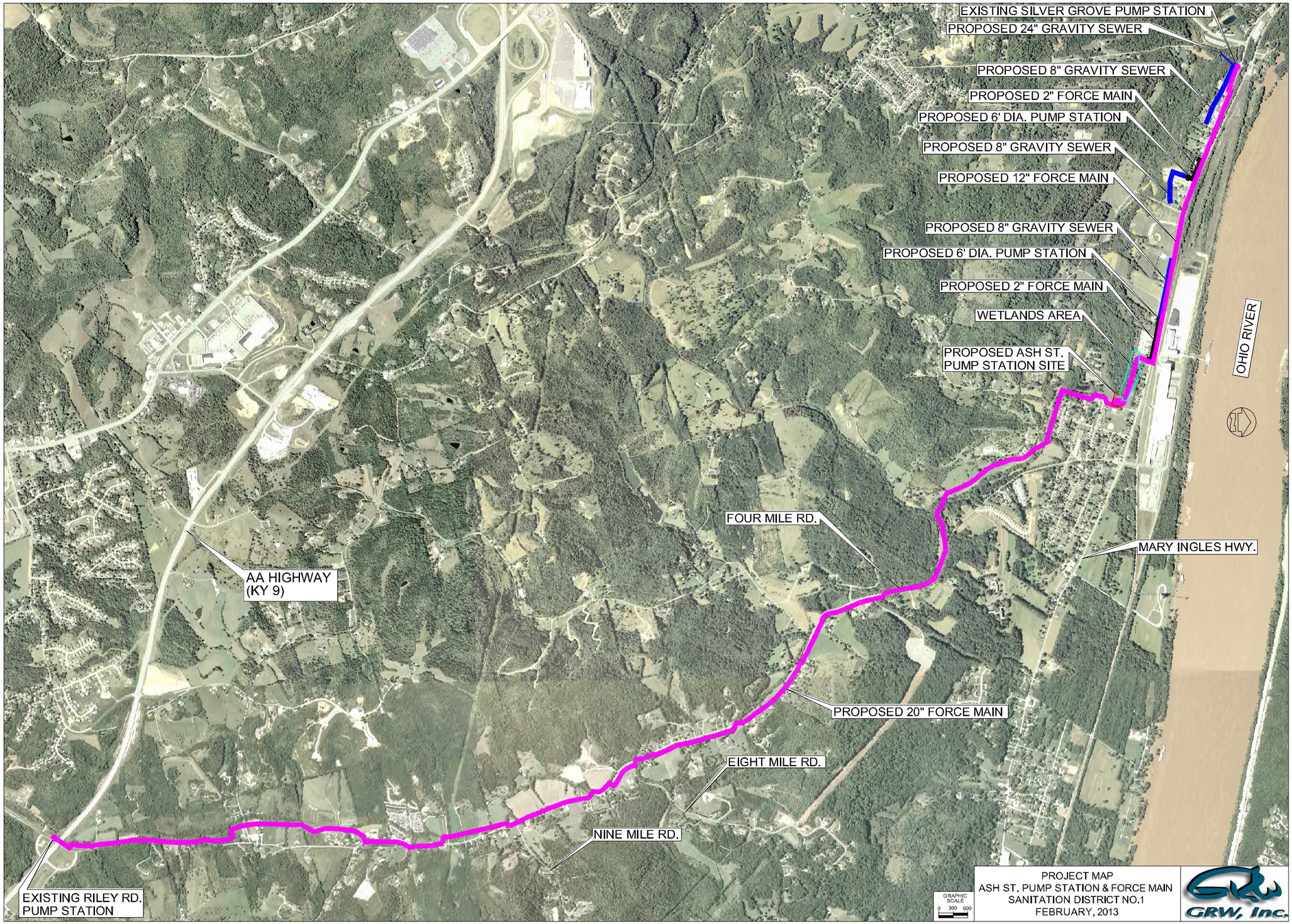
Letters were sent to all property owners notifying them of the project, and requesting permission to access their property. Correspondence concerning the project has been received from Camp Springs Initiative and Ms. Anna Zinkhon of Silver Grove, KY. Copies of this correspondence are included in Appendix G.

Sanitation District No. 1 and GRW have conducted two preliminary public meetings at the Camp Springs, KY Volunteer Fire Department. The Owner and Engineer have also attended a public community meeting organized by local residents to discuss the details of the meeting. Minutes of these meetings are included in Appendix G.

EXHIBIT 1

USGS MAP OF PROPOSED ASH STREET

PUMP STATION AND FORCE MAIN


EXISTING SILVER GROVE PUMP STATION
PROPOSED 24" GRAVITY SEWER
PROPOSED 8" GRAVITY SEWER
PROPOSED 2" FORCE MAIN
PROPOSED 6' DIA. PUMP STATION
PROPOSED 8" GRAVITY SEWER
PROPOSED 12" FORCE MAIN
PROPOSED 8" GRAVITY SEWER
PROPOSED 6' DIA. PUMP STATION
PROPOSED 2" FORCE MAIN
WETLANDS AREA
PROPOSED ASH ST. PUMP STATION SITE
OHIO RIVER
FOUR MILE RD.
MARY INGLES HWY.
AA HIGHWAY (KY 9)
PROPOSED 20" FORCE MAIN
EIGHT MILE RD.
NINE MILE RD.
EXISTING RILEY RD. PUMP STATION
GRAPHIC SCALE
0 300 600
PROJECT MAP
ASH ST. PUMP STATION & FORCE MAIN
SANITATION DISTRICT NO.1
FEBRUARY, 2013
GRW, Inc.

APPENDIX A

TECHNICAL MEMORANDUM BY

THIRD ROCK CONSULTANTS

THIRD ROCK
WWW.THIRDROCKCONSULTANTS.COM

TECHNICAL MEMORANDUM

To: Joe Henry, GRW Engineers, Inc.

From: Virginia Goodman

Re: Existing Conditions Overview, Ash Street Force Main, Campbell County, Kentucky

Date: June 3, 2011

AQUATIC AND TERRESTRIAL ENVIRONMENT

General Environmental Setting

The proposed Ash Street Force Main (ASFM) runs along Fourmile Creek and KY 547 for most of its length, ending at KY 9, approximately five miles south of Silver Grove (Exhibits 1 and 2, attached). Fourmile Creek is a perennial stream with a watershed of 17.8 square miles. The lower 30 percent of the proposed force main is in the floodplain of the Ohio River and is subject to backwater flooding that may last for several days. The remainder of the line, from the mouth of Owl Creek south to KY 9, is located in a more steeply dissected upland setting. This portion of the line is in the narrower Fourmile Creek floodplain and is less subject to sustained flooding. The steep, hilly watershed is dominated by Eden soil, a deep, well drained and somewhat droughty silty clay loam.

The area is rural, with a mix of agricultural, commercial, and residential land uses. Agro-tourism farms, vineyards, and bed and breakfasts are located in the Camp Springs community, an area that contains many stone houses and barns built by German immigrants in the late 1800s. Most of the farmland directly impacted by the proposed force main is in hay/pasture or woodland. Only a small portion of the land is used for row crops.

Stream Crossings

The force main will involve 25 stream crossings: nine crossings of perennial Fourmile Creek and 16 crossings of ephemeral and intermittent tributaries (Table 1, page 2; Exhibits 1 and 2, attached). The stream crossings will be excavated to a depth so that the pipe is four feet below the existing streambed. The open trench within the stream will be backfilled with concrete and the excavated banks reshaped to a 2:1 slope. In addition to the pipeline crossings, temporary crossings for equipment and materials will also be required.

TABLE 1 – SUMMARY OF STREAM CROSSINGS

CROSSING	PERENNIAL	INTERMITTENT	EPHEMERAL	WETTED WIDTH (FEET)
1	X			15
2			X	2.5
3		X		6.5
3a		X		3
4			X	2
5			X	2.5
6		X		8
7		X		9
8	X			20
9		X		6
10	X			15
11		X		8
12	X			20
13	X			20
14	X			15
15			X	2
16		X		3
17	X			20
18		X		6
19			X	6
20			X	1.5
21		X		9
22			X	1.5
23	X			20
24	X			20

Wetlands

Two wetland areas were identified along the proposed route. The first, located just south of Poplar Ridge Road (Exhibit 1, attached), is the shallow remnant of what was once a much larger pond. The pipeline will be located uphill, approximately 25 feet east, and will not directly impact the vegetated pond. However, the trench bottom will be five to seven feet below the existing grade and below the level of the adjacent pond. An indirect impact could occur, in that the rock fill around the pipe could act as a "French drain," intercepting subsurface flow off the hillside that would ordinarily feed into the wetland. Depending on the porosity of the soil between the wetland and the trench, it might also drain water from the wetland.

The second wetland is located just west of Ash Street in Silver Grove (Exhibit 2, attached). The line at this point enters an area of bottomland hardwood forest located on somewhat poorly drained Newark soil. Some of the soils along the proposed route have been disturbed by the placement of fill and excavation during the construction of an existing sewer line. This previous disturbance creates an atypical wetland soil situation. Three plots were sampled to determine if the area is a wetland, and each had a somewhat different soil profile. All three plots contain a predominance of hydrophytic vegetation, exhibit wetland hydrology, and have hydric soils.

Threatened and Endangered Species
Based on information provided by the US Fish and Wildlife Service Kentucky Ecological Services Field Office, only two federally listed species could occur within the project area: the Indiana bat (*Myotis sodalis*) and running buffalo clover (*Trifolium stoloniferum*). The project area includes approximately 435 acres of Indiana bat summer foraging and roosting habitat. The proposed force main's route and Indiana bat habitat are shown on Exhibits 1 and 2, attached. Because of the project area geology, no caves that would provide winter habitat are present.

Based on current land use, previous road construction, and field observations, running buffalo clover is not present within the project area. A large majority of the proposed route is in open fields or maintained roadsides, neither of which provide the habitat necessary for this species. Those portions of the line that are wooded are heavily shaded floodplains that receive little disturbance.

Prime or Unique Agricultural Lands
The proposed force main will not significantly impact prime or unique agricultural land. Prime farmland is shown on Exhibits 1 and 2, attached.

Floodplains
Nearly the entire proposed route lies in the floodplain of Fourmile Creek or the Ohio River. Construction of the buried force main will not adversely affect the functions of the floodplain or flood levels.

SOCIOECONOMIC ENVIRONMENT
Unincorporated Camp Springs, which comprises the southern two-thirds of the proposed corridor, was settled by immigrants from Germany's Rhine River wine district in the mid-1800s. These immigrants constructed the community's distinctive stone buildings and established numerous farms and vineyards in this area. The Camp Springs area was listed on the National Register of Historic Places in the early 1980s. The community's architectural and agricultural histories have contributed to the area's agro-tourism economy. Camp Springs promotes its stone houses with a self-guided walking/biking tour. Several commercial farms and vineyards, such as Neltner's Farm & Greenhouses, sell area produce and host a variety of small-scale family-friendly festivals and activities throughout the year. Camp Springs Vineyard, located along KY 547 just south of Nine Mile Road, and Stonebrook Winery (further east of the proposed line) are regional wineries open for tours/tastings. In addition, the Camp Springs House Bed and Breakfast and Camp Springs Tavern along KY 547 cater to local residents as well as regional tourists. Habitats Native Plant Nursery, a wholesale native plant nursery, is located along Owl Creek Road.

Misty Ridge Farm, located along Owl Creek Road, provides horse boarding, breeding, and riding lessons, and has an indoor arena as well as the Circle Z Tack and Gift Shop. The Northern Kentucky Saddle Club, a nonprofit horse and event hall facility, is located on KY 547 at Poplar Ridge Road.

Two recreational facilities are located in the vicinity of the proposed force main. Morscher Park, a recreational complex with baseball and soccer fields, is located on the south side of KY 8. Silver Grove's City Park is located on Ash Street, north of West Second Street. The city park contains a baseball diamond, picnic tables, and playground equipment. Diehard Paintball, a private recreational facility, is located on KY 8 near the force main's proposed western terminus. A cemetery is also present in the area, on Gresskamp Road.

Demographic data for the project area was compiled from the US Census Bureau's 2010 Census as well as the 2005-2009 American Community Survey (ACS), which provides population, demographic, and housing

estimates. This data is listed in Tables 2 and 3. The ACS's level of detail is not as geographically precise as the decennial census; however, it provides the most current economic data available at the state, county, and census tract levels. Census data indicates that Campbell County's population is wealthier and less racially diverse than Kentucky as a whole - the county's per capita and median household income are higher than the statewide average, the percentage of individuals living below the poverty level is lower, and the county's percentage of minority residents is half that of the state average.

TABLE 2 - DEMOGRAPHIC INFORMATION

	KENTUCKY	CAMPBELL	CT 531	CT 529	CT 519.03	CT 519.01
Population	4,339,367	90,336	5,810	5,362	5,316	4,986
White (%)	86.3	93.4	96.1	97.0	97.5	96.1
Black or African American (%)	7.7	2.5	0.7	0.5	0.4	0.7
American Indiana and Alaska Native (%)	0.2	0.1	0.1	0.2	0.1	0.1
Asian (%)	1.1	0.8	0.0	0.6	0.3	1.1
Native Hawaiian or Other Pacific Islander (%)	0.0	0.0	0.0	0.0	0.0	0.0
Some Other Race (%)	0.1	0.1	0.2	0.1	0.0	0.2
Two or More Races (%)	1.5	1.4	0.9	0.9	0.8	0.9
Hispanic or Latino* (%)	3.1	1.7	0.9	0.6	0.9	0.7
Minority** (%)	13.7	6.6	3.9	3.0	2.5	3.9

*Hispanic Origin is not considered a separate race by the US Census. The number shown is counted twice, once as Hispanic Origin and once as one of the other racial groups listed above.
**Hispanic Origin not included to avoid duplication.
Source: 2010 US Census, American FactFinder

TABLE 2 - ECONOMIC INFORMATION (2009)

	KENTUCKY	CAMPBELL	CT 531	CT 529	CT 519.03	CT 519.01
Median Household Income	$41,197	$51,890	$55,142	$65,402	$71,208	$68,438
Per Capita Income	$22,284	$27,138	$28,764	$26,946	$28,502	$28,019
Income in the Past 12 Months Below Poverty Level (%)	17.4	10.4	10.6	6.8	3.9	5.3

Source: American Community Survey (2009), US Census Bureau

Of the four census tracts (CT) located along the proposed force main line, all (CT 539, 529, 519.03, and 519.01) contain a smaller percentage of minority residents and residents living below the poverty level than Campbell County as a whole. These census tracts are shown in Figure 1, attached. Three of the four census tracts studied have a lower percentage of individuals living below the poverty level than Campbell County as a whole; CT 531 has a slightly higher percentage than the county.

Environmental Justice

Two mobile home communities are located in CT 531 – Lakeview Mobile Home Court, just west of Ash Street, and Green Valley Trailer Park, on KY 547 south of Third Street. Though census economic data is

not available to the block level due to privacy concerns, mobile home communities are often comprised of individuals with lower incomes. No other potential environmental justice populations have been identified in the proposed corridor.

Neither mobile home community is anticipated to bear a disproportionate share of the project's adverse effects. The Green Valley Trailer Park is approximately 500 feet from the proposed force main, and is separated from the main's route by a wooded area. The Lakeview Mobile Home Court is closer to the proposed force main, with the closest homes approximately 200 feet from the line, and vegetative screening is also present in the area. Air vents to release methane gas (outfitted with carbon scrubbers to minimize odor) are proposed at five points along the proposed line; however, these vents are not located in the vicinity of either mobile home court. The Lakeview community is located near an undeveloped lot across Ash Street from Silver Grove's City Park; discussions with a local resident indicated that the lot periodically experiences sewer overflows. The proposed new force main will reduce overflows, improving the quality of life in this area.

Public involvement is an important component of the project and will ensure that any unidentified environmental justice population will have an opportunity to be heard.

Air Quality

While Campbell County is not in attainment for any transportation-related pollutants, the proposed force main installation is not a transportation project. Thus it is exempt from any air quality studies. Seven methane gas vents will be located along the proposed force main route. All will be outfitted with carbon scrubbers to minimize odor.

Noise

Camp Springs and Silver Grove are quiet communities that attract visitors to their historic setting and peaceful environment along the Ohio River. Primary noise generators along the corridor are vehicles, including daily commuters to/from Lafarge Gypsum and residents utilizing the area's recreational facilities that attract people for soccer and baseball games. Noise is also generated by the active railroad tracks paralleling KY 8. While installation of the proposed force main will generate construction noise to some degree, the force main itself upon its completion will not generate any noise discernable to the community.

UNDERGROUND STORAGE TANKS/HAZARDOUS MATERIALS

The project limits were evaluated for the presence of hazardous waste issues. The focus was to determine if the project has any significant potential to encounter contaminated soil or groundwater or buried waste during construction activities.

This effort included a review of an environmental agency database search. The objective was to identify records for properties along the project limits that have been the subject of environmental regulatory action. Each record was evaluated for its potential to represent or create an environmental condition within the project limits. An executive summary of the database report in included in Appendix A.

A series of historical resources were examined to identify historic land use that has the potential to create an environmental condition within the project limits. These included aerial photographs, geologic maps, and topographic maps.

A site reconnaissance was conducted on May 2, 2011 to evaluate the locations of features and facilities identified in the records and historical resources.

Third Rock also conducted interviews with representatives of regulatory environmental agencies, property owners, or other individuals that might have knowledge of the conditions within the project limits.

Based on the data collected, the following facilities required assessment and warranted consideration of their potential to represent a risk of encountering contaminated soil or groundwater during construction.

Facilities of Interest

Camp Springs Grocery

According to the database report mapping, this facility appears to have been located near the pump station at the southwest quadrant of the interchange with KY 9 and KY 547. Records reviewed from the Kentucky Division of Waste Management's (DWM) Underground Storage Tank Branch indicate that the facility has been closed since 1985. According to the records the tanks were filled with concrete and left in place. The precise location of this facility was not determined. Efforts to contact the previous owner were not successful. No facility structures appear to remain at the location. The contents of the regulatory agency file are included in Appendix B. If the assumed location of the facility is correct, it is not anticipated that this site represents a potential risk of encountering the underground storage tanks that were left in place.

Morton International/Rohm and Haas Chemicals LLC

This facility, located at 199C Poplar Ridge Road, was identified in the database research as a hazardous waste generator, a state hazardous waste site, and a superfund consent decree site. It is located in the southwestern quadrant of the Fourmile Creek crossing of Poplar Ridge Road. A review of the regulatory agency file was conducted to evaluate the status of the facility. Relevant portions of the file contents are included in Appendix C.

A tri-level brick home and a barn are currently located at this address. The site was previously utilized to clean adhesive application equipment utilizing chlorinated solvents between 1982 and 2001. A series of site investigations indicated that this activity resulted in groundwater contamination that migrated to the east toward and under Fourmile Creek. The US Environmental Protection Agency filed a case against Morton International, Inc. resulting in a consent decree dated January 17, 2001 requiring the cleanup of the impacted groundwater. Subsequent cleanup efforts have resulted in the property gaining compliance. Susan L. Mallette of the Kentucky DWM issued a "No Further Action" letter dated April 29, 2011.

The proposed force main will be located approximately 100 feet east of Fourmile Creek and the proposed route does not cross the property line of this facility. Based on the cleanup effort completed by the property owner, this facility does not represent a constraint to the project. Susan L. Mallette concurred with this finding via telephone on May 26, 2011.

Reitman Auto Parts

This facility is located at 6810 Four Mile Road (KY 547) and is engaged in the resale of used auto and truck parts and automotive recycling. This type of facility is typically expected to exhibit surface spills of automotive fluids. The proposed force main will be located along KY 547 in front of the facility and not within the areas of the facility where potential soil or groundwater impacts may have occurred. Based on the position of the project, this facility in not likely to represent a risk to the project. It should be noted that a 250-gallon oil tank is located in close proximity to the project limits near the north end of the property. Care should be taken not to undermine or disturb this tank during construction.

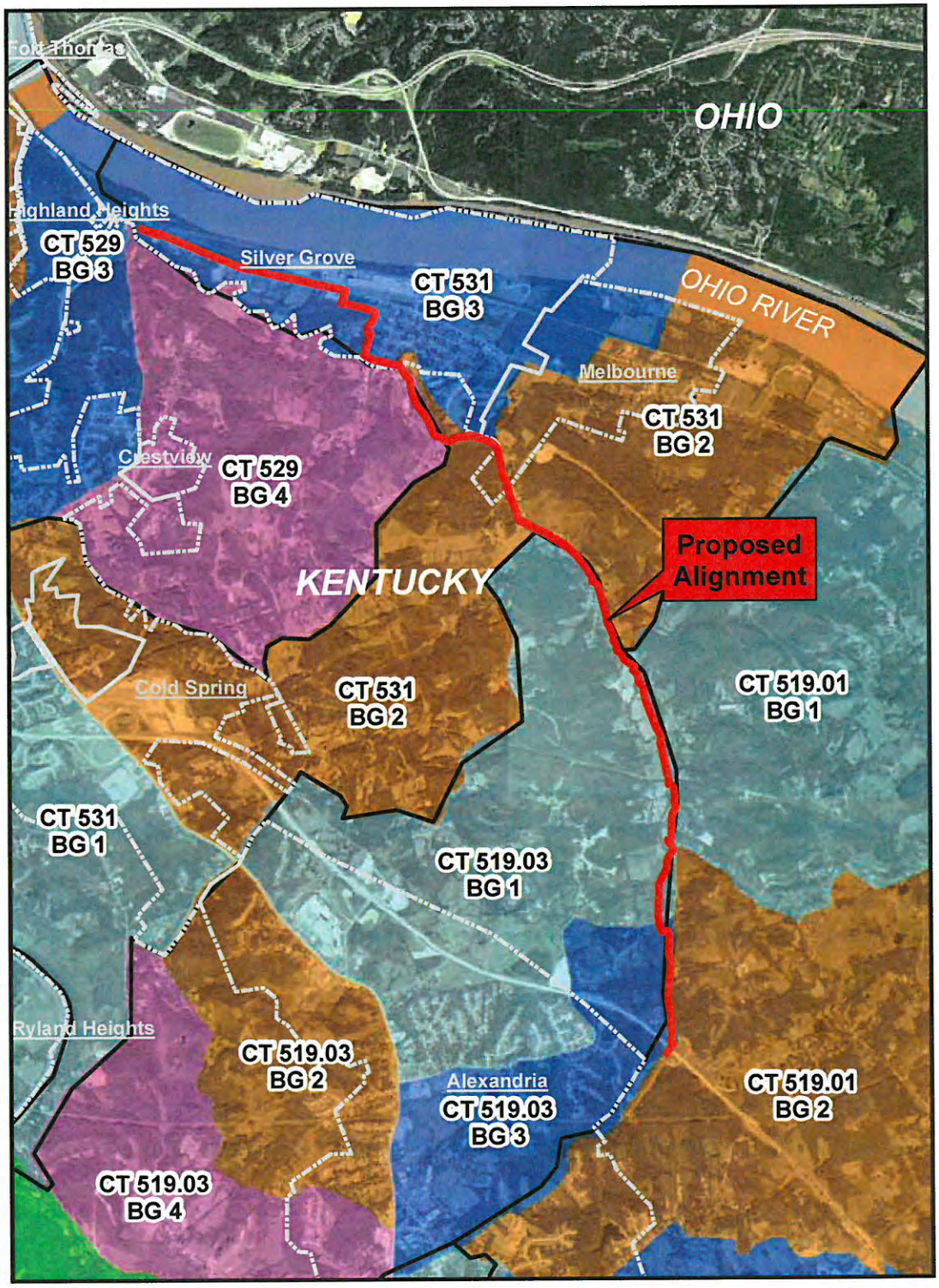
Gasoline Stations

Two gasoline stations are located on the south side of KY 8, across the road from the proposed project. One of the stations, located at 4720 KY 8, is not open for business. The second (Silver Grove BP) is located at 4618 KY 8. The database report does not indicate that these facilities have a record of releases of petroleum products to the environment. Both of these facilities are of sufficient distance from the project that undetected releases of petroleum products would not likely pose a significant risk.

General Condition

The use of fuel oil for residential heating is a common practice in the area of the project. Above-ground fuel oil tanks were observed at several residential structures in the project area. However, no residential storage was observed in close proximity to the project limits. Though not documented or observed in the project area, the use of underground storage tanks for residential storage of this fuel should be assumed. The selected contractor should be made aware of this potential and if tanks are encountered, contact the Owner immediately.

FIGURE 1 – PROJECT AREA CENSUS TRACTS



Map Document: (P:\Project_Files\Kentucky\9188-09_HDR_GRW_KY_Ecology-Permit-Hazmat_Ash Street_PS_Campbell_Co\Mapping\GIS\Ex1.mxd) 6/2/2011 -- 12:03:06 PM las

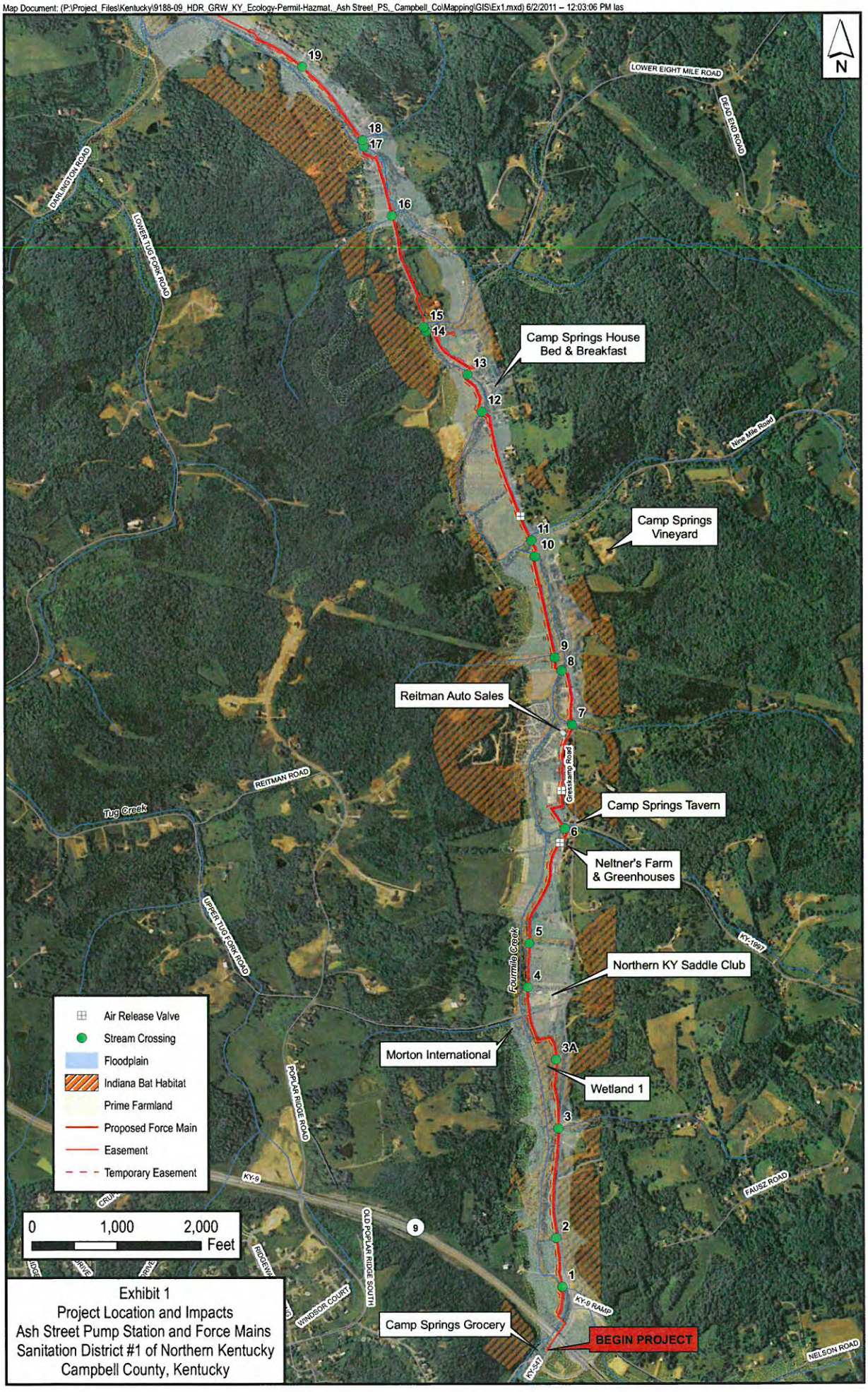


Exhibit 1
Project Location and Impacts
Ash Street Pump Station and Force Mains
Sanitation District #1 of Northern Kentucky
Campbell County, Kentucky

Map Document: (P:\Project_Files\Kentucky\6188-09_HDR_GRW_KY_Ecology-Permit-Hazmat_Ash Street_PS_Campbell_Co\Mapping\GIS\Ex2.mxd) 6/2/2011 – 12:02:52 PM las

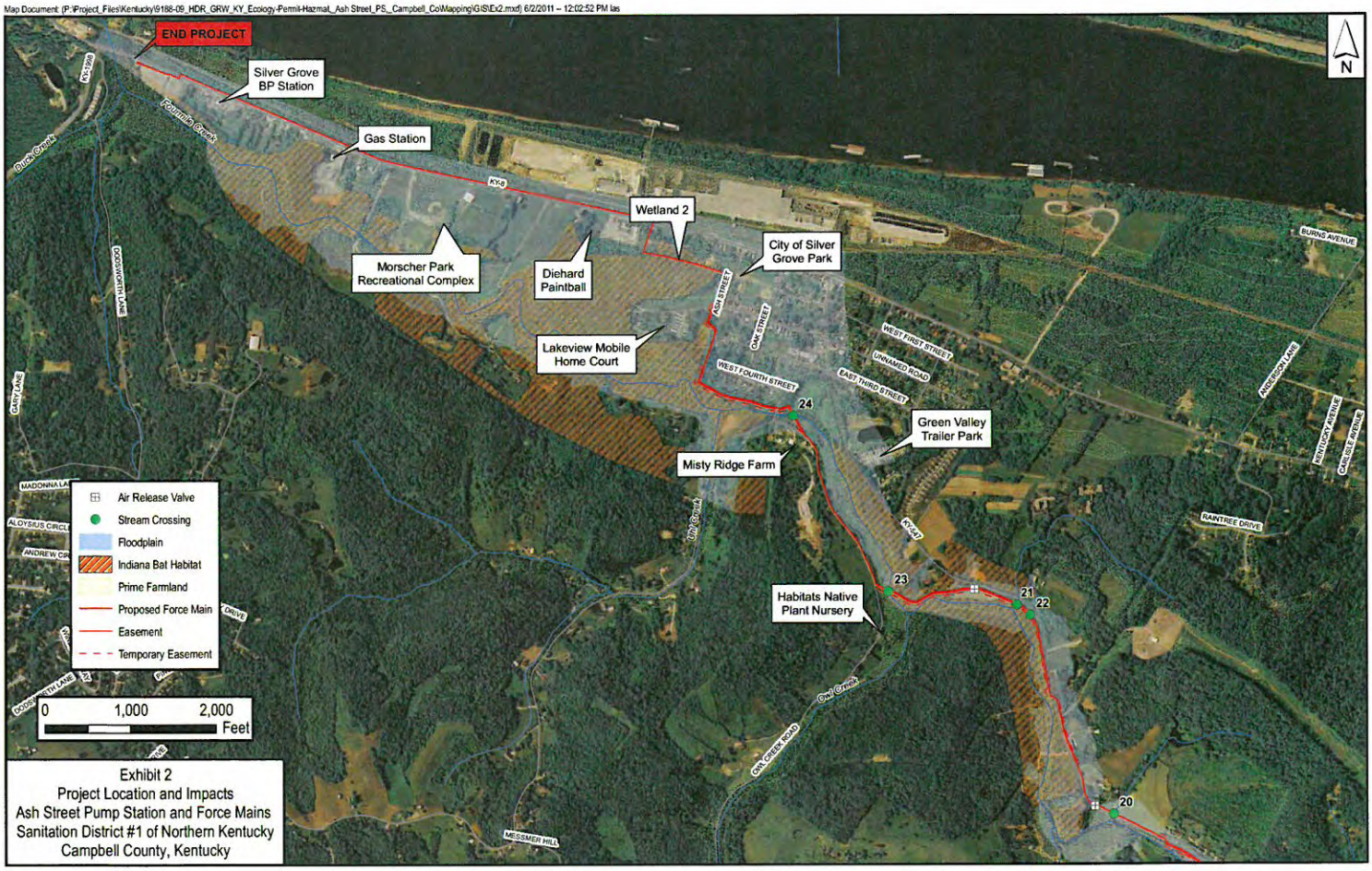


Exhibit 2
Project Location and Impacts
Ash Street Pump Station and Force Mains
Sanitation District #1 of Northern Kentucky
Campbell County, Kentucky

APPENDIX A – ENVIRONMENTAL DATABASE REPORT, EXECUTIVE SUMMARY

Ash Street Pump Station
Silver Grove, KY 41085

Inquiry Number: 3053055.1s
April 28, 2011

EDR DataMap™ Corridor Study

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

TARGET PROPERTY INFORMATION

ADDRESS

SILVER GROVE, KY 41085
SILVER GROVE, KY 41085

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records within the requested search area for the following databases:

FEDERAL RECORDS

NPL	National Priority List
Proposed NPL	Proposed National Priority List Sites
Delisted NPL	National Priority List Deletions
NPL LIENS	Federal Superfund Liens
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CERC-NFRAP	CERCLIS No Further Remedial Action Planned
LIENS 2	CERCLA Lien Information
CORRACTS	Corrective Action Report
RCRA-TSDF	RCRA - Treatment, Storage and Disposal
RCRA-LQG	RCRA - Large Quantity Generators
RCRA-CESQG	RCRA - Conditionally Exempt Small Quantity Generator
US ENG CONTROLS	Engineering Controls Sites List
US INST CONTROL	Sites with Institutional Controls
ERNS	Emergency Response Notification System
HMIRS	Hazardous Materials Information Reporting System
DOT OPS	Incident and Accident Data
US CDL	Clandestine Drug Labs
US BROWNFIELDS	A Listing of Brownfields Sites
DOD	Department of Defense Sites
FUDS	Formerly Used Defense Sites
LUCIS	Land Use Control Information System
CONSENT	Superfund (CERCLA) Consent Decrees
ROD	Records Of Decision
UMTRA	Uranium Mill Tailings Sites
ODI	Open Dump Inventory
DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations
MINES	Mines Master Index File
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
SSTS	Section 7 Tracking Systems
ICIS	Integrated Compliance Information System
PADS	PCB Activity Database System

EXECUTIVE SUMMARY

MLTS	Material Licensing Tracking System
RADINFO	Radiation Information Database
RAATS	RCRA Administrative Action Tracking System
FEMA UST	Underground Storage Tank Listing
COAL ASH DOE	Sleam-Electric Plan Operation Data
FEDERAL FACILITY	Federal Facility Site Information listing
PCB TRANSFORMER	PCB Transformer Registration Database
US HIST CDL	National Clandestine Laboratory Register
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List

STATE AND LOCAL RECORDS

OH SHWS	This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.
OH DERR	Division of Emergency & Remedial Response's Database
OH TOWNGAS	DERR Towngas Database
KY SWF/LF	Solid Waste Facilities List
OH SWF/LF	Licensed Solid Waste Facilities
OH UIC	Underground Injection Wells Listing
KY SWRCY	Recycling Facilities
KY HIST LF	Historical Landfills
OH SWRCY	Recycling Facility Listing
OH HIST LF	Old Solid Waste Landfill
OH LUST	Leaking Underground Storage Tank File
KY SB193	SB193 Branch Site Inventory List
OH UNREG LTANKS	Ohio Leaking UST File
OH UST	Underground Storage Tank File
OH ARCHIVE UST	Archived Underground Storage Tank Sites
OH SPILLS	Emergency Response Database
KY ENG CONTROLS	Engineering Controls Site Listing
OH ENG CONTROLS	Sites with Engineering Controls
KY INST CONTROL	State Superfund Database
OH INST CONTROL	Sites with Institutional Engineering Controls
KY VCP	Voluntary Cleanup Program Sites
OH VCP	Voluntary Action Program Sites
KY DRYCLEANERS	Drycleaner Listing
OH DRYCLEANERS	Drycleaner Facility Listing
OH BROWNFIELDS	Ohio Brownfield Inventory
KY BROWNFIELDS	Kentucky Brownfield Inventory
KY CDL	Clandestine Drub Lab Location Listing
OH CDL	Clandestine Drug Lab Locations
OH NPDES	NPDES General Permit List
KY AIRS	Permitted Airs Facility Listing
OH AIRS	Title V Permits Listing
OH USD	Urban Setting Designation Sites
KY PSTEAF	Facility Ranking List
OH HIST ENG CONTROLS	Operation & Maintenance Agreements Database
OH HIST INST CONTROLS	Institutional Controls Database
OH HIST USD	Urban Setting Designations Database
KY COAL ASH	Coal Ash Disposal Sites
OH CRO	Cessation of Regulated Operations Facility Listing
OH COAL ASH	Coal Ash Disposal Site Listing

TRIBAL RECORDS

INDIAN RESERV	Indian Reservations

EXECUTIVE SUMMARY

INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands
INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land
INDIAN UST..... Underground Storage Tanks on Indian Land
INDIAN VCP..... Voluntary Cleanup Priority Listing

EDR PROPRIETARY RECORDS

Manufactured Gas Plants..... EDR Proprietary Manufactured Gas Plants

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified.

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

FEDERAL RECORDS

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 02/17/2010 has revealed that there are 2 RCRA-SQG sites within the searched area.

Site	Address	Map ID	Page
GRAPHIC RESOURCES INCORPORATED	***300 INDUSTRIAL RD***	*1*	*4*
ROHM AND HAAS CHEMICALS LLC	***199C POPLAR RIDGE ROAD***	*20*	*32*

RCRA-NonGen: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA-NonGen list, as provided by EDR, and dated 02/17/2010 has revealed that there is 1 RCRA-NonGen site within the searched area.

Site	Address	Map ID	Page
CSX TRANSPORTATION - STEVENS Y	***12 MILE PIKE ROAD***	*2*	*19*

EXECUTIVE SUMMARY

FINDS: The Facility Index System contains both facility information and "pointers" to other sources of information that contain more detail. These include: RCRIS; Permit Compliance System (PCS); Aerometric Information Retrieval System (AIRS); FATES (FIFRA [Federal Insecticide Fungicide Rodenticide Act] and TSCA Enforcement System, FTTS [FIFRA/TSCA Tracking System]; CERCLIS; DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes); Federal Underground Injection Control (FURS); Federal Reporting Data System (FRDS); Surface Impoundments (SIA); TSCA Chemicals in Commerce Information System (CICS); PADS; RCRA-J (medical waste transporters/disposers); TRIS; and TSCA. The source of this database is the U.S. EPA/NTIS.

A review of the FINDS list, as provided by EDR, and dated 04/14/2010 has revealed that there are 16 FINDS sites within the searched area.

Site	Address	Map ID	Page
GRAPHIC RESOURCES INCORPORATED	***300 INDUSTRIAL RD***	***1***	***4***
CSX TRANSPORTATION - STEVENS Y	***12 MILE PIKE ROAD***	***2***	***19***
SILVER GROVE SCHOOL	101 W THIRD ST	5	21
TARVIN RESIDENCE	5680 FOUR MILE RD	8	23
PARNELL RESIDENCE	3004 EIGHT MILE RD	9	24
SMART RESIDENCE	273E DARLINGTON RD	10	24
SCHMIDT RESIDENCE	273F DARLINGTON RD	10	25
RATH RESIDENCE	6225 LOWER TUG FORK RD	10	25
PARNELL RESIDENCE #2	2942 EIGHT MILE RD	11	27
BORN RESIDENCE	6228 FOUR MILE RD	13	28
DOYLE RESIDENCE	6385 FOUR MILE RD	14	29
BEZOLD RESIDENCE	2814 NINE MILE RD	15	30
MEYER RESIDENCE	6692 FOUR MILE RD	16	30
ST JOSEPH PARISH	6833 FOUR MILE RD	17	31
CAMP SPRINGS TAVERN	7009 STONEHOUSE RD	18	32
ROHM AND HAAS CHEMICALS LLC	***199C POPLAR RIDGE ROAD***	***20***	***32***

STATE AND LOCAL RECORDS

KY SHWS: The State Hazardous Waste Sites records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. The data come from the Department of Environmental Protection's Uncontrolled Site Branch List.

A review of the KY SHWS list, as provided by EDR, and dated 01/19/2011 has revealed that there are 3 KY SHWS sites within the searched area.

Site	Address	Map ID	Page
SILVER GROVE POST OFFICE Facility Status: Closed	301 FOUR MILE PIKE	4	21
SILVER GROVE SCHOOL Facility Status: Closed	101 W 3RD ST	5	22
MORTON INTERNATIONAL Facility Status: Active	1951 POPLAR RIDGE RD	19	32

EXECUTIVE SUMMARY

KY UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environmental Protection's Owner/Facility Report of All Tanks Regardless of Status list.

A review of the KY UST list, as provided by EDR, and dated 02/04/2011 has revealed that there is 1 KY UST site within the searched area.

Site	Address	Map ID	Page
CAMP SPRINGS GRO	KY 547	21	41

NY MANIFEST: Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

A review of the NY MANIFEST list, as provided by EDR, has revealed that there is 1 NY MANIFEST site within the searched area.

Site	Address	Map ID	Page
GRAPHIC RESOURCES INCORPORATED	***300 INDUSTRIAL RD***	***1***	***4***

KY NPDES: A listing of permitted wastewater facilities.

A review of the KY NPDES list, as provided by EDR, and dated 11/29/2010 has revealed that there are 10 KY NPDES sites within the searched area.

Site	Address	Map ID	Page
TARVIN RESIDENCE	5680 FOUR MILE RD	8	23
PARNELL RESIDENCE	3004 EIGHT MILE RD	9	24
RATH RESIDENCE	6225 LOWER TUG FORK RD	10	25
PARNELL RESIDENCE #2	2854 EIGHT MILE RD	11	26
BLEVINS ESTATE	6110 FOUR MILE RD	12	27
BORN RESIDENCE	6228 FOUR MILE RD	13	27
DOYLE RESIDENCE	6385 FOUR MILE RD	14	28
BEZOLD RESIDENCE	2814 NINE MILE RD	15	29
MEYER RESIDENCE	6692 FOUR MILE RD	16	30
ST JOSEPH PARISH	6833 FOUR MILE RD	17	31

KY LEAD: A listing of lead related inspections.

A review of the KY LEAD list, as provided by EDR, and dated 03/01/2010 has revealed that there are 3 KY LEAD sites within the searched area.

Site	Address	Map ID	Page
Not reported	111 WEST 1ST STREET	3	21
Not reported	317 EAST SECOND STREET	6	22
Not reported	5247 FOUR MILE	7	22

EXECUTIVE SUMMARY

Please refer to the end of the findings report for unmapped orphan sites due to poor or inadequate address information.

MAP FINDINGS SUMMARY

Database	Total Plotted
FEDERAL RECORDS	
NPL	0
Proposed NPL	0
Delisted NPL	0
NPL LIENS	0
CERCLIS	0
CERC-NFRAP	0
LIENS 2	0
CORRACTS	0
RCRA-TSDF	0
RCRA-LQG	0
RCRA-SQG	2
RCRA-CESQG	0
RCRA-NonGen	1
US ENG CONTROLS	0
US INST CONTROL	0
ERNS	0
HMIRS	0
DOT OPS	0
US CDL	0
US BROWNFIELDS	0
DOD	0
FUDS	0
LUCIS	0
CONSENT	0
ROD	0
UMTRA	0
ODI	0
DEBRIS REGION 9	0
MINES	0
TRIS	0
TSCA	0
FTTS	0
HIST FTTS	0
SSTS	0
ICIS	0
PADS	0
MLTS	0
RADINFO	0
FINDS	16
RAATS	0
FEMA UST	0
COAL ASH DOE	0
FEDERAL FACILITY	0
PCB TRANSFORMER	0
US HIST CDL	0
SCRD DRYCLEANERS	0
COAL ASH EPA	0
STATE AND LOCAL RECORDS	
KY SHWS	3

MAP FINDINGS SUMMARY

Database	Total Plotted
OH SHWS	0
OH DERR	0
OH TOWNGAS	0
KY SWF/LF	0
OH SWF/LF	0
OH UIC	0
KY SWRCY	0
KY HIST LF	0
OH SWRCY	0
OH HIST LF	0
OH LUST	0
KY SB193	0
OH UNREG LTANKS	0
KY UST	1
OH UST	0
OH ARCHIVE UST	0
NY MANIFEST	1
OH SPILLS	0
KY ENG CONTROLS	0
OH ENG CONTROLS	0
KY INST CONTROL	0
OH INST CONTROL	0
KY VCP	0
OH VCP	0
KY DRYCLEANERS	0
OH DRYCLEANERS	0
OH BROWNFIELDS	0
KY BROWNFIELDS	0
KY CDL	0
OH CDL	0
KY NPDES	10
OH NPDES	0
KY AIRS	0
OH AIRS	0
OH USD	0
KY PSTEAF	0
KY LEAD	3
OH HIST ENG CONTROLS	0
OH HIST INST CONTROLS	0
OH HIST USD	0
KY COAL ASH	0
OH CRO	0
OH COAL ASH	0

TRIBAL RECORDS

INDIAN RESERV	0
INDIAN ODI	0
INDIAN LUST	0
INDIAN UST	0
INDIAN VCP	0

MAP FINDINGS SUMMARY

Database	Total Plotted
EDR PROPRIETARY RECORDS	
Manufactured Gas Plants	0

NOTES:

Sites may be listed in more than one database

APPENDIX B – CAMP SPRINGS GROCERY REGULATORY FILE INFORMATION

Notification for Underground Storage Tanks

FORM APPROVED
OMB NO. 2050-0049
APPROVAL EXPIRES 6-30-88

FOR TANKS IN **KY**

RETURN COMPLETED FORM TO: Natural Resources Cabinet
Division of Waste Management
Attention: Vicki Pettus
18 Reilly Road
Frankfort, KY 40601

APR 24 1986
DWM/PROGRAM

I.D. Number: STATE USE ONLY 4528-019

Date Received: 4/24/86

GENERAL INFORMATION

Notification is required by Federal law for all underground tanks that have been used to store regulated substances since January 1, 1974, that are in the ground as of May 8, 1986, or that are brought into use after May 8, 1986. The information requested is required by Section 9002 of the Resource Conservation and Recovery Act, (RCRA), as amended.

The primary purpose of this notification program is to locate and evaluate underground tanks that store or have stored petroleum or hazardous substances. It is expected that the information you provide will be based on reasonably available records, or, in the absence of such records, your knowledge, belief, or recollection.

Who Must Notify? Section 9002 of RCRA, as amended, requires that, unless exempted, owners of underground tanks that store regulated substances must notify designated State or local agencies of the existence of their tanks. Owner means—

(a) in the case of an underground storage tank in use on November 8, 1984, or brought into use after that date, any person who owns an underground storage tank used for the storage, use, or dispensing of regulated substances, and

(b) in the case of any underground storage tank in use before November 8, 1984, but no longer in use on that date, any person who owned such tank immediately before the discontinuation of its use.

What Tanks Are Included? Underground storage tank is defined as any one or combination of tanks that (1) is used to contain an accumulation of "regulated substances," and (2) whose volume (including connected underground piping) is 10% or more beneath the ground. Some examples are underground tanks storing: 1. gasoline, used oil, or diesel fuel, and 2. industrial solvents, pesticides, herbicides or fumigants.

What Tanks Are Excluded? Tanks removed from the ground are not subject to notification. Other tanks excluded from notification are:
1. farm or residential tanks of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes;
2. tanks used for storing heating oil for consumptive use on the premises where stored;
3. septic tanks;
4. pipeline facilities (including gathering lines) regulated under the Natural Gas Pipeline Safety Act of 1968, or the Hazardous Liquid Pipeline Safety Act of 1979, or which is an intrastate pipeline facility regulated under State laws;
5. surface impoundments, pits, ponds, or lagoons;
6. storm water or waste water collection systems;
7. flow-through process tanks;
8. liquid traps or associated gathering lines directly related to oil or gas production and gathering operations;
9. storage tanks situated in an underground area (such as a basement, cellar, mineworking, drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor.

What Substances Are Covered? The notification requirements apply to underground storage tanks that contain regulated substances. This includes any substance defined as hazardous in section 101 (14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), with the exception of those substances regulated as hazardous waste under Subtitle C of RCRA. It also includes petroleum, e.g., crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute).

Where To Notify? Completed notification forms should be sent to the address given at the top of this page.

When To Notify? 1. Owners of underground storage tanks in use or that have been taken out of operation after January 1, 1974, but still in the ground, must notify by May 8, 1986. 2. Owners who bring underground storage tanks into use after May 8, 1986, must notify within 30 days of bringing the tanks into use.

Penalties: Any owner who knowingly fails to notify or submits false information shall be subject to a civil penalty not to exceed $10,000 for each tank for which notification is not given or for which false information is submitted.

INSTRUCTIONS

Please type or print in ink all items except "signature" in Section V. This form must by completed for each location containing underground storage tanks. If more than 5 tanks are owned at this location, photocopy the reverse side, and staple continuation sheets to this form.

Indicate number of continuation sheets attached: 0

I. OWNERSHIP OF TANK(S)

Owner Name (Corporation, Individual, Public Agency, or Other Entity): JOE SANDERS D.B.A. CAMP SPRINGS GOLF

Street Address: R.R. KY 547

County: CAMPBELL

City: MELBOURNE State: KY ZIP Code: 41059

Area Code: 606- Phone Number: 635-9122

Type of Owner (Mark all that apply ☒)

- ☒ Current
- ☐ Former
- ☐ State or Local Gov't
- ☐ Federal Gov't (GSA facility I.D. no. _____)
- ☐ Private or Corporate
- ☐ Ownership uncertain

II. LOCATION OF TANK(S)

(If same as Section I, mark box here ☒)

Facility Name or Company Site Identifier, as applicable

Street Address or State Road, as applicable: R.R. KY 547

County: CAMPBELL

City (nearest): MELBOURNE State: KY ZIP Code: 41059

Indicate number of tanks at this location: 3

Mark box here if tank(s) are located on land within an Indian reservation or on other Indian trust lands ☐

III. CONTACT PERSON AT TANK LOCATION

Name (If same as Section I, mark box here ☒) Job Title Area Code Phone Number

IV. TYPE OF NOTIFICATION

☐ Mark box here only if this is an amended or subsequent notification for this location.

V. CERTIFICATION (Read and sign after completing Section VI.)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Name and official title of owner or owner's authorized representative	Signature	Date Signed
JOE SANDERS OWNER	x Joe Sanders	x 4/21/86

CONTINUE ON REVERSE SIDE

Owner Name (from Section I) JOE SANOFOLI Location (from Section II) MELBOURNE KY Page No. 1 of 1 Pages

VI. DESCRIPTION OF UNDERGROUND STORAGE TANKS (Complete for each tank at this location.)

Tank Identification No. (e.g., ABC-123), or Arbitrarily Assigned Sequential Number (e.g., 1,2,3...)	Tank No. 1	Tank No. 2	Tank No. 3	Tank No.	Tank No.
1. Status of Tank (Mark all that apply ☒)					
Currently in Use	☐	☐	☐	☐	☐
Temporarily Out of Use	☐	☐	☐	☐	☐
Permanently Out of Use	☒	☒	☒	☐	☐
Brought into Use after 5/8/86	☐ 11	☐ 69	☐ 69	☐	☐
2. Estimated Age (Years)	9	18	18		
3. Estimated Total Capacity (Gallons)	550	280	280		
4. Material of Construction (Mark one ☒)					
Steel	☒	☒	☒	☐	☐
Concrete	☐	☐	☐	☐	☐
Fiberglass Reinforced Plastic	☐	☐	☐	☐	☐
Unknown	☐	☐	☐	☐	☐
Other, Please Specify					
5. Internal Protection (Mark all that apply ☒)					
Cathodic Protection	☐	☐	☐	☐	☐
Interior Lining (e.g., epoxy resins)	☐	☐	☐	☐	☐
None	☐	☐	☐	☐	☐
Unknown	☒	☒	☒	☐	☐
Other, Please Specify					
6. External Protection (Mark all that apply ☒)					
Cathodic Protection	☐	☐	☐	☐	☐
Painted (e.g., asphaltic)	☐	☐	☐	☐	☐
Fiberglass Reinforced Plastic Coated	☐	☐	☐	☐	☐
None	☐	☐	☐	☐	☐
Unknown	☒	☒	☒	☐	☐
Other, Please Specify					
7. Piping (Mark all that apply ☒)					
Bare Steel	☐	☐	☐	☐	☐
Galvanized Steel	☐	☐	☐	☐	☐
Fiberglass Reinforced Plastic	☐	☐	☐	☐	☐
Cathodically Protected	☐	☐	☐	☐	☐
Unknown	☒	☒	☒	☐	☐
Other, Please Specify					
8. Substance Currently or Last Stored in Greatest Quantity by Volume (Mark all that apply ☒)					
a. Empty	☒	☒	☒	☐	☐
b. Petroleum					
Diesel	☐	☐	☐	☐	☐
Kerosene	☐	☐	☐	☐	☐
Gasoline (including alcohol blends)	☒	☒	☒	☐	☐
Used Oil	☐	☐	☐	☐	☐
Other, Please Specify					
c. Hazardous Substance	☐	☐	☐	☐	☐
Please Indicate Name of Principal CERCLA Substance OR Chemical Abstract Service (CAS) No.					
Mark box ☒ if tank stores a mixture of substances	☐	☐	☐	☐	☐
d. Unknown	☐	☐	☐	☐	☐
9. Additional Information (for tanks permanently taken out of service)					
a. Estimated date last used (mo/yr)	12/85	12/85	12/85	1	1
b. Estimated quantity of substance remaining (gal.)	0	0	0		
c. Mark box ☒ if tank was filled with inert material (e.g., sand, concrete)	☒	☒	☒	☐	☐

CARL M. BRADLEY
SECRETARY

WALLACE G. WILKINSON
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FRANKFORT OFFICE PARK
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

NOV 09 1989

MEMORANDUM

TO: JOE SANDFOSS
RR KY 547
MELBOURNE, KY 41059

ENTERED 11/15/89

FROM: Joan Cullen-Lollis, Supervisor JCL
Underground Storage Tank Program

DATE: October 25, 1989

SUBJECT: Request for Updated Underground Storage Tank Information

The Division of Waste Management, Underground Storage Tank Program is updating its records of underground storage tank registrations. Please examine the enclosed information regarding your underground storage tank(s). If information listed is incorrect, please clearly mark changes. If there are no changes, please mark "No Changes Necessary". Return the enclosed forms to this agency no later than November 15, 1989 This information will be used to verify or correct our existing records.

4528019.

Please note that you have been assigned the Facility I.D. #4528019. It is necessary that you refer to this number with any future correspondence with this agency.

Your assistance in this matter would be appreciated. Should you have any questions, please do not hesitate to contact Jane Akin at (502) 564-6716.

tre

No Changes Necessary ✓

CARL M. BRADLEY
SECRETARY

WALLACE G. WILKINSON
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FRANKFORT OFFICE PARK
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

NOV 09 1989

MEMORANDUM

TO: JOE SANDFOSS
RR KY 547
MELBOURNE, KY 41059

ENTERED 10/25/90

FROM: Joan Cullen-Lollis, Supervisor
Underground Storage Tank Program

DATE: October 25, 1989

SUBJECT: Request for Updated Underground Storage Tank Information

The Division of Waste Management, Underground Storage Tank Program is updating its records of underground storage tank registrations. Please examine the enclosed information regarding your underground storage tank(s). If information listed is incorrect, please clearly mark changes. If there are no changes, please mark "No Changes Necessary". Return the enclosed forms to this agency no later than November 15, 1989. This information will be used to verify or correct our existing records.

4528019.

Please note that you have been assigned the Facility I.D. #4528019. It is necessary that you refer to this number with any future correspondence with this agency.

Your assistance in this matter would be appreciated. Should you have any questions, please do not hesitate to contact Jane Akin at (502) 564-6716.

tre

No Changes Necessary ✓

FOR TANKS IN KY	RETURN COMPLETED FORM TO:	DEPARTMENT FOR ENVIRONMENTAL PROTECTION DIVISION OF WASTE MANAGEMENT UNDERGROUND STORAGE TANK SECTION 18 REILLY ROAD FRANKFORT, KENTUCKY 40601

FOR STATE USE ONLY

FACILITY ID NO. 4528019

DATE RECV'D._____

INSTRUCTIONS

Please type or print in ink all items except "signature" in Section V. This form must be completed for each location containing underground storage tanks. If more than four (4) tanks are owned at this location, photocopy the Tank Description form attached to this form.

I.Ownership of Tank(s)	II.Location of Tank(s)
JOE SANDFOSS Owner Name (Corporation,Individual, Agency etc.)	JOE SANDFOSS Owner Name (Corporation,Individual, Agency etc.)
RR KY 547 Street Address	RR KY 547 Street Address
MELBOURNE KY 41059 City State Zip Code	CAMPBELL County
606-635-9122 Area Code Telephone Number	MELBOURNE 41059 City Zip

III. Type of Owner

CURRENT X	STATE/LOCAL GOV'T	PRIVATE/CORP X
FORMER	FEDERAL GOV'T (GSA ID NO.)	OWNERSHIP UNCERTAIN

IV. Contact Person at Tank(s) Location

Name:	Title:	Phone
JOE SANDFALL DBA CAM		606-635-9122

V. Certification

QUIT BUSINESS AND RETIRED 12/84

Joseph Sandfoss
Signature

11/7/89
Date

DESCRIPTION OF UNDERGROUND STORAGE TANK	
FACILITY ID: 4528019	TANK ID NUMBER: 0001

TANK STATUS	
Currently in Use	
Temporarily out of Use	
Permanently out of Use	
Brought into Use after 6/8/86	
Year Installed (last 2 digits e.g., 89 for present year)	77
Estimated Total Capacity (gallons)	550
Date Removed (month/year)	--------

MATERIAL OF CONSTRUCTION	
Steel	X
Concrete	
Fiberglass/Reinforced Plastic	
Unknown	
Other, please specify	

INTERNAL PROTECTION	
Cathodic Protection	
Interior Lining (epoxy resins e.g.)	
None	
Unknown	X
Other, please specify	

EXTERNAL PROTECTION	
Cathodic Protection	
Painted (asphaltic e.g.)	
Fiberglass/Reinforced Plastic Coated	
None	
Unknown	X
Other, please specify	

PIPING	
Bare steel	
Galvanized steel	
Fiberglass/Reinforced Plastic coated	
Cathodic Protection	
Unknown	X
Other, please specify	

SUBSTANCE CURRENTLY OR LAST STORED IN GREATEST QUANTITY BY VOLUME	
Empty	X
PETROLEUM: Diesel	
Kerosene	
Gasoline (include alcohol blends)	X
Used Oil	
Other, please specify	
HAZARDOUS SUBSTANCE	
Principal CERCLA Substance Name	
Chemical Abstract Service (CAS) Number	
Stores a Mixture of Substances	
Unknown	

ADDITIONAL INFORMATION (for tanks permanently taken out of service)	
Estimated date last used (month/year)	1985 112
Estimated Quantity of Substance Remaining (gallons)	0
Tank filled with inert material (sand, concrete e.g.)	Y

DESCRIPTION OF UNDERGROUND STORAGE TANK	
FACILITY ID: 4528019	TANK ID NUMBER: 0002
TANK STATUS	
Currently in Use	
Temporarily out of Use	
Permanently out of Use	
Brought into Use after 6/8/86	
Year Installed (last 2 digits e.g., 89 for present year)	68
Estimated Total Capacity (gallons)	280
Date Removed (month/year)	--------
MATERIAL OF CONSTRUCTION	
Steel	X
Concrete	
Fiberglass/Reinforced Plastic	
Unknown	
Other, please specify	
INTERNAL PROTECTION	
Cathodic Protection	
Interior Lining (epoxy resins e.g.)	
None	
Unknown	X
Other, please specify	
EXTERNAL PROTECTION	
Cathodic Protection	
Painted (asphaltic e.g.)	
Fiberglass/Reinforced Plastic Coated	
None	
Unknown	X
Other, please specify	
PIPING	
Bare steel	
Galvanized steel	
Fiberglass/Reinforced Plastic coated	
Cathodic Protection	
Unknown	X
Other, please specify	
SUBSTANCE CURRENTLY OR LAST STORED IN GREATEST QUANTITY BY VOLUME	
Empty	X
PETROLEUM: Diesel	
Kerosene	
Gasoline (include alcohol blends)	X
Used Oil	
Other, please specify	
HAZARDOUS SUBSTANCE	
Principal CERCLA Substance Name	
Chemical Abstract Service (CAS) Number	
Stores a Mixture of Substances	
Unknown	
ADDITIONAL INFORMATION (for tanks permanently taken out of service)	
Estimated date last used (month/year)	1985 112
Estimated Quantity of Substance Remaining (gallons)	0
Tank filled with inert material (sand, concrete e.g.)	Y

DESCRIPTION OF UNDERGROUND STORAGE TANK	
FACILITY ID: 4528019	TANK ID NUMBER: 0003

TANK STATUS	
Currently in Use	
Temporarily out of Use	
Permanently out of Use	
Brought into Use after 6/8/86	
Year Installed (last 2 digits e.g., 89 for present year)	68
Estimated Total Capacity (gallons)	280
Date Removed (month/year)	--------

MATERIAL OF CONSTRUCTION	
Steel	X
Concrete	
Fiberglass/Reinforced Plastic	
Unknown	
Other, please specify	

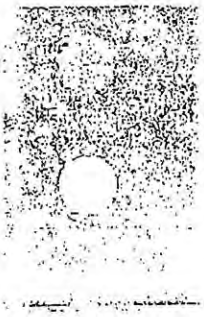
INTERNAL PROTECTION	
Cathodic Protection	
Interior Lining (epoxy resins e.g.)	
None	
Unknown	X
Other, please specify	

EXTERNAL PROTECTION	
Cathodic Protection	
Painted (asphaltic e.g.)	
Fiberglass/Reinforced Plastic Coated	
None	
Unknown	X
Other, please specify	

PIPING	
Bare steel	
Galvanized steel	
Fiberglass/Reinforced Plastic coated	
Cathodic Protection	
Unknown	X
Other, please specify	

SUBSTANCE CURRENTLY OR LAST STORED IN GREATEST QUANTITY BY VOLUME	
Empty	X
PETROLEUM: Diesel	
Kerosene	
Gasoline (include alcohol blends)	X
Used Oil	
Other, please specify	
HAZARDOUS SUBSTANCE	
Principal CERCLA Substance Name	
Chemical Abstract Service (CAS) Number	
Stores a Mixture of Substances	
Unknown	

ADDITIONAL INFORMATION (for tanks permanently taken out of service)	
Estimated date last used (month/year)	1985 112
Estimated Quantity of Substance Remaining (gallons)	0
Tank filled with inert material (sand, concrete e.g.)	Y



4/23/91

Gentlemen

In regards to this storage tank situation we will try to clear up this matter. For starters this Camp Spring Grocery has been closed + shut down out of business for nearly six years and we have been retired for nearly six years. When we were in business we had a small Mom & Pop grocery with two small gas pumps and two small tanks when we retired we were told to fill these tanks with concrete which we did so it would be awfully hard to store any thing in these tanks when they are filled with concrete. And sending back your invoice can see no reason to pay this bill ninety dollars ($90.00) for something which will never be useful or harmfull to any one hope this enlightens the situation and puts an end to all these Inquiries.

Respectfully

Joe Sandfoss

JAMES E. BICKFORD
SECRETARY

PAUL E. PATTON
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FRANKFORT OFFICE PARK
14 REILLY RD
FRANKFORT KY 40601

September 2, 1997

MS HELEN SANDFOSS
RR KY 547
MELBORNE, KY 41059

RE: Camp Springs Grocery
KY 547
Melbourne - Campbell County
UST ID# 4528019

Dear Ms. Sandfoss,

This letter is in response to your request for information concerning the closure of the underground storage tanks (UST's) at the above mentioned property. Our records indicate that the tanks were closed in place with concrete on January 1, 1985. Therefore, the following will be required:

1. Since the underground storage tanks were filled with concrete in 1985, the Division of Waste Management will not require any further information from you at this time.

The federal regulations 40 CFR Part 280.73, does allow the Underground Storage Tank Branch to require an assessment for all UST's previously closed prior to December 22, 1988. At this time, the UST Branch is only requiring assessments if there is a threat to human health, safety or the environment. Groundwater contamination, fume/odor problems, sheen on surface water, and free-phased product discovered will constitute a threat to human health, safety, or the environment. If any of these conditions occur please contact the Emergency Response Team at (502)564-2380.

It is possible the UST Branch will address the UST's closed prior to December 22, 1988, at some time. If you choose to permanently close the UST's or if you have any questions about permanently closing the UST's to standards of today, I can provide you with the requirements for permanent closure.

There is also a new regulation in place with the Kentucky Petroleum Storage Tank Environmental Assurance Fund that may provide some assistance to you if you choose to permanently close your UST's. If you have questions about the new regulation please contact the KYSTEAF at 1-800-928-7782.

If you have any further questions please do not hesitate to contact me at 1-800-928-4273 extension #213.

Sincerely,

Lori Terry

Lori Terry, Supervisor
Underground Storage Tank Branch
Division of Waste Management

Commonwealth of Kentucky
Waste Management - UST
18 Reilly Road
Frankfort, KY 40601-1190

JOE SANDERS ENVELOPE
ADDRESS HERE

ADDRESS CORRECTION REQUESTED

COMPUTER GENERATED
POSTAL INDICIA
HERE

INVOICE#: 199101006922 INVOICE DATE: 03/14/91

SITE#: 4528019 CAMP SPRINGS GRO
DUE DATE: 04/25/91 RR KY 547
MELBOURNE , KY 41059

TANK_ID	ANNL FEE
0001	30.00
0002	30.00
0003	30.00
Total Due	90.00

Invoice disputes must be written, including details.
If you have general questions, Call (502)564-6716.
The annual fee is for the period 07/01/90 - 06/30/91 .

INVOICE#: 199101006922 INVOICE DATE: 03/14/91

SITE#: 4528019 CAMP SPRINGS GRO
DUE DATE: 04/25/91 RR KY 547
MELBOURNE , KY 41059

TANK_ID	ANNL FEE
0001	30.00
0002	30.00
0003	30.00
Total Due	90.00

4-25-91
received

Return this part with check or money order, NOT cash.
Write Invoice and Site Numbers on checks or letters.
Make checks payable to: Kentucky State Treasurer.

INVOICE#: 199101006922 - SITE#: 4528019
Commonwealth of Kentucky
Waste Management - UST
18 Reilly Road
Frankfort, KY 40601-1190

TO

INVOICE#: 199101006922 - SITE#: 4528019
JOE SANDERS ENVELOPE
ADDRESS HERE
MELBOURNE KY 41059

MP2-603

APPENDIX C – MORTON INTERNATIONAL / ROHM AND HAAS CHEMICALS REGULATORY FILE INFORMATION

ENERGY AND ENVIRONMENT CABINET

Steven L. Beshear
Governor

Department for Environmental Protection
Division of Waste Management
200 Fair Oaks Lane, Second Floor
Frankfort, Kentucky 40601

Leonard K. Peters
Secretary

29 April 2011

Carl Coker, Project Manager
Rohm and Haas Company
Engineering Division
3100 State Road
Corydon, PA 19021

Re: Morton International (Melbourne Facility)
AI# 48736, Mars# E455
Campbell County

Dear Mr. Coker:

The Division of Waste Management's Superfund Branch has completed a review of the 2010 Monitoring Report on the Enhanced In-Situ Bioremediation of Chlorinated Solvents dated February 2011 by Parsons on behalf of Rohm and Haas Company.

As you may be aware, in order for us to issue a no further action letter, there needs to be four quarters of sampling with results under the applicable screening level and with the detection limits below the screening level as well. This was achieved by having the laboratory complete a second sample run for two of the samples where the detection limits were initially too high, as described in the report and in an email dated April 11, 2011 from Eric Mysona of Parsons.

Therefore, pursuant to Kentucky Revised Statute (KRS) 224.01-400, no further action is required at this site. Please be advised that the Division of Waste Management reserves the right to require further remedial action or corrective measures should they be warranted by additional information or further developments.

Thank you very much for your cooperation in this matter. If you should need any additional information, please contact me.

Sincerely,

Susan L. Mallette

Susan L. Mallette
Geologist Registered

ec: Eric Mysona, Project Manager, Parsons
Wesley Turner, Shawn Cecil, Superfund Branch

SECTION 1.0
INTRODUCTION

This work plan provides a detailed discussion of tasks to be conducted as part of the Phase III Field Investigation at the closed Morton International, Inc. (Morton) property located at 199C Poplar Ridge Road, Melbourne, Kentucky (Figure 1). Application guns containing a polymer sealant were cleaned at the site between 1982 and 2001. These guns were cleaned at the rear of the property using solvents. Subsequent to the purchase of Morton by Rohm and Haas Company, Parsons has published the following assessment reports describing impacts to the subsurface resulting from the use of solvents at the site:

- Combined Phase I and Phase II Environmental Site Assessments, Morton International, November 2001.
- Site Assessment, Morton International, March 2003.

The Combined Phase I and Phase II Environmental Site Assessment report determined the history of solvent use at the site and confirmed that the shallow soil and groundwater had been impacted. As a result of the initial investigation, a subsequent environmental site assessment was conducted in November and December 2001 to identify potential source areas for the VOCs detected in groundwater during the September 2000 investigation. In addition, as part of the 2001 study, groundwater samples were collected to evaluate the potential for migration of these compounds within the saturated zone.

Analytical results from the 2001 investigation indicated that seven VOCs were present in soil, including 1,1,1-trichloroethane (1,1,1-TCA) and its daughter products 1,1 dichloroethene (1,1-DCE), and 1,1-dichloroethane (1,1-DCA). The largest concentrations of these compounds were detected in samples collected from under the concrete pad west of the maintenance portion of the barn.

Groundwater sampling results from the 2001 investigation indicated that 1,1,1-TCA and its daughter products 1,1-DCE, 1,1-DCA, and chloroethane are present in

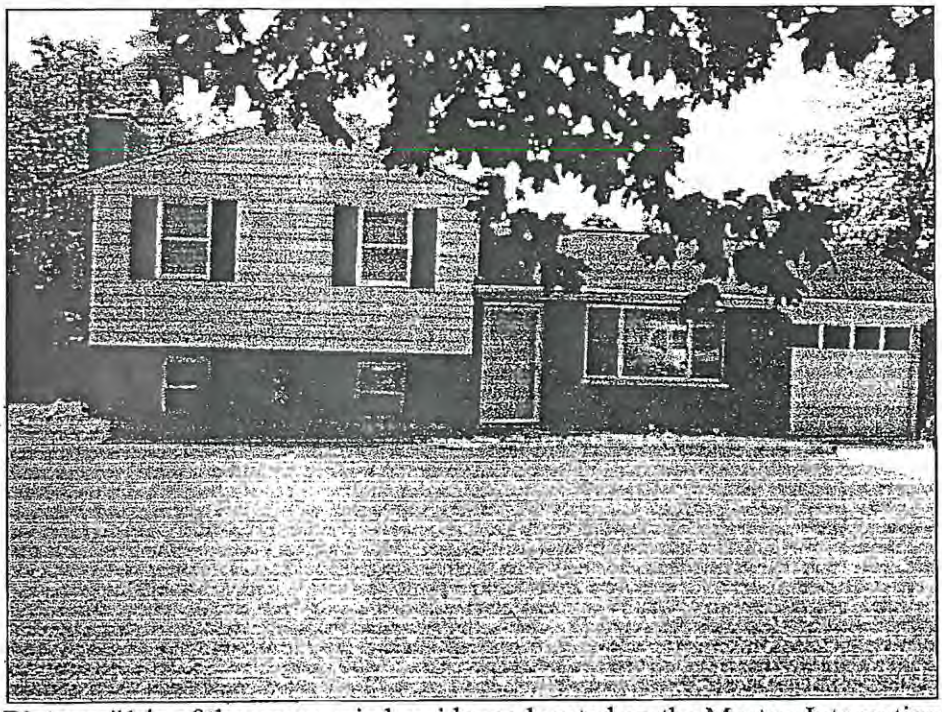
groundwater, and a plume of VOCs migrating to the northeast is present at the site. Like the soil samples, the largest concentrations in groundwater were detected in samples collected from piezometers and monitoring wells installed through and near the concrete pad west of the barn. As a result, the source area for the VOCs in soil and groundwater appears to be under the concrete pad next to the barn.

Chlorinated solvents like those detected at the site are heavier than water and generally sink and sometimes collect as a dense non-aqueous phase layer (DNAPL). The Phase III Investigation conducted in August 2003 focused on determining whether DNAPLs were present on top of bedrock at the site. Monitoring wells were installed at strategic locations to the top of bedrock. No DNAPLs were encountered, and where detected, the concentrations of chlorinated compounds in groundwater were below action levels. Therefore, impact of past practices seems to be limited to the upper zone of the aquifer. Future investigations and remedial activities will be focused on the upper portion of the aquifer only.

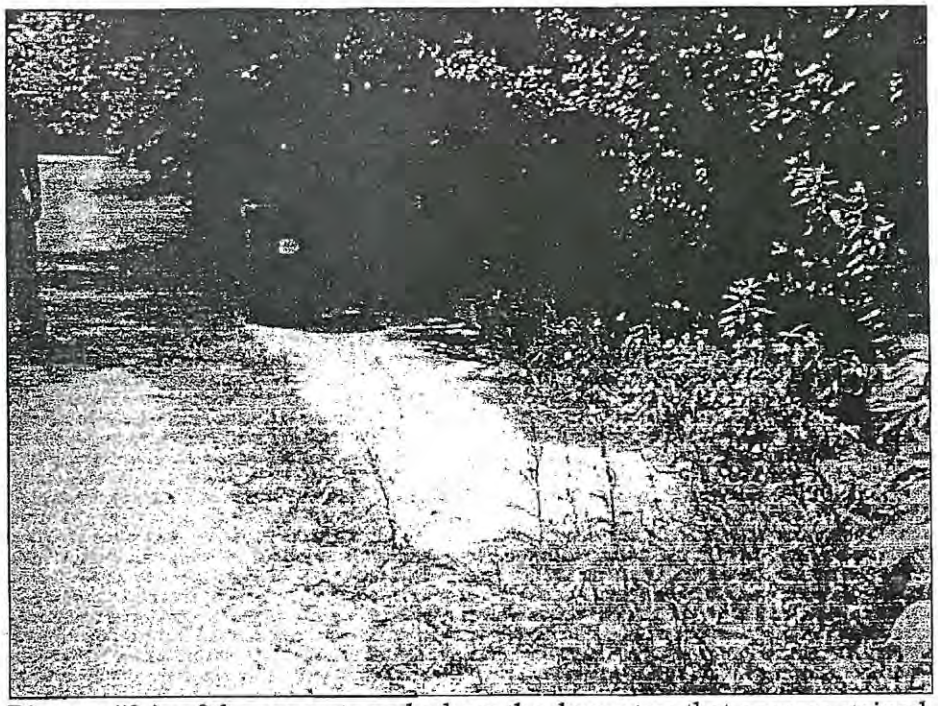
The August 2003 data indicated that the creek did not serve as a full divide as previously determined. This was evidenced by the detection of chlorinated compounds in two wells located on the east side of Four Mile Creek, indicating that the contaminants are migrating within the shallow aquifer zone, below the creek to the east. Hence, one of the objectives of the extended Phase III will be to better define the extent of the plume on the east side of Four Mile Creek. Additionally, data will be collected on site, north of the house, to determine if there is a component of migration along the creek to the north.

Recently, the property owner to the south of the site provided access to Rohm and Haas for the purpose of sampling soil and groundwater. Therefore, another objective of the Extended Phase III Assessment will be to define the extent of impacts to the south of the site.

Finally, the property owners to the west of the site have also provided access to Rohm and Haas for the purpose of sampling. Previous sampling has shown that groundwater has not migrated onto this property. Due to the fact that this adjacent property is directly upgradient, only soil samples will be collected to determine if this property was impacted by any historical surface activities at the site.

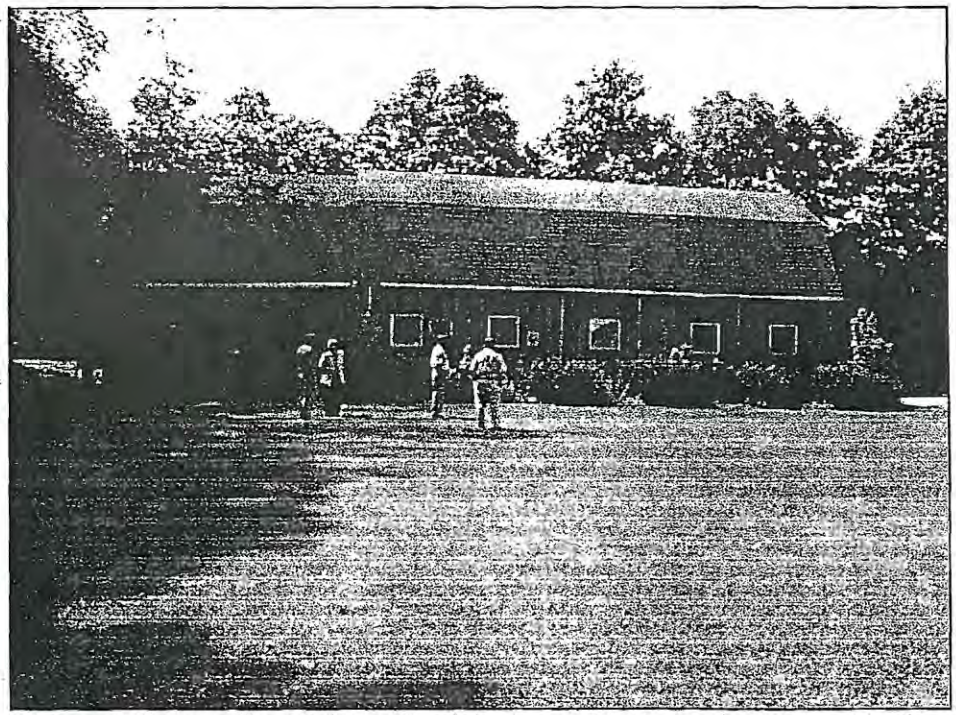


Picture #1 is of the unoccupied residence located on the Morton International property.



Picture #2 is of the concrete pad where the dumpsters that once contained sludge waste was stored.

Picture #7 is of MW-7, one of the contaminated shallow wells on the Morton property.



Picture #8 shows the total length of the barn. Morton only operated in the first 2/3rds of the barn. The Frasier family used the back of the barn for storage.

EXECUTIVE SUMMARY

For a number of years, chlorinated solvents were used at the Melbourne Site ("the Site") to remove adhesive from applicator guns. Volatile organic compounds (VOCs) were detected in groundwater samples collected during site assessment activities in September 2000 and the source area was identified to be the concrete pad outside the barn during characterization studies in 2001. Phase III Investigations occurred in August 2003 and March 2004. The primary objectives of these investigations were to determine whether a dense non-aqueous phase liquid (DNAPL) had accumulated on the bedrock surface at the base of the aquifer and to delineate the extent of VOC impacts in the subsurface. An additional objective was to establish the baseline site conditions for comparison to conditions after a pilot scale injection of organic substrate.

In 2003, Rohm and Haas advanced six borings to bedrock and converted each to a monitoring well screened at the base of the aquifer. In addition, two shallow delineation wells were also installed. In 2004, Rohm and Haas installed five additional shallow aquifer wells (two on-site and three off-site consisting of two on the property to the south and one on Campbell County property to the east) and six soil borings on the property to the west. Parsons personnel used field test kits to record carbon dioxide, alkalinity, manganese and ferrous iron concentrations in select wells as part of the baseline characterization. Severn Trent Laboratories conducted VOC analysis (Environmental Protection Agency [EPA] Method 8260) on all the soil and groundwater samples collected in 2003 and 2004 and analysis for biogeochemical indicator parameters including nitrate (Method E353.1), chloride and sulfate (Method E300.1) on select samples in 2004. Microseeps, Inc. Laboratory analyzed select samples for methane, ethane and ethene (Method AM20GAX) and volatile fatty acids (Method AM21G) in 2004.

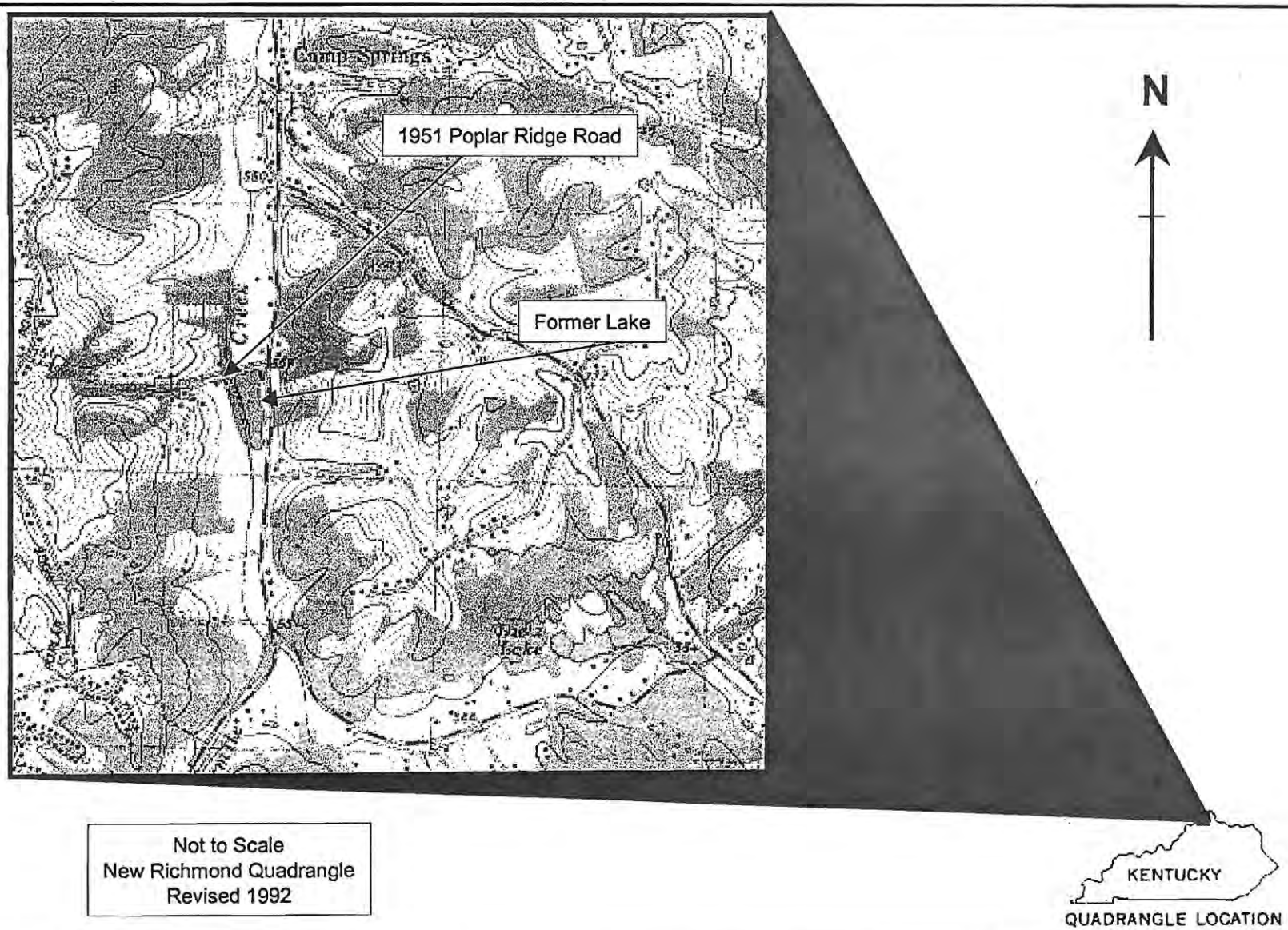
No DNAPL plume was discovered in the deep groundwater samples. A vertical profile of constituent concentrations in groundwater in the source area shows the highest concentrations of VOCs in the 16-18 foot interval with very few and relatively small detections of contaminants deeper than 20 feet below ground surface (bgs). Groundwater sampling results indicate that the 1,1,1-trichloroethane (1,1,1-TCA) plume is limited in

extent to the on-site property but that its daughter product plumes 1,1-DCE, 1,1-DCA, and chloroethane are migrating to the northeast from the source area. The 1,1-DCE and chloroethane plumes are the most far-reaching and have been detected off-site in concentrations exceeding the established criteria for the site (the United States Environmental Protection Agency [USEPA] Maximum Contaminant Level [MCL] for drinking water of 7 micrograms per liter (µg/L) for 1,1-DCE and the EPA Region 9 PRG of 4.6 µg/L for chloroethane) on the Campbell County Property to the east of, and across the creek from, the site.

Analysis of soil and groundwater samples from the monitoring wells installed on the property to the south and of soil samples from the property to the west indicate no detectable concentrations of contaminants.

Water level information collected at the Site indicates that groundwater flows under the creek during low groundwater stages and therefore, the creek does not always serve as a groundwater divide as previously thought.

The groundwater geochemical data indicate that organic substrate injection is an appropriate remedy to pilot test at the site. The higher concentrations of ethane, ethene, and methane in groundwater samples from MW-7 and MW-16 in and near the source area compared to the concentrations of the same gases in the groundwater samples further from the source area indicate that natural attenuation is already occurring.



Parsons Cincinnati, Ohio 45241 513-326-3040	**Figure 1:** **Site Location Map**	Rohm and Haas Company Melbourne Kentucky March 2002

SECTION 1.0
INTRODUCTION

This work plan provides a detailed discussion of tasks to be conducted as part of the Phase III Field Investigation at the Morton International, Inc. (Morton) leased property at 199C Poplar Ridge Road, Melbourne, Kentucky (Figure 1). Application guns containing a polymer sealant were cleaned at the site between 1982 and 2001. These guns were cleaned at the rear of the property using chlorinated solvents. Subsequent to the purchase of Morton by Rohm & Haas Company, Parsons conducted Phase I and limited Phase II environmental site assessments (ESAs) of the property to evaluate the potential effects of solvent use at the facility on soil and groundwater quality in the area.

Volatile organic compounds (VOCs) were detected in groundwater samples collected during initial site assessment activities in September 2000. The results of the initial investigation were presented to Rohm and Haas in a report entitled: *Combined Phase I and Phase II Environmental Site Assessment* (November 2000). As a result of the initial investigation, a subsequent environmental site assessment was conducted in November and December 2001 to identify potential source areas for the VOCs detected in groundwater during the September 2000 investigation. In addition, as part of the 2001 study, groundwater samples were collected to evaluate the potential for migration of these compounds within the saturated zone. As part of this investigation, twenty-eight soil borings were advanced at the Facility. Ten of these were abandoned, nine were completed as temporary piezometers, and nine were completed as permanent monitoring wells. The results of the 2001 investigation were presented to Rohm and Haas in a report entitled: *Site Assessment, Morton International, Melbourne, Kentucky Facility* (March 2002).

Groundwater level information was collected during the 2001 investigation from both the temporary piezometers and the permanent monitoring wells. In general, groundwater flow is to the east-northeast at the Site toward Four Mile Creek. Based on water level data collected from Four Mile Creek, it appears that groundwater within the unconsolidated material discharges to the creek. In addition, groundwater flow east of

Four Mile Creek is to the northwest toward Four Mile Creek. As a result, the creek is a hydraulic divide in this area (Figure 2).

Analytical results from the 2001 investigation indicated that seven VOCs were present in soil, including 1,1,1-trichloroethane (1,1,1-TCA) and its daughter products 1,1 dichloroethene (1,1-DCE), and 1,1-dichloroethane (1,1-DCA). The largest concentrations of these compounds were detected in samples collected from under the concrete pad west of the maintenance portion of the barn.

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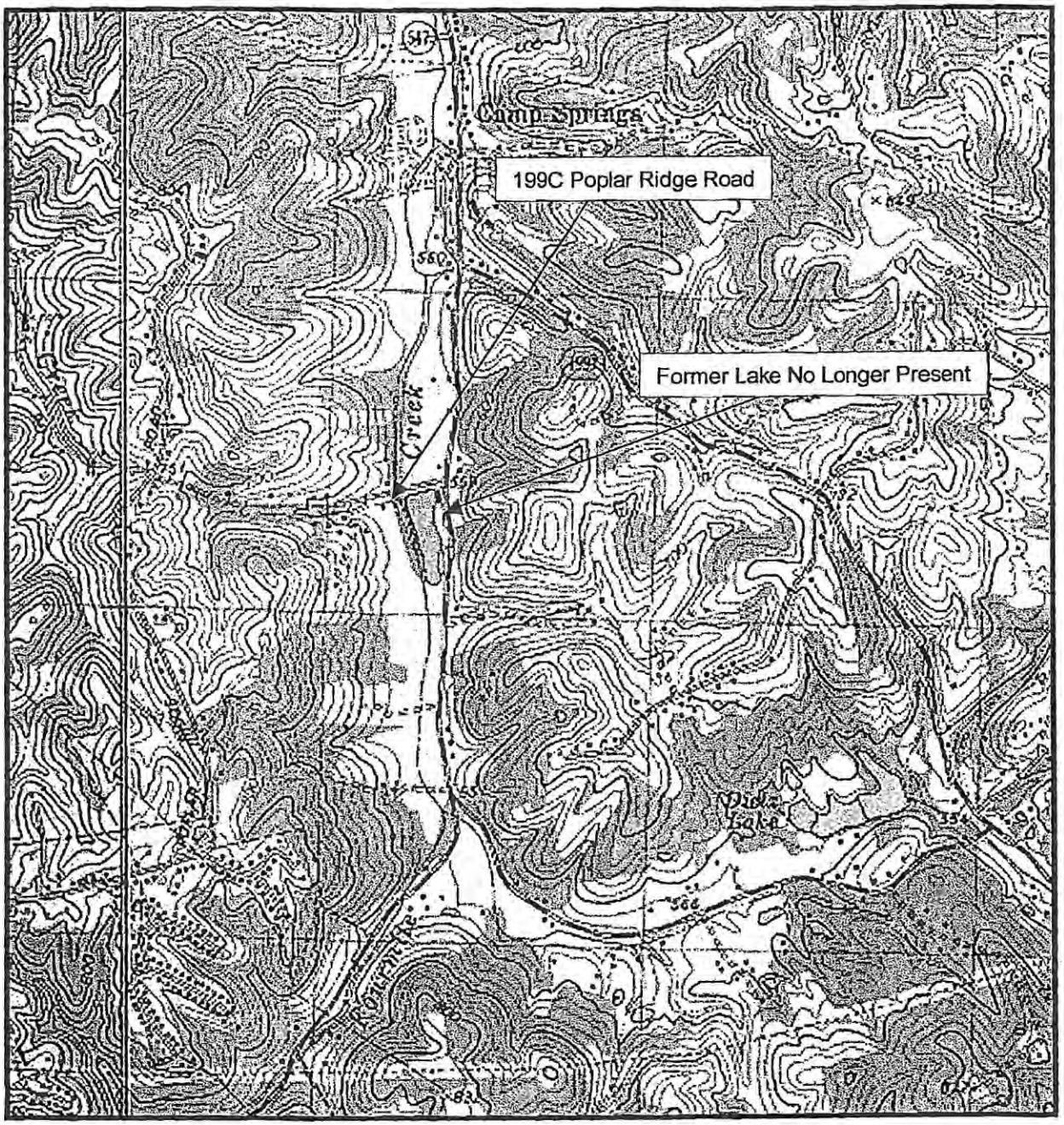
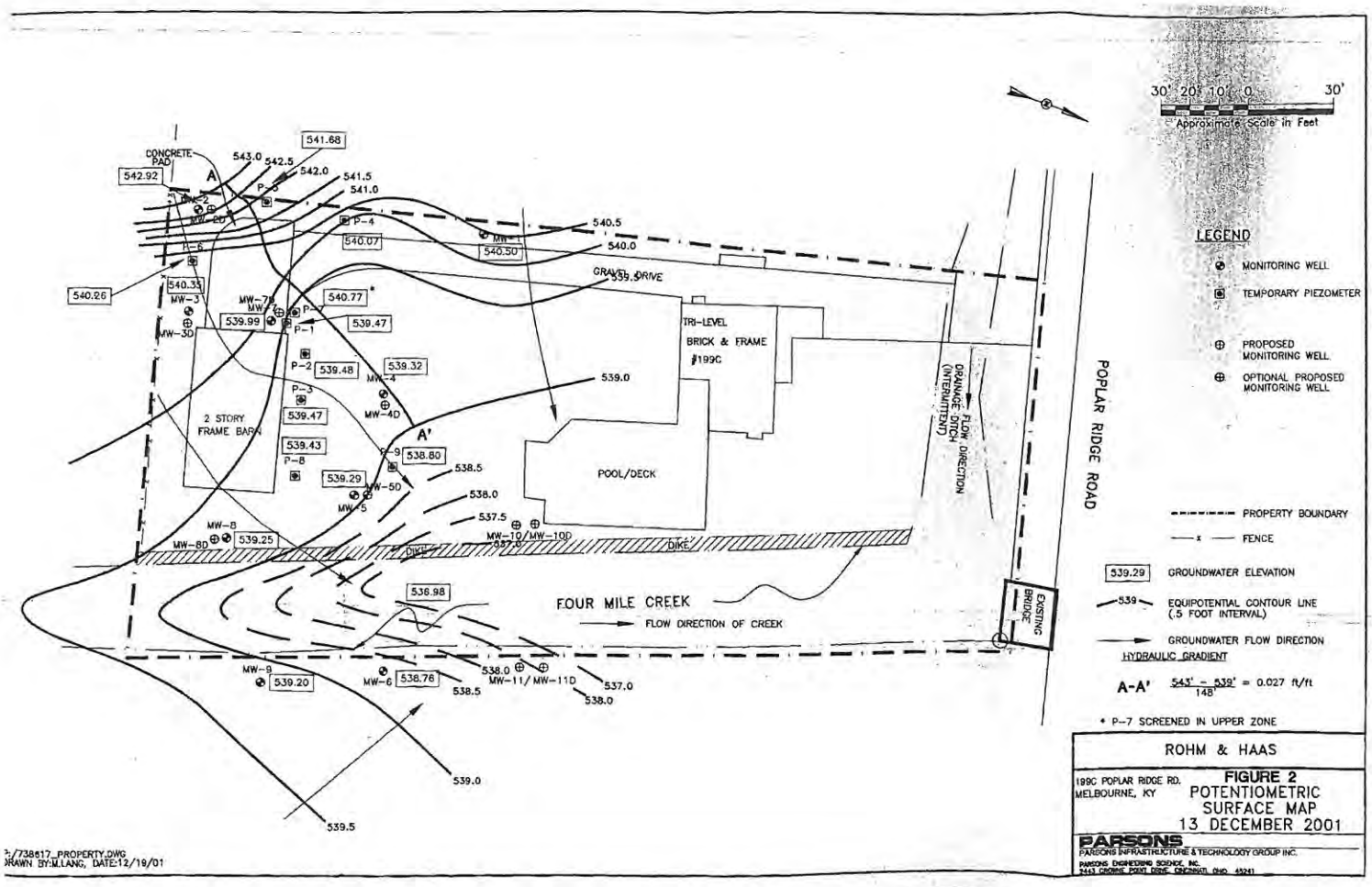


Not to Scale
New Richmond Quadrangle
Revised 1992

QUADRANGLE LOCATION

Parsons Engineering Science Cincinnati, Ohio 45241 515-326-3040	**Figure 1:** **Site Location Map**	Rohm & Haas Company Melbourne, Kentucky July 2002



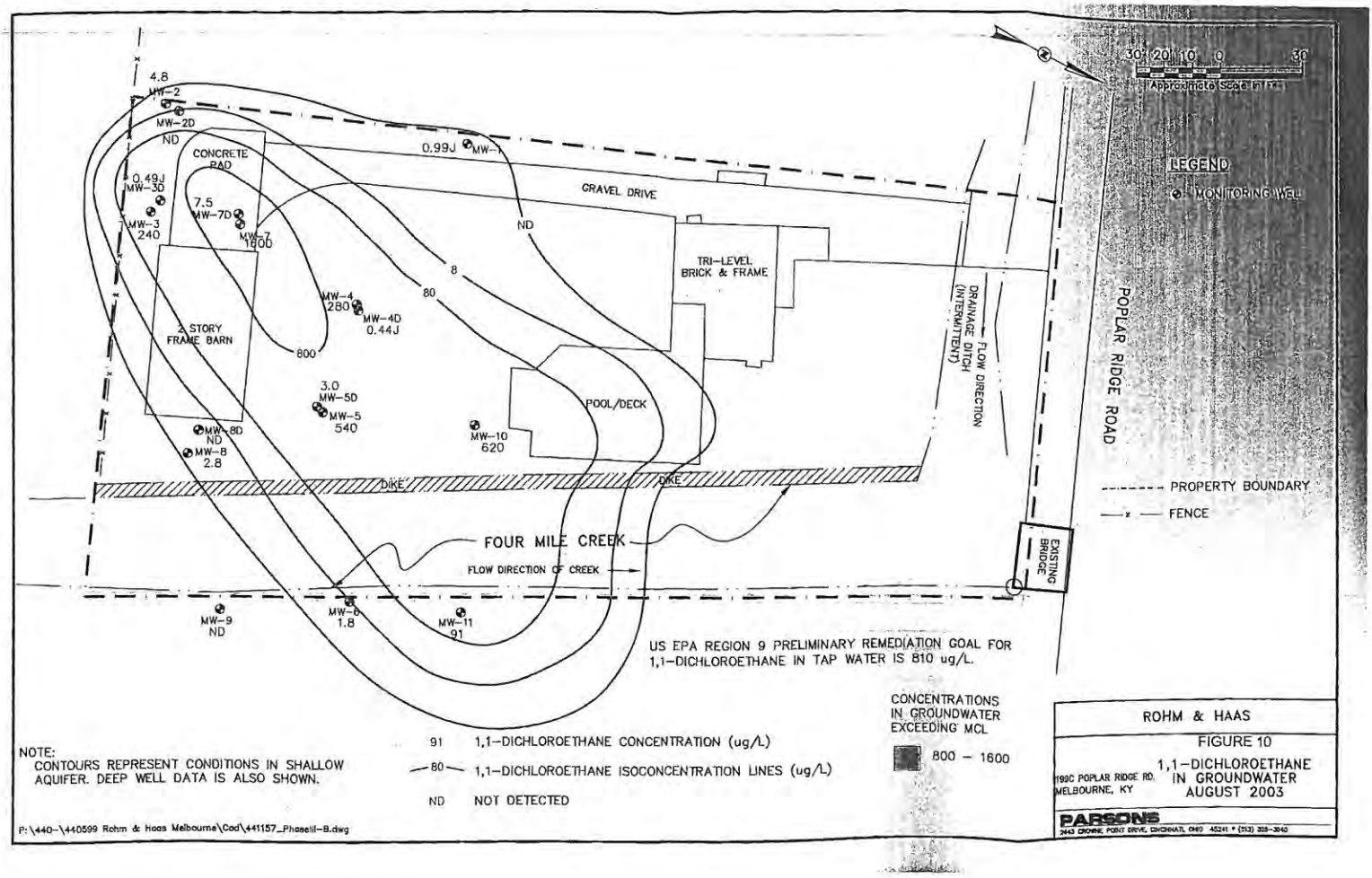
ROHM & HAAS

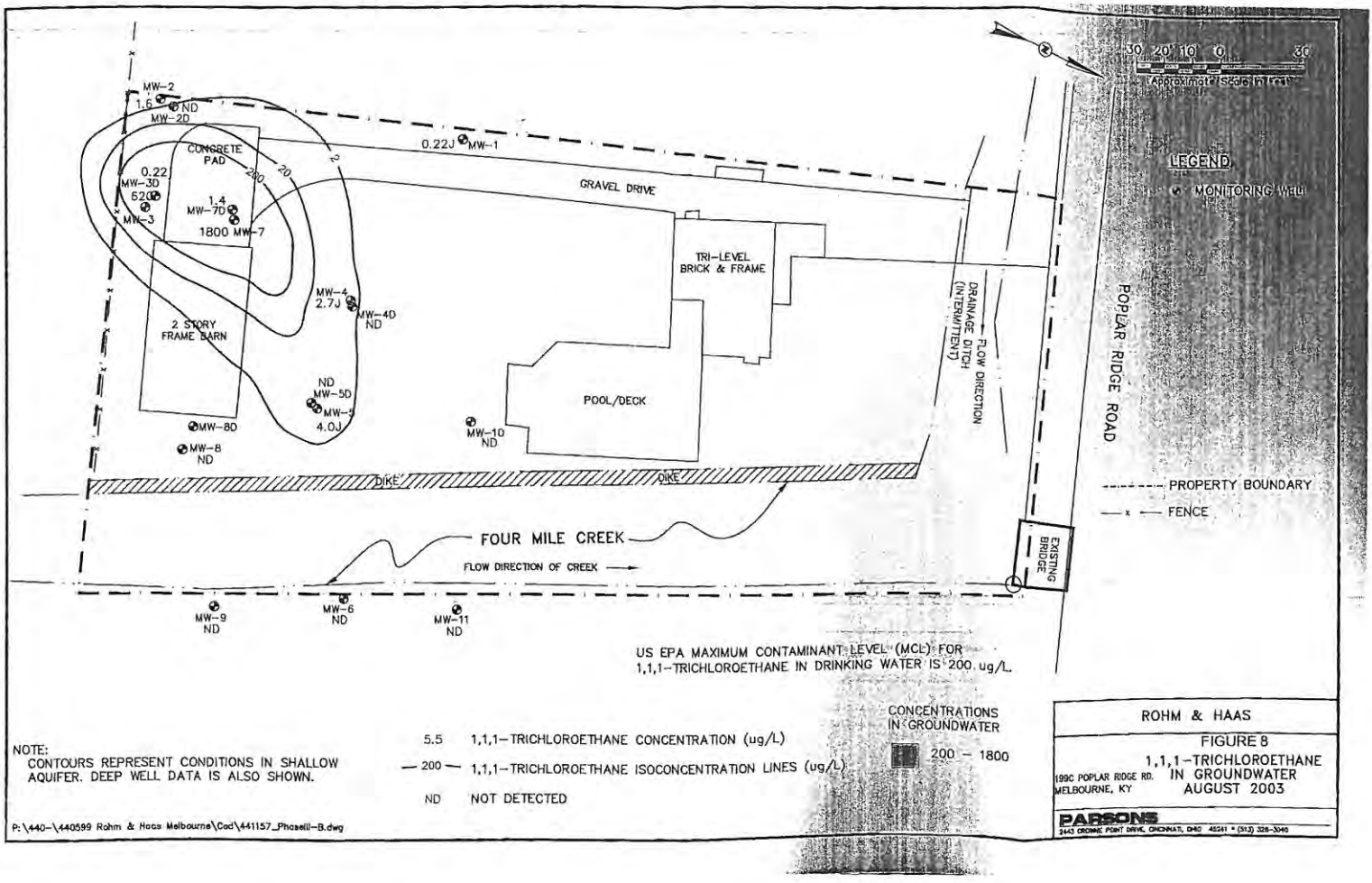
199C POPLAR RIDGE RD.
MELBOURNE, KY

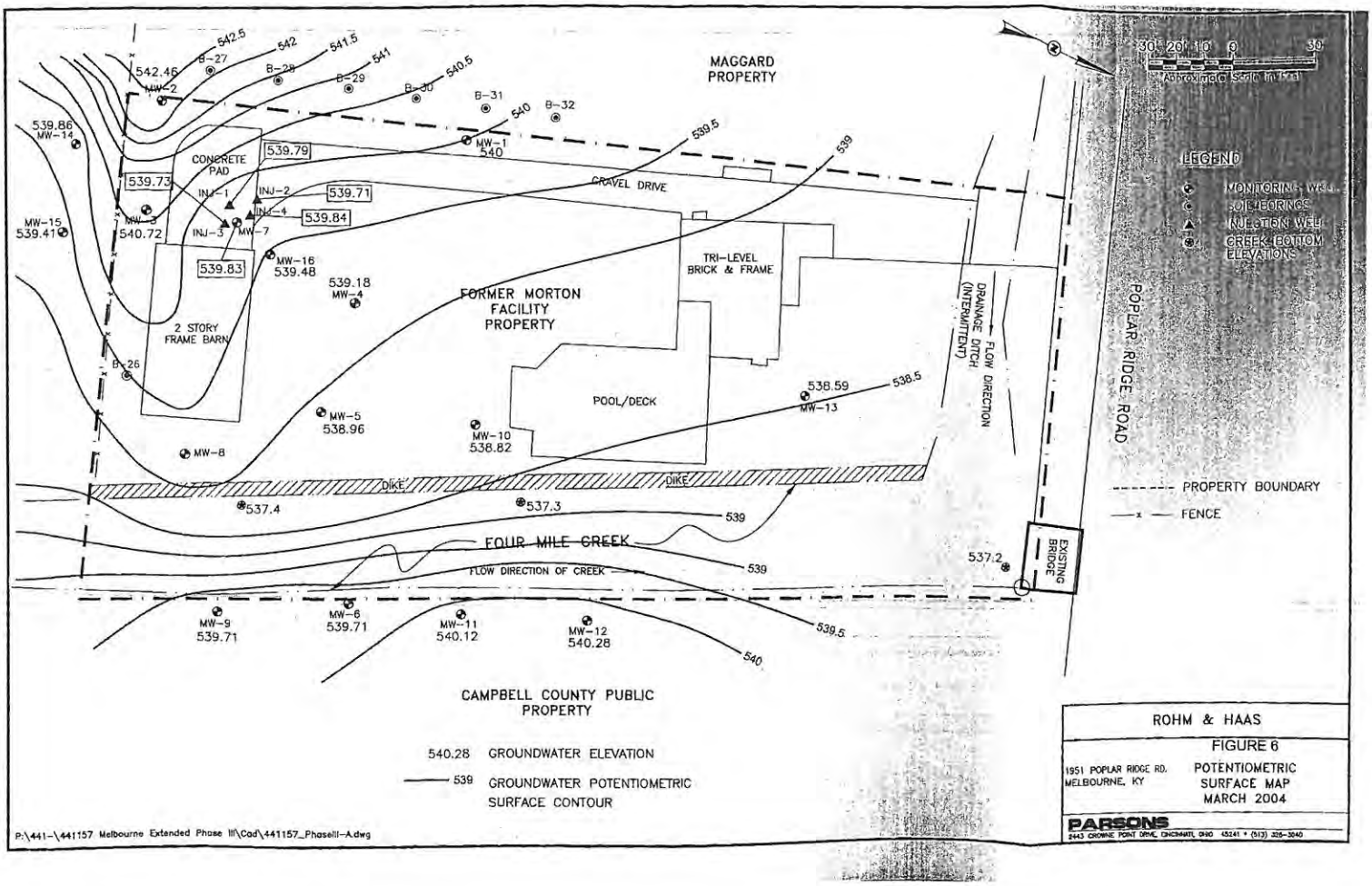
FIGURE 2
POTENTIOMETRIC SURFACE MAP
13 DECEMBER 2001

PARSONS
PARSONS INFRASTRUCTURE & TECHNOLOGY GROUP INC.
PARSONS ENGINEERING SCIENCE, INC.
2433 CROSPIE POINT DRIVE, CINCINNATI, OHIO 45241

J:/738617_PROPERTY.DWG
DRAWN BY:M.LANG, DATE:12/19/01


4.8
MW-2
MW-2D
ND
CONCRETE PAD
0.49J
MW-3D
7.5
MW-7D
MW-3
240
MW-7
1600
0.99J
MW-1
ND
GRAVEL DRIVE
TRI-LEVEL BRICK & FRAME
8
80
800
MW-4
280
MW-4D
0.44J
2 STORY FRAME BARN
3.0
MW-5D
MW-5
540
MW-10
620
POOL/DECK
MW-8D
ND
MW-8
2.8
DIKE
DIKE
FOUR MILE CREEK
FLOW DIRECTION OF CREEK
MW-9
ND
MW-6
1.8
MW-11
91
DRAINAGE DITCH (INTERMITTENT)
FLOW DIRECTION
POPLAR RIDGE ROAD
EXISTING BRIDGE
30 20 10 0 30
Approximate Scale in Ft.
LEGEND
MONITORING WELL
PROPERTY BOUNDARY
FENCE
US EPA REGION 9 PRELIMINARY REMEDIATION GOAL FOR 1,1-DICHLOROETHANE IN TAP WATER IS 810 ug/L.
CONCENTRATIONS IN GROUNDWATER EXCEEDING MCL
800 - 1600
91 1,1-DICHLOROETHANE CONCENTRATION (ug/L)
80 1,1-DICHLOROETHANE ISOCONCENTRATION LINES (ug/L)
ND NOT DETECTED
NOTE:
CONTOURS REPRESENT CONDITIONS IN SHALLOW AQUIFER. DEEP WELL DATA IS ALSO SHOWN.
ROHM & HAAS
FIGURE 10
1,1-DICHLOROETHANE IN GROUNDWATER
AUGUST 2003
1199C POPLAR RIDGE RD. MELBOURNE, KY
PARSONS
2433 CROSPE POINT DRIVE, CINCINNATI, OHIO 45241 • (513) 326-3040
P:\440-\440599 Rohm & Haas Melbourne\Cad\441157_PhaseII-B.dwg


MW-2
1.6
ND
MW-2D
0.22J
MW-1
CONCRETE PAD
GRAVEL DRIVE
0.22
MW-3D
620
MW-3
1.4
MW-7D
1800
MW-7
MW-4
2.7J
MW-4D
ND
2 STORY FRAME BARN
TRI-LEVEL BRICK & FRAME
ND
MW-5D
MW-5
4.0J
MW-8D
MW-8
ND
MW-10
ND
POOL/DECK
DRAINAGE DITCH (INTERMITTENT)
FLOW DIRECTION
POPLAR RIDGE ROAD
DIKE
DIKE
FOUR MILE CREEK
FLOW DIRECTION OF CREEK
EXISTING BRIDGE
MW-9
ND
MW-6
ND
MW-11
ND
30 20 10 0 30
APPROXIMATE SCALE IN FEET
LEGEND
MONITORING WELL
PROPERTY BOUNDARY
FENCE
US EPA MAXIMUM CONTAMINANT LEVEL (MCL) FOR 1,1,1-TRICHLOROETHANE IN DRINKING WATER IS 200 ug/L.
CONCENTRATIONS IN GROUNDWATER
200 - 1800
NOTE:
CONTOURS REPRESENT CONDITIONS IN SHALLOW AQUIFER. DEEP WELL DATA IS ALSO SHOWN.
5.5 1,1,1-TRICHLOROETHANE CONCENTRATION (ug/L)
200 1,1,1-TRICHLOROETHANE ISOCONCENTRATION LINES (ug/L)
ND NOT DETECTED
P:\440-\440599 Rohm & Haas Melbourne\Cad\441157_Phase II-B.dwg
ROHM & HAAS
FIGURE 8
1,1,1-TRICHLOROETHANE IN GROUNDWATER
AUGUST 2003
1990 POPLAR RIDGE RD.
MELBOURNE, KY
PARSONS
2433 CROSME POINT DRIVE, CINCINNATI, OHIO 45241 • (513) 326-3040


MAGGARD PROPERTY
FORMER MORTON FACILITY PROPERTY
CAMPBELL COUNTY PUBLIC PROPERTY
CONCRETE PAD
GRAVEL DRIVE
TRI-LEVEL BRICK & FRAME
2 STORY FRAME BARN
POOL/DECK
DRAINAGE DITCH (INTERMITTENT)
FLOW DIRECTION
POPLAR RIDGE ROAD
EXISTING BRIDGE
DIKE
FOUR MILE CREEK
FLOW DIRECTION OF CREEK
542.46
539.86
539.79
539.73
539.71
539.84
539.83
540.72
539.41
539.48
539.18
538.96
538.82
538.59
538.5
537.4
537.3
537.2
539.71
540.12
540.28
540
539.5
539
LEGEND
MONITORING WELL
OIL BORINGS
INJECTION WELL
CREEK BOTTOM ELEVATIONS
PROPERTY BOUNDARY
FENCE
Approximate Scale in Feet
540.28 GROUNDWATER ELEVATION
539 GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR
ROHM & HAAS
FIGURE 6
1951 POPLAR RIDGE RD. MELBOURNE, KY
POTENTIOMETRIC SURFACE MAP MARCH 2004
PARSONS
2443 CROWNE POINT DRIVE, CINCINNATI, OHIO 45241 • (513) 326-3040
P:\441-\441157 Melbourne Extended Phase III\Cad\441157_PhaseIII-A.dwg

APPENDIX B

ARCHAEOLOGICAL SURVEY

CULTURAL RESOURCE SURVEY

CULTURAL HISTORIC BASELINE SURVEY

TREE IMPACT ASSESSMENT

Contract Publication Series 09-255

A CULTURAL RESOURCE SURVEY OF THE PROPOSED ASH STREET PUMP STATION AND FORCE MAIN PROJECT IN CAMPBELL COUNTY, KENTUCKY

by
Russell S. Quick, Ph.D.

With a contribution by Alan Higgins

Prepared for

and

Kentucky Infrastructure Authority
Office of the Governor

Prepared by

cra
cultural resource analysts, inc

Kentucky | West Virginia | Ohio
Wyoming | Illinois | Indiana | Louisiana | Tennessee
New Mexico | Virginia | Colorado | Maryland

Contract Publication Series 09-255

A CULTURAL RESOURCE SURVEY OF THE PROPOSED ASH STREET PUMP STATION AND FORCE MAIN PROJECT IN CAMPBELL COUNTY, KENTUCKY

By Russell S. Quick, Ph.D.
With a contribution by Alan Higgins, MS

Prepared for

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801 Corporate Drive
Lexington, Kentucky 40503
Phone: (859) 223-3999
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Prepared by

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Phone: (859) 252-4737
Fax: (859) 254-3747
Email: cmniquette@crai-ky.com
CRA Project No.: K09G003

Charles M. Niquette, RPA
Co-Principal Investigator

Andrew P. Bradbury, RPA
Co-Principal Investigator

August 8, 2011

Lead Agency: Kentucky Infrastructure Authority
OSA Project Registration No.: FY10_6237

ABSTRACT

On November 15–18, 2010, and May 2–4, 2011, Cultural Resource Analysts, Inc., personnel conducted a cultural resource survey of the proposed corridor for a force main sewer line in Campbell County, Kentucky. The survey was conducted at the request of Joe Henry of GRW Engineers, Inc., in Lexington, Kentucky, on behalf of Sanitation District No. 1 of Northern Kentucky. The project area begins at an existing pump station adjacent to Mary Ingles Highway in Silver Grove, Kentucky, encompasses the location of the proposed new pump station on Ash Street, and continues south-southeast, paralleling Four Mile Road through the community of Camp Springs to the existing Riley Road Pump Station northeast of the community of Alexandria. The proposed project area consisted of approximately 32 ha (79 acres). Prior to conducting the field research, a records review was conducted at the Office of State Archaeology. The review indicated that no archaeological sites and no investigations had been documented within the project area. Survey methods, which included intensive pedestrian survey supplemented by shovel testing and auger cores, varied according to topographic setting and past and current land use practices. Most of the proposed right-of-way crossed farmland and residential areas, but some portions passed through commercial properties. Some portions of the project area were extensively disturbed by previous construction or landscaping activities, confirmation of which only required visual inspection and randomly placed shovel tests.

No archaeological sites were documented during this survey; however, the proposed force main passes through several areas with standing structures over 50 years of age. These structures (Cultural Historic Sites 1–39) were documented as historic resources either individually or in groups. One of these sites (Site 36) is a contributing element of a site listed on the National Register of Historic Places. The force main in this area will be bored beneath the existing structures and, therefore, will not have any adverse visual or physical effect to this historic property. The other resources are recommended as not eligible for listing on the National Register of Historic Places. Therefore, cultural resource clearance for the proposed project is recommended.

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LIST OF TABLES

I. INTRODUCTION

On November 15–18, 2010, and May 2–4, 2011, Cultural Resource Analysts, Inc. (CRA), personnel conducted a cultural resource survey of the proposed corridor for a force main sewer line in Campbell County, Kentucky (Figure 1). The survey was conducted at the request of Joe Henry of GRW Engineers, Inc. (GRW), in Lexington, Kentucky, on behalf of Sanitation District No. 1 of Northern Kentucky. The project area begins at an existing pump station adjacent to Mary Ingles Highway in Silver Grove, Kentucky, encompasses the location of the proposed new pump station on Ash Street, and continues south-southeast, paralleling Four Mile Road through the community of Camp Springs to the existing Riley Road Pump Station northeast of the community of Alexandria. The proposed project area consisted of approximately 32 ha (79 acres). Russell Quick supervised the fieldwork and was assisted by Karen Taylor and Ken Case. Approximately 90 person hours were required to complete the fieldwork. Geographic Information Systems (GIS) data requested by CRA on November 10, 2009, was returned on November 17, 2009. The results were researched by Heather Barras of CRA at the OSA on November 18, 2009. The OSA project registration number is FY10_6237. The scope of work is included as Appendix A.

Project Description

Sanitation District No. 1 of Northern Kentucky proposes to construct a new pump station and force main sewer line between an existing pump station adjacent to Mary Ingles Highway in Silver Grove, Kentucky, continuing south-southeast and paralleling Four Mile Road through the community of Camp Springs to the existing Riley Road Pump Station northeast of the community of Alexandria (Figures 2 and 3). A total area of approximately 32 ha (79 acres) was surveyed.

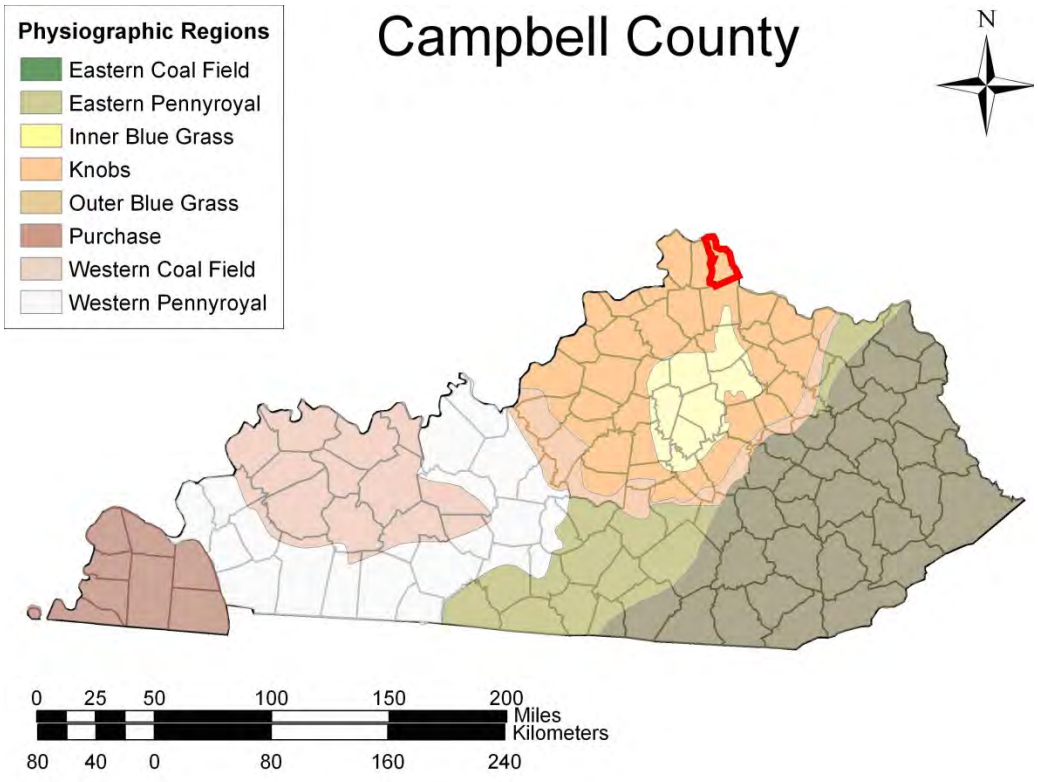

Figure 1. Map of Kentucky showing the location of Campbell County.

Purpose of Study

The study was conducted to comply with Section 106 of the National Historic Preservation Act. This project requires a Section 404 permit under the Clean Water Act from the United States Army Corps of Engineers (USACE) and is therefore considered an undertaking subject to Section 106 review.

The purpose of this survey was to assess any potential effects the proposed connector might have on identified cultural resources. To do this, we followed 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;

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

identify aboveground resources 50 years of age or older located in the project easement and viewshed and evaluate their eligibility for listing in the NRHP.

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). Cultural material, field notes, records, and site photographs will be curated with the William S. Webb Museum of Anthropology, University of Kentucky, in Lexington.

Summary of Findings

Prior to conducting the field research, a records review was conducted at OSA. The review indicated that no archaeological sites had previously been recorded and no archaeological surveys had previously taken place within the current project area.

No archaeological sites were documented during this survey; however, the proposed force main passes through several areas with standing structures over 50 years of age. These structures (Sites 1–39) were documented as historic resources either individually or in groups. One of these sites (Site 36) is a contributing element of a site listed on the National Register of Historic Places. The force main in this area will be bored beneath the existing structures and therefore will not have any adverse visual or physical effect on this historic property. The other resources are recommended as not eligible for listing on the National Register of Historic Places (NRHP); therefore, cultural resource clearance for the proposed project is recommended.

II. ENVIRONMENTAL SETTING

This section of the report provides a description of the modern and prehistoric environment and considers those aspects of the physical environment that may have influenced the location and methods for finding archaeological sites. The discussion of the modern environment specifically provides information regarding the topography, soils, vegetation, and climate. In addition, the general prehistoric environmental conditions are discussed to place the archaeological record of the region within a relative environmental context.

Newport, KY-OH 1983 (Photorevised 1987)
USGS 7.5 minute series digital topographic quadrangle. Map B42, Governor's Office for Technology, Office of Geographic Information.

Withamsville, OH-KY 1996
USGS 7.5 minute series digital topographic quadrangle. Map B43, Governor's Office for Technology, Office of Geographic Information.

CH Sites 2-17

CH Sites 18-35

CH Site 1

CH Site 38

CH Site 37

Project Area

QUADRANGLE LOCATION

0 1000 2000 feet

0 300 600 meters

LEGEND

Cultural Historic Survey Site

K09G003 (04AUG11) DMW

Figure 2a. Location of project area on topographic quadrangle.

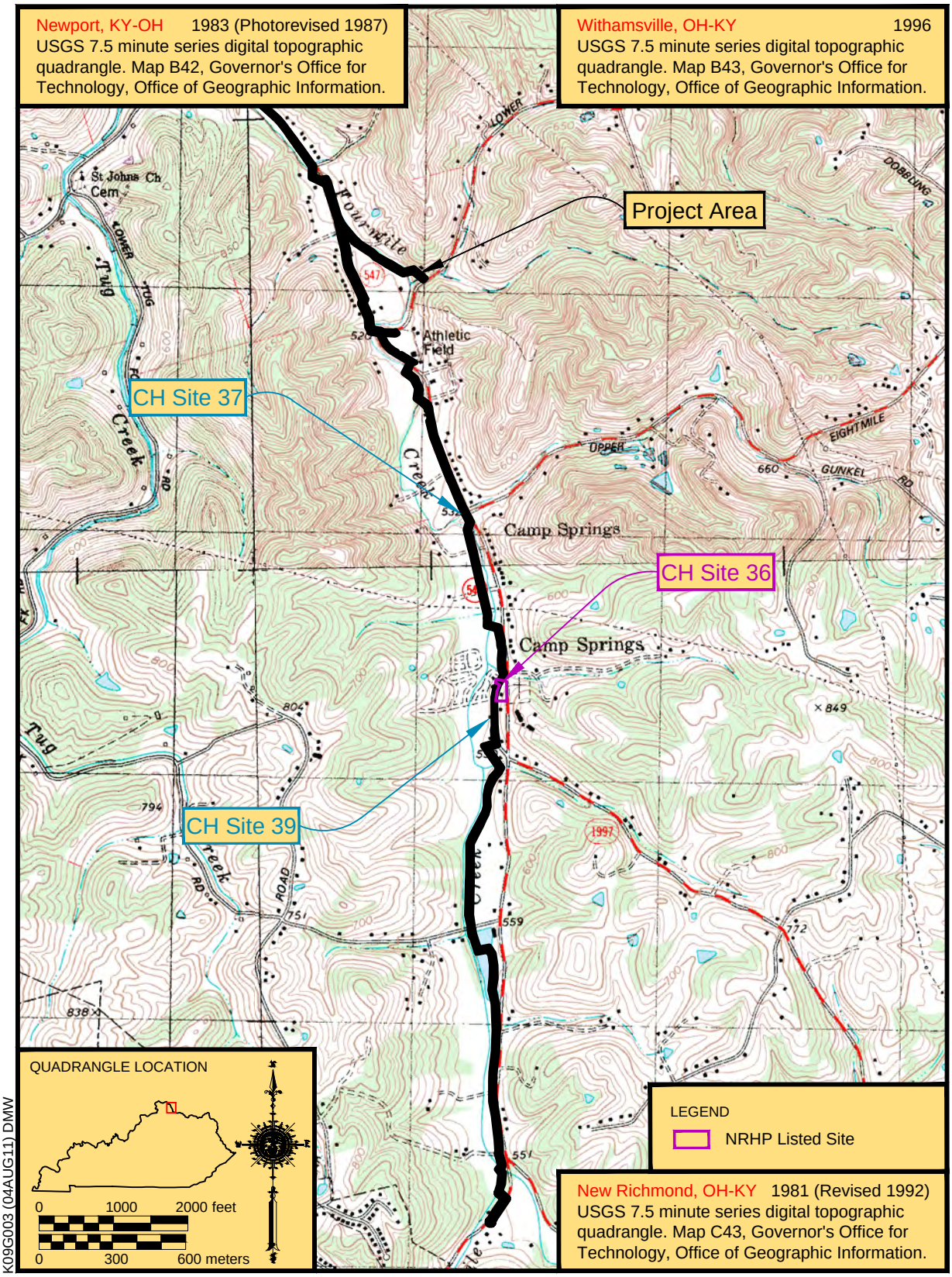

Figure 2b. Location of project area on topographic quadrangle.

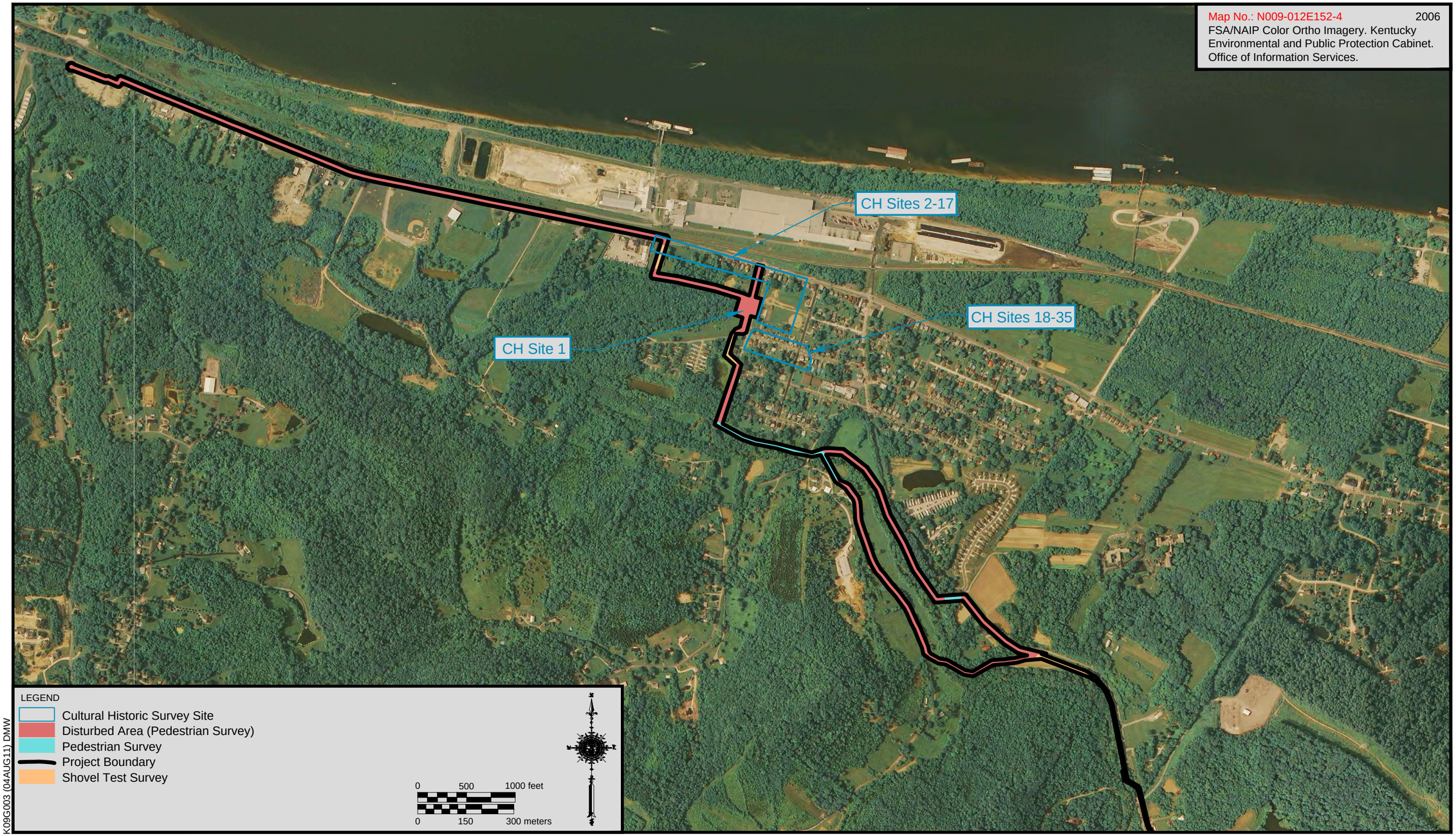

Figure 3a. Project area plan map.

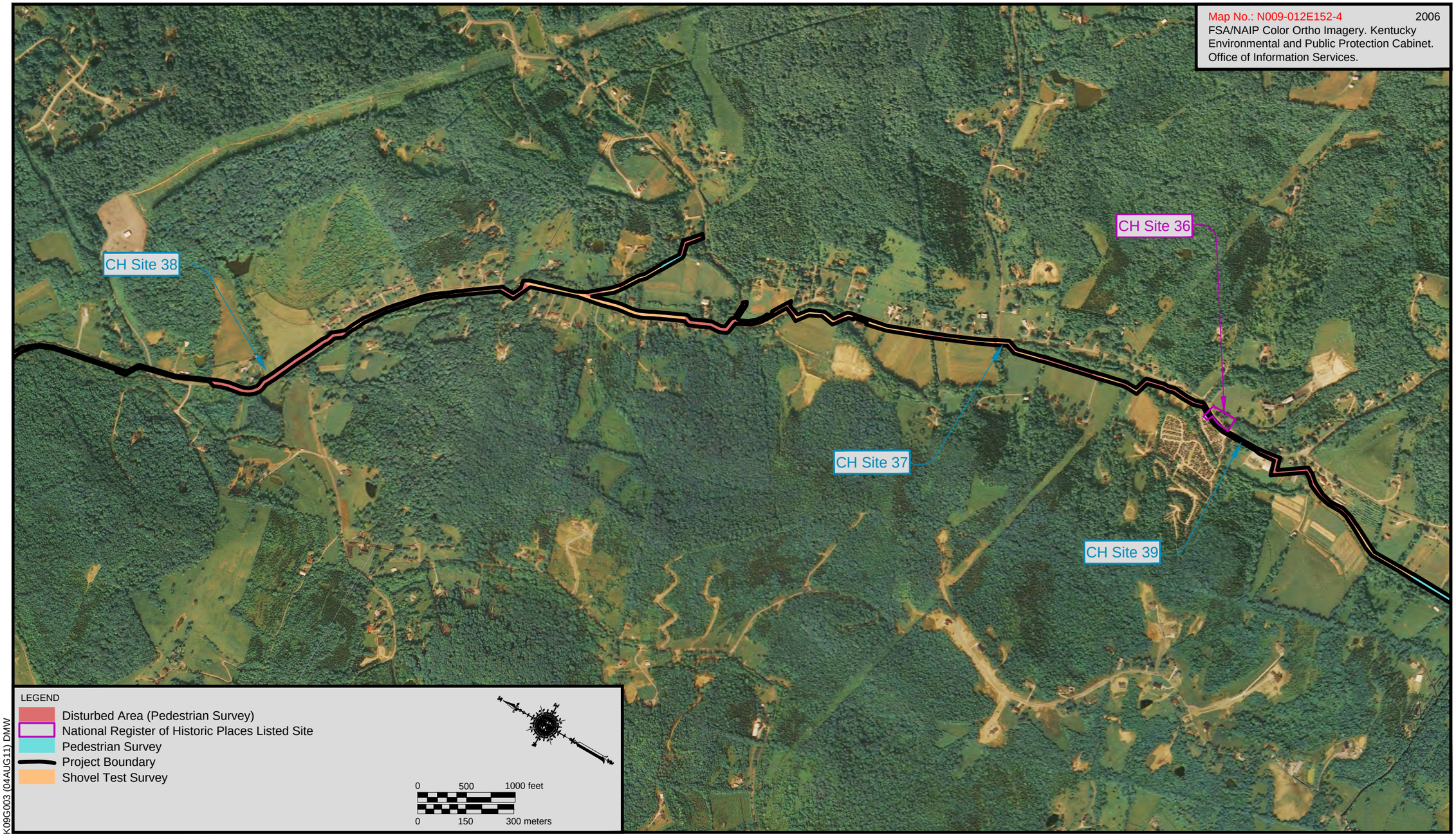

Figure 3b. Project area plan map.

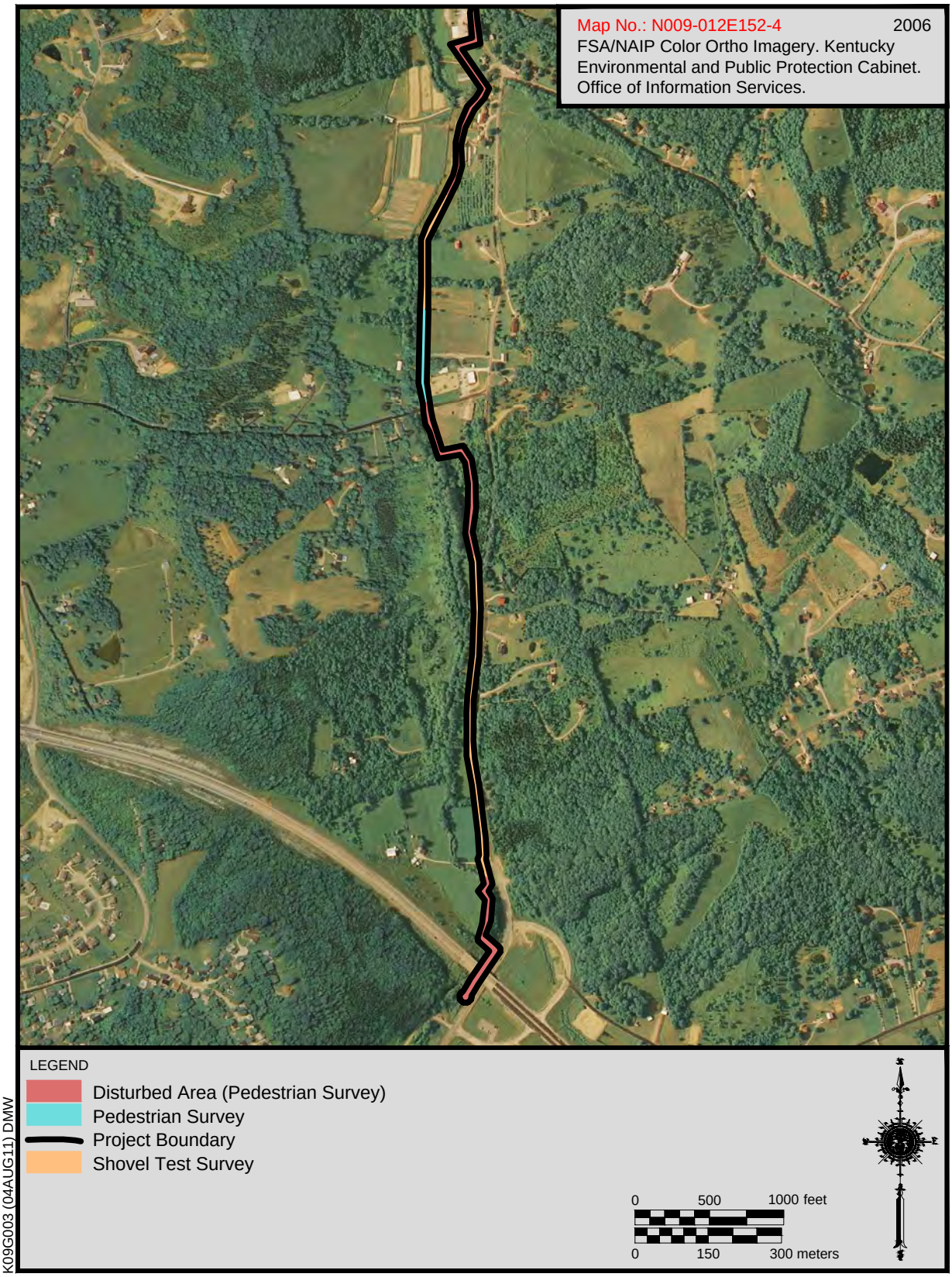

Figure 3c. Project area plan map.

Topography

The project area is located in the eastern portion of Campbell County in the Outer Bluegrass region of Kentucky (McGrain and Currens 1978). The topography of the Outer Bluegrass is characterized by rolling, high-grade limestone uplands that are slightly to moderately dissected (McGrain and Currens 1978). The majority of the project area consisted of floodplains and terraces with a few ridgetop, hillside, and dissected upland settings. Slopes ranged from nearly level to moderate. Elevations within the project area ranged between approximately 162 and 190 m (530 and 623 ft) above mean sea level (AMSL) (see Figures 2 and 3). The project area lies within the Licking River drainage (Figure 4).

Soils

Five soil associations are mapped within Campbell County: the Eden-Cynthiana, Faywood-Nicholson, Rossmoyne-Jessup, Licking-Captina, and Wheeling-Huntington-Alluvial land, steep (Weisenberger et al. 1973). Each soil association is comprised of one or more soil series. Every soil association and soil series represented within the project area is described in more detail below.

The proposed project area was located primarily within the Licking-Captina and Wheeling-Huntington-Alluvial land soil associations. The Licking-Captina association is found on stream terraces and is comprised of gently sloping soils with a clayey to loamy subsoil. Wheeling-Huntington-Alluvial land soils are found on stream terraces and bottoms along the Ohio River and some of its tributaries. These soils have loamy subsoil (Weisenberger et al. 1973:5–6).

Fourteen soil series were mapped for the project area (Table 1) and include Ashton, Avonburg, Brashear, Captina, Eden, Egam, Huntington, Lakin, Licking, Lindside, Newark, Nolin, Rossmoyne, and Wheeling (Weisenberger et al. 1973).

The Ashton series (Mollic Hapludalfs) consists of silt loam that is very deep, well drained, and moderately permeable. These soils formed in loamy alluvium on low stream terraces and alluvial fans, and slopes range from 0 to 15 percent. A typical soil profile consists of a dark brown (10YR 3/3) silt loam Ap horizon to a depth of 23 cm (9 in) over a brown (7.5YR 4/4) silt loam BA horizon to a depth of 38 cm (15 in) over a brown (7.5YR 4/4) silt loam Bt horizon. A C horizon extends between 102 and 203 cm (40 and 80 in) (Soil Survey Staff 2011).

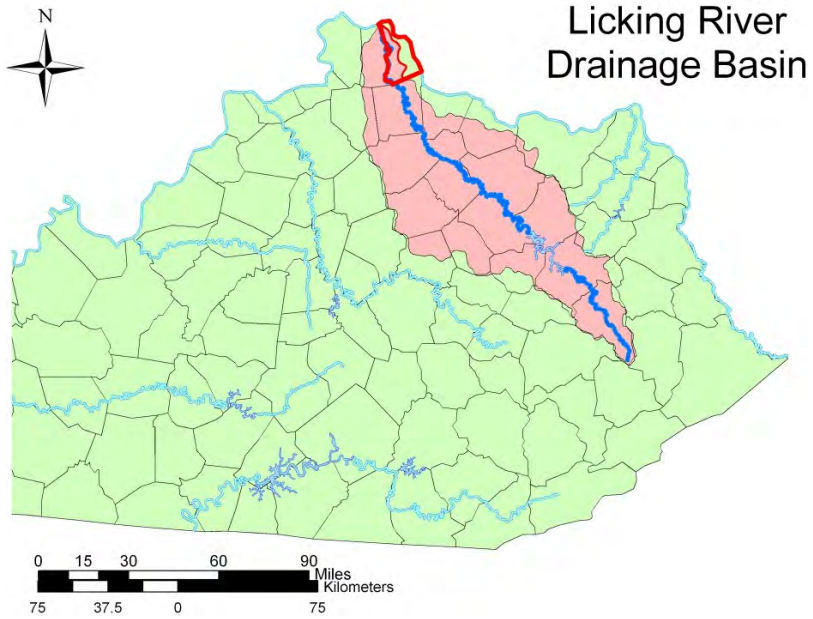

Figure 4. Map of the Licking River drainage basin.

Table 1. Summary of Soil Information for Project Area.

Symbol	Series Name	geomdesc	Taxonomic Order	Age
AsA	Ashton silt loam, 0 to 2 percent slopes (occasionally flooded)	stream terraces on river valleys	Alfisols	late Pleistocene deposits or surfaces
Av	Avonburg silt loam (0 to 4 percent slopes)	flats on uplands	Alfisols	late Pleistocene deposits or surfaces
BrC	Brashear silty clay loam, 6 to 12 percent slopes	ridges on uplands	Alfisols	late Pleistocene deposits or surfaces
BsD3	Brashear silty clay, 12 to 20 percent slopes, severely eroded	hills on uplands	Alfisols	late Pleistocene deposits or surfaces
CaB	Captina silt loam, 2 to 6 percent slopes	stream terraces on river valleys	Ultisols	Pleistocene to late Pliocene or older
EdE2	Eden silty clay loam, 20 to 35 percent slopes, eroded	hills on uplands	Alfisols	late Pleistocene deposits or surfaces
Eg	Egam silty clay loam, (woolper 0 to 4 percent slopes)	flood plains on valleys	Mollisols	late Wisconsin age deposits or surfaces
Hu	Huntington silt loam (0 to 4 percent slopes, occasionally flooded)	flood plains on river valleys	Mollisols	Holocene or late Pleistocene deposits
LaC	Lakin loamy fine sand, 2 to 12 percent slopes	stream terraces on river valleys	Entisols	on surfaces of any age from recent Historic to Pliocene (Udipsamments are generally on late Pleistocene or younger age)
LkA	Licking silt loam, 0 to 2 percent slopes	stream terraces on valleys	Alfisols	late Pleistocene deposits or surfaces
LkB	Licking silt loam, 2 to 6 percent slopes	stream terraces on valleys	Alfisols	late Pleistocene deposits or surfaces
LlD	Licking silty clay loam, 12 to 20 percent slopes	stream terraces on valleys	Alfisols	late Pleistocene deposits or surfaces
LlC	Licking silty clay loam, 6 to 12 percent slopes	stream terraces on valleys	Alfisols	late Pleistocene deposits or surfaces
Ln	Lindside silt loam (0 to 3 percent slopes, occasionally flooded)	flood plains on valleys	Inceptisols	developed in Holocene or late Pleistocene age deposits
Nk	Newark silt loam (0 to 2 percent slopes, occasionally flooded)	flood plains on river valleys	Inceptisols	developed in late Pleistocene or younger deposits
No	Nolin silt loam (0 to 3 percent slopes, occasionally flooded)	flood plains on river valleys	Inceptisols	Holocene or late Pleistocene deposits
RsB	Rossmoyne silt loam, 0 to 6 percent slopes	ridges on uplands	Alfisols	late Pleistocene age deposits
AlD	Wheeling (Alluvial land, steep, 25 to 30 percent slopes, rarely flooded)	stream terraces on river valleys	Alfisols	late Pleistocene deposits or surfaces
WhA	Wheeling silt loam, 0 to 2 percent slopes	stream terraces on river valleys	Alfisols	late Pleistocene deposits or surfaces
WhB	Wheeling silt loam, 2 to 6 percent slopes	stream terraces on river valleys	Alfisols	late Pleistocene deposits or surfaces

Avonburg series (Fragic Glossaqualfs) soils consist of very deep, somewhat poorly drained silt loams. These soils are found on the summits of loess-covered till plains and were formed in loess and the underlying paleosol and till. A typical profile consists of a yellowish brown (10YR 5/4) silt loam Ap horizon to a depth of 28 cm (11 in) over a brownish yellow (10YR 6/6) silt loam BE horizon to a depth of 53 cm (21 in). These surface soils overlie a complex series of four Bt horizons to a total depth of 229 cm (90 in) (Soil Survey Staff 2011).

The Brashear series (Typic Hapludalfs) consists of deep, well drained and moderately well drained soils that are moderately permeable and were formed in the residuum or colluvium of interbedded shale, siltstone, and limestone. These soils are typically found on footslopes and benches but can be found on upslopes with slopes ranging from 2 to 20 percent (Soil Survey Staff 2011). A typical profile consists of an Ap horizon between 0 and 18 cm (0 and 7 in) consisting of brown (10YR 4/3) silt loam over two Bt horizons: a yellowish brown (10YR 5/4) silty clay loam Bt1 and a yellowish brown (10YR 5/6) silty clay Bt2 to a total depth of 86 cm (34 in). These Bt horizons are followed by a Bc horizon of yellowish brown (10YR 5/4) silty clay to a depth of 114 cm (45 in) and a light olive brown (2.5Y 5/4) clay C horizon to a depth of 254 cm (100 in) (Soil Survey Staff 2011; Weisenberger et al. 1973:9–10).

Captina series (Typic Fragiudults) consist of very deep, moderately well drained silt loams. They are found on nearly level to moderately sloping uplands and formed in a thin mantle of silt, colluvium, and residuum weathered from limestone, cherty limestone and dolomite, or siltstone. Slopes range from 1 to 15 percent. A typical profile consists of a brown (10YR 4/3) silt loam Ap horizon to a depth of 23 cm (9 in) over a yellowish brown (10YR 5/4) silt loam BE horizon to a depth of 36 cm (14 in). These are followed by a complex series of five Bt horizons to a total depth of 203 cm (80 in) (Soil Survey Staff 2011).

The Eden series (Typic Hapludalfs) consists of moderately deep, well-drained soils that are slowly permeable and that were formed in residuum from interbedded calcareous shale, siltstone, and limestone. These soils are usually found on hillsides and narrow ridgetops with slopes ranging from 2 to 70 percent but are predominantly found on slopes of 20 and 30 percent (Soil Survey Staff 2011). A typical profile contains an Ap horizon between 0 and 15 cm (0 and 6 in) consisting of brown (10YR 4/3) silty clay loam over a Bt horizon characterized by light olive brown (2.5Y 5/4) silty clay with a few fine faint yellowish brown (10YR 5/6) mottles between 15 and 46 cm (6 and 18 in). The Bt horizon also contains 15 percent weathered shale and siltstone fragments. A BC horizon of light olive brown (2.5Y 5/4) flaggy silty clay with common fine faint olive brown (2.5Y 4/4) light yellowish brown (2.5Y 6/4) and olive (5Y 5/3) mottles can be found between 46 and 61 cm (18 and 24 in). The BC horizon also contains 25 percent weathered shale and siltstone fragments. The last two zones of the Eden series profile are a Cr1 horizon of olive gray (5Y 5/2) slightly weathered interbedded calcareous shale and siltstone with some strata of fractured limestone found between 61 and 127 cm (24 and 50 in) over a Cr2 horizon found between 127 and 203 cm (50 and 80 in) characterized by interbedded soft gray (N 5/0) calcareous shales and siltstones and thin-bedded gray hard fossiliferous limestone (Soil Survey Staff 2011; Weisenberger et al. 1973:13–14).

The Egam series (Cumulic Hapludolls) consists of silty clay loam soils that are “very deep, well drained or moderately well drained soils that formed in clayey alluvium on flood plains and in depressions” (Soil Survey Staff 2011). Slopes are typically less than 2 percent but can be as high as 5 percent. A typical profile consists of a dark brown (10YR 3/3) silty clay loam Ap horizon to a depth of 18 cm (7 in) followed by a very dark grayish brown (10YR 3/2) silty clay loam A horizon to a depth of approximately 56 cm (22 in). The subsoil consists of three very dark grayish brown (10YR 3/2) to brown (10YR 4/3) silty

clay Bw horizons to a total depth of 190 cm (75 in) (Soil Survey Staff 2011).

Huntington series soils consist of deep, well drained soils that are on first bottoms along rivers and small creeks. These Hapludoll soils, which are located along the Ohio River, formed in mixed sediment of Holocene or late Pleistocene age that washed from the upper part of the Ohio River basin. Those along the creeks formed in sediment that washed mostly from soils of limestone origin (Soil Survey Staff 2011).

The Lakin series soils (Lamellic Udipsamments) are excessively-drained soils formed from sandy materials deposited by wind or water and are generally found in hummocky areas on stream terraces and uplands along the Ohio River. These soils typically have a dark brown (10YR 3/3) loamy sand Ap-horizon overlying a brown (10Y 4/3) loamy sand A-horizon followed by a dark yellowish brown (10YR 4/4) loamy sand B-horizon (Weisenberger et al. 1973:6, 18; Soil Survey Staff 2011).

Licking series soils (Aquic Hapludalfs) consist of very deep, moderately well drained silt loams. They formed in a silty mantle over clayey lacustrine deposits on terraces and slopes ranging between 0 and 25 percent. A typical profile consists of a brown (10YR 4/3) silt loam Ap horizon to a depth of 18 cm (7 in) over a yellowish brown (10YR 5/6) silt loam BE horizon to a depth of 28 cm (11 in). These near-surface soils overlie a series of 3 Bt horizons to a depth of 91 cm (36 in) over a series of three C horizons to a total depth of 213 cm (84 in) (Soil Survey Staff 2011).

Lindside series (Fluventic Endoaquepts) consists of very deep, moderately well drained soils formed in alluvium washed mainly from lime-influenced soils on uplands. These soils occur on nearly level floodplains. They typically have a dark grayish brown (10YR 4/2) silt loam A-horizon overlying a brown (10YR 4/3) silt loam BA horizon to approximately 43 cm (17 in). A brown (10YR 4/3) silty clay loam Bw-horizon with many fine and medium distinct yellowish red (5YR 4/6) masses of oxidized iron and few fine and medium distinct grayish brown (10YR 5/2) iron depletions commonly underlies these surface soils (Soil Survey Staff 2011).

The Newark series (Fluventic Endoaquepts) soils consist of very deep, somewhat poorly drained soils formed in mixed alluvium from limestone, shale, siltstone, sandstone, and loess (Whitaker and Waters 1986:94). The soil is on nearly level floodplains and in depressions. These soils are widely scattered throughout creek and river valleys and developed in late Pleistocene or younger deposits. Those soils along small creeks formed in sediment that washed mostly from soils of limestone origin, and those in the Ohio Valley formed in mixed sediment that washed from the upper part of the Ohio River basin. These soils typically have a brown (10YR 4/3) silt loam A-horizon over a brown (10YR 5/3) silt loam Bw-horizon that has many fine and medium faint light brownish gray (10YR 6/2) iron depletions. Commonly, the sediments are gleyed below 15 inches in these soils as a result of a high water table (Soil Survey Staff 2011).

Nolin series (Fluventic Eutrudepts) soils consist of very deep, well drained soils formed in alluvium derived from limestones, sandstones, siltstones, shales, and loess (Whitaker and Waters 1986:95–96). These nearly level to moderately steep soils are on floodplains, in depressions which receive runoff from surrounding slopes, or on natural levees of major streams and rivers. Nolin soils are weakly developed and typically have a brown (10YR 4/3) silt loam A-horizon over a brown (10YR 4/3) silt loam Bw-horizon with few, medium faint yellowish brown (10YR 5/4) mottles of highly weathered siltstone (Soil Survey Staff 2011).

The Rossmoyne soil series consists of "deep, moderately well drained soils that contain a fragipan" (Weisenberger et al. 1973:3). These soils were formed in either loess or glacial till and occur mostly on the broad glaciated ridges in the region. This soil series has been classified as a fine-silty, mixed, super active, mesic Aquic Fragiudalfs (Soil Survey Staff 2011). In a representative

profile, the topsoil is a dark brown silt loam to a depth of 18 cm (7 in) and is underlain by a dark brown silt loam to a depth of 28 cm (11 in). These soil horizons are then underlain by yellowish brown silty clay loam to a depth of 53 cm (21 in) (Weisenberger et al. 1973:24–25).

The Wheeling series (Ultic Hapludalfs) is comprised of deep and well drained soils that formed in loamy material underlain by sand or sand and gravel. Wheeling soils are associated with the Nolin soils on nearby floodplains. Slopes range from 0 to 55 percent. A typical Wheeling soil profile consists of a brown (10YR 4/3) silt loam Ap horizon to 23 cm. This is underlain by a strong brown (7.5YR 5/6) silty clay loam subsoil (Soil Survey Staff 2011).

Observed Soils

The soil profiles revealed in shovel test probes (STPs) within the project area varied depending on the topographic situation. Soils observed were generally associated with their mapped soil series. The typical profile for agricultural pastures that had been subjected to plowing revealed a dark brown (10YR 3/3) sandy loam topsoil that ranged in depth from 0 to 20 cm (0 to 8 in) below ground surface (bgs). The underlying subsoil generally consisted of yellowish brown (10YR 5/6) or brownish yellow (10YR 6/6) sandy loam or sandy clay loam. On hillsides and slopes, the topsoil had been extensively eroded. The profile typically consisted of a thin yellowish brown (10YR 5/6) clayey silt loam extending to approximately 5–7 cm (2–3 in) bgs. The underlying subsoil was characterized by brownish yellow (10YR 6/8) clay loam or clay. Soils situated within drainages and in floodplains usually indicated brown (10YR 4/3) silty clay loam topsoil extending to approximately 5–10 cm (2–4 in) bgs with an underlying gray (10YR 6/1) clay subsoil. Soils noted within previously disturbed areas that included mostly commercial and residential yards contained mixtures of strong brown (7.5YR 4/6), gray (10YR 5/1), and yellowish brown (10YR 5/8) clay subsoil that was mixed with gravel or rock.

Vegetation

The Outer Bluegrass physiographic province is located within the Western Mesophytic Forest (Braun 1950:146). The major vegetation types in this region form a complex mosaic strongly influenced by underlying geologic strata. This is in strong contrast to the situation in the Mixed Mesophytic Forest to the east. Forests in the Inner Bluegrass are generally less luxuriant than those in the Appalachian Plateau and have a greater tendency toward dominance of a few species (Braun 1950:122-123).

The transition from extensive, mixed Mesophytic communities in the far eastern part of the state to extensive oak and oak-hickory communities in central and western Kentucky is well marked despite the more generalized mosaic pattern and the presence of large prairie areas (Braun 1950:123). While old forest trees remain on large estates, there are no extensive areas of original vegetation outside of the river gorges in the Bluegrass and it is impossible to reconstruct a picture of the original forest conditions (Braun 1950:125). Beech trees are not represented naturally in the Inner Bluegrass forest however; beech trees are part of the forested areas in the Outer Bluegrass. The western Mesophytic forest is dominated by oak and hickory, but a wide variety of other species are represented.

Oak, oak-hickory, and oak-chestnut communities occupy many of the drier slopes and uplands while an oak-tuliptree type is represented in areas of low relief. Pine woods, more extensive in secondary than in primary growth, cover many of the Devonian age shale slopes (Braun 1950:137–138; Niquette and Henderson 1984).

Modern Climate

The climate of Kentucky is continental in character. As a result, temperature and precipitation levels throughout the state fluctuate widely. The prevailing surface winds originate in the Gulf of Mexico and are southerly and weak, allowing upper-level

westerly winds to steer weather systems across the state. These factors result in warm, moist air coming from the south, while cooler and drier air is derived from the north. Mean annual temperatures across the state range from 53 degrees Fahrenheit in the northeast to 59 degrees Fahrenheit in the southwest. Overall, there is significant seasonal variation in temperature, with approximately 20 degree differences possible during summer and winter months, as well as up to 25 degree shifts in the spring and fall. Average annual precipitation across the state ranges from 106.68 cm (42 in) in the north to 132.08 cm (52 in) in the south. Warm, moist tropical air masses derived from the Gulf of Mexico are most common during the summer months and contribute to the high humidity levels experienced in the state. During the spring and fall, storm systems tend to be less severe and less frequent, resulting in less radical climate extremes (Foster and Conner 2008).

In Campbell County, Kentucky, the average daily maximum temperature in January is 36 degrees Fahrenheit. July is the warmest month with an average daily maximum temperature of 85 degrees Fahrenheit. The total annual precipitation in the Kenton, Campbell, and Boone County area is 41.5 in (Weisenberger et al. 1973).

Description of the Project Area

The current project area begins at an existing pumping station in the community of Silver Grove on the north end, passes through the community of Camp Springs in the center, and terminates at another existing pump station 2.7 km (1.7 mi) northeast of the community of Alexandria on the south end. For most of its length, the proposed force main parallels the Mary Ingles Highway and Four Mile Road (KY 547) (see Figures 2 and 3).

Terrain within the current project area consisted of floodplains and terraces with a few small dissected upland ridges. Elevations ranged between 162 m (530 ft) AMSL along the Mary Ingles Highway in the northern portion of the project area and approximately 190 m (623 ft) AMSL along upland ridges in the southern portion of the project area along Four Mile Road.

Land within the project area was used for agricultural, commercial, and residential purposes (Figures 5–8). The agricultural areas included pastures that typically held short grass and weeds, as well as occasional stands of deciduous trees. The majority of commercial and residential properties had extensive ground surface disturbance due to landscaping and access roads.

III. PREVIOUS RESEARCH AND HISTORIC CONTEXT

Prior to initiating fieldwork, a search of records maintained by the OSA (Registration Number FY10_6237) was conducted to: 1) determine if the project area had been previously surveyed for archaeological resources; 2) identify any previously recorded 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. 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 characterize the archaeological resources in the general area further, the OSA archaeological site database for the county was reviewed and synthesized. The review of professional survey reports and archaeological site data for the county provided basic information on the types of 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.

Figure 5. General overview of project area depicting commercial area, facing east.

Figure 6. General overview of project area depicting typical terrain and vegetation, facing south.

Figure 7. General overview of project area depicting utility disturbance, facing north.

Figure 8. General overview of typical ground surface disturbance associated with residential properties, facing north.

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 sruvey 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		

Newport, KY-OH 1983 (Photorevised 1987)
USGS 7.5 minute series digital topographic quadrangle. Map B42, Governor's Office for Technology, Office of Geographic Information.

Withamsville, OH-KY 1996
USGS 7.5 minute series digital topographic quadrangle. Map B43, Governor's Office for Technology, Office of Geographic Information.

MS-1
MS-14
MS-33
MS-32
MS-31
MS-2
MS-13
MS-19
MS-29
MS-20
MS-28
MS-30
MS-45
MS-44
MS-21
MS-23
MS-27
MS-12
MS-6
MS-11
MS-18
MS-17
MS-16
MS-48
MS-5
MS-15

Project Area

HAMILTON CO
CAMPBELL CO
RIVER
OHIO
KENTUCKY
Mile 460
Mile 459
Mile 458
Light
Boat Ramp
Conveyor
CSX
Yard
Silver Grove
Trailer Park
Campbell Lodge Boys Home
Fourmile Creek
Melbourne
St Anne Convent
Athletic Field
Substations
Duck Creek
Crestview
Valley Chapel
Sewage Disposal
St Joseph Sch
Cold Spring
Holly Hill Childrens Home
Owl Creek
St Johns Ch Cem
Tug Fork
Substa
Camp Springs
OLD KELLOGG
PRIVATE
DOBELVING
LOWER
PIPELINE
ROAD

QUADRANGLE LOCATION

0 1000 2000 feet
0 300 600 meters

LEGEND
Map Structure

K09G003 (05AUG11) DMW

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

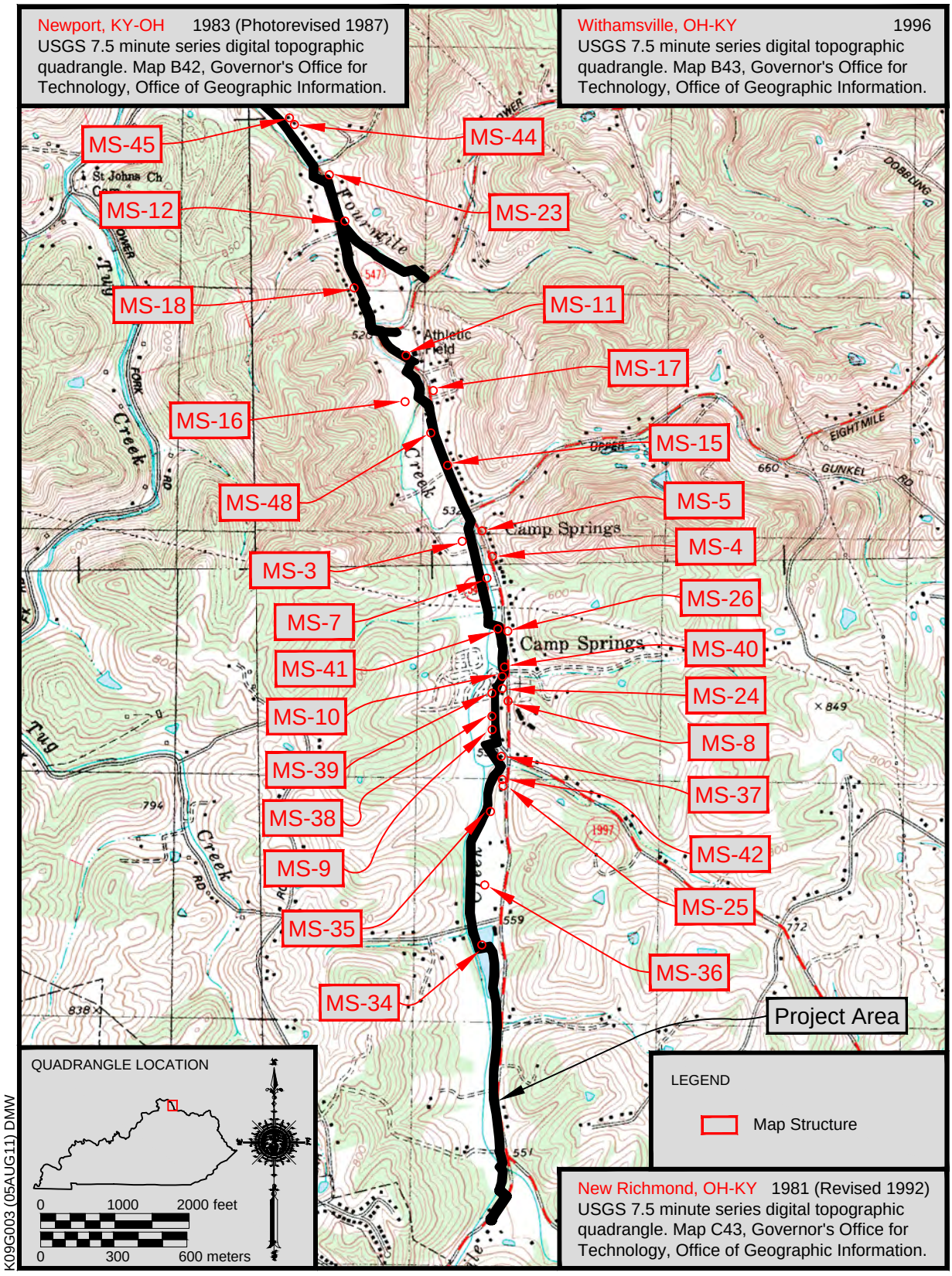

Figure 9b. Topographic map indicating the locations of map structures.

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-Amerian 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 pargeted 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.

Figure 23. Southeasterly view of the church located at West Second Street and Oak Street. Note the addition to the rear (south) of the historic mass.

Of the residential resources, the typical resource in this grouping is a circa 1922, one-story bungalow set on a concrete block foundation beneath a front or side-gabled roof with walls primarily of exposed brick. Gabled ends are commonly clad in vinyl siding. One-story residences are the most commonly represented form (approximately 47 percent; n = 7). One-and-one-half-story dwellings comprise approximately 29 percent (n = 5) of all resources, while two-story residences account for approximately 24 percent (n = 4).

Approximately 76 percent (n = 13) of all residential resources exhibit concrete block foundations. Two dwellings (approximately 12 percent) have poured concrete foundations, while one building (approximately 6 percent) rests on a concrete slab. The remaining house (approximately 6 percent) exhibits a brick foundation.

Both front-gabled and side-gabled roofs represent approximately 29 percent (number = 5) of all resources. Cross-gabled and gambrel roofs are each found on three (approximately 18 percent) dwellings. Two houses (approximately 12 percent) have hipped roofs. Walls are primarily brick (approximately 94 percent; n = 16), although most have either vinyl (approximately 53 percent; n = 9) or aluminum (approximately 18 percent; n = 3) siding in the gable end or as secondary claddings. One resource (approximately 6 percent) has wood shingles in the gable end, while another resource (approximately 6 percent) has composite siding. One resource (approximately 6 percent) is completely clad in vinyl siding.

According to Campbell County assessment records, most resources (approximately 47 percent; number = 8) date to 1922. Four resources (approximately 24 percent) date to 1920. Two resources date to 1925 (approximately 12 percent) and to 1926 (approximately 12 percent). The earliest resource dates to 1911 (approximately 6 percent), while the most recent dwelling dates to 1956 (approximately 6 percent).

The one religious resource is the Silver Grove Christian Church, constructed 1917–18 at the southeast corner of West Second Street and Oak Street. The building rests on a pargeted foundation beneath an asphalt, shingle-clad, cross-gabled roof. Walls are exposed brick, and all windows have leaded

glass. An addition adjoins the rear (south) elevation, extending along Oak St.

NRHP Evaluation: Not Eligible. Sites 18–35 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 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 West Second Street 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 18–35 and persons of historical significance. They have not been credited to a particular planner or individual at the C&O Railroad. Architecturally, the resources do not warrant inclusion under Criterion C. The residential resources are common examples of a prolific building form—the bungalow—which was built throughout the region and the country in large swaths during the early twentieth century. In addition, these resources do not possess the architectural integrity necessary for NHRP eligibility. Nearly all of the houses exhibit replacement windows. Although many retain their primary brick claddings, they have also been compromised by the introduction of modern materials, such as aluminum and vinyl siding, which detract from the natural qualities historically associated with the building form. Research has not indicated any association with master architects, builders, or craftsmen.

The church likewise does not appear to be eligible for inclusion in the NRHP. Ordinarily properties owned by religious institutions or used for religious purposes are not considered eligible for the NRHP unless they derive their primary significance from architectural or artistic distinctions or historical importance (Criterion Consideration A). Although this church retains a fair amount of architectural integrity, its historic form has been altered by the construction of a substantial addition. In addition, research indicated no association between the church and persons or events of historical significance. Therefore, CRA recommends that Sites 18–35 are not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A.

Site 36

KHC Survey #: CP-60

Photographs: Figure 24

Property Address: Four Mile Road, Camp Springs

Map: Figures 2 and 3

Zone: 16

Quad: New Richmond, KY 1982

UTMs: E: 728333 N: 4319613

Description: Site 36 contains a round stone smokehouse, constructed circa 1880 (Figure 24), that was formerly assessed as part of the Reitman's St. Joseph House (CP-60), which was listed in the NRHP as part of the German Settlement Properties of the Four Mile Creek Multiple Property Nomination (MPDF). It was listed as a contributing element to the Reitman

House site. The smokehouse is located on the west side of Four Mile Road, approximately 70 ft southwest of its intersection with Gresskamp Road.

According to the nomination, the smokehouse, located across Four Mile Road from the Reitman House, was historically associated with a farmhouse that is no longer extant. It is characterized by its round form, constructed of uncoursed stone with a parged exterior. The form is punctuated by a single-leaf pedestrian entry, which is occupied by a hinged, vertical board door. A narrow, rectangular ventilation opening lies at either side. The conical roof is clad in composite shingles. Modern, freestanding informational signs noting the smokehouse as the information center for Historic Camp Springs Kentucky abut the structure. Modern pole-frame buildings are located to the north and west.

NRHP Evaluation: Listed. Reitman's Smokehouse was listed in the NRHP as part of the nomination for Reitman's St. Joseph House, a two-and-one-half-story stone structure that historically functioned as a dwelling and tavern. The house is located across Four Mile Road from the smokehouse. According to the nomination, the house with which the smokehouse was historically associated has been demolished (Torma and Chappel 1982:2).

Three smokehouses were listed as part of the German Settlement Properties in the Four Mile Creek Area MPDF. This nomination included 30 historic properties that were significant for their association with German settlement in this part of Campbell County. While the nomination is primarily concerned with primary structures, such as houses and commercial buildings, it also draws special attention to outbuildings that were historically associated with German settlement. According to the nomination, these structures are "significant by virtue of their rarity and ethnic associations" (Gordon 1982:8). Currently, the smokehouse continues to possess those qualities that associate it with its German origins, including its iconic uncoursed stone construction. Modern intrusions such as pole-frame storage buildings have compromised the setting of the structure but not to the extent that they compromise the structure's ability to convey its significance. Indeed, one of the outbuildings was already present at the time of the original boundary delineation and did not diminish the ability of the structure to reflect its significance as a symbolic and rare example of an intact German outbuilding.

The boundaries for the collective Reitman House site, depicted in Figure 25, are described as follows in the nomination:

> Beginning at the intersection of Four Mile Pike (Route 547) and St. Joseph's Church Road, proceed south 400' along the west side of latter road, then turning west to proceed down hill 175' along fencerow to Four Mile Pike, then proceed north 250' along said road, crossing Four Mile Pike so as to include round smokehouse, then return to east side of road, proceeding north 150' to the point of origin. [Torma and Chappel 1982:3]

Determination of Effect: No Adverse Effect. The stone smokehouse will not be adversely affected by the proposed installation of the force main pipeline. Modern intrusions will be placed completely underground, and as such, there will be no visual impact on Site 36. In addition, although the proposed pipeline will be installed in the immediate vicinity of the smokehouse at Site 36 as it travels along Four Mile Road, it will not result in an adverse effect to Site 36. No physical alteration or destruction will occur to the site that might change those characteristics that make it eligible for listing in the NRHP. If necessary, installation of the pipeline at this site will be completed via a directional bore, which entails the drilling of a small tunnel from a launch site at the surface that in turn exits at a terminal site farther down the proposed line. This will minimize any disturbance at the site and ensure that Site 36 is not subjected to any modification, alteration, or demolition that might adversely affect its inclusion in the NRHP.

Figure 24. Westerly view of the smokehouse at Site 36.

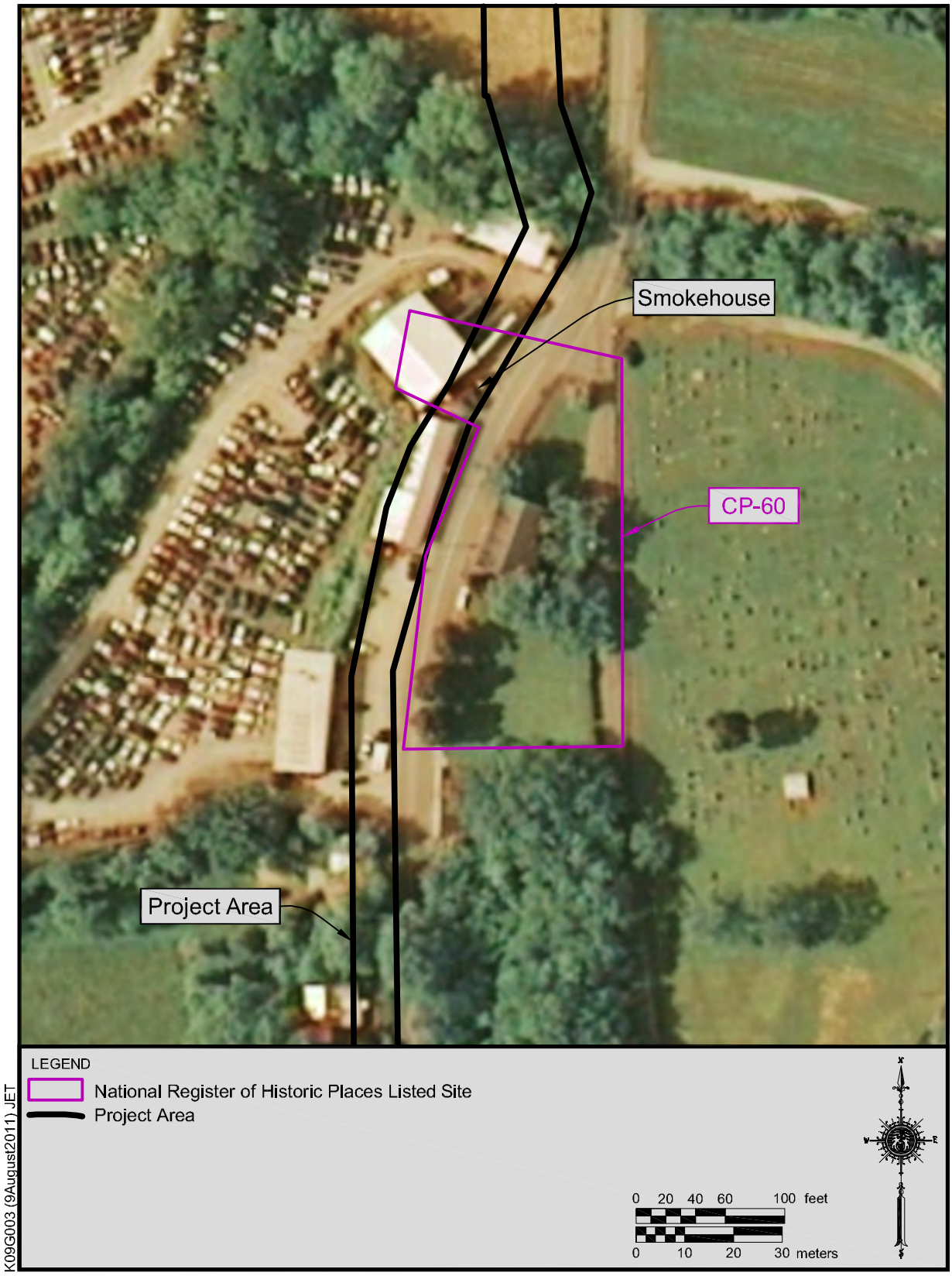

Figure 25. NRHP Boundary of Reitman House Site.

Site 37

KHC Survey #: CP-201

Photographs: Figures 26–27

Property Address: Four Mile Road, Camp Springs

Map: Figures 2 and 3

Zone: 16

Quad: New Richmond, KY 1982

UTMs: E: 728178 N: 4320310

Description: Site 37 contains the remnants of a partially collapsed dry-laid stone fence that likely functioned as a boundary delineator and drain dam for the adjacent creek (Figures 26–27). The fence remnants are located on the west side of Four Mile Road at its intersection with Nine Mile Road. It is heavily overgrown with brush and trees, which have grown on and around the fence structure.

The fence is comprised of a combination of ledge rock and coursed, weathered field rock laid with dry joints, both running and covered. It appears to be random-coursed without apparent patterns in the thickness of courses. A water gap is evident at the eastern end of the fence.

NRHP Evaluation: Not Eligible. The rock fence at Site 037 does not retain the integrity necessary to warrant inclusion in the NRHP. In its currently deteriorated state, the fence structure no longer exhibits its intact historic form. Furthermore, as a result of the site having become overgrown, the fence's spatial relationship with the encompassing landscape has been compromised, thus alleviating the site of functional and associative significance. Research revealed no association between Site 037 and persons or events of historical significance. As such, CRA recommends that Site 037 is ineligible for inclusion in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A.

Figure 26. Northwesterly view of the remnants of the rock fence at Site 037.

Figure 27. Northwesterly view of the remnants of the rock fence at Site 037.

Site 38

KHC Survey #: CP-202

Photographs: Figures 28–29

Property Address: 5757 Four Mile Road, Melbourne

Map: Figures 2 and 3

Zone: 16

Quad: New Richmond, KY 1982

UTMs: E: 726905 N: 4322213

Description: Site 38 consists of a dry-laid stone fence that functions as a boundary delineator and retaining wall (Figures 28–29). It encompasses the steeply-sloped property at 5757 Four Mile Road, which contains a circa 1873 farmhouse. The fence and property are situated on the east side of Four Mile Road approximately 350 ft northwest of its intersection with Lower Tug Fork Road. Private driveways extending northeast and northwest to the south and west of the fence lead to a house and bank barn.

The fence, which wraps the corner of the property and extends northwest and northeast, is comprised of block-shaped quarried stone tightly laid with dry, covered joints. It exhibits courses of varying height without apparent patterns. A layer of thin, flat rock comprises the capping course. It is partially overgrown in various places along the wall structure.

NRHP Evaluation: Not Eligible. The rock fence at Site 038 does not rise to the level of significance warranting inclusion in the NRHP. Although the structure remains fairly intact and representative of early settlement, it does not comprise an element of a significant, associated landscape. The structure is not associated with an intact farmstead and does not convey any immediate association with similar structures. The house on the encompassed property has witnessed severe alteration as a result of additions and re-cladding. As an isolated example of a rock fence, it does not possess enough significance to warrant listing in the NRHP. CRA recommends that Site 038 is ineligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A.

Figure 28. North-northeasterly view of the rock fence at Site 38.

Figure 29. East-northeasterly view of the rock fence at Site 38.

Site 39

KHC Survey #: CP-203

Photographs: Figure 30

Property Address: 6830 Four Mile Road, Melbourne

Map: Figures 2 and 3

Zone: 16

Quad: New Richmond, KY 1982

UTMs: E: 728312 N: 4319489

Description: Site 39 consists of a modified 1953 house located on a .58-acre parcel on the west side of Four Mile Road approximately 650 ft northwest of its intersection with Stonehouse Road (Figure 30). A split-rail fence fronts the property along the road. A concrete driveway abuts the house to the north.

The house exhibits a one-and-one-half-story, three-bay (ww/d/ww), side-gabled, frame form with a front-gabled façade wing. The house, totaling 1,040 sq ft, rises from a continuous concrete block foundation and is sheltered beneath a composite shingle-clad roof. An exterior brick chimney rises above the roofline on the north elevation, and a metal stovepipe pierces the roof of the enclosed façade porch. A front-gabled dormer with a one-over-one, double-hung sash window fronts the façade roof slope. Walls are clad in a combination of vinyl siding and asbestos shingles; gable ends are clad in vertical board.

The primary entrance is centrally-located on the façade within an enclosed porch. It is occupied by a half-light replacement door. To the south lies a pair of twelve-light fixed sash windows. North of the entry, within the front-facing gabled mass, is another pair of windows; these exhibit one-over-one, double-hung replacement sashes.

The side elevations are each punctuated by multiple first-story window openings that each have a one-over-one, double-hung replacement sash. An identical window fronts the half story on either gable end. A full-width addition spans the rear (west) elevation.

Figure 30. West-southwesterly view of the house at Site 39.

NRHP Evaluation: Not Eligible. The house at Site 39 does not possess the architectural significance or integrity to warrant inclusion in the NRHP under Criterion C. It is an undistinguished example of a common building form that proliferated in the early to mid-twentieth century and does not separate itself from like examples. Furthermore, its integrity has been compromised by the construction of additions, the enclosure of the façade porch, and replacement of historic window and door components. Research indicated no association between Site 39 and events or persons of historical significance. As such, CRA recommends that Site 39 is ineligible for inclusion in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A.

VI. CONSULTING PARTIES

In addition to the information acquired by CRA during the field survey, Anna Zinkhon, a Campbell County citizen representing the Camp Springs Initiative, contacted the KHC to request consulting party status for this project. CRA contacted Ms. Zinkhon to invite her to share any information that she had on historic resources that she feels may be impacted by the proposed project. To date, Ms. Zinkhon has not responded to CRA; however, in a letter to Judge Steve Pendery, Judge/Executive of Campbell County, she expressed her concerns with the preliminary cultural resource surveys conducted by CRA.

Briefly, her concerns are these: 1) the proposed raw sewage pipeline will introduce "incompatible visual, atmospheric, or audible elements" that will adversely affect the Camp Springs community, which contains 27 properties listed in the NHRP; 2) that the initial Cultural Historic Records Review (Joseph 2009) contained "major inconsistencies" because it stated that resource CP-72, the "Buttermilk" John Weber Farm and its historic home (CP-107), were not listed on the NRHP; and 3) that initial records review conducted by CRA (Kerr and Stephenson 2009) is contradictory because it states that "few significant archaeological resources, if present, will be impacted…if the proposed force main is placed within the existing public right-of-ways (i.e., the roadways)" (Kerr and Stephenson 2009). Ms. Zinkhon also requested that an archaeological field investigation be completed.

As noted earlier, it was determined during CRA's consultation with Jill Howe, environmental review coordinator for KHC, that because the sewer line is located entirely below ground, the project will have no adverse effect on any historic resources unless the construction of the force main directly impacts a building or structure. Any visual, audible, or atmospheric effects during construction of the force main will be temporary and will have no lasting impact on the qualities of the properties that qualify them for listing in the NRHP. The field survey only recorded resources located directly within the APE for the current alignment. Seven cultural resources were recorded during the current project, four of which (CP-60, CP-201–CP-203) are located in the Camp Springs area. Three of these four were not previously recorded and are recommended not eligible for listing in the NRHP. The fourth (CP-60) is listed in the NRHP, but GRW has proposed a construction method (direct boring) that will avoid any physical impact to this building, resulting in a recommendation of no adverse effect.

In every instance, except for the smokehouse discussed above (CP-60), the proposed alignment avoids NRHP listed properties by crossing to the opposite side of the street or running well outside of the property boundaries (see Figures 2 and 3). CRA's initial records review (Joseph 2009) reflected the information available at the time and therefore omitted both the "Buttermilk" Farm (CP-72) and its historic house (CP-107) because KHC records had not been updated to reflect the listed status of these properties. The sewer line does not directly impact these properties because the current alignment is on the opposite side of the street, resulting in a recommendation of no adverse effect.

With regards to cultural resources within, or directly adjacent to, public right-of-ways, CRA's initial cultural resources survey (Kerr and Stephenson 2009) specifically mentioned that if the pipeline was placed in the public right-of-ways (i.e., the roadways), then it likely would not impact intact resources. However, while not specifically mentioned in the report, public right-of-ways also include sidewalks, drainage ditches, and previously existing utilities along those roadways. According to the currently proposed alignment, the pump station and large portions of the pipeline will be constructed in these existing right-of-ways. Only a records review and a visual examination of these areas to verify disturbance was required during the archaeological fieldwork. The few portions of the force main outside the right-of-ways required intensive archaeological survey. As documented in this report, the records review and visual examination of existing right-of-ways and the intensive archaeological survey of the remainder of the proposed force main corridor have been completed, and no archaeological sites were identified. Provided that the proposed pipeline is placed in the public right-of-ways and intensively surveyed portions of the corridor, it is unlikely that the project will impact intact archaeological resources; cultural resource clearance is, therefore, recommended.

VII. CONCLUSIONS, RECOMMENDATIONS, AND TREATMENT

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 lead federal agency in consultation with the State Historic Preservation Office (the KHC).

The records search revealed no previously recorded archaeological sites or historic properties within the project area. No archaeological sites were identified as a result of this investigation. Cultural Historic Site 36 (CP-60), a round smokehouse within the NRHP boundaries of the Reitman's St. Joseph House, lies within the project area but will not be adversely affected by the proposed force main sewer line. Because no sites listed in, or eligible for, the NRHP will be adversely affected by the proposed construction, cultural resource 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 KHC, the local coroner, and the local law enforcement agency must be notified, as described in KRS 72.020.

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APPENDIX A. SCOPE OF WORK

cra
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Proposal for Cultural Resource Survey

July 20, 2009

Submitted to:

Bob Smallwood
GRW Engineers, Inc.
801 Corporate Drive
Lexington, KY 40503

Project Identification

Sanitation District No. 1 of Northern Kentucky
Ash Street Pump Station and Force Main
CIP No. C-414-46 & C-414-48
RFP Issued: June 11, 2009

Study Scope

The RFP states: *Consultant shall perform a preliminary evaluation of the potential level of impacts to wetlands, archaeological and cultural resources, flood plains, streams and stream banks, and endangered species for the sewer alignments. Findings from this survey shall be summarized in the brief technical memorandum as described below and shall be used in the final selection of an alignment.*

Once an alignment has been chosen for final design, Consultant shall perform a more detailed evaluation on the level of impacts to wetlands, archaeological and cultural resources, flood plains, streams and stream banks, and endangered species as necessary to meet regulatory requirements. Consultant shall prepare all letters and submittals related to the environmental assessment for the project. This includes, as a minimum, Phase I Environmental Site Assessment, Phase I Archaeological Survey and Wetlands Assessment. In the event Phase II and Phase III Environmental and/or Archaeological Investigations are required by the regulatory agencies, these services will be negotiated and paid for as an amendment to the Consultant's original design contract.

For purposes of the initial scope and fee proposal, Consultant shall also assume that a general nationwide Clean Water Act 404 permit from the US Army Corps of Engineers (USACE) will be permissible for this project. If an individual permit is required, these services will be negotiated and paid for as an amendment to the Consultant's original design contract.

Scope of Services for the Archaeological Survey

The cultural resource investigations will be conducted in accordance with current Kentucky State Historic Preservation Office specifications. For our proposal we have made the following assumptions for the Phase I archaeological survey:

1.) New Ash St. PS will be build on previously disturbed ground, only a records review and visual examination to verify disturbance will be required,

2.) New force main to convey flow from the new Ash St. Pump Station to the existing Riley Road Pump Station, only a records review and a visual examination to verify disturbance will be required on about 8,000 LF and 20,000 LF will require intensive survey,
3.) New force main from the existing Silver Grove Pump Station to the new Ash St Pump Station will be constructed in exiting right-of-way, only a records review and a visual examination to verify disturbance will be required,
4.) Design a new low pressure sewer system to service the designated properties along Route 8 and convey the flow to the new Ash St Pump Station, only a records review and a visual examination to verify disturbance will be required on about 3,000 LF and about 3,000 LF will require intensive survey,
5.) Rehabilitate or replace approximately 750 LF of existing sewer and manholes influent to the existing Silver Grove Pump Station, only a records review and a visual examination to verify disturbance will be required.

Task 1: File Search/Archival Research

For the preliminary evaluation of potential project impacts, CRA will conduct review of the archaeological and cultural historic site files at the Kentucky Office of the State Archaeologist (OSA) and the Kentucky Heritage Council (KHC) for all project elements. The results of the records review will documented in a technical memorandum.

Task 2: Field Research

An intensive study will be conducted for the final design. We have assumed that the study will focus on 23,000 LF of force main and low pressure. The field research will consist of an intensive survey of the final design following standard archaeological methods (i.e., pedestrian, shovel testing, augering). The portions of the project area that cross terrain with good surface visibility (for example plowed/cultivated fields) or characterized by steep slopes (creek bank) will be subject to pedestrian survey. This entails a walking, visual inspection of the ground surface to identify historic and prehistoric artifacts. Portions of the project that are located on relatively flat terrain with poor surface visibility will have to be shovel tested. This assessment method requires the excavation of screened shovel tests measuring 35 cm in diameter at intervals of 20 m. The phase I investigation will survey only the undisturbed ground within the project area (i.e., areas outside the existing construction rights-of-way). Limited bucket augering may be conducted on alluvial landforms to determine the nature and extent of Holocene alluvium and the potential for the presence of significant deeply buried archaeological sites. All archaeological sites and historic structures discovered within the intensive survey area will be recorded following current SHPO specifications.

Task 3: Report

The results of the archival and field research will be documented in a detailed written report. The report will conform to Kentucky SHPO specifications. In addition, site survey forms will be prepared for each archaeological site recorded and submitted to OSA. A historic structure form will be completed for each historic structure documented and submitted to the Kentucky Heritage Council (KHC).

Deliverables

CRAI will provide eight printed copies of the Phase I survey report, including six copies for agency review. CRAI will also provide one copy of the report on CD in pdf format. CRAI will make one set of revisions to the report requested by the agencies.

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To Be Provided By Client

The Client will provide CRA the following:

1. Project description
2. The name of the permitting or funding agency
3. Permitting or funding agency identification number
4. Project mapping in electronic format (Autocad, Microstation, or Arch View shape files). If electronic mapping is not provided additional fees will be accrued on a time and materials basis.

Signed:_____

Name: Steven D. Creasman, RPA

Position: Executive Vice President

Contract Publication Series 09-255

AN ARCHAEOLOGICAL SURVEY OF THE PROPOSED ASH STREET PUMP STATION AND FORCE MAIN PROJECT IN CAMPBELL COUNTY, KENTUCKY

by
Russell S. Quick, Ph.D.

With a contribution by Jennifer M. Faberson

Prepared for

Kentucky Infrastructure Authority
Office of the Governor

and

Prepared by

cra
cultural resource analysts, inc

Kentucky | West Virginia | Ohio
Wyoming | Illinois | Indiana | Louisiana | Tennessee
New Mexico | Virginia | Colorado | Maryland

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By Russell S. Quick, Ph.D.
With a contribution by Jennifer M. Faberson

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CRA Project No.: K09G003

Charles M. Niquette, RPA
Co-Principal Investigator

Andrew P. Bradbury, RPA
Co-Principal Investigator

April 17, 2012

Lead Agency: Kentucky Infrastructure Authority
OSA Project Registration No.: FY12_7196

ABSTRACT

On November 15–18, 2010, May 2–4, 2011, and February 28–March 1, 2012, Cultural Resource Analysts, Inc., personnel conducted an archaeological survey of the proposed corridor for a force main sewer line and pump station in Campbell County, Kentucky. The survey was conducted at the request of Joe Henry of GRW Engineers, Inc., in Lexington, Kentucky, on behalf of Sanitation District No. 1 of Northern Kentucky. The project area begins at an existing pump station adjacent to Mary Ingles Highway in Silver Grove, Kentucky, encompasses three alternate locations for the proposed new pump station near Ash Street, and continues south-southeast, paralleling Four Mile Road through the community of Camp Springs to the existing Riley Road Pump Station northeast of the community of Alexandria. The proposed project area consisted of approximately 48 ha (119 acres). Prior to conducting the field research, a records review was conducted at the Office of State Archaeology. The review indicated that no archaeological sites and no investigations had been documented within the project area. Survey methods, which included intensive pedestrian survey supplemented by shovel testing and auger cores, varied according to topographic setting and past and current land use practices. Most of the proposed right-of-way crossed farmland and residential areas. Minor portions passed through commercial properties. Some portions of the project area were extensively disturbed by previous construction or landscaping activities, confirmation of which only required visual inspection and randomly placed shovel tests.

One archaeological site was documented during this survey. Site 15Cp87 is a historic residence dating from before 1900 through at least 1993. Within the current project area, the site consists of a concrete block outbuilding foundation and artifact scatter dating to before 1960. This outbuilding was probably associated with a house that stood on the same long residential lot from at least 1898 through at least 1993. The majority of the site, including the former house location, is outside of the current project area. Within the project area, the site has been heavily disturbed by demolition, the clearance of a right-of-way, and modern trash dumping. All artifacts were found on the surface around the partial foundation. No subsurface artifacts or features were found. The portion of Site 15Cp87 that lies within the project area has little depositional integrity and is recommended as not eligible for the National Register of Historic Places.

The proposed force main passes through several areas with standing structures over 50 years of age. These structures were documented either individually or in groups as historic resources. They are discussed in a separate report (McMahan et al. 2012). No cultural historic clearance is implied by the current archaeological report. The sole archaeological site documented by the project, Site 15Cp87, is recommended as not eligible for listing on the National Register of Historic Places. Therefore, archaeological clearance for the proposed project is recommended.

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I. INTRODUCTION

On November 15–18, 2010, May 2–4, 2011, and February 28–March 1, 2012, Cultural Resource Analysts, Inc. (CRA), personnel conducted a cultural resource survey of the proposed corridor for a force main sewer line and pump station in Campbell County, Kentucky (Figure 1). The survey was conducted at the request of Joe Henry of GRW Engineers, Inc. (GRW), in Lexington, Kentucky, on behalf of Sanitation District No. 1 of Northern Kentucky. The project area begins at an existing pump station adjacent to Mary Ingles Highway in Silver Grove, Kentucky, encompasses the location of three proposed alternate locations for a new pump station near Ash Street, and continues south-southeast, paralleling Four Mile Road through the community of Camp Springs to the existing Riley Road Pump Station northeast of the community of Alexandria. The proposed project area consisted of approximately 48 ha (119 acres). Russell Quick supervised the fieldwork and was assisted by Karen Taylor, Mike Curran, and Ken Case. Approximately 150 person hours were required to complete the fieldwork. Geographic Information Systems (GIS) data was requested by CRA on two occasions. The most recent OSA search was requested on March 1, 2012, and returned on March 2, 2012. The results were researched by Heather Barras of CRA at the OSA on March 5, 2012. The OSA project registration number is FY12_7196. The scope of work is included as Appendix A.

Project Description

Sanitation District No. 1 of Northern Kentucky proposes to construct a new pump station and force main sewer line between an existing pump station adjacent to Mary Ingles Highway in Silver Grove, Kentucky, continuing south-southeast and paralleling Four Mile Road through the community of Camp Springs to the existing Riley Road Pump Station northeast of the community of Alexandria (Figures 2 and 3). Approximately 48 ha was surveyed.

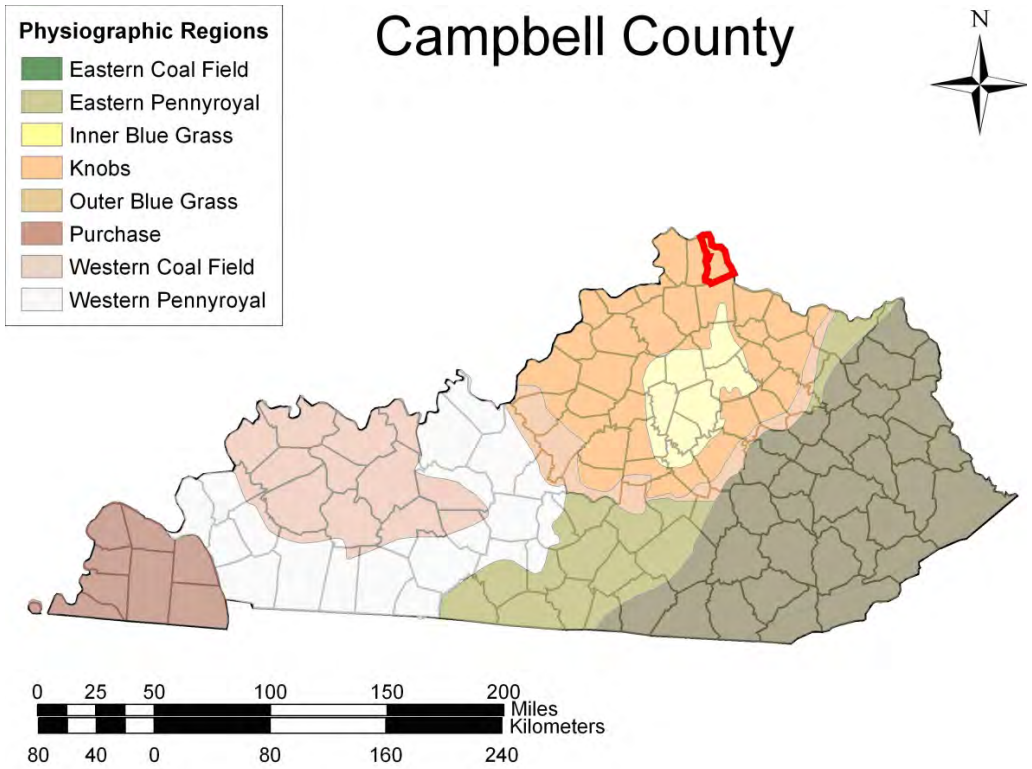


Figure 1. Map of Kentucky showing the location of Campbell County.

Purpose of Study

The study was conducted to comply with Section 106 of the National Historic Preservation Act. This project requires a Section 404 permit under the Clean Water Act from the United States Army Corps of Engineers (USACE) and is therefore considered an undertaking subject to Section 106 review.

The purpose of this survey was to assess any potential effects the proposed connector might have on identified cultural resources. To do this, we followed 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;
>
> establish the degree of site integrity and potential for intact cultural deposits to be present; and
>
> identify aboveground resources 50 years of age or older located in the project easement and viewshed and evaluate their eligibility for listing in the National Register of Historic Places (NRHP).

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). Cultural material, field notes, records, and site photographs will be curated with the Department of Anthropology at the University of Louisville, Kentucky.

Summary of Findings

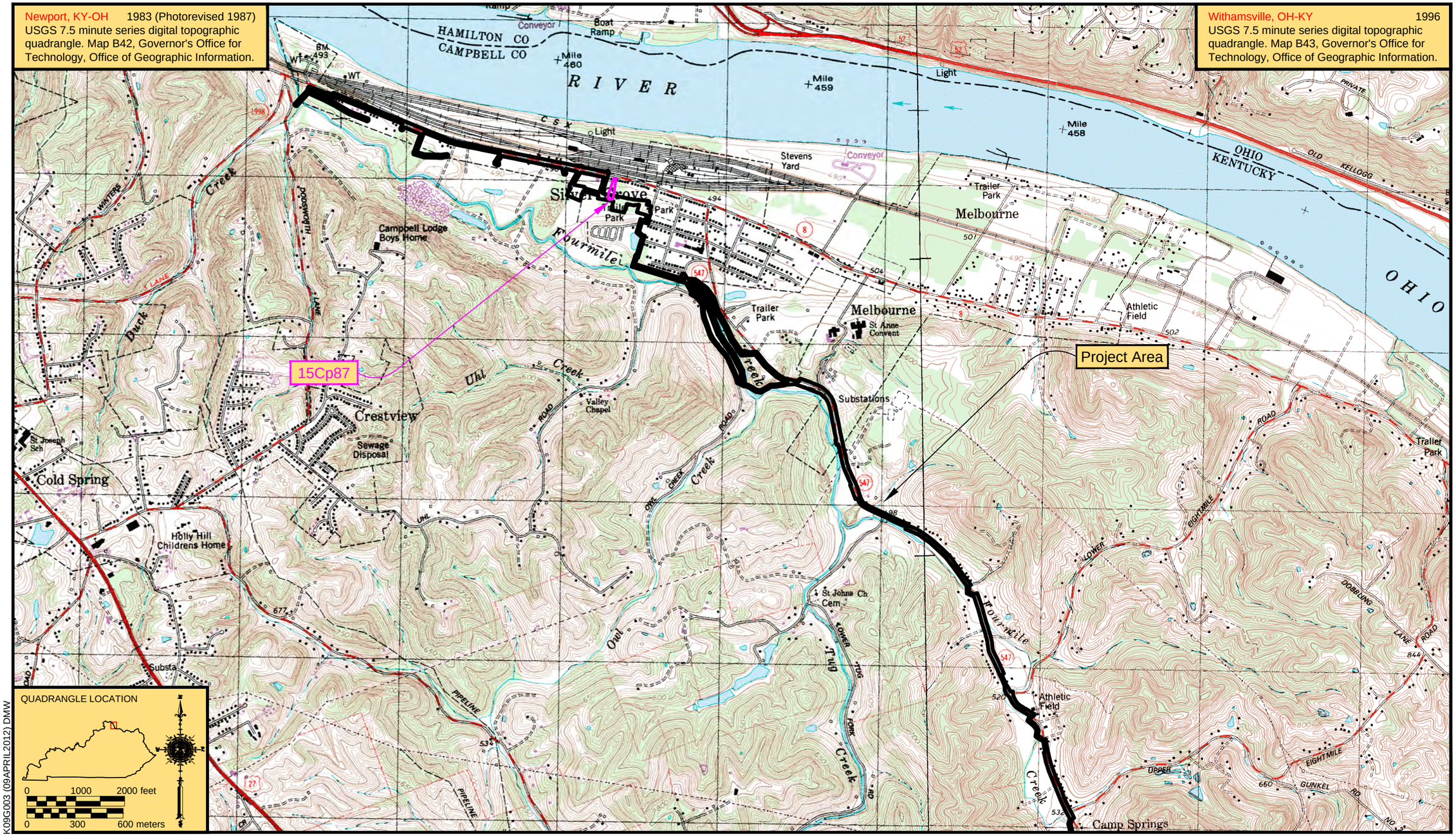
In conjunction with the field research, a records review was conducted at OSA. The review indicated that no archaeological sites had previously been recorded and no archaeological surveys had previously taken place within the current project area.

The proposed force main passes through several areas with standing structures over 50 years of age. These structures were documented and discussed in a separate report (McMahan et al. 2012). No cultural historic clearance is implied by the current archaeological report.

One archaeological site was documented during this survey. Site 15Cp87 is a historic residence dating from before 1900 through at least 1993. Within the current project area, the site consists of a concrete block outbuilding foundation and artifact scatter dating to before 1960. This outbuilding was probably associated with a house that stood on the same long residential lot from at least 1898 through at least 1993. The majority of the site, including the former house location, is outside of the current project area. Within the project area, the site has been heavily disturbed by demolition, the clearance of a right-of-way, and modern trash dumping. All artifacts were found on the surface around the partial foundation. No subsurface artifacts or features were found. The portion of Site 15Cp87 that lies within the project area has little depositional integrity and is recommended as not eligible for the National Register of Historic Places. Therefore, archaeological clearance for the proposed project is recommended. Should future project changes impact that portion of Site 15Cp87 outside of the current project area, further testing may be necessary.

Newport, KY-OH 1983 (Photorevised 1987)
USGS 7.5 minute series digital topographic quadrangle. Map B42, Governor's Office for Technology, Office of Geographic Information.

Withamsville, OH-KY 1996
USGS 7.5 minute series digital topographic quadrangle. Map B43, Governor's Office for Technology, Office of Geographic Information.



K09G003 (09APRIL2012) DMW

Figure 2a. Location of project area on topographic quadrangle.

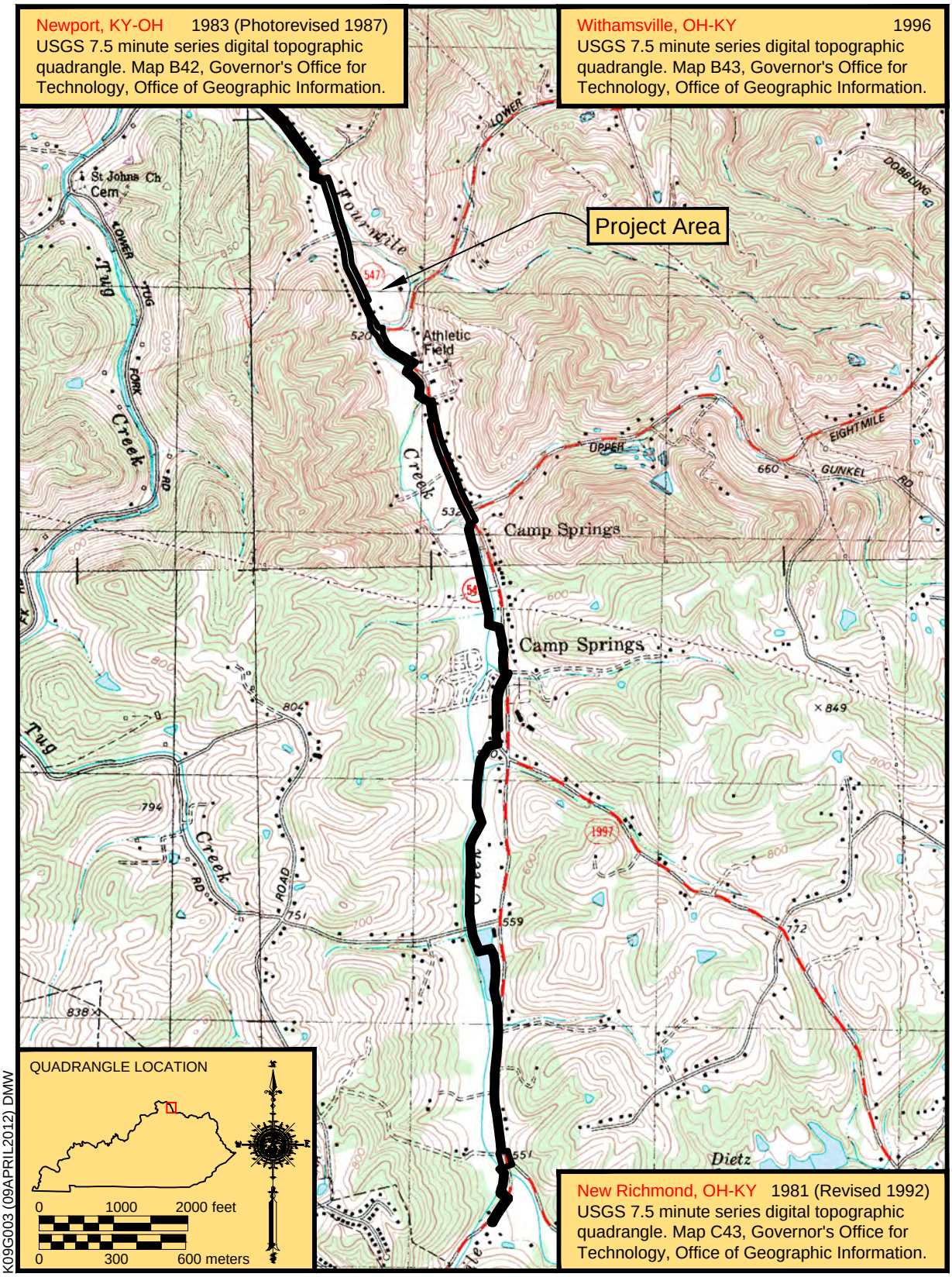


Figure 2b. Location of project area on topographic quadrangle.

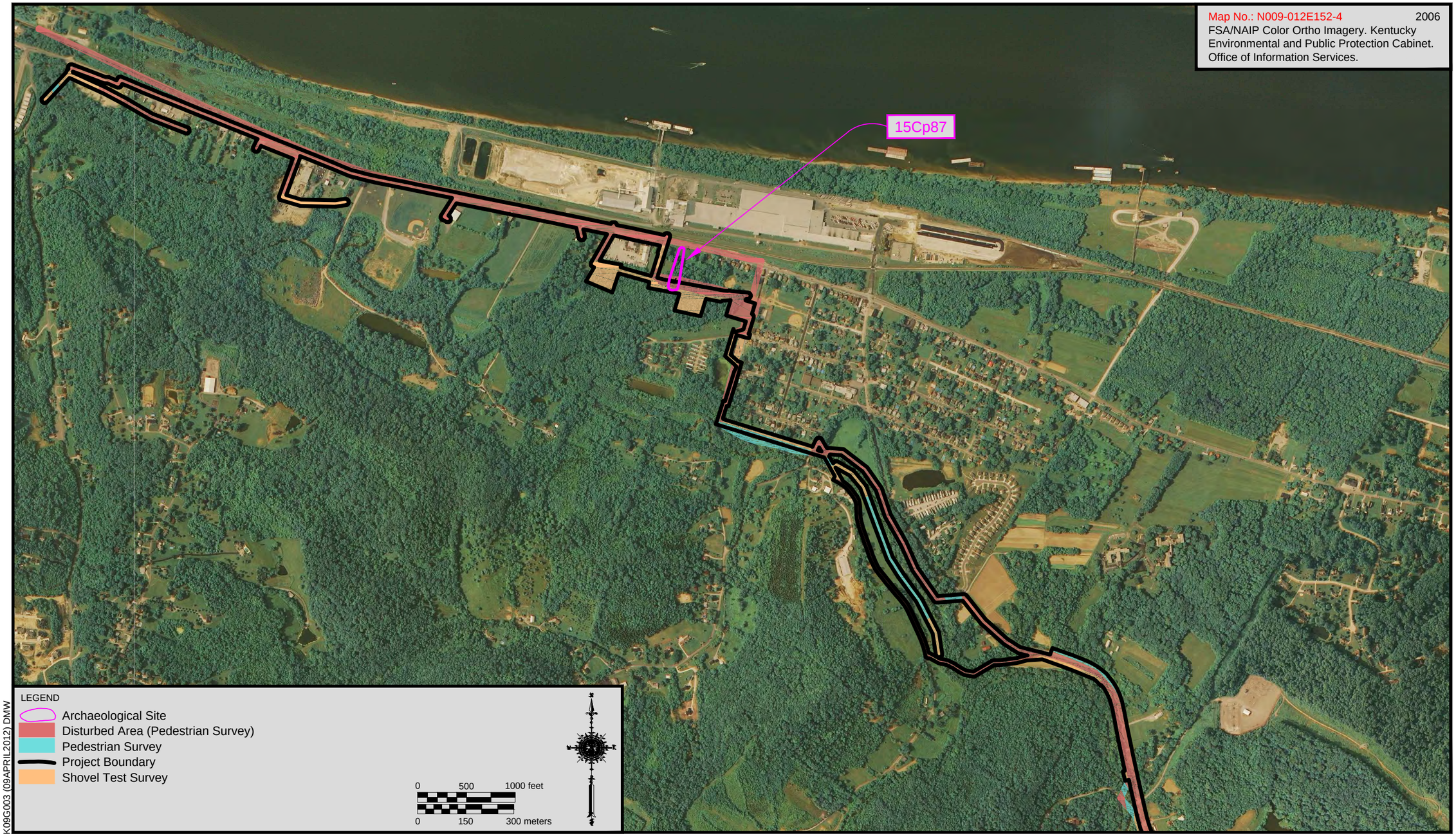


Figure 3a. Project area plan map.

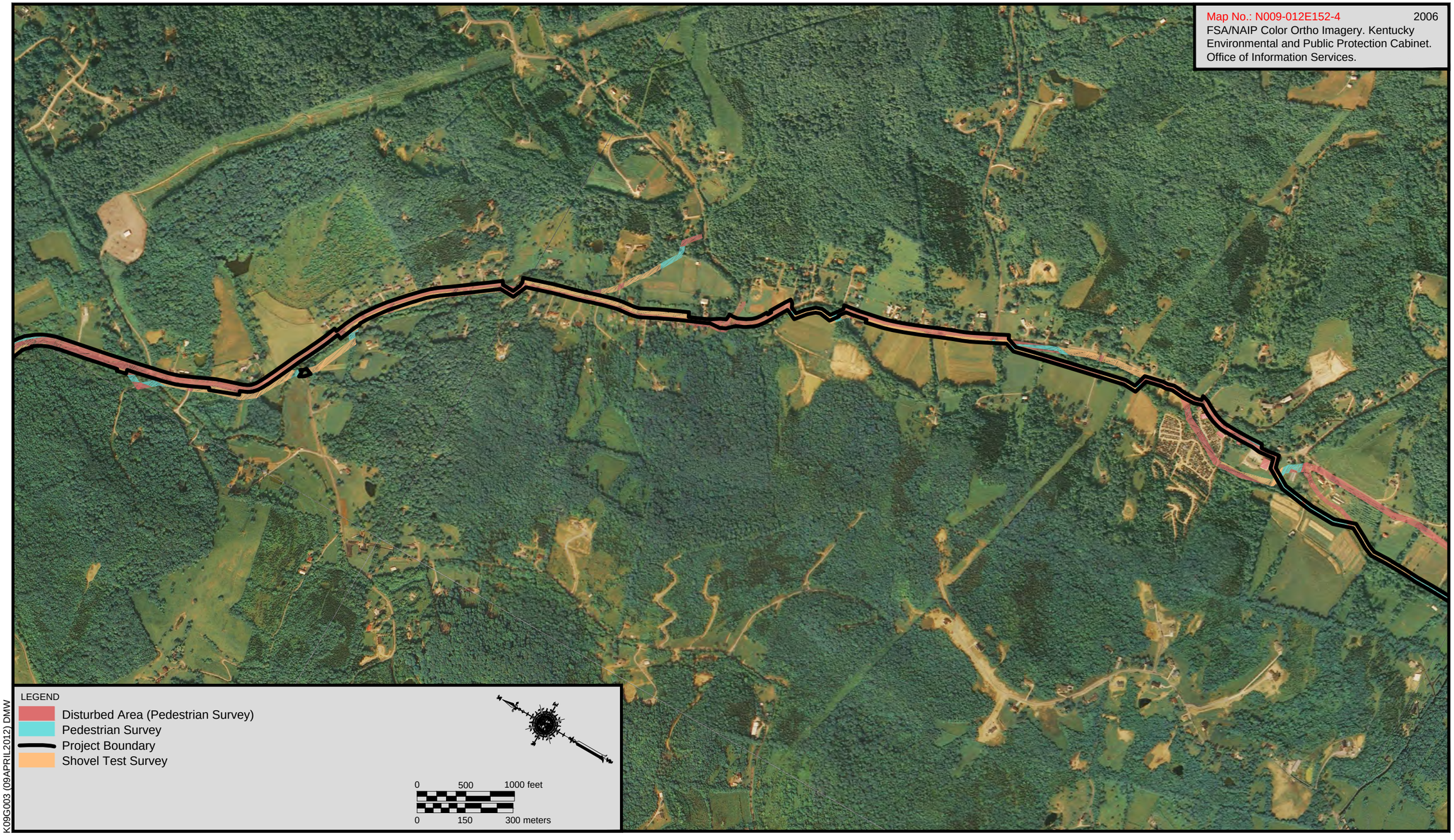


Figure 3b. Project area plan map.

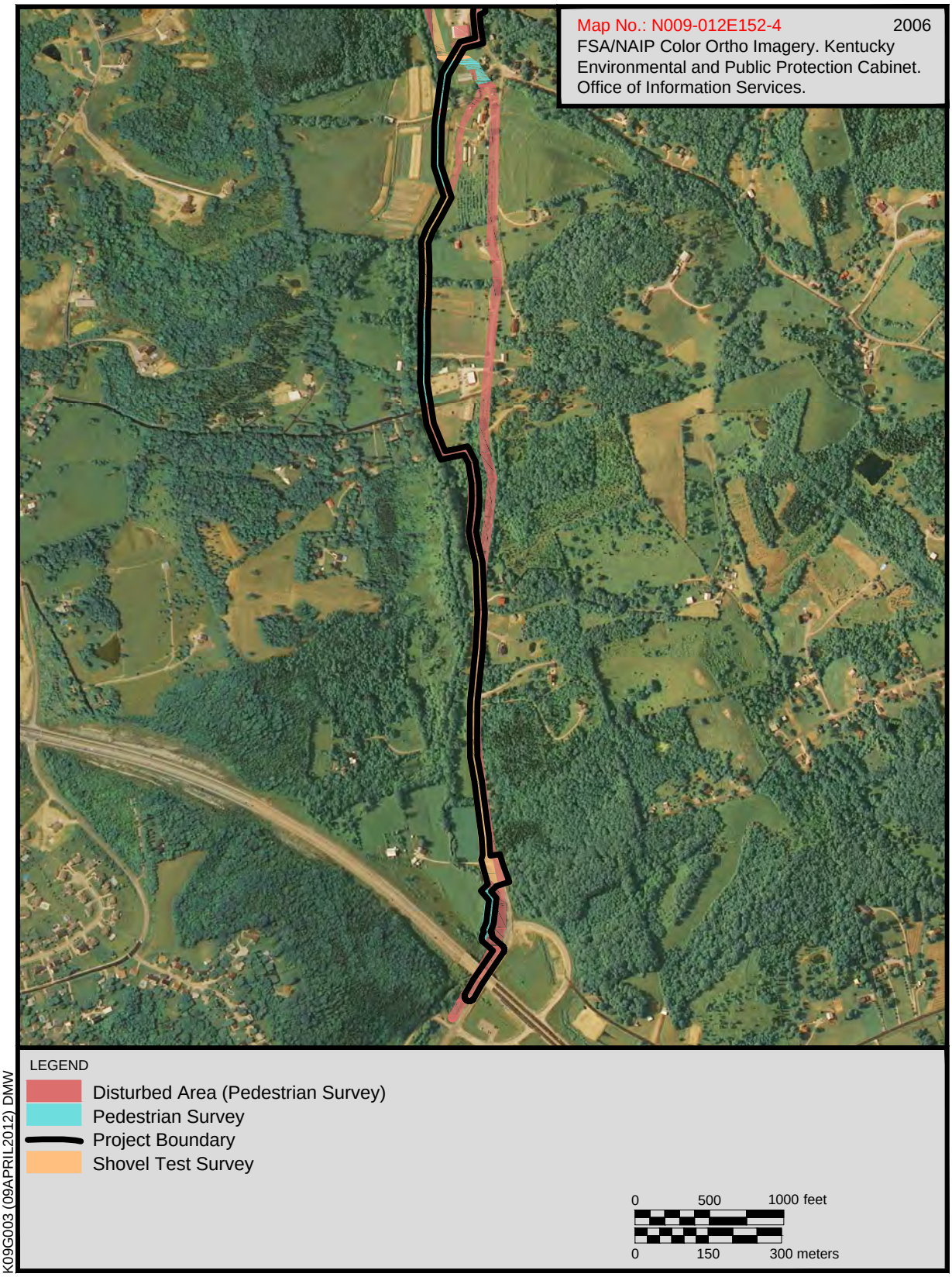


Figure 3c. Project area plan map.

II. ENVIRONMENTAL SETTING

This section of the report provides a description of the modern and prehistoric environment and considers those aspects of the physical environment that may have influenced the location and methods for finding archaeological sites. The discussion of the modern environment specifically provides information regarding the topography, soils, vegetation, and climate. In addition, the general prehistoric environmental conditions are discussed to place the archaeological record of the region within a relative environmental context.

Topography

The project area is located in the eastern portion of Campbell County in the Outer Bluegrass region of Kentucky (McGrain and Currens 1978). The topography of the Outer Bluegrass is characterized by rolling, high-grade limestone uplands that are slightly to moderately dissected (McGrain and Currens 1978). The majority of the project area consisted of floodplains and terraces with a few ridgetop, hillside, and dissected upland settings. Slopes ranged from nearly level to moderate. Elevations within the project area ranged between approximately 162 and 190 m (530 and 623 ft) above mean sea level (AMSL) (see Figures 2 and 3). The project area lies within the Licking River drainage (Figure 4).

Soils

Five soil associations are mapped within Campbell County: the Eden-Cynthiana, Faywood-Nicholson, Rossmoyne-Jessup, Licking-Captina, and Wheeling-Huntington-Alluvial land, steep (Weisenberger et al. 1973). Each soil association is comprised of one or more soil series. Every soil association and soil series represented within the project area is described in more detail below.

The proposed project area was located primarily within the Licking-Captina and Wheeling-Huntington-Alluvial land soil associations. The Licking-Captina association is found on stream terraces and is comprised of gently sloping soils with a clayey to loamy subsoil. Wheeling-Huntington-Alluvial land soils are found on stream terraces and bottoms along the Ohio River and some of its tributaries. These soils have loamy subsoil (Weisenberger et al. 1973:5–6).

Fourteen soil series were mapped for the project area (Table 1) and include Ashton, Avonburg, Brashear, Captina, Eden, Egam, Huntington, Lakin, Licking, Lindside, Newark, Nolin, Rossmoyne, and Wheeling (Weisenberger et al. 1973).

The Ashton series (Mollic Hapludalfs) consists of silt loam that is very deep, well drained, and moderately permeable. These soils formed in loamy alluvium on low stream terraces and alluvial fans, and slopes range from 0 to 15 percent. A typical soil profile consists of a dark brown (10YR 3/3) silt loam Ap horizon to a depth of 23 cm (9 in) over a brown (7.5YR 4/4) silt loam BA horizon to a depth of 38 cm (15 in) over a brown (7.5YR 4/4) silt loam Bt horizon. A C horizon extends between 102 and 203 cm (40 and 80 in) (Soil Survey Staff 2011).

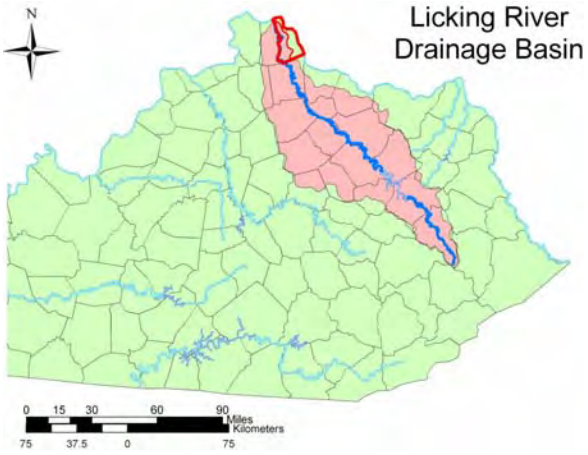


Figure 4. Map of the Licking River drainage basin.

Table 1. Summary of Soil Information for Project Area.

Symbol	Series Name	geomdesc	Taxonomic Order	Age
AsA	Ashton silt loam, 0 to 2 percent slopes (occasionally flooded)	stream terraces on river valleys	Alfisols	late Pleistocene deposits or surfaces
Av	Avonburg silt loam (0 to 4 percent slopes)	flats on uplands	Alfisols	late Pleistocene deposits or surfaces
BrC	Brashear silty clay loam, 6 to 12 percent slopes	ridges on uplands	Alfisols	late Pleistocene deposits or surfaces
BsD3	Brashear silty clay, 12 to 20 percent slopes, severely eroded	hills on uplands	Alfisols	late Pleistocene deposits or surfaces
CaB	Captina silt loam, 2 to 6 percent slopes	stream terraces on river valleys	Ultisols	Pleistocene to late Pliocene or older
EdE2	Eden silty clay loam, 20 to 35 percent slopes, eroded	hills on uplands	Alfisols	late Pleistocene deposits or surfaces
Eg	Egam silty clay loam, (woolper 0 to 4 percent slopes)	flood plains on valleys	Mollisols	late Wisconsin age deposits or surfaces
Hu	Huntington silt loam (0 to 4 percent slopes, occasionally flooded)	flood plains on river valleys	Mollisols	Holocene or late Pleistocene deposits
LaC	Lakin loamy fine sand, 2 to 12 percent slopes	stream terraces on river valleys	Entisols	on surfaces of any age from recent Historic to Pliocene (Udipsamments are generally on late Pleistocene or younger age)
LkA	Licking silt loam, 0 to 2 percent slopes	stream terraces on valleys	Alfisols	late Pleistocene deposits or surfaces
LkB	Licking silt loam, 2 to 6 percent slopes	stream terraces on valleys	Alfisols	late Pleistocene deposits or surfaces
LlD	Licking silty clay loam, 12 to 20 percent slopes	stream terraces on valleys	Alfisols	late Pleistocene deposits or surfaces
LlC	Licking silty clay loam, 6 to 12 percent slopes	stream terraces on valleys	Alfisols	late Pleistocene deposits or surfaces
Ln	Lindside silt loam (0 to 3 percent slopes, occasionally flooded)	flood plains on valleys	Inceptisols	developed in Holocene or late Pleistocene age deposits
Nk	Newark silt loam (0 to 2 percent slopes, occasionally flooded)	flood plains on river valleys	Inceptisols	developed in late Pleistocene or younger deposits
No	Nolin silt loam (0 to 3 percent slopes, occasionally flooded)	flood plains on river valleys	Inceptisols	Holocene or late Pleistocene deposits
RsB	Rossmoyne silt loam, 0 to 6 percent slopes	ridges on uplands	Alfisols	late Pleistocene age deposits
AlD	Wheeling (Alluvial land, steep, 25 to 30 percent slopes, rarely flooded)	stream terraces on river valleys	Alfisols	late Pleistocene deposits or surfaces
WhA	Wheeling silt loam, 0 to 2 percent slopes	stream terraces on river valleys	Alfisols	late Pleistocene deposits or surfaces
WhB	Wheeling silt loam, 2 to 6 percent slopes	stream terraces on river valleys	Alfisols	late Pleistocene deposits or surfaces

Avonburg series (Fragic Glossaqualfs) soils consist of very deep, somewhat poorly drained silt loams. These soils are found on the summits of loess-covered till plains and were formed in loess and the underlying paleosol and till. A typical profile consists of a yellowish brown (10YR 5/4) silt loam Ap horizon to a depth of 28 cm (11 in) over a brownish yellow (10YR 6/6) silt loam BE horizon to a depth of 53 cm (21 in). These surface soils overlie a complex series of four Bt horizons to a total depth of 229 cm (90 in) (Soil Survey Staff 2011).

The Brashear series (Typic Hapludalfs) consists of deep, well drained and moderately well drained soils that are moderately permeable and were formed in the residuum or colluvium of interbedded shale, siltstone, and limestone. These soils are typically found on footslopes and benches but can be found on upslopes with slopes ranging from 2 to 20 percent (Soil Survey Staff 2011). A typical profile consists of an Ap horizon between 0 and 18 cm (0 and 7 in) consisting of brown (10YR 4/3) silt loam over two Bt horizons: a yellowish brown (10YR 5/4) silty clay loam Bt1 and a yellowish brown (10YR 5/6) silty clay Bt2 to a total depth of 86 cm (34 in). These Bt horizons are followed by a Bc horizon of yellowish brown (10YR 5/4) silty clay to a depth of 114 cm (45 in) and a light olive brown (2.5Y 5/4) clay C horizon to a depth of 254 cm (100 in) (Soil Survey Staff 2011; Weisenberger et al. 1973:9–10).

Captina series (Typic Fragiudults) consist of very deep, moderately well drained silt loams. They are found on nearly level to moderately sloping uplands and formed in a thin mantle of silt, colluvium, and residuum weathered from limestone, cherty limestone and dolomite, or siltstone. Slopes range from 1 to 15 percent. A typical profile consists of a brown (10YR 4/3) silt loam Ap horizon to a depth of 23 cm (9 in) over a yellowish brown (10YR 5/4) silt loam BE horizon to a depth of 36 cm (14 in). These are followed by a complex series of five Bt horizons to a total depth of 203 cm (80 in) (Soil Survey Staff 2011).

The Eden series (Typic Hapludalfs) consists of moderately deep, well-drained soils that are slowly permeable and that were formed in residuum from interbedded calcareous shale, siltstone, and limestone. These soils are usually found on hillsides and narrow ridgetops with slopes ranging from 2 to 70 percent but are predominantly found on slopes of 20 and 30 percent (Soil Survey Staff 2011). A typical profile contains an Ap horizon between 0 and 15 cm (0 and 6 in) consisting of brown (10YR 4/3) silty clay loam over a Bt horizon characterized by light olive brown (2.5Y 5/4) silty clay with a few fine faint yellowish brown (10YR 5/6) mottles between 15 and 46 cm (6 and 18 in). The Bt horizon also contains 15 percent weathered shale and siltstone fragments. A BC horizon of light olive brown (2.5Y 5/4) flaggy silty clay with common fine faint olive brown (2.5Y 4/4) light yellowish brown (2.5Y 6/4) and olive (5Y 5/3) mottles can be found between 46 and 61 cm (18 and 24 in). The BC horizon also contains 25 percent weathered shale and siltstone fragments. The last two zones of the Eden series profile are a Cr1 horizon of olive gray (5Y 5/2) slightly weathered interbedded calcareous shale and siltstone with some strata of fractured limestone found between 61 and 127 cm (24 and 50 in) over a Cr2 horizon found between 127 and 203 cm (50 and 80 in) characterized by interbedded soft gray (N 5/0) calcareous shales and siltstones and thin-bedded gray hard fossiliferous limestone (Soil Survey Staff 2011; Weisenberger et al. 1973:13–14).

The Egam series (Cumulic Hapludolls) consists of silty clay loam soils that are “very deep, well drained or moderately well drained soils that formed in clayey alluvium on flood plains and in depressions” (Soil Survey Staff 2011). Slopes are typically less than 2 percent but can be as high as 5 percent. A typical profile consists of a dark brown (10YR 3/3) silty clay loam Ap horizon to a depth of 18 cm (7 in) followed by a very dark grayish brown (10YR 3/2) silty clay loam A horizon to a depth of approximately 56 cm (22 in). The subsoil consists of three very dark grayish brown (10YR 3/2) to brown (10YR 4/3) silty

clay Bw horizons to a total depth of 190 cm (75 in) (Soil Survey Staff 2011).

Huntington series soils consist of deep, well drained soils that are on first bottoms along rivers and small creeks. These Hapludoll soils, which are located along the Ohio River, formed in mixed sediment of Holocene or late Pleistocene age that washed from the upper part of the Ohio River basin. Those along the creeks formed in sediment that washed mostly from soils of limestone origin (Soil Survey Staff 2011).

The Lakin series soils (Lamellic Udipsamments) are excessively-drained soils formed from sandy materials deposited by wind or water and are generally found in hummocky areas on stream terraces and uplands along the Ohio River. These soils typically have a dark brown (10YR 3/3) loamy sand Ap-horizon overlying a brown (10Y 4/3) loamy sand A-horizon followed by a dark yellowish brown (10YR 4/4) loamy sand B-horizon (Weisenberger et al. 1973:6, 18; Soil Survey Staff 2011).

Licking series soils (Aquic Hapludalfs) consist of very deep, moderately well drained silt loams. They formed in a silty mantle over clayey lacustrine deposits on terraces and slopes ranging between 0 and 25 percent. A typical profile consists of a brown (10YR 4/3) silt loam Ap horizon to a depth of 18 cm (7 in) over a yellowish brown (10YR 5/6) silt loam BE horizon to a depth of 28 cm (11 in). These near-surface soils overlie a series of 3 Bt horizons to a depth of 91 cm (36 in) over a series of three C horizons to a total depth of 213 cm (84 in) (Soil Survey Staff 2011).

Lindside series (Fluventic Endoaquepts) consists of very deep, moderately well drained soils formed in alluvium washed mainly from lime-influenced soils on uplands. These soils occur on nearly level floodplains. They typically have a dark grayish brown (10YR 4/2) silt loam A-horizon overlying a brown (10YR 4/3) silt loam BA horizon to approximately 43 cm (17 in). A brown (10YR 4/3) silty clay loam Bw-horizon with many fine and medium distinct yellowish red (5YR 4/6) masses of oxidized iron and few fine and medium distinct grayish brown (10YR 5/2) iron depletions commonly underlies these surface soils (Soil Survey Staff 2011).

The Newark series (Fluventic Endoaquepts) soils consist of very deep, somewhat poorly drained soils formed in mixed alluvium from limestone, shale, siltstone, sandstone, and loess (Whitaker and Waters 1986:94). The soil is on nearly level floodplains and in depressions. These soils are widely scattered throughout creek and river valleys and developed in late Pleistocene or younger deposits. Those soils along small creeks formed in sediment that washed mostly from soils of limestone origin, and those in the Ohio Valley formed in mixed sediment that washed from the upper part of the Ohio River basin. These soils typically have a brown (10YR 4/3) silt loam A-horizon over a brown (10YR 5/3) silt loam Bw-horizon that has many fine and medium faint light brownish gray (10YR 6/2) iron depletions. Commonly, the sediments are gleyed below 15 inches in these soils as a result of a high water table (Soil Survey Staff 2011).

Nolin series (Fluventic Eutrudepts) soils consist of very deep, well drained soils formed in alluvium derived from limestones, sandstones, siltstones, shales, and loess (Whitaker and Waters 1986:95–96). These nearly level to moderately steep soils are on floodplains, in depressions which receive runoff from surrounding slopes, or on natural levees of major streams and rivers. Nolin soils are weakly developed and typically have a brown (10YR 4/3) silt loam A-horizon over a brown (10YR 4/3) silt loam Bw-horizon with few, medium faint yellowish brown (10YR 5/4) mottles of highly weathered siltstone (Soil Survey Staff 2011).

The Rossmoyne soil series consists of “deep, moderately well drained soils that contain a fragipan” (Weisenberger et al. 1973:3). These soils were formed in either loess or glacial till and occur mostly on the broad glaciated ridges in the region. This soil series has been classified as a fine-silty, mixed, super active, mesic Aquic Fragiudalfs (Soil Survey Staff 2011). In a representative

profile, the topsoil is a dark brown silt loam to a depth of 18 cm (7 in) and is underlain by a dark brown silt loam to a depth of 28 cm (11 in). These soil horizons are then underlain by yellowish brown silty clay loam to a depth of 53 cm (21 in) (Weisenberger et al. 1973:24–25).

The Wheeling series (Ultic Hapludalfs) is comprised of deep and well drained soils that formed in loamy material underlain by sand or sand and gravel. Wheeling soils are associated with the Nolin soils on nearby floodplains. Slopes range from 0 to 55 percent. A typical Wheeling soil profile consists of a brown (10YR 4/3) silt loam Ap horizon to 23 cm. This is underlain by a strong brown (7.5YR 5/6) silty clay loam subsoil (Soil Survey Staff 2011).

Observed Soils

The soil profiles revealed in shovel test probes (STPs) within the project area varied depending on the topographic situation. Soils observed were generally associated with their mapped soil series. The typical profile for agricultural pastures that had been subjected to plowing revealed a dark brown (10YR 3/3) sandy loam topsoil that ranged in depth from 0 to 20 cm (0 to 8 in) below ground surface (bgs). The underlying subsoil generally consisted of yellowish brown (10YR 5/6) or brownish yellow (10YR 6/6) sandy loam or sandy clay loam. On hillsides and slopes, the topsoil had been extensively eroded. The profile typically consisted of a thin yellowish brown (10YR 5/6) clayey silt loam extending to approximately 5–7 cm (2–3 in) bgs. The underlying subsoil was characterized by brownish yellow (10YR 6/8) clay loam or clay. Soils situated within drainages and in floodplains usually indicated brown (10YR 4/3) silty clay loam topsoil extending to approximately 5–10 cm (2–4 in) bgs with an underlying gray (10YR 6/1) clay subsoil. Soils noted within previously disturbed areas that included mostly commercial and residential yards contained mixtures of strong brown (7.5YR 4/6), gray (10YR 5/1), and yellowish brown (10YR 5/8) clay subsoil that was mixed with gravel or rock.

Vegetation

The Outer Bluegrass physiographic province is located within the Western Mesophytic Forest (Braun 1950:146). The major vegetation types in this region form a complex mosaic strongly influenced by underlying geologic strata. This is in strong contrast to the situation in the Mixed Mesophytic Forest to the east. Forests in the Inner Bluegrass are generally less luxuriant than those in the Appalachian Plateau and have a greater tendency toward dominance of a few species (Braun 1950:122-123).

The transition from extensive, mixed Mesophytic communities in the far eastern part of the state to extensive oak and oak-hickory communities in central and western Kentucky is well marked despite the more generalized mosaic pattern and the presence of large prairie areas (Braun 1950:123). While old forest trees remain on large estates, there are no extensive areas of original vegetation outside of the river gorges in the Bluegrass and it is impossible to reconstruct a picture of the original forest conditions (Braun 1950:125). Beech trees are not represented naturally in the Inner Bluegrass forest however; beech trees are part of the forested areas in the Outer Bluegrass. The western Mesophytic forest is dominated by oak and hickory, but a wide variety of other species are represented.

Oak, oak-hickory, and oak-chestnut communities occupy many of the drier slopes and uplands while an oak-tuliptree type is represented in areas of low relief. Pine woods, more extensive in secondary than in primary growth, cover many of the Devonian age shale slopes (Braun 1950:137–138; Niquette and Henderson 1984).

Modern Climate

The climate of Kentucky is continental in character. As a result, temperature and precipitation levels throughout the state fluctuate widely. The prevailing surface winds originate in the Gulf of Mexico and are southerly and weak, allowing upper-level westerly winds to steer weather systems across

the state. These factors result in warm, moist air coming from the south, while cooler and drier air is derived from the north. Mean annual temperatures across the state range from 53 degrees Fahrenheit in the northeast to 59 degrees Fahrenheit in the southwest. Overall, there is significant seasonal variation in temperature, with approximately 20 degree differences possible during summer and winter months, as well as up to 25 degree shifts in the spring and fall. Average annual precipitation across the state ranges from 106.68 cm (42 in) in the north to 132.08 cm (52 in) in the south. Warm, moist tropical air masses derived from the Gulf of Mexico are most common during the summer months and contribute to the high humidity levels experienced in the state. During the spring and fall, storm systems tend to be less severe and less frequent, resulting in less radical climate extremes (Foster and Conner 2008).

In Campbell County, Kentucky, the average daily maximum temperature in January is 36 degrees Fahrenheit. July is the warmest month with an average daily maximum temperature of 85 degrees Fahrenheit. The total annual precipitation in the Kenton, Campbell, and Boone County area is 41.5 in (Weisenberger et al. 1973).

Description of the Project Area

The current project area begins at an existing pumping station in the community of Silver Grove on the north end, passes through the community of Camp Springs in the center, and terminates at another existing pump station 2.7 km (1.7 mi) northeast of the community of Alexandria on the south end. For most of its length, the proposed force main parallels the Mary Ingles Highway and Four Mile Road (KY 547) (see Figures 2 and 3).

Terrain within the current project area consisted of floodplains and terraces with a few small dissected upland ridges. Elevations ranged between 162 m (530 ft) AMSL along the Mary Ingles Highway in the northern portion of the project area and approximately 190 m (623 ft) AMSL along upland ridges in the southern portion of the project area along Four Mile Road.

Land within the project area was used for agricultural, commercial, and residential purposes (Figures 5–10). The agricultural areas included pastures that typically held short grass and weeds, as well as occasional stands of deciduous trees. The majority of commercial and residential properties had extensive ground surface disturbance due to landscaping and access roads. The proposed alternate locations for the pump station were primarily modern fill surrounding swampy lowlands.

III. PREVIOUS RESEARCH AND CULTURAL OVERVIEW

Prior to initiating fieldwork, two searches of records maintained by the OSA (Registration Numbers FY10_0749 and FY12_7196) were conducted to: 1) determine if the project area had been previously surveyed for archaeological resources; 2) identify any previously recorded 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. 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. The following review utilizes the data obtained during the 2012 records search (FY12_7196). To characterize the archaeological resources in the general area further, the OSA archaeological site database for the county was reviewed and synthesized. The review of professional survey reports and archaeological site data for the county provided basic information on the types of 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.

Figure 5. General overview of project area depicting commercial area, facing east.

Figure 6. General overview of project area depicting typical terrain and vegetation, facing south.

Figure 7. General overview of project area depicting utility disturbance, facing north.

Figure 8. General overview of typical ground surface disturbance associated with residential properties, facing north.

Figure 9. General overview of western project area depicting disturbance from dumping, facing east.

Figure 10. General overview of alternate pump station area depicting swampy terrain, facing southeast.

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:

1883 *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 45 structures (MS 1–45) were located within or directly adjacent to the project area (Figure 11; Table 3). MS 1–10 originally appear on the *1883 Atlas of Boone, Kenton, and Campbell Counties, Kentucky*. MS 11–21 originally appear on the 1898 East Cincinnati, Ohio-Kentucky, 15-minute series topographic

Newport, KY-OH 1983 (Photorevised 1987)
USGS 7.5 minute series digital topographic quadrangle. Map B42, Governor's Office for Technology, Office of Geographic Information.

Withamsville, OH-KY 1996
USGS 7.5 minute series digital topographic quadrangle. Map B43, Governor's Office for Technology, Office of Geographic Information.

MS-1
MS-14
MS-33
MS-32
MS-31
MS-2
MS-13
MS-19
MS-29
MS-20
MS-28
MS-45
MS-30
MS-44
MS-21
MS-23
MS-27
MS-12
MS-6
MS-11
MS-18
MS-17
MS-16
MS-48
MS-5
MS-15

Project Area

HAMILTON CO
CAMPBELL CO
OHIO RIVER
KENTUCKY
OHIO
Mile 460
Mile 459
Mile 458
CSX
Conveyor
Boat Ramp
Light
Yard
Trailer Park
Melbourne
Sikes Grove
Campbell Lodge Boys Home
Fourmile Creek
Duck Creek
Crestview
Valley Chapel
Sewage Disposal
St Joseph Sch
Cold Spring
Holly Hill Childrens Home
Substa
Owl Creek
St Johns Ch Cem
Tug Fork
Substations
St Anne Convent
Athletic Field
Camp Springs
PIPELINE
ROAD
LANE

QUADRANGLE LOCATION

0 1000 2000 feet
0 300 600 meters

K09G003 (09APRIL2012) DMW

LEGEND
Map Structure

Figure 11a. Topographic map indicating the locations of map structures.

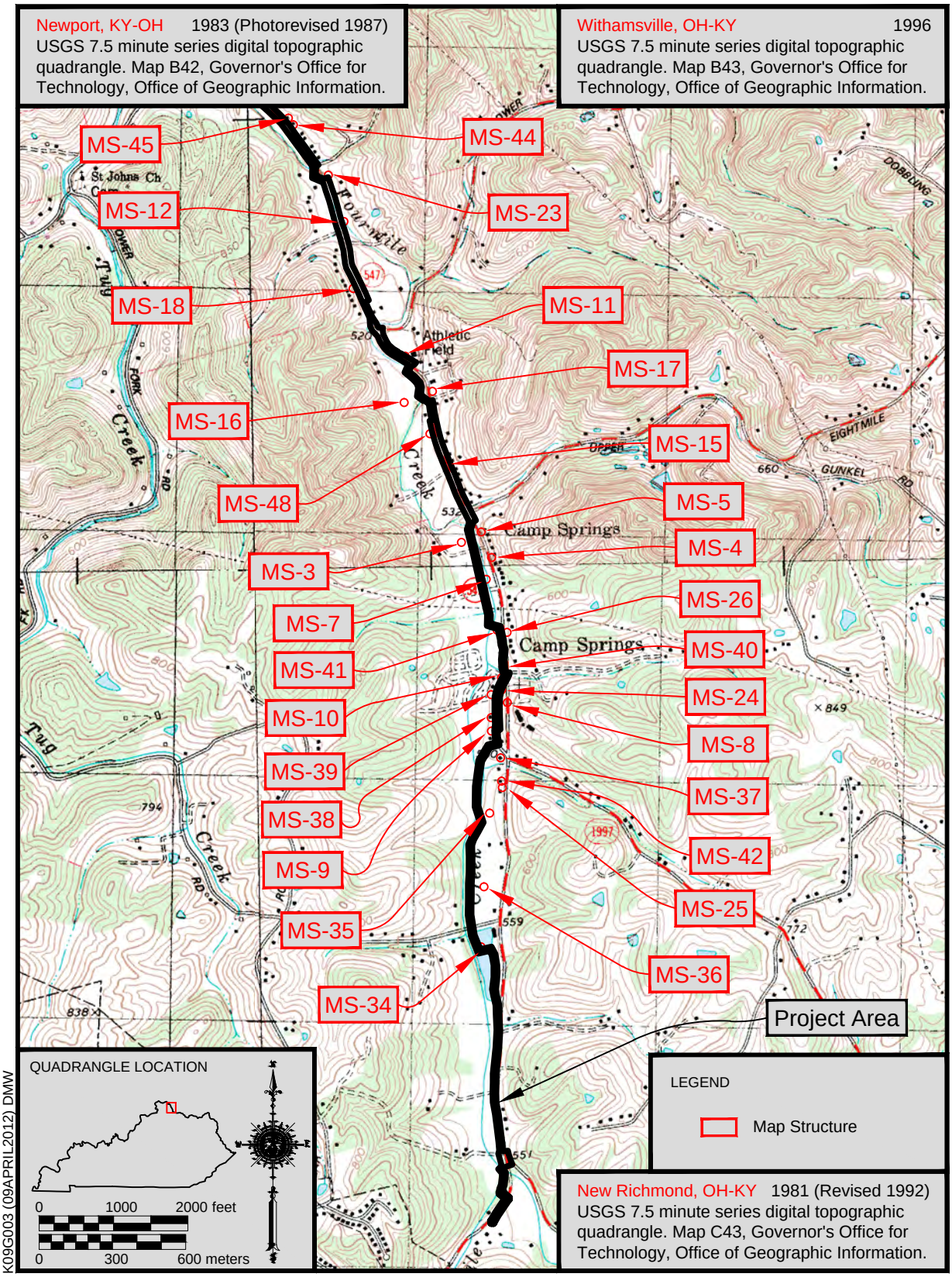


Figure 11b. Topographic map indicating the locations of map structures.

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 42–45 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	CH Resource	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	313	X		X								Yes	N. Einhaus
1888 Atlas of Boone, Campbell, etc	6	277	X	X	X								Yes (house)	J. Wittmann
1888 Atlas of Boone, Campbell, etc	7		X											N. Reitmann
1888 Atlas of Boone, Campbell, etc	8	324?	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										
1898 East Cincinnati, OH-KY, 15-min	14			X									No	
1898 East Cincinnati, OH-KY, 15-min	15	304		X									Yes (house)	
1898 East Cincinnati, OH-KY, 15-min	16			X									No	
1898 East Cincinnati, OH-KY, 15-min	17	71?		X									Yes	
1898 East Cincinnati, OH-KY, 15-min	18	294		X									Yes	
1898 East Cincinnati, OH-KY, 15-min	19	274		X									Yes (house)	
1898 East Cincinnati, OH-KY, 15-min	20			X									No (Modern)	
1898 East Cincinnati, OH-KY, 15-min	21			X									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	60					X						Yes	
1936 Alexandria, KY-OH, 15-min	25	325					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					
1952 Newport, KY-OH, 7.5-min	29	236							X				Yes (WPA PS)	
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	235?							X					
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	322									X		Yes	
1953 New Richmond, KY, 7.5-min	39	319									X		Yes	
1953 New Richmond, KY, 7.5-min	40	318									X		Yes	
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	281										X	Yes	
1953 Withamsville, KY, 7.5-min	45	280										X	Yes	

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) (Joseph 2009; Kerr and Stephenson 2009). 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 (CP-60) fell within the project area easement and viewshed surveyed in 2011. Cultural historic resources are discussed in a separate report (McMahan et al. 2012).

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.

Cultural Overview

Early Human Occupation

There is an increasing amount of evidence documented over the last two decades suggesting that humans arrived in North America before what has traditionally been thought of as the first migration of peoples into the Americas. Archaeologists thought that humans first entered the Americas while following Pleistocene megafauna or other animal species over the Bering Land Bridge that once joined Siberia and Alaska no earlier than about 11,500 years ago. It was thought that after arrival, these migrants—referred to as the Clovis people—quickly spread across North and South America.

Evidence for a pre-Clovis migration is becoming stronger as additional data are collected. Furthermore, multiple entry points or routes have been suggested. Not only did entry into North America occur across a land bridge, but it may also have happened via northern coastal waterways leading to the western (Waguespack 2007), and possibly the eastern (Lowery et al. 2010), seaboards. According to Maggard and Stackelbeck (2008:110) “these discoveries have seriously challenged the Clovis-first model and force us to reconsider the timing of colonization and the processes that were involved in the initial settlement of the New World.”

One case supporting the pre-Clovis occupation of North America has been documented at Meadowcroft Rockshelter in western Pennsylvania. Excavations at the site have produced radiocarbon dates earlier than 17,000 B.C. through material recovered from the deepest microstrata in Stratum IIa associated with pebble tool artifacts, such as choppers, scrapers, and planes (Adovasio et al. 1978:638–639).

More recently, the Monte Verde site in northern Chile in South America has provoked much discussion because of an occupational surface (MV-II) dating to approximately 12,500 years ago that was documented at the site. The Monte Verde occupation includes wooden huts, hearths, and associated stone artifacts. The site dates approximately 1,000 years earlier than the generally accepted dates for Clovis, but it is situated approximately 16,000 km (9,942 mi) south of the Bering Land Bridge (Dillehay 1989, 1997; Meltzer et

al. 1997). In fact, the Monte Verde data have compelled Meltzer and other archaeologists to back off from proclamations concerning a "Clovis Barrier" that had not been breached (Meltzer et al. 1997).

Several additional thoroughly investigated sites in the southeastern United States have also been suggested as pre-Clovis candidates. Among these are the Cactus Hill site located in southeast Virginia (McAvoy and McAvoy 1997; Wagner and McAvoy 2004) and the Topper site in South Carolina (Chandler 2001; Goodyear 1999; Goodyear and Steffy 2003). McAvoy and McAvoy (1997) have recovered fairly good data on pre-Clovis activity at the Cactus Hill site. This site has produced evidence that it was used between 11,000 and 15,000 years ago, the most compelling of which was recovered from a thermal feature that contained a few core blade tools and returned a radiocarbon date of 15,070 ± 70 B.P. (McAvoy and McAvoy 1997:179). Two additional dates for this occupation were 16,670 ± 730 B.P., which was associated with a thermal feature and prismatic blade clusters, and 16,940 ± 50 B.P., which was associated with another thermal feature (McAvoy and McAvoy 1997; Wagner and McAvoy 2004). Thin, lanceolate-shaped hafted bifaces, core blades, blade cores, and worked flakes were found in occupation levels at the site below Clovis-aged occupations (McAvoy and McAvoy 1997).

At another southeastern United States site, the Topper site in South Carolina, a number of lithic artifacts, such as burin- and blade-like tools, have been recovered from beneath Clovis period layers. These artifacts have been dated by optically stimulated luminescence to approximately 13,500 ± 1000 B.P. (Goodyear 1999; Marshall 2001:1730) and "the pre-Clovis artifact-bearing alluvial sands …are at least 16,000 to 20,000 years old" (Goodyear 2006:108). To date, no definitive pre-Clovis occupations or materials have been found in Kentucky (Maggard and Stackelbeck 2008:114).

The Paleoindian Period (before 8000 B.C.)

The Paleoindian period is the earliest cultural period conclusively documented in the Kentucky Bluegrass. Dragoo (1976:5) dated this period in the eastern United States from about 10,500 B.C. to 8000 B.C.; however, Mason (1962:236) has suggested that it may have begun as early as 11,550 B.C.

The arrival of humans in the Bluegrass region was probably linked to the movements of the Pleistocene glaciers. During the Paleoindian period, the last of these glacial advances and retreats, called the Greatlakean Stadial (post-9900 B.C.), occurred. Although the glaciers never actually extended south of the Ohio River, the climatic effects probably did. This cooler, moister climate would affect the composition and distribution of floral and faunal communities (Delcourt and Delcourt 1982; Klippel and Parmalee 1982).

In the Plains area, Paleoindian points recovered from subsurface contexts have been found in direct association with extinct Pleistocene megafauna (Jennings 1978:27). Often these sites have been interpreted as kill sites, leading archaeologists to hypothesize that early Americans were engaged full time in hunting big game Pleistocene mammals, such as mammoth, mastodon, giant beaver, bison, and horse, to the exclusion of plant resource utilization (e.g., Bonnichsen et al. 1987; Kelly and Todd 1988; Stoltman and Baerreis 1983).

An alternative interpretation is supported by the many species of plants and small mammals that have been recovered from Clovis-age sites, including Lubbock Lake (Johnson 1987), Shawnee-Minisink (Dent and Kaufman 1985; Gingerich 2011;), and Aubrey (Ferring 1989). At Dust Cave in northern Alabama, faunal material associated with the Late Paleoindian levels was more highly represented by birds than mammals (Walker 1996). In a review of the topic, Meltzer (1993) concluded that there is no widespread evidence for the specialized hunting of big game species (i.e., megafauna). Several authors (e.g., Davis 1993; Dincauze 1993;

Meltzer 1993) now argue that the Paleoindian diet was more generalized and relied on a number of faunal and floral species. Megafauna would have been taken when encountered, but not to the exclusion of other species.

In the eastern United States, few sites have definite associations of fluted points and extinct Pleistocene fauna. Associations of chipped stone tools and mastodon remains have been reported for several regional sites. At the Adams mastodon site in Harrison County, Kentucky, the remains of a single mastodon with cut marks on the bones were found in association with large limestone slabs. The configuration of the skeletal remains, in addition to the above evidence, has been interpreted as representative of a possible butchering site (Duffield and Boisvert 1983; Walters 1988). In opposition to the characterization of Paleoindians hunting megafauna, MacDonald (1985) has proposed that caribou were the preferred game. Evidence to support this suggestion has been found at Holcomb Beach in Michigan (Fitting et al. 1966).

Distinctive lanceolate, often fluted hafted bifaces called “Clovis points” are the hallmark of the early part of the Paleoindian period (Maggard and Stackelbeck 2008). Unifacially and bifacially chipped tools, such as knives, scrapers, spokeshaves, drills, gravers, and endscrapers with spurs, have also been recovered. Archaeologists infer that artifacts and tools of wood, bone, and shell were also used, although they were rarely preserved. One exception is a “carved, incised, and beveled-based osseous point” recovered from the Sheriden Cave site in Wyandot County, Ohio (Tankersley 1997:713). An additional bone point was recovered from the site in 2000. In Florida, where preservation is better, a number of bone and ivory tools associated with Paleoindian remains have been described (Dunbar and Webb 1996). Many of these tools were manufactured from the bones and tusks of now extinct fauna, including megafauna.

Paleoindian sites in the eastern United States where Clovis points have been recovered from subsurface contexts include Bull Brook in Massachusetts (Byers 1954); the Shawnee-Minisink site in Pennsylvania (Marshall 1978); Wells Creek Crater (Dragoo 1973); the Johnson-Hawkins, Johnson, and Carson-Conn-Short sites (Broster and Norton 1992) in Tennessee; the Debert site in Nova Scotia (MacDonald 1985); and Modoc Rockshelter in Illinois (Fowler 1959). At Meadowcroft, despite the lack of diagnostic fluted hafted bifaces, subsurface remains that date to the Paleoindian period were recovered, including Mungai knives, bifaces, flake blades, and flake debris, as well as four fire-pit features (Adovasio et al. 1977). Although the date is far from being universally accepted, the earliest dated Paleoindian component in North America (14,225 ± 975 B.C.) (Adovasio et al. 1977:Table 7) was recovered from Stratum II at this site.

Radiometrically dated Paleoindian material in the Bluegrass region is limited. A date from one Bluegrass site is worth noting, although a direct association between the date and Paleoindian material unfortunately cannot be demonstrated. An alluvial stratum at Big Bone Lick in Boone County that contained sloth, horse, mastodon, and mammoth yielded a date of 8650 ± 250 B.C. (Tankersley 1985:41, 1987:36–37, 1990:Table 1). Clovis points found at the site over the years indicate that the date may be an accurate assessment for Paleoindian use of this locale (Maggard and Stackelbeck 2008).

According to Freeman et al. (1996:402), most Paleoindian sites in Kentucky “represent short, ephemeral occupations that occur in shallow, deflated, or severely disturbed deposits” and larger sites are in “areas that provide high-quality lithic raw material, or topographic features or resources that would have attracted and concentrated game.” Away from lithic source areas, for example, larger sites often “occur in association with ponded or slow-moving water, at stream confluences and fords, along major game trails, and at mineral springs” (Freeman et al. 1996:402).

With the retreat of the glaciers the environment began to change, and Pleistocene

megafauna became extinct. Regional archaeological complexes began to develop (Dragoo 1976:10), and new hafted bifaces replaced the Clovis point tradition. In the Southeast, Clovis fluted points gave way to Plainview, Agate Basin, Cumberland, Quad, Dalton (Meserve), Beaver Lake, and Hardaway-Dalton hafted bifaces. These hafted biface types are representative of the transition from the Late Paleoindian to the Early Archaic subperiod.

Transitional Paleoindian/Early Archaic sites of the Dalton culture are slightly more numerous than the earlier Paleoindian sites. Sites dating to this period show many resemblances to those with Paleoindian material (i.e., lanceolate projectile point knives, uniface tools) and those reflecting Early Archaic lifeways (i.e., more diverse subsistence, the introduction of many bifacial tool forms, and several types of sites). Hunting remained an important source of subsistence during this time period; however, Dalton peoples probably based their economy around the hunting of animals such as the white-tailed deer instead of large game animals (Morse 1973). This is probably also the case for other Late Paleoindian/Early Archaic groups. According to Williams and Stoltman (1965:678), "available evidence suggests an increasing Dalton concentration into the Tennessee River Valley of northwest Alabama and western Tennessee, and the Green River in Kentucky." With the depletion of the big-game herds, old supplementary subsistence patterns were intensified, signaling the beginning of an Archaic subsistence pattern (Williams and Stoltman 1965). Morse (1973) has described two basic kinds of Dalton sites: base settlements and butchering camps. In addition, the first systematic use of rockshelters is seen during the Dalton period (Walthall 1998).

Many sites that contained Paleoindian material also contained components representative of the transition from the Paleoindian to Archaic periods. There appears to be an increase in the number of sites that may reflect a population increase as part of the transition. Hunting remained important; however, there is evidence for the use of wild plants as a dietary supplement. At the Hester site, Lentz (1986) recovered the remains of wild plum, hickory nut, hackberry, walnut, and acorn in association with Dalton, Big Sandy, Decatur, and Pine Tree horizons. According to Lentz (1986:272) "Most of the foods [recovered in these early horizons] can be consumed fresh without any required grinding, soaking, or cooking." Few food processing artifacts were recovered from the site.

Goodyear (1982:382–392) has argued, based on radiocarbon dates and contexts of Dalton points across the Southeast, that Dalton points consistently date earlier and are not contemporary with later Archaic side-notched and corner-notched forms. Goodyear places this transitional phase between 8500 and 7900 B.C.

The Archaic Period (8000–1000 B.C.)

The Archaic period includes a long span of time during which important cultural changes took place. As Funk states (1978:19) "it is generally agreed that Archaic cultures evolved from Late Paleoindian expressions of the Southeast and Midwest, because there is growing evidence for the existence of transitional cultural manifestations. It is very unlikely that new migrations from Asia were represented." These manifestations probably occurred in response to environmental changes that took place at the close of the Pleistocene epoch. The Archaic period is customarily divided into three subperiods: Early (8000–6000 B.C.), Middle (6000–4000 B.C.), and Late (4000–1000 B.C.). As of 2006, 720 Archaic period sites had been identified in the Bluegrass (Jefferies 2008:260).

During the Early Archaic subperiod, the last glaciers retreated, and the arctic-like boreal forest began developing into the eastern deciduous forest. By the Middle Archaic subperiod, the environment had become warmer and drier than it is today. In response to the changing environment, with its associated changes in plant and animal life,

Late Archaic peoples developed a more diversified subsistence strategy based on local choices from a variety of subsistence options that included hunting, plant gathering, fishing, and, in some areas, the beginnings of plant domestication in a planned seasonal round exploitation strategy (Winters 1967:32, 1969). Caldwell (1958:6–18) has called this Archaic subsistence approach "primary forest efficiency." This strategy appears to have continued well into the Woodland period.

Early Archaic (8000–6000 B.C.)

Except for the adoption of new hafted biface styles, Early Archaic tool kits are nearly identical to Paleoindian. The fact that these hafted biface styles are found over a very large area suggests that little regional subsistence diversity occurred during the Early Archaic subperiod. Subsistence strategies are believed to have been similar to those employed by Paleoindian peoples, although a greater variety of game was hunted. The scarcity of tools associated with the preparation of plant foods and fishing in the early part of the Archaic period indicates that hunting was probably still the major subsistence activity (Dragoo 1976:11). Archaeological investigations at a number of deeply buried sites in the Southeast, such as the Longworth-Gick site near Louisville, Kentucky (Collins 1979), have provided important information about Archaic lifeways and their changes through time.

Middle Archaic (6000–4000 B.C.)

The climate during the Middle Archaic subperiod was dryer and warmer than the modern environment. Increasing regionalization of artifact assemblages, with the addition of new artifact classes and hafted biface styles, implies the development of extensive resource exploitation strategies. The Middle Archaic is marked by the introduction of groundstone artifacts manufactured through pecking, grinding, and polishing. A number of these groundstone tools (e.g., manos, mortars and pestles, and nutting stones) are interpreted as plant food processing artifacts and indicate an increasing utilization of plant foods during the Middle Archaic subperiod (Jefferies 2008:203–206).

New hafted biface styles appeared during this subperiod. Stemmed and corner-notched points and a variety of bone tools, including antler hafted bifaces, fishhooks, and gouges, suggest an improved efficiency in exploiting local resources. Middle Archaic sites tend to contain larger accumulations of materials than those of earlier periods, "suggesting increasing group size and either increased sedentism or carefully scheduled seasonal reoccupation of selected locations" (Cohen 1977:191). Chapman (1975) has suggested that hafted bifaces were probably used in conjunction with the atlatl, a device that increases the distance and accuracy of a spear throw. The recovery in Middle Archaic contexts of bone and groundstone objects (bannerstones) interpreted as atlatl weights tends to support his suggestion (cf., Neuman 1967:36–53). Certain classes of chipped stone tool artifacts, such as scrapers, unifaces, drills, and gouges, indicate a continuation of their importance from the Paleoindian period.

In the middle Ohio Valley there appear to be at least two Middle Archaic horizons, although the second is not particularly well documented. The first is the North Carolina sequence, first defined by Coe (1964). The second manifestation is represented by corner-notched and side-notched Brewerton-like points that are typically thought of as Late Archaic points, although they may well have first appeared during the Middle Archaic subperiod (Hemmings 1977, 1985; United States Army Corps of Engineers 1980; Wilkins 1978).

Late Archaic (4000–1000 B.C.)

The Late Archaic subperiod was a time of continued cultural expansion and growing complexity. Dragoo (1976:12–15) has discussed several Late Archaic traditions for the Eastern Woodlands. Their distinctiveness stems from varied regional responses reflected in material culture. Straight-stemmed, basal-notched, or contracted-base hafted bifaces characterize the Late Archaic subperiod. Judging from the greater number of Late

Archaic sites that have been recorded, an increase in population can be postulated. In some cases, evidence of longer and more intensive site occupation suggests extended habitation within an area.

A series of related Late Archaic sites that define the Skidmore phase have been investigated in Rowan and Powell Counties adjacent to the Bluegrass. These sites include the Bluestone site complex (15Ro35-36) (Brooks et al. 1979) and the Skidmore (15Po17) (Cowan 1976) and Zilpo sites (Rolingson and Rodeffer 1968). Diagnostic hafted bifaces have been described in a variety of ways but are generally broad bladed with stubby, contracting stems. Turnbow and Jobe (1981) suggest a maximum age range of 2400 to 1650 B.C. for the Skidmore phase.

The Grayson site, also outside the Bluegrass, covered about 6.00 ha (14.82 acres) of a broad second terrace overlooking the Little Sandy River near Grayson, Kentucky (Ledbetter and O'Steen 1991, 1992). Machine stripping and block excavation revealed a relatively discrete Maple Creek base camp that was occupied during the fall and winter. The site was far less substantial than the Maple Creek site described by Vickery (1976) at the Ohio River near Cincinnati. Diagnostic artifacts recovered included small Merom-Trimble points, and absolute dates spanned the period from 1700 to 1250 B.C. Two rectangular pit houses with rounded corners, one 6.00-x-7.00 m (19.68-x-22.97 ft) and the other 10.00-x-11.00 m (32.81-x-36.09 ft) in size, had been constructed with unevenly spaced posts around an open area. In each was a single large pit containing a small central hearth. The houses were surrounded by medium-size to large pits. Similar structures occur at Late Archaic sites (9Wr4 and 9Wr11) in Warren County, Georgia (Ledbetter 1990).

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

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

Struever and Vickery (1973) have defined two plant complexes domesticated at the close of the Archaic period that continued to be used into the Woodland period. One consisted of non-native plants, such as gourd and squash, occurring sporadically but early, and corn, which did not become important in the Ohio Valley until circa A.D. 1000. The other was a group of native plants, including *chenopodium*, marsh elder, and sunflower. Recent research in Missouri, Kentucky, and Tennessee suggests that squash was under cultivation in the mid-South by the late third millennium B.C., and that by the second half of the second millennium B.C., evidence from Illinois, Kentucky, and Tennessee demonstrates that squash, gourd, and sunflower were well established (Adovasio and Johnson 1981:74). Watson (1985) views these plants as two different groups of cultigens—the East Mexican Agricultural Complex and the Eastern United States Agricultural Complex. The first includes squash (*Cucurbita pepo*), bottle gourd (*Legenaria siceraria*), and maize (*Zea mays*). The latter includes sunflower (*Helianthus annus*), sumpweed (*Iva annua*), chenopod (*Chenopodium* sp.), maygrass (*Phalaris* sp.),

and knotweed (*Polygonum* sp.). Watson, like Struever and Vickery (1973), suggests that corn, squash, and bottle gourd were domesticated in Mexico and imported into the eastern United States by way of the Gulf of Mexico, and then were transported up the Mississippi River and its tributaries. The native cultigens consist of local species whose seeds, recovered from archaeological contexts, are much larger than those that grow in a natural state; thus, cultivation is inferred.

Plant domestication became an important factor in Late Archaic cultural development. Recent research at Cloudsplitter shelter in the Knobs region has documented early plant domestication. Desiccated squash rind was found in a Late Archaic deposit associated with a radiocarbon date of 1778 ± 80 B.C. (Cowan et al. 1981:71, Table 1). Seeds of the Eastern Agricultural Complex (sunflower, sumpweed, maygrass, and erect knotweed) are sparse in the Late Archaic levels at the site. According to Cowan et al. (1981:71), after 1050 B.C., however, "all members of the Eastern [Agricultural] Complex undergo a sudden and dramatic increase in the rate at which they were being deposited in the site," perhaps "indicative of a wholesale introduction of the complex into the region at this time." They (Cowan et al. 1981:71) go on to say "the Late Archaic and Early Woodland inhabitants of Cloudsplitter seem to have followed a similar trajectory in cultivated plant usage experienced in several other river drainages in the East."

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

A number of hafted biface styles are considered terminal Late Archaic and appear in the Early Woodland subperiod (i.e., from approximately 2000–500 B.C. [see below]). They usually have been found in contexts without Woodland pottery, a situation that leads archaeologists to place them in the Late Archaic rather than the Early Woodland subperiod, which may not be the case.

The Woodland Period (1000 B.C.–A.D. 1000)

Over the two millennia of the Woodland period, cultures in the Ohio Valley sharply diverged from their Archaic beginnings. The Kentucky Bluegrass and the adjacent Knobs region shared in this development that produced, in burial mounds and earthwork enclosures, some of the more notable prehistoric monuments in the Ohio Valley of Kentucky. Alongside this development came the intensification of plant domestication, the introduction and spread of pottery—first used as specialized containers and later used more widely—and the intensification of trade with distant regions of the Midwest for exotic materials used in personal life, including burial offerings (Applegate 2008).

The Woodland period is customarily divided into Early (1000–300 B.C.), Middle (300 B.C.–A.D. 400), and Late (A.D. 400–1000) subperiods. Of these, the Early Woodland is the least known. Burial mound and earthwork complexes termed "Adena," which have counterparts north of the Ohio River, characterized the Bluegrass region at the time of the Middle Woodland subperiod. Toward the end of this subperiod a few sites reflect the subsequent Hopewellian cultural fluorescence, best known from Ohio in the major earthworks of the Scioto and Little Miami Valleys. In the Late Woodland, a distinctive cultural adaptation developed with similar variants throughout the middle Ohio River valley (Railey 1996). As of 2006, 780 sites with Woodland period components had been recorded for the Bluegrass (Applegate 2008:454).

Early Woodland (1000–300 B.C.)

Some of the earliest known Early Woodland sites in the Bluegrass and adjoining Outer Bluegrass Ohio Valley to the north

include Peter Village in Fayette County (Clay 1984, 1985, 1987) and the West Runway site in Boone County (Duerksen et al. 1995). The two sites were quite different. Peter Village was an enclosure first surrounded by a post stockade and later by a ditch and internal bank; the West Runway site was a campsite with multiple hearths, suggesting a series of short-term occupations. Radiocarbon dates place the occupation at West Runway possibly as early as 600 B.C. and Peter Village at about 350–400 B.C. Subsequent dates from the Argosy Casino project across the river in southeastern Indiana confirm that the type of pottery that occurs at West Runway does indeed date as early as 700 B.C. (Clay 2002a). Such early dates have not yet been obtained for the Inner Bluegrass. Although West Runway, in the types of features and their clustering, is not that much different from a Late Archaic site, the site does occur in uplands as opposed to a bank-side location. The Peter Village enclosure, however, marks a sharp break with Archaic settlement systems.

At both sites, thick and relatively crude pottery representing large containers appears. First called Fayette Thick (Griffin 1943) from its occurrence at the Peter Village site, the pottery occurs widely, though sparsely, across the Bluegrass (cf. Clay 1980), with some variation suggesting different pottery-making groups. It even occurs in small and early burial mounds, for example the Hartman Mound in Boone County (Webb 1943), where it may date to around 400 B.C., although the association is not definite. It is hypothesized (Clay 1987) that groups gathered at the Peter Village enclosure to mine barite and galena, which was then fashioned into pigments and artifacts (atlatl weights and cone-shaped barite "buttons") for personal use and for intergroup trading. The large pots may have been "feast containers" made as needed to serve specific work crews. As a result, they may have been difficult to transport between sites and abandoned at the conclusion of a particular project.

Outside of the few sites that have been excavated, artifacts belonging to the Early Woodland subperiod occur widely in the Bluegrass. Chipped chert bifaces are large and of a type known as "Adena Stemmed." Polished, ungrooved stone axes were widely used in woodworking—for example, for cutting stockade posts at the Peter Village enclosure. Finally, the existence of worked weights made from barite/galena suggests the use of improved atlatl or throwing sticks (Clay 1985, 1987).

Middle Woodland (300 B.C.–A.D. 400)

The Bluegrass Middle Woodland subperiod is known by its burial mounds, which have been called Adena after a site excavated in the early twentieth century (Mills 1902) in southern Ohio (Dragoo 1963; Webb and Baby 1957; Webb and Snow 1945). Major mound excavations of the Fischer, Drake, Mt. Horeb, Morgan Stone, Wright, Ricketts, Camargo Mounds, and many others, have given archaeologists a detailed picture of burial customs during this period (Clay 1986, 1998). Excavations at the small Auvergne mound in Bourbon County (Clay 1983) suggest that Native Americans from a larger area came together at the time of a death to feast at the graveside. Some of the large mounds containing multiple burials suggest that these groups often returned to the same mound to add further burials to the structure. At times, the burial mound could, like the Wright Mound in Montgomery County (Webb 1940), grow to imposing size.

Although we have considerable excavated evidence for burial customs, the settlement system is not well understood (Clay 1998:13–19). Those responsible for the mounds may have been widely dispersed throughout the Bluegrass in relatively small groups. Seen in this light, the elaborate burial sites (the burial mounds) offered essential foci for scattered groups to meet and interact. There were also small, circular enclosures, called ceremonial circles, of which the Mount Horeb site in Fayette County (Webb 1941) is an excavated example. Late in the Middle Woodland subperiod, hilltop enclosures, such as Indian Fort Hill near Berea in Madison County, Kentucky, were constructed. Still, daily domestic sites are very poorly understood,

although examples dating to the time period have been found to the south on the Cumberland Plateau (Kerr and Creasman 1995), and off-mound domestic areas have been identified adjacent to the mounds (Clay 1983). Although hunting was important in the Middle Woodland subperiod, finds from rockshelters in the adjoining Knobs region suggest that manipulation of native plants, by this time domesticated, intensified. Despite this change, the additional food supply did not create significant changes in the way people lived (Railey 1996).

Late Woodland (A.D. 400–1000)

After circa A.D. 400, earthen burial mounds went out of style in the Bluegrass. Some of the latest examples are the Auvergne mound in Bourbon County (Clay 1983), dating circa A.D. 200, and the Wright Mound in Montgomery County (Webb 1940), with a single date after A.D. 200. Simpler communal burial sites, generally involving stone constructions or coverings, became widespread, perhaps as a replacement for the mounds (Brown 1981; Clay 1984). The nature of human settlement also changed. Sites such as Rodgers in Boone County (Kreinbrink 1992) and Pyles in Mason County (Railey 1984) indicate that Native-American groups often returned repeatedly to the same location or congregated in larger groups. However, the possible lack of permanent shelter at these sites suggests that the use of these places was sporadic, possibly seasonal, perhaps still related to certain group ceremonies (Clay 2002b:174–182). The economy continued to emphasize hunting, gathering, and the utilization of a variety of locally domesticated plants. Corn was not an economic resource until the very end of the Late Woodland subperiod but would become a hallmark of the following Late Prehistoric period, with significant consequences for human cultures in the Bluegrass.

Late Prehistoric Period (A.D. 1000–1700)

The Late Prehistoric archaeological complex of the middle Ohio Valley, dating from approximately A.D. 1000 through circa A.D. 1700, is called Fort Ancient, again after a site in southern Ohio. Fort Ancient extends from western West Virginia to southeastern Indiana, and from south-central Ohio to north-central and northeastern Kentucky (Griffin 1978:551). In the Bluegrass, Fort Ancient is divided into Early (circa A.D. 1000–1200), Middle (A.D. 1200–1400), and Late (A.D. 1400–1700) subperiods (Applegate 2008). In the central Bluegrass, the Early Fort Ancient is defined as the Osborne Phase, known from the Muir (Turnbow and Sharp 1988) and Dry Run sites (Sharp 1984) in Jessamine and Scott Counties. Middle Fort Ancient sites include Buckner, Gilfoil (Fassler 1987), and Florence. In this area, the Late Fort Ancient is also referred to as the Madisonville Horizon, observed at the Larkin site in Bourbon County and the Goolman site in Clark County. In the eastern Bluegrass, the Manion Phase has been defined as a Middle Fort Ancient component at the Fox Farm site, and the Late Fort Ancient or Madisonville Horizon has been subdivided into the Gist (A.D. 1400–1550) and Montour (A.D. 1550–1750) Phases (Applegate 2008; Henderson 1990; Henderson and Turnbow 1987).

The development of Fort Ancient culture and its relationship to Late Woodland cultures has been a debated issue. Two hypotheses have been offered for the relationship between Fort Ancient and Late Woodland cultures. One suggests that Fort Ancient represents the fluorescence of an indigenous Late Woodland culture (Graybill 1980:55–56; Rafferty 1974). Others suggest that Fort Ancient represents an influx of Mississippian peoples from the lower Ohio River Valley (Essenpries 1978:154–155). Although the question has yet to be resolved, it is possible that both of these hypotheses may be correct, depending upon the data set and region one employs to address the problem. Essenpries (1978), for example, has suggested that these two hypotheses are appropriate for explaining Fort Ancient manifestations at different times during the Late Prehistoric period. In this scenario, Fort Ancient is viewed as a fluorescence of Mississippian-influenced Late Woodland

culture during the early (Baum, Anderson, and Feurt) phases and as an influx of Mississippian peoples during the later Madisonville Phase (Essenpries 1978:164).

Other archaeologists argue that not all local Late Woodland groups chose to participate in, or accepted, the Mississippian cultural complex (i.e., horticulture and sedentism), and instead they continued to follow their essentially Woodland (Late Archaic) way of life. The very few absolute dates from Fort Ancient sites and the almost complete lack of stratigraphic data and intersite comparative studies contribute to the confusion (Griffin 1978:557).

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

Fort Ancient subsistence is characterized by a reliance on the cultivation of maize, coupled with beans and squash. Despite the increased importance of horticulture, hunting provided an important source of food. Deer was the main source of meat; at some sites, up to 80 percent of the game consumed was deer (Griffin 1978:552). The cultural material assemblage, including elaborately decorated pottery vessels (usually tempered with crushed mussel shell, although limestone and grit tempered ceramics also occurred), triangular arrow points, mussel shell tools (e.g., knives, scrapers, and hoes), and bone tools (e.g., bone beamers), also serves to distinguish Fort Ancient cultures from Late Woodland occupations (Griffin 1978; Sharp 1996).

Although Fort Ancient subsistence, like that of Mississippian populations, was based on the cultivation of corn and other cultigens, other aspects of Fort Ancient culture clearly distinguish it from the contemporary Mississippian occupations (i.e., Fort Ancient sites lack large ceremonial centers and earthworks, although some Early and Middle Fort Ancient sites [through circa A.D. 1250] had burial mounds). The Rowena site, for example, which was flooded by Lake Cumberland, was described as a small Mississippian regional center, possibly occupied from A.D. 1300 to 1400 (Weinland 1980:133). The artifact assemblage indicated that the site was strongly influenced by eastern Tennessee cultures, especially the Dallas cultures (Weinland 1980:131), throughout most of its history. Other Mississippian sites along the Cumberland River, such as Crowley-Evans (Jefferies 1995; Jefferies and Flood 1996), were built around a low platform/mound on which stood the house of a local chief. However, the complex settlement hierarchy found in Mississippian cultures does not seem as prevalent in Fort Ancient culture. Very few Fort Ancient settlements have mounds (n = 12)—the overwhelming majority (n = 476) of them do not—and few other site types (e.g. workshops, cemeteries, rockshelters) are known in the Bluegrass (Henderson 2008:808).

Protohistoric and Historic Period (A.D. 1700)

The Protohistoric period begins with the first indications of contact between Native-American groups and expanding western European populations after A.D. 1492. The evidence for this contact exists principally in the form of glass beads of European manufacture and metal artifacts (first brass, and later iron) of both European (e.g., bells) and Native-American (e.g., tinklers) manufacture (Drooker 1997).

In the middle Ohio Valley and the neighboring Cumberland Plateau, these artifacts appear in the Late Prehistoric, Madisonville Horizon of the Fort Ancient culture (Drooker 1997). They occur at the Madisonville site near Cincinnati and then

widely at other Fort Ancient sites of the phase, some of which occur on the plateau. They reflect indirect contact between Native-American groups and the French via their occupation of the St. Lawrence Valley to the north and the Spanish to the south. In other words, the European goods were obtained by trade where Native Americans were living in direct contact with Europeans (Drooker 1997).

An exhaustive analysis of Madisonville Horizon Fort Ancient culture suggests that this final Fort Ancient occupation of the region may have been on the decline by the end of the first quarter of the seventeenth century, reflecting the movement of its Native-American peoples both west and east in order to maintain closer contact with the French settlements of the Mississippi Valley and the Dutch and English settlements of the east coast, both being developing points of European trade. As a result, this portion of the Ohio Valley may have been largely vacated by Native Americans before the onset of the Iroquois depredations after A.D. 1640, themselves a product of intensifying commercial links between the tribes of the Iroquois Confederacy and the French (Drooker 1997:336–337).

After A.D. 1724, Native-American tribes, who we can identify as the Shawnee, were present in the region, having been pushed westward from the east (i.e., from the Susquehanna drainage of Pennsylvania) by the expansion of European settlement (McConnell 1992:21). The origins of the Shawnee are not clear, but they can be identified on the Ohio River by A.D. 1750 or later at sites such as Bentley and Old Fort Earthworks (named for the nearby Middle Woodland earthworks) (Henderson et al. 1986:131–137, 1992:270–278; Pollack and Henderson 1984). By this time, like their European competitors, the native residents possessed a full range of iron tools and arms. Currently, there is little good evidence to indicate that these Shawnee were the cultural descendants of the last Fort Ancient Native Americans of the Madisonville Horizon (Drooker 1997:104–105).

The conflicts between the Shawnee and other groups of the middle Ohio (i.e., Delaware, Miami, Piankashaw, and Wyandot) lasted through the War of 1812. They were a part of the conflict between the French and British and later the British and the new American colonies (Hammack 1992:928–929; McBride and McBride 2008; O'Donnell 1992:815).

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 a surveyor 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 Indians and English fur traders and closed the area to permanent settlement. His decree was ignored, however, 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 contained three counties, Fayette,

Lincoln, and Jefferson, which became the Commonwealth of Kentucky on June 1, 1792 (Clark 1992). These three counties were later divided and subdivided into the 120 counties that presently make up the Commonwealth of Kentucky.

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-Amerian 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. Site-specific field methods are discussed in further detail in the Site Description section of this report. Laboratory methods specific to the individual analyses are discussed in the specific analysis sections of this report.

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. 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 220 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, 45 map structures (MS 1–45) 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.

Cultural Historic Resources

As noted, the proposed force main passes through several areas with standing structures over 50 years in age. These structures were documented either individually or in groups as historic resources. They are discussed in a separate report (McMahan et al. 2012). No cultural historic clearance is implied by the current archaeological report.

Laboratory Methods

All cultural material recovered from the project was transported to CRA for processing and analysis. Initial processing of the recovered artifacts involved washing all artifacts, sorting the artifacts into the major material classes (i.e., ceramic, faunal, historic, and lithic) for further analysis, and assigning catalog numbers. Catalog numbers consisted of the site number and a unique number for each provenience lot or diagnostic specimen. Historic artifacts received a unique catalog number for each material group and class by provenience.

The methods, specifics, and results of subsequent analysis are discussed in each of the specific analysis sections of this report. All cultural materials, field notes, records, and site photographs will be curated with the Department of Anthropology at the University of Louisville, Kentucky.

V. MATERIALS RECOVERED

Jennifer M. Faberson

Historic materials were recovered from one site (15Cp87). The assemblage from the site is described below. In addition, an inventory of materials recovered from the site listed by provenience is presented in the individual site description section of this report.

Methods

The historic assemblage includes artifacts classified and grouped according to a scheme originally developed by Stanley South (1977). South believed that his classification scheme would present patterns in historic site artifact assemblages that would provide cultural insights. Questions of historic site function, the cultural background of a site's occupants, and regional behavior patterns were topics to be addressed using this system.

South's system was widely accepted and adopted by historical archaeologists. However, some have criticized South's model on theoretical and organizational grounds (Orser 1988; Wesler 1984). One criticism is that the organization of artifacts is too simplistic. Swann (2002) observed that South's groups have the potential to be insufficiently detailed. She suggested the use of sub-groups to distinguish between, for example, candleholders used for religious purposes and those used for general lighting. Others, such as Sprague (1981), have criticized South's classification scheme for its limited usefulness on late nineteenth- and early-twentieth-century sites, sites which include an array of material culture—such as automobile parts—not considered by South. Despite its shortcomings, most archaeologists recognize the usefulness of South's classification system to present data.

Stewart-Abernathy (1986), Orser (1988), and Wagner and McCorvie (1992) have subsequently revised this classification scheme. In this report, artifacts were grouped into the following categories: domestic, architecture, and

maintenance and subsistence. The artifacts recovered during this project are summarized in Table 4.

Table 4. Historic Artifacts Recovered According to Functional Group.

Group	Total	Percent
Architecture	2	11.8
Domestic	10	58.8
Maint/Subsist	5	29.4
Totals	17	100

Grouping artifacts into these specific categories makes it more efficient to associate artifact assemblages with historic activities or site types. One primary change associated with the refinement of these categories is reassigning artifacts associated with the "Miscellaneous and Activities" under South's (1977) original system. Considering the potential variety of historic dwellings and outbuildings within the project area, a refinement of the artifact groupings was considered important to perhaps observe whether the distribution of specific artifact groups would produce interpretable patterns related to activity areas or structure types. Each one of these groups and associated artifacts is discussed in turn.

Information on the age of artifacts as described in the artifact tables is derived from a variety of sources cited in the discussion of the materials recovered. The beginning and ending dates cited need some clarification. Usually, an artifact has specific attributes that represent a technological change, an invention in the manufacturing process, or simple stylistic changes in decoration. These attribute changes usually have associated dates derived from historical and archaeological research. For example, bottles may have seams that indicate a specific manufacturing process patented in a certain year. The bottle then can be assigned a "beginning," or incept, date for the same year of the patent. New technology may eliminate the need for the same patent and the bottle would no longer be produced. The "ending," or terminal, date will be the approximate time when the new technology took hold and the older manufacturing processes are no longer in use.

Specific styles in ceramic decorations are also known to have changed. Archaeological and archival researchers have defined time periods when specific ceramic decorations were manufactured and subsequently went out of favor (e.g., Lofstrom et al. 1982; Majewski and O'Brien 1987). South's (1977) mean ceramic dating technique uses this information. The dates presented here should not be considered absolute but are the best estimates of an artifact's age available at this time. A blank space indicates that the artifact could not be dated or, alternately, that the period of manufacture was so prolonged that the artifact was being manufactured before America was colonized. An open-ended terminal date was assigned for artifacts that may be acquired today. The rationale for presenting dates for the artifacts recovered is to allow a more precise estimate of the time span the site was occupied, rather than the mean occupation date of a site.

A summary of the artifacts recovered follows. A complete inventory of the historic artifacts can be found in Appendix B.

Materials Recovered by Functional Group

There were 17 historic artifacts recovered during the investigation. The following provides a descriptive discussion of the types and age of artifacts recovered from Site 15Cp87.

Architecture Group (N = 2)

The architecture group is comprised of artifacts directly related to buildings, as well as those artifacts used to enhance the interior or exterior of buildings. These artifacts consisted of brick and plate glass.

Construction Materials (n = 1)

Construction materials refer to all elements of building construction. One hand-made brick fragment was recovered from the project area (Table 5). Hand-made or early machine-made bricks often have a glaze, resulting from the sand in the clay turning to glass in the kiln. The paste is usually more porous, and the shape of the early bricks is more irregular. The later machine-made bricks have a harder, more consistent paste

and are uniform in shape. Machine-made bricks will often have marks in the clay related to the machine manufacturing process (Greene 1992; Gurcke 1987). Since no research has been conducted regarding the local history of brick-making facilities near the project area, the brick fragments recovered were not assigned specific dates.

Flat Glass (n = 1)

Cylinder glass was developed in the late eighteenth century to enable the inexpensive production of window glass. With this method, glass was blown into a cylinder and then cut flat (Roenke 1978:7). This method of producing window glass replaced that of crown glass production, which dates back to the Medieval period and was capable of fabricating only very small, usually diamond-shaped, panes (Roenke 1978:5). Cylinder glass was the primary method of window glass production from the late eighteenth century through the early twentieth century, at which time cylinder glass windows were slowly replaced by plate glass windows. Plate glass window production became mechanized after 1900 but did not become a commercial success in the United States until around 1917 (Roenke 1978:11).

Cylinder window glass has been shown to gradually increase in thickness through time and can be a useful tool for dating historic sites. Several dating schemes and formulas have been devised that use average glass thickness to calculate building construction or modification dates. These include Ball (1984), Roenke (1978), and Chance and Chance (1976) to name a few. Like previously derived formulas, Moir (1987) developed a window glass dating formula to estimate the initial construction dates for structures built primarily during the nineteenth century. Although Moir (1987:80) warns that analysis on structures built prior to 1810 or later than 1915 have shown poor results, most research in this area shows the regression line extending back beyond 1810 (Moir 1977; Roenke 1978). Hence, dates calculated back to 1785 were considered plausible. Sample size is also a consideration when using the Moir window glass regression formula. According to Moir (1987:78), sample sizes also need to be "reasonable and not collected from a point or two" in order to accurately date the construction of a building. For the purposes of this investigation, a "reasonable" sample size is considered 25 window glass sherds.

Each fragment of flat glass was measured for thickness and recorded to the nearest hundredth of a millimeter using digital calipers. The differences between cylinder window glass, mirror glass, and plate glass were in part determined by the thickness and wear of each flat glass fragment. Although Moir (1987:80) states that dating window glass after 1915 is not as reliable for dating sites, for our purposes, window glass that measured 2.41 mm (dating to 1916) was included in the calculations because according to Roenke (1978:11), plate glass does not become widely or successfully produced in the United States until 1917. One flat glass sherd was recovered during the current survey (Table 5). This sherd was plate glass dating after 1917.

Table 5. Summary of Architecture Group.

Class	Type	Total
Const material		
	Brick	1
Flat glass		
	Plate glass	1
Ceramics		
	Ironstone	2
	Late majolica	1
	Porcelain	1
	Stoneware	3
Closures		
	Home canning	2
	Commercial	1
Fuels		
	Coal	4
	Cinder/slag	1
	Totals	17

Domestic Group (N = 10)

Artifacts included in the domestic group consisted of ceramics (n = 7) and container closures (n = 3).

The ceramic inventory consisted of a variety of refined and utilitarian wares dating from the mid-nineteenth century through the twentieth century. A full description of ceramic types recovered from the project area is listed below, followed by descriptions of other domestic group artifacts.

Ceramics (n = 7)

The ceramics recovered were grouped into four major ware types: ironstone (n = 2), porcelain (n = 1), stoneware (n = 3), and late majolica (n = 1). Ceramics within each of these ware groups were separated into decorative types that have temporal significance. Each of these ware groups is reviewed below, followed by discussions of associated decorative types.

Ironstone (n = 2)

Ironstone is a white or gray-bodied, refined stoneware with a clear glaze. It is often indistinguishable from whiteware. Ironstone differs from whiteware in that the body is more vitreous and dense. In addition, a bluish tinge or a pale blue-gray cast often covers the body. In some cases, a fine crackle can be seen in the glaze; however, this condition is not as common as it is in whiteware (Denker and Denker 1982:138).

Confusion in the classification of white-bodied wares is further compounded by the use of the term as a ware type or trade name in advertising of the nineteenth century. Both ironstones and whitewares were marketed with names such as "Patent Stone China," "Pearl Stone China," "White English Stone," Royal Ironstone," "Imperial Ironstone," "Genuine Ironstone," "White Granite," and "Granite Ware" (Cameron 1986:170; Gates and Ormerod 1982:8). These names do not imply that true ironstone was being manufactured. Some investigators avoid the distinctions entirely by including ironstones as a variety of whiteware. Others, however, such as Wetherbee (1980), refer to all nineteenth-century white-bodied earthenwares as ironstone. For this analysis, the primary determining factor in classification of a sherd as ironstone was the hardness and porosity of the ceramic paste. Sherds with a hard vitreous paste were classified as ironstone.

Charles James Mason is usually credited with the introduction of ironstone (referred to as Mason's Ironstone China) in 1813 (Dodd 1964:176). Others, including the Turners and Josiah Spode, produced similar wares as early as 1800 (Godden 1964). As a competitive response to the highly popular oriental porcelain, British potters initiated this early phase of ironstone production. The ironstone of this early phase bears a faint blue-gray tint and oriental motifs, much like Chinese porcelain. A second phase of ironstone began after 1850 in response to the popularity of hard paste porcelains produced in France. This variety of ironstone had a harder paste and reflected the gray-white color of French porcelains.

While some ironstones continued to use oriental design motifs after 1850, the general trend was toward undecorated or molded ironstones (Collard 1967:125–130; Lofstrom et al. 1982:10). Ironstone continued to be produced in England, and after 1870, it was also manufactured by numerous American companies. For many years, classic ironstone—the heavy, often undecorated ware—had been frequently advertised as being affordable and suitable for "country trade" (Majewski and O'Brien 1987:121). By the late 1800s, these thick, heavy ironstones began losing popularity and were often equated with lower socio economic status (Collard 1967:13). At the same time, ironstone manufacturers began shifting to thinner, lighter weight ironstones. As a result, this type of ironstone became popular tableware in American homes during most of the twentieth century (Majewski and O'Brien 1987:124–125). In spite of the shift towards thinner and lighter ironstones, heavy ironstone remained on the market and continues to be popular in hotel/restaurant service (hence, this heavy, twentieth-century ironstone is sometimes called "hotelware"). However, its production for home use all but ceased by the second decade of the twentieth century (Lehner 1980:11).

Two ironstone sherds were recovered from the project area (Table 5). Embossed ironstone (n = 1) was available beginning in 1860 and was also recovered from the project area (Faulkner 2000). One chromatic-glazed ironstone sherd also was recovered. This sherd dated from 1930 to 1970 (Figure 12a) (Blaszczyk 2000:121).

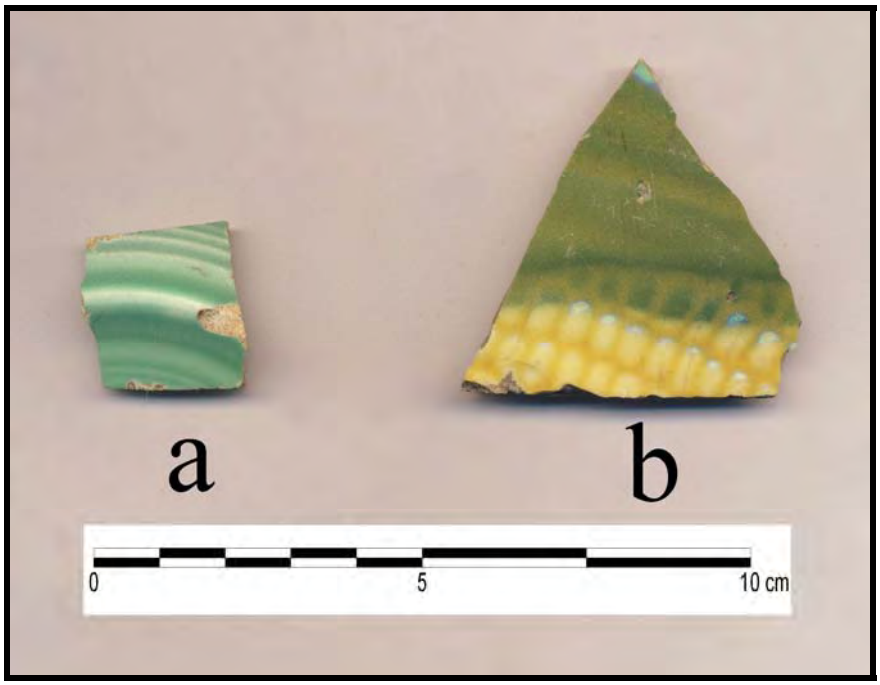


Figure 12. Historic material recovered: (a) green chromatic-glazed ironstone from GSC 1; (b) late majolica sherd from GSC 1.

Porcelain (n = 1)

Porcelain is the name given to high-temperature fired, translucent ware. This ware type was first developed by the Chinese. Chinese, or hard paste, porcelain was introduced to Europe by Portuguese sailors that had traveled to China during the sixteenth century. The formula for true, or feldspathic, porcelain was not discovered in Europe until 1708 and not marketed until 1713 (Boger 1971:266). The production of true porcelain was limited to three factories in England; all other products were softer porcelains made with glass, bone ash, or soapstone. Porcelain made with bone ash, often called "bone china," became the preferred product after 1800, since the paste was harder and the ware was cheaper to produce with bone than with glass or soapstone (Mankowitz and Haggar 1957:179). Among the more affluent households in Europe and North America, porcelain was a common tableware used during the eighteenth and nineteenth centuries (Fay 1986:69). Porcelain production in America was not successful until 1826, and the number of porcelain factories in the United States remained small throughout the nineteenth century.

In the lab, bone china can be differentiated from hard paste porcelain by placing it under ultraviolet light. Bone china fluoresces blue-white while hard paste porcelain fluoresces magenta (Majewski and O'Brien 1987:128). One porcelain sherd was recovered during the current project (Table 5). One modern hand-painted porcelain sherd was recovered dating from 1880 to 1940 (Blaszczyk 2000).

Stoneware (n = 3)

Stoneware served as the "daily use" pottery of America, particularly rural America, after its introduction during the last decade of the eighteenth century. By 1850, this ware generally replaced coarse redware as the primary utilitarian ware used in American households. Stoneware is a semi-vitreous ware manufactured of a naturally fine, but dense, clay. The pottery was fired longer and to a higher temperature than earthenwares; a kiln temperature of at least 1,200 to 1,250 degrees celsius had to be obtained (Cameron 1986:319; Dodd 1964:274–275). As a result, stoneware generally exhibits a hard body and a very homogeneous texture. The paste may vary from gray to brown, depending on the clay source, and length and intensity of the firing.

Because this ware is fired at such high temperatures, its body is nonporous and well suited to liquid storage. Stoneware, as mentioned, was not typically manufactured as a refined ware (such as its cousin, ironstone, or eighteenth-century refined white salt-glazed stoneware), and hence, it was, for the most part, utilized for utilitarian activities associated with jars, churns, crocks, tubs, jugs, mugs, pans, and pots. These vessels were typically glazed, with salt glazing and slip glazing most common.

Although refined salt glazing was practiced in England during the eighteenth century, by 1780, the production of English salt-glazed tableware had been virtually supplanted by the manufacture of cream colored earthenwares (Lewis 1950:29). The salt-glazing technique continued to be utilized for utilitarian vessels, however, and was eventually introduced to the United States in the early-nineteenth century. Salt glazing was accomplished by introducing sodium chloride into the kiln during the firing process, at which point the salt quickly volatilized. The vapor reacted with the clay to form a sodium aluminum silicate glaze (see Billington 1962:210; Dodd 1964:239). The surface of the glaze is typically pitted, having what is commonly known as an "orange peel" effect.

Stoneware may also be coated with a colored slip (a suspension of fine clay and pigment). The Albany slip—named after the rich brown clay found near Albany, New York—first appeared in the 1820s. Initially, it was mainly used for the interior of stoneware vessels. However, by the 1850s, it was also used as an exterior glaze. Bristol glaze, an opaque white slip, was introduced late in the nineteenth century. When used in combination with Albany slip, Bristol-glazed stoneware vessels have a general date range of 1880–1925 (Ketchum 1983:19; Raycraft and Raycraft 1990:5).

A third glaze often used on stoneware is the alkaline glaze. Like the Albany slip, it was developed in the 1820s. The basic alkaline glaze is made up of wood ash, clay, and sand. Other additions may be slaked lime, ground glass, iron foundry cinders, or salt. These additions affected the color and texture of the glaze. Colors vary from olive to brown to a gray-green or yellowish hue, depending on adjustments in proportion of ingredients (Ketchum 1991:9). Although not as prevalent, alkaline glazing has been used in combination with salt glazing. This causes the stoneware vessel to exhibit the colors of alkaline glazing with the pitted texture of a salt glaze.

The stoneware sherds recovered reflect one of the three glazes described above (Table 5). Three Bristol-slip sherds were identified dating from 1880 to 1925.

Late Majolica (n = 1)

Majolica is best described as a soft-bodied molded earthenware exhibiting a broad palette of lead-glazed colors. This ceramic type was originally introduced to the consumer market in 1851 by Herbert Minton, and experienced great popularity through the mid-1880s. This ceramic type came in numerous forms, mostly natural, and was found throughout the Victorian home. Majolica, with the exception of a few early examples, was relatively inexpensive and could be attained by nearly everyone. Vessel types consisted of a wide variety of forms, including umbrella stands, pitchers, figurines, tea sets, and platters. Virtually every room of the home may have displayed a majolica vessel (Snyder 2004).

Minton borrowed the term "majolica" from an early tin-glazed pottery imported from Italy to Spain during the Renaissance. This early ceramic type was transported from the western Mediterranean island of Majorca and was called Maiolica. Italian potters began creating their own tin-glazed wares that eventually spread to England, France and Holland. The French termed their pottery "faience," and the Dutch and English called theirs "Delft," or "Delftware." French faience, especially that created by Bernard Palissy, sparked the interest of Minton. Palissy used a lead glaze instead of a tin glaze, which changed the appearance of the pottery from opaque to clear. He also portrayed natural themes and developed an appliqué technique, making his pottery three dimensional. Minton soon realized that he could imitate this high demand pottery at a reasonable price and London's Crystal Palace Exhibition was the perfect place for his consumer introduction (Schneider 2006).

By the late 1880s, the quality of majolica had greatly declined, and it could be found in the American market inexpensively. This ware type was also distributed as carnival prizes. Majolica continued to be produced until circa 1930 (Snyder 2004).

One late majolica sherd was recovered from the project area (Figure 12b). This sherd dated from 1880 to 1940.

Closures (n = 3)

Bottle closures serve both to prevent the spilling of a bottle's contents and to protect a bottle's contents from contamination and evaporation (Berge 1980). Closures have been used almost as long as animal skins and bottles have been employed to contain liquids. Closures range from a utilitarian piece of paper or cloth stuffed into the mouth of a bottle to a delicately crafted crystal stopper for a decanter. There are three primary closure types: caps, stoppers, and seals (Berge 1980).

Caps are secured to a bottle by overlapping the outside edge of the finish or mouth. Common cap types include external screw, lugs, crown, and snap-on. External screw caps were first introduced in the mid-nineteenth century (Jones and Sullivan 1985; Toulouse 1977). External thread caps were attached to bottles by means of grooves in the cap that screwed down on continuous glass threads on the finished exterior of a bottle. External thread caps were first produced using metal in 1858 (Jones and Sullivan 1985; Toulouse 1977). Advances in technology led to the introduction of a Bakelite external thread cap around 1922 (Berge 1980; Meikle 1995), an aluminum shell roll-on cap in 1924 (Berge 1980; Rock 1980), and modern plastic caps in the mid-1930s (Meikle 1995). Examples of the external thread cap include canning jar, mayonnaise jar, and pickle jar lids.

The crown cap was patented on February 2, 1892, by William Painter of Baltimore, Maryland (Rock 1980). The crown cap was placed over the finish, and then crimped around a lip or groove in the finish to seal the container. This closure was lined with cork from 1892 until circa 1965 (IMACS 2001; Riley 1958; Rock 1980). Crown caps with composition liners appeared in 1912, and both cork and composition liners were gradually phased out following the introduction of the plastic liner in 1955 (IMACS 2001; Riley 1958). The majority of commercially produced glass soda bottles have crown cap closures.

Stoppers, the second major closure type, are secured to the finish interior of bottles, usually by forcing a portion of the stopper into the bore of the finish. Stopper types include cork, glass, inside screw, porcelain-top, Hutchinson Spring, Electric, Pittsburgh, and Lightning. Cork stoppers were the most common historic closure type.

Most glass stoppers use ground or roughened tapered stems along with a roughened finish inside to seal bottles. The "modern" ground and tapered glass stopper was developed in Europe around 1725 (Holscher 1965). Glass stoppers came in many shapes, sizes, and styles and were used as closures in many different types of bottles. As with the cork stopper, the glass stopper was phased out in the 1920s with the advent of the crown cap closure (Berge 1980; Jones and Sullivan 1985).

Seal closures utilized the vacuum on the interior of the glass container. The heating and then cooling of the bottle's contents created the vacuum. Seal closures, although dating back to 1810, did not become popular until the mid-twentieth century. These closures were most often used in food jars (Berge 1980). There were several types of seal closures including Phoenix, Sure Seal, Giles, spring seal, and disc seal.

The disc seal was used as early as 1810 by Nicholas Appert (Berge 1980). John L. Mason used this type of closure on his patented fruit jar in 1858 (Berge 1980). Mason's closure was made of zinc and was held in place with an exterior screw cap ring. Unfortunately, the zinc reacted with the contents of the jars, giving the contents an unpleasant metal taste (Jones and Sullivan 1985). Glass liners were then developed and added to the disc around 1869 by Lewis R. Boyd (Toulouse 1969, 1977). These liners prevented the zinc from reacting with the contents of the jar. To aid in opening, Boyd added a handle to the disc circa 1900 (Toulouse 1977). Both of these disc seal types were used

until around 1950 (Jones and Sullivan 1985; Toulouse 1969, 1977). In 1865, the Kerr two piece seal was patented. This system utilized a metal seal disc held in place by an exterior screw cap with no center. This seal and cap type system is still in use today.

The closure artifacts recovered from the project areas date from the 1860s to last half of the twentieth century (Table 5). The closures were divided into two specific categories. The first was the commercial closures category which contained a threaded iron/steel cap. The second category was the home canning jar closures. Two glass mason zinc canning jar lid liners were identified in this category.

Maintenance and Subsistence Group (n = 5)

The maintenance and subsistence group contains artifacts related to general maintenance activities on a farmstead. These artifacts were grouped into classes containing non-food containers, electrical, farming and gardening, hunting and fishing, stable and barn activities, general hardware, general tools, transportation, and fuel-related items such as coal. One of these classes were represented in the historic assemblage recovered from this site (Table 5).

Fuels (n = 5, 30.1 g)

This group of artifacts includes charcoal, coal, cinder, slag, and containers indicative of fuel. One cinder/slag fragment and four coal fragments were collected from the project area. These artifacts were not assigned specific dates.

Discussion

There were 17 historic artifacts recovered during the investigation. The material collected is described in detail above, and summarized below.

Two architecture group items were recovered from this site: 1 hand-made brick fragment and 1 plate glass fragment. The plate glass dated after 1917. The brick fragment was not assigned a specific date.

The domestic group consisted of ceramics (n = 7) and container closures (n = 1). The ceramic inventory included ironstone (n = 2), porcelain (n = 1), stoneware (n = 3), and late majolica (n = 1). The ironstone was 1 embossed sherd dating after 1860 and 1 chromatic-glazed sherd dating from 1930 to 1970. One saucer was identified in the ironstone assemblage. The porcelain sherd exhibited modern hand-painting dating from 1880 to 1940. The stoneware sherds were Bristol slipped and dated from 1880 to 1930. The late majolica fragment dated from 1880 to 1940. Four container closures were recovered from this site. These included 2 glass mason zinc lid liners and 1 iron/steel threaded cap. The container closures dated after 1860.

The maintenance and subsistence group artifacts were fuel-related items. These were 4 coal fragments and 1 cinder/slag fragment. No specific dates were assigned to these items.

The artifacts recovered from this site were manufactured from the mid-nineteenth century through the mid-twentieth century. For the most part, these artifacts were most popular at the turn of the twentieth century. These artifacts likely are associated with former historic structures located in the vicinity of this site as shown on the 1898 historic map of the project area. Due to the long use period of this site and the paucity of artifacts recovered, a further site interpretation based solely on the historic material cannot be made.

VI. RESULTS

During the course of the current survey, one previously unrecorded archaeological site (15Cp87) was documented. A description of the site is presented below and its location is depicted in Figure 2.

Site 15Cp87

Elevation: 140 m (490 ft) AMSL
Component(s): historic
Site type(s): residence
Size: 2,443 sq m (26,293 sq ft)
Distance to nearest water: 435 m (1,425 ft)
Direction to nearest water: North
Type and extent of previous disturbance: 75–90 percent disturbed

Topography: Artificial terrace
Vegetation: Scrub growth with a few older trees
Ground surface visibility: 75–100 percent
Aspect: Flat
Recommended NRHP status: not eligible

Site Description

Site 15Cp87 was a historic residence dating from the early to mid-twentieth century. The site was located approximately .35 km (.21 mi) east-southeast of the intersection of Mary Ingles Highway with Messer Road (east branch) and .29 km (.18 mi) northwest of the intersection of Ash Street with Second Street in the community of Silver Grove, Kentucky (see Figures 2 and 3). Topographically, the area appears to be an artificial terrace or dike constructed to raise building sites above the normal flood level of Four Mile Creek. Within the project area, the site consisted of a partially demolished concrete block outbuilding foundation, probably a garage or workshop, dating from before 1960 (Figure 13) and a low density scatter of historic materials collected from the ground surface.

This outbuilding was probably associated with a house that stood on Mary Ingles Highway at the front of the same long residential lot. The house is depicted on the 1898 East Cincinnati 15-minute series topographic quadrangle and on a 1993 aerial photograph (USGS 1898; 1993). The house is also depicted on the 1914 East Cincinnati 15-minute series topographic quadrangle, and the 1952, 1955, and 1983 Newport, Kentucky-Ohio, 7.5-minute series topographic quadrangles (USGS 1952; 1955; 1983) (see Figure 2). The associated house was demolished between 1993 and 2004. A local informant stated that no building had stood on the partial concrete block foundation since approximately 1962. The majority of the site, including the former house location, is outside of the current project area. A scatter of historic materials was observed, but not collected, outside of the project area in the direction of the former house. These artifacts were similar to those recovered from within the current project area. The site dimensions, established by the location of artifacts recovered from ground surface around the foundation at the back of the lot and the former house location, were 114 m (374 ft) north to south and 47 m (154 ft) east to west (Figure 14). The site covered .27 ha (.68 acres).

Figure 13. Overview of Site 15Cp87, looking northeast.

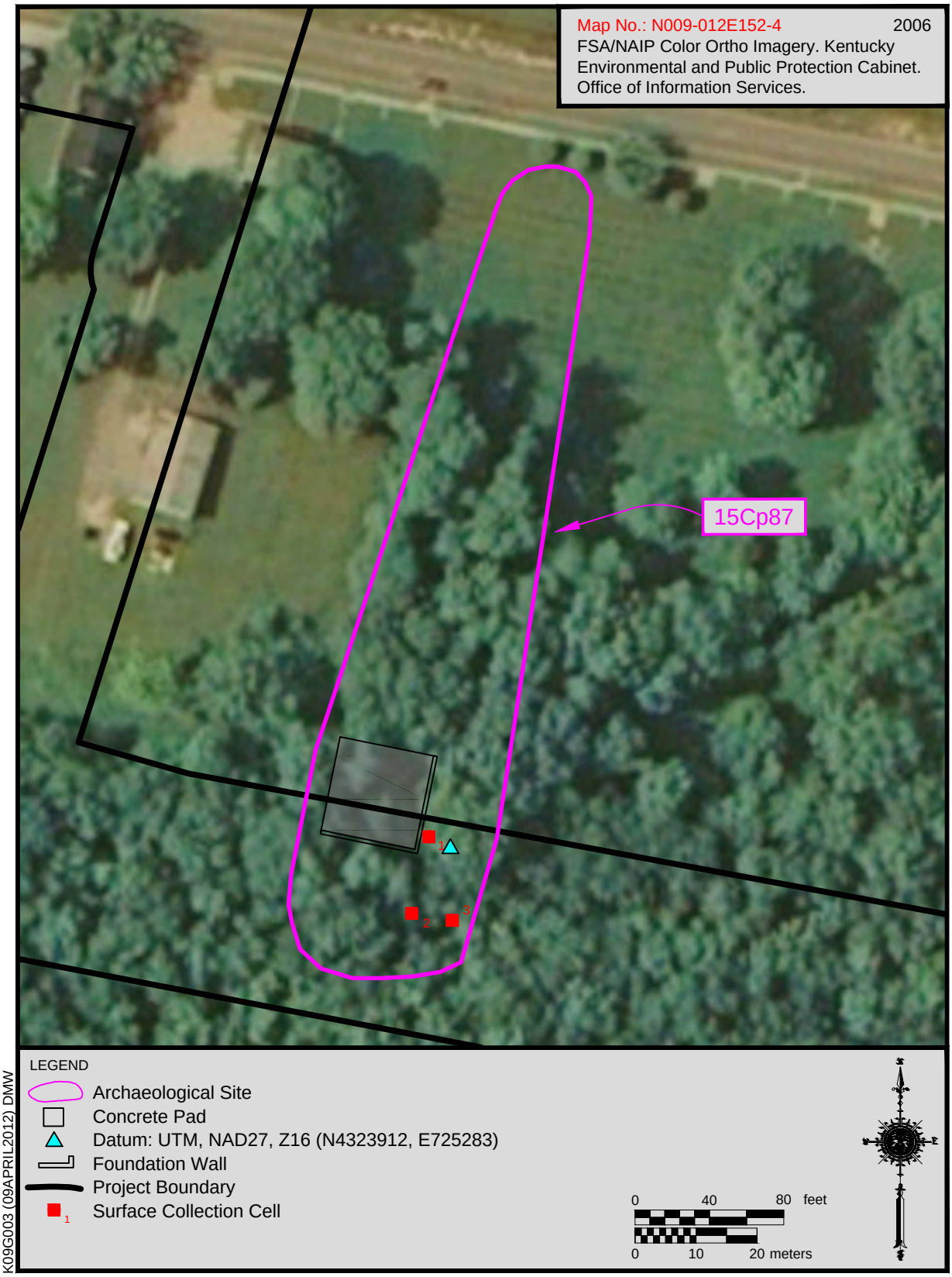


Figure 14. Schematic plan map of Site 15Cp87.

Within the project area, the site has been heavily disturbed by demolition, the clearance of a right-of-way, and modern trash dumping. All artifacts were found on the surface around the partial foundation.

Vegetation at Site 15Cp87 consisted primarily of scrub brush with a few older deciduous and evergreen trees. Leaf litter partially obscured the ground surface, but visibility was good around the foundation.

Investigation Methods

Materials from the site were recovered from three collection cells with good surface visibility (Figure 14). Four screened shovel tests were attempted at the site, but were immediately terminated due to a thick gravel layer surrounding the partial foundation. The locations of all surface artifacts were recorded using a hand-held GPS.

Depositional Context

Newark silt loam was mapped for the site area; however, all attempted shovel tests around the partial foundation contained very thin disturbed soils that terminated within 5–10 cm (2–4 in) at a gravel layer. Shovel tests approximately 15 m away from the foundation (outside of the site boundaries), the soil profile consisted of an Ap horizon of dark brown (10YR 3/3) silt loam to depths between 10 and 15 cm bgs followed by a gray (7.5YR 5/1) silty clay loam subsoil (Figure 15). The soils at Site 15Cp87 were more consistent with Urban Land than Newark series soils.

The soils at Site 15Cp87 appeared to have been heavily mixed and disturbed. The Ap horizon at the site consisted primarily of mixed surface and subsoils (former B and C horizons). All artifacts at the site were recovered from the ground surface and, as such, have poor depositional integrity.

Artifacts

The artifacts recovered from this site were manufactured from the middle nineteenth century through the middle twentieth century. Seventeen historic artifacts were recovered during the investigation. The assemblage consisted of two architectural items (brick, n = 1; plate glass, n = 1), ceramics (n = 7), four container closures, four coal fragments, and one piece of slag/cinder (Table 6). These artifacts were most popular at the turn of the twentieth century. These artifacts likely are associated with former historic structure depicted on the 1898 historic map of the project area. Based on aerial photographs, this structure was extant through at least 1993 (USGS 1993).

Features

Apart from the partial outbuilding foundation, no features were observed during the investigation of the site.

Summary and National Register Evaluation

Site 15Cp87 consisted of a very low density scatter of historic artifacts dating from the nineteenth through the middle of the twentieth centuries. The ceramics found at the site range in date from the 1860s through 1970. The plate glass dates to after 1917 and the canning jar closures and seals range in date between 1869 and 1950 (Table 6). The cultural material tended to be scattered near the southeast corner of the partial foundation.

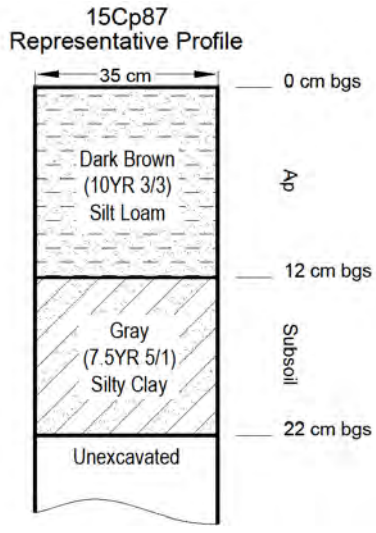


Figure 15. Representative soil profile from Site 15Cp87.

Table 6. Artifacts Recovered from Site 15Cp87.

Unit	Depth	Group	Class Definition	Type Definition	N	Dates
GSC 1	Surface	Architecture	Flat Glass	Plate Glass	1	1917-
GSC 1	Surface	Domestic	Ceramics	Ironstone	1	1930-1970
GSC 1	Surface	Domestic	Ceramics	Late Majolica	1	1910-1940
GSC 1	Surface	Domestic	Ceramics	Stoneware	2	1880-1925
GSC 1	Surface	Domestic	Container Closures	Home Canning Jars	1	1869-1950
GSC 1	Surface	Maintenance	Fuels	Coal	3	-
GSC 2	Surface	Domestic	Ceramics	Stoneware	1	1880-1925
GSC 2	Surface	Domestic	Container Closures	Commercial Containers	1	1900-
GSC 2	Surface	Domestic	Container Closures	Home Canning Jars	1	1869-1950
GSC 2	Surface	Maintenance	Fuels	Cinder / Slag	1	-
GSC 2	Surface	Maintenance	Fuels	Coal	1	-
GSC 3	Surface	Architecture	Construction Material	Brick	1	-
GSC 3	Surface	Domestic	Ceramics	Ironstone	1	1860-
GSC 3	Surface	Domestic	Ceramics	Porcelain: hard paste	1	1880-1940

The portion of Site 15Cp87 located within the project boundaries is not considered to have the potential to provide important information about local or regional history; therefore, 15Cp87 is recommended as not eligible for the NRHP (Criterion D). No further work is recommended for the portion of Site 15Cp87 located within the project area. It is unlikely that further investigation of this portion of Site 15Cp87 would produce information beyond that recorded during the current survey. The remains have poor depositional integrity—all artifacts were confined to disturbed contexts within the Ap horizon. In addition, there is no evidence suggesting the potential for sub–Ap horizon features to be located at the site. Should future project changes impact that portion of Site 15Cp87 outside of the current project area, further testing may be necessary.

VII. CONSULTING PARTIES

In addition to the information acquired by CRA during the field surveys, Anna Zinkhon, a Campbell County citizen representing the Camp Springs Initiative, contacted the KHC to request consulting party status for this project. In a letter to Judge Steve Pendery, Judge/Executive of Campbell County, Ms. Zinkhon expressed her concerns with the preliminary cultural resource surveys conducted by CRA. The majority of her concerns were with cultural historic resources located in and around Camp Springs. These are discussed in the separate cultural historic report (McMahan et al. 2012).

With regard to the archaeological survey, Ms. Zinkhon's comments were limited to requesting that an archaeological field investigation be completed. As documented in this report, the records review and visual examination of existing right-of-ways and the intensive archaeological survey of the remainder of the proposed force main corridor have been completed, and one historic archaeological site, 15Cp87, was identified. Provided that the proposed pipeline is placed in the public right-of-ways and intensively surveyed portions of the corridor, it is unlikely that the project will impact intact archaeological resources; archaeological clearance is, therefore, recommended.

VIII. CONCLUSIONS AND RECOMMENDATIONS

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 lead federal agency in consultation with

the State Historic Preservation Office (the Kentucky Heritage Council [KHC]).

The records search revealed no previously recorded archaeological sites or historic properties within the project area. One archaeological site was documented during this survey. Site 15Cp87 is a historic residence dating from before 1900 through at least 1993. Within the current project area, the site consists of a concrete block outbuilding foundation and artifact scatter dating to before 1960. This outbuilding was probably associated with a house that stood on the same long residential lot from at least 1898 through at least 1993. The majority of the site, including the former house location, is outside of the current project area. Within the project area, the site has been heavily disturbed by demolition, the clearance of a right-of-way, and modern trash dumping. All artifacts were found on the surface around the partial foundation. No subsurface artifacts or features were found. The portion of Site 15Cp87 that lies within the project area has little depositional integrity and is recommended as not eligible for the National Register of Historic Places. Therefore, archaeological clearance for the proposed project is recommended. Should future project changes impact that portion of Site 15Cp87 outside of the current project area, further testing may be necessary.

Because no sites listed in, or eligible for, the NRHP will be adversely affected by the proposed construction, archaeological clearance for the project is recommended.

The proposed force main passes through several areas with standing structures over 50 years of age. These structures were documented and discussed in a separate report (McMahan et al. 2012). No cultural historic clearance is implied by the current archaeological report.

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 KHC, the local coroner, and the local law enforcement agency must be notified, as described in KRS 72.020.

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APPENDIX A. SCOPE OF WORK

cra
cultural resource analysts, inc

Proposal for Archaeological Survey

February 3, 2012

Submitted to:

Joe Henry
GRW Engineers, Inc.
801 Corporate Drive
Lexington, Kentucky 40503
JHenry@grwinc.com

Project Identification

Sanitation District No. 1 of Northern Kentucky
Ash Street Pump Station and Force Main and Silver Grove Pump Stations and Force Main
CIP No. C-414-46 & C-414-48

Project Background

In November 2010 and May 2011, Cultural Resource Analysts, Inc. (CRA) completed a cultural resource survey of the proposed corridor for the Ash Street pump station and force main and Silver Grove force main project in Campbell County, Kentucky. The project area began at an existing pump station adjacent to Mary Ingles Highway in Silver Grove, Kentucky, encompassed the location of the proposed new pump station on Ash Street, and continued south-southeast, paralleling Four Mile Road through the community of Camp Springs to the existing Riley Road Pump Station northeast of the community of Alexandria. The proposed project area consisted of approximately 32 ha (79 acres). No archaeological sites were documented as a result of this survey.

Modifications to the route were made subsequent to this survey and other routes and underground pump stations were added to complete the engineering design of the project. The following scope takes these changes into consideration to complete the archaeological survey. The archaeological survey only pertains to the direct area of potential effect (APE) for the force mains and pump stations, including the construction areas and right-of-way limits; both permanent and temporary.

Project Area to be Studied

Through consultation with KHC, the U.S. Army Corps of Engineers (USACE), and the Kentucky Division of Water, it has been determined that survey of the previously unsurveyed portions of the archaeological APE is required in order to adequately assess these potential effects to archaeological properties if present. The proposed area consists of approximately 6.33 ha (15.64 acres) or 6,034 linear m (19,800 linear ft) of previously unsurveyed areas along an approximately 11,430 linear m (37,500 linear ft) right-of-way.

Scope of Services

The archaeological survey will be conducted in accordance with current *Specifications for Conducting Fieldwork and Preparing Cultural Resource Assessment Reports* issued by the Kentucky State Historic Preservation Office and the previous Phase I CRA report will be revised to incorporate the results of this survey.

File Search/Archival Research/APE

As requested by the SHPO, a new review of the archaeological site files at the Office of State Archeology (SHPO) will be conducted for the proposed project area plus a two km buffer.

Field Research

The field investigation will consist of an intensive survey of the unsurveyed portions of the proposed project area following standard archaeological methods (i.e., pedestrian and shovel test survey). The portions of the project area that cross terrain with good surface visibility (for example plowed/cultivated fields or strip plowed fields) or characterized by steep slopes (creek bank) will be subject to pedestrian survey. This entails a walking, visual inspection of the ground surface to identify historic and prehistoric artifacts. Portions of the project that are located on relatively flat terrain with poor surface visibility will have to be shovel tested. This assessment method requires the excavation of screened shovel tests measuring 35 cm in diameter at intervals of 20 m. The phase I investigation will survey only the undisturbed ground within the project area (i.e., areas outside the existing construction rights-of-way). All archaeological sites discovered within the intensive survey area will be recorded following current SHPO specifications. Limited bucket augering may be conducted on alluvial landforms to determine the nature and extent of Holocene alluvium and the potential for the presence of significant deeply buried archaeological sites.

Report

The report for the previous survey will be revised and updated with the results of this field research. The report will conform to Kentucky SHPO specifications. The report will describe all archaeological resources located during the study and make recommendations for their treatment in relation to potential impacts. In addition, site survey forms will be prepared for each archaeological site recorded and submitted to OSA.

Deliverables

Eight copies of the report will be submitted to GRW, including 6 copies for agency reviews. CRA will also provide one copy of the report on CD in pdf format. CRA will make any necessary revisions to the report requested by the reviewing agencies.

Schedule

We can initiate the study within 2 days of NTP. The records review will require 7-10 days to complete. The field research to follow will take 2-3 business days. The report of the study can be submitted GRW within 15-25 working days of the completion of the fieldwork, depending on the field survey results.

To Be Provided By Client

The Client will provide CRA the following:

1. Project description
2. The name of the permitting or funding agency
3. Permitting or funding agency identification number
4. Project mapping in electronic format (Autocad, Microstation, or Arch View shape files). If electronic mapping is not provided additional fees will be accrued on a time and materials basis.

cra
cultural resource analysts, inc

FOR Cultural Resource Analysts:

Signed:_____

Name: Steven D. Creasman, RPA

Position: Executive Vice President

Proposal Accepted by:

Signed: _____

Name:

Position:

APPENDIX B. HISTORIC MATERIALS

Table B-1. Historic Materials Database.

Bag	Site	Unit #	Dep	Cat #	Group	Class Definition	Type Definition	Attr 1a	Attr 1c	Attr 2a	N	Wt	Vessel Part	Vessel Type	MinDate	MaxDate
1	15Cp87	GSC 1	- Surface	1	D	Ceramics	Ironstone	Chromatic glaze	Green		1		Footring/base	Saucer	1930	1970
1	15Cp87	GSC 1	- Surface	2	D	Ceramics	Late Majolica				1				1880	1940
1	15Cp87	GSC 1	- Surface	3	D	Ceramics	Stoneware	Bristol slipped exterior		Bristol slipped interior	1		Rim		1880	1925
1	15Cp87	GSC 1	- Surface	3	D	Ceramics	Stoneware	Bristol slipped exterior		Bristol slipped interior	1		Body		1880	1925
1	15Cp87	GSC 1	- Surface	4	D	Container Closures	Home Canning Jars	Liner for Mason zinc: flat			1				1869	1950
1	15Cp87	GSC 1	- Surface	5	A	Flat Glass	Plate Glass	Flat glass			1				1917	
1	15Cp87	GSC 1	- Surface	6	M	Fuels	Coal				3	2.5				
2	15Cp87	GSC 2	- Surface	7	D	Ceramics	Stoneware	Bristol slipped exterior		Bristol slipped interior	1		Rim		1880	1925
2	15Cp87	GSC 2	- Surface	8	D	Container Closures	Home Canning Jars	Liner for Mason zinc: flat			1				1869	1950
2	15Cp87	GSC 2	- Surface	9	D	Container Closures	Commercial Containers	Threaded: iron / steel			1				1900	
2	15Cp87	GSC 2	- Surface	10	M	Fuels	Coal				1	4.1				
2	15Cp87	GSC 2	- Surface	11	M	Fuels	Cinder / Slag				1	23.5				
3	15Cp87	GSC 3	- Surface	12	D	Ceramics	Ironstone	Molded / Embossed			1		Base		1860	
3	15Cp87	GSC 3	- Surface	13	D	Ceramics	Porcelain: hard paste	Handpainted (late colors)			1		Rim		1880	1940
3	15Cp87	GSC 3	- Surface	14	A	Construction Material	Brick	Handmade brick:non-vit			1	445.9				

Contract Publication Series 12-079

CULTURAL HISTORIC BASELINE SURVEY FOR THE PROPOSED ASH STREET PUMP STATION AND FORCE MAIN PROJECT IN CAMPBELL COUNTY, KENTUCKY

by
Matthew D. McMahan and
Elizabeth G. Heavrin

With contributions by
Holly B. Higgins, S. Alan Higgins,
Sarah J. Reynolds, and Trent Spurlock

Prepared for

Engineers • Architects • Planners

and

SD1
Managing Northern Kentucky's Wastewater and Storm Water

Prepared by

cra
cultural resource analysts, inc

Kentucky | West Virginia | Ohio
Wyoming | Illinois | Indiana | Louisiana | Tennessee
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CRA Project No.: K09G003

_____
Elizabeth G. Heavrin, M.H.P.
Principal Investigator

May 9, 2012

Lead Agency: United States Army Corps of Engineers
Kentucky Heritage Council Project Registration Number FY12-1192

ABSTRACT

In February and March of 2012, Cultural Resource Analysts, Inc., personnel completed a cultural historic baseline survey for the proposed Ash Street pump station and force main project in Campbell County, Kentucky. The survey was conducted at the request of Joe Henry of GRW Engineers, Inc., on behalf of Sanitation District No. 1 of Northern Kentucky.

The project area begins at an existing pump station adjacent to Mary Ingles Highway in Silver Grove, Kentucky; encompasses three alternate locations for the proposed new pump station near Ash Street; and continues south-southeast, paralleling Four Mile Road through the community of Camp Springs to the existing Riley Road pump station northeast of the community of Alexandria. Although the majority of the project, excluding the Ash Street pump station, will be located below ground, local consulting parties and the Kentucky Heritage Council have identified several potential direct and indirect effects of the proposed project to the cultural historic resources of Silver Grove and Camp Springs. Thus, through consultation with the Kentucky Heritage Council and the United States Army Corps of Engineers, the area of potential effect for the cultural historic survey was defined as a 200 ft corridor, 100 ft to either side of the centerline of the proposed force main, and a 500 ft radius buffer surrounding the proposed pump station sites in Silver Grove. If any portion of a property fell within the area of potential effect, it was recorded in its entirety.

Prior to initiating fieldwork, Cultural Resource Analysts, Inc., initiated a review of records maintained by the Kentucky Heritage Council (State Historic Preservation Office) in order to identify previously recorded cultural historic resources within the area of potential effect. Global information system data provided by the Kentucky Heritage Council indicated that 11 such resources were located within the area of potential effect, including 1 previously surveyed property in Silver Grove (Site 16 [CP 94, the Dutle Inn]) and 10 properties in Camp Springs that are listed in the National Register of Historic Places as part of the German Settlement, Four Mile Creek Area Thematic Resource nomination (Site 95 [CP 72, John Weber Farm], Site 98 [CP 71, Camp Springs House], Site 117 [CP 61, Blau's Four Mile House], Site 119 [CP 91, Leick House], Site 121 [CP 60, Reitman's St. Joseph House], Site 122 [CP 62, St. Joseph's Catholic Church and Cemetery], Site 128 [CP 52, Baumann House], Site 130 [CP 81, Gubser-Schuchter Farm], Site 131 [CP 92, Andrew Ritter Farm], and Site 132 [CP 51, Ort-Heeb Farm]).

During the field survey, Cultural Resource Analysts, Inc., personnel identified a total of 133 cultural historic sites within the area of potential effect, including the 11 previously surveyed properties listed above and 122 previously undocumented properties (Sites 1–15 [CP 204–218], Sites 17–94 [CP 220–297], Sites 96–97 [CP 298–299], Sites 99–116 [CP 300–317], Site 118 [CP 318], Site 120 [CP 319], Sites 123–127 [CP 320–324], Site 129 [CP 325], and Site 133 [CP 326]). To facilitate efficient assessment of common property types and potential historic districts, several of the previously undocumented properties were documented and evaluated as groups, including 41 resources in Silver Grove (Sites 18–32, 34, 36–42, 44–53, 56–62, and 64), 10 American Small Houses on Four Mile Road (Sites 68, 77, 79, 85, 86, 94, 102, 105, 124, and 125), and 12 Ranch houses on Four Mile Road (Sites 80, 81, 87–93, 97, 99, and 108).

Cultural Resource Analysts, Inc., recommends that the Dutle Inn (Site 16 [CP 94]) and all of the previously undocumented properties (Sites 1–15 [CP 204–218], Sites 17–94 [CP 220–297], Sites 96–97 [CP 298–299], Sites 99–116 [CP 300–317], Site 118 [CP 318], Site 120 [CP 319], Sites 123–127 [CP 320–324], Site 129 [CP 325], and Site 133 [CP 326]) are ineligible for listing in the National Register of Historic Places under Criterion A, B, or C, both individually and as part of a potential historic district. In addition, Site 119 (CP 9) has undergone major unsympathetic alterations since the time of its listing in the National Register of Historic Places and no longer retains sufficient integrity to convey its historical significance as a German settlement property in the Camp Springs area. The

nine other National Register-listed properties (Site 95 [CP 72], Site 98 [CP 71], Site 117 [CP 61], Site 121 [CP 60], Site 122 [CP 62], Site 128 [CP 52], Site 130 [CP 81], Site 131 [CP 92], and Site 132 [CP 51]) remain eligible for listing as part of the German Settlement, Four Mile Creek Area Thematic Resource nomination.

The proposed project will not directly impact any of the contributing features associated with these National Register-listed sites, and it appears that GRW Engineers, Inc., and Sanitation District No. 1 have taken sufficient measures to minimize the project's potential effects to these historic properties, including those effects related to construction noise, odor caused by air release valves, damage to fragile mortar joints caused by construction activities, tree removal, and potential system failure. Also, in addition to prohibiting blasting within 200 ft of listed structures, Sanitation District No. 1 has committed to seismographic monitoring at the National Register-listed sites when blasting or mechanical rock excavation occurs near the site to ensure that there are no construction-related damages to the historic buildings. Assuming that the steps outlined are implemented to minimize effects on historic properties, CRA recommends a No Adverse Effect determination for this project.

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I. PURPOSE OF REPORT

In February and March of 2012, Cultural Resource Analysts, Inc. (CRA), personnel completed a cultural historic baseline survey for the proposed Ash Street pump station and force main project in Campbell County, Kentucky (Figure 1). The survey was conducted at the request of Joe Henry of GRW Engineers, Inc. (GRW), on behalf of Sanitation District No. 1 of Northern Kentucky (SD1).

The purpose of the survey was to:

1) identify and document all cultural historic sites (aboveground resources 50 years of age or older) located within the area of potential effect (APE);

2) evaluate their eligibility for listing in the National Register of Historic Places (NRHP) and recommend boundaries, if eligible; and

3) evaluate the effect of the project on any properties included in, or eligible for listing in, the NRHP.

The purpose of the project is to construct a pump station and force main to eliminate up to 25.6 million gallons per year of sewage from spilling into the Ohio River as a result of combined sewer overflows in the city of Silver Grove. The project area begins at an existing pump station adjacent to Mary Ingles Highway in Silver Grove, Kentucky; encompasses three alternate locations for the proposed new pump station near Ash Street; and continues south-southeast, paralleling Four Mile Road through the community of Camp Springs to the existing Riley Road pump station northeast of the community of Alexandria. Although the majority of the project, excluding the Ash Street pump station, will be located below ground, local consulting parties and the Kentucky Heritage Council (KHC) have identified several potential direct and indirect effects of the proposed project to the cultural historic resources of Silver Grove and Camp Springs. Thus, through consultation with the KHC and the U.S. Army Corps of Engineers (USACE), the APE for the cultural historic survey was defined as a 200 ft corridor, 100 ft to either side of the centerline of the proposed force main, and a 500 ft radius buffer surrounding the proposed pump station sites in Silver Grove (Figures 2a–2b and 3a–3c). If any portion of a property fell within the APE, it was recorded in its entirety.

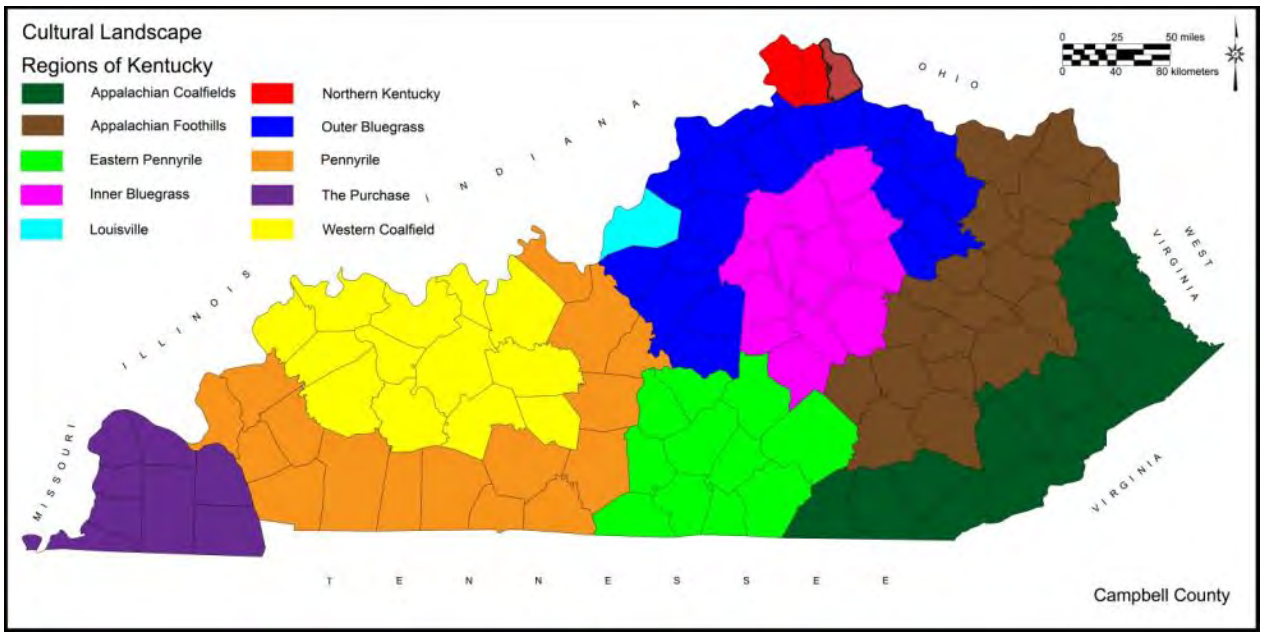


Figure 1. Map of Kentucky showing the location of Campbell County.

The survey was conducted to comply with federal regulations concerning the impact of federal actions on sites and structures listed in, or eligible for nomination to, the NRHP. These regulations include Section 106 of the National Historic Preservation Act of 1966 and the regulations published in the Code of Federal Regulations at 36 CFR Part 800. This project requires a Section 404 permit under the Clean Water Act from the USACE and is therefore considered an undertaking subject to Section 106 review.

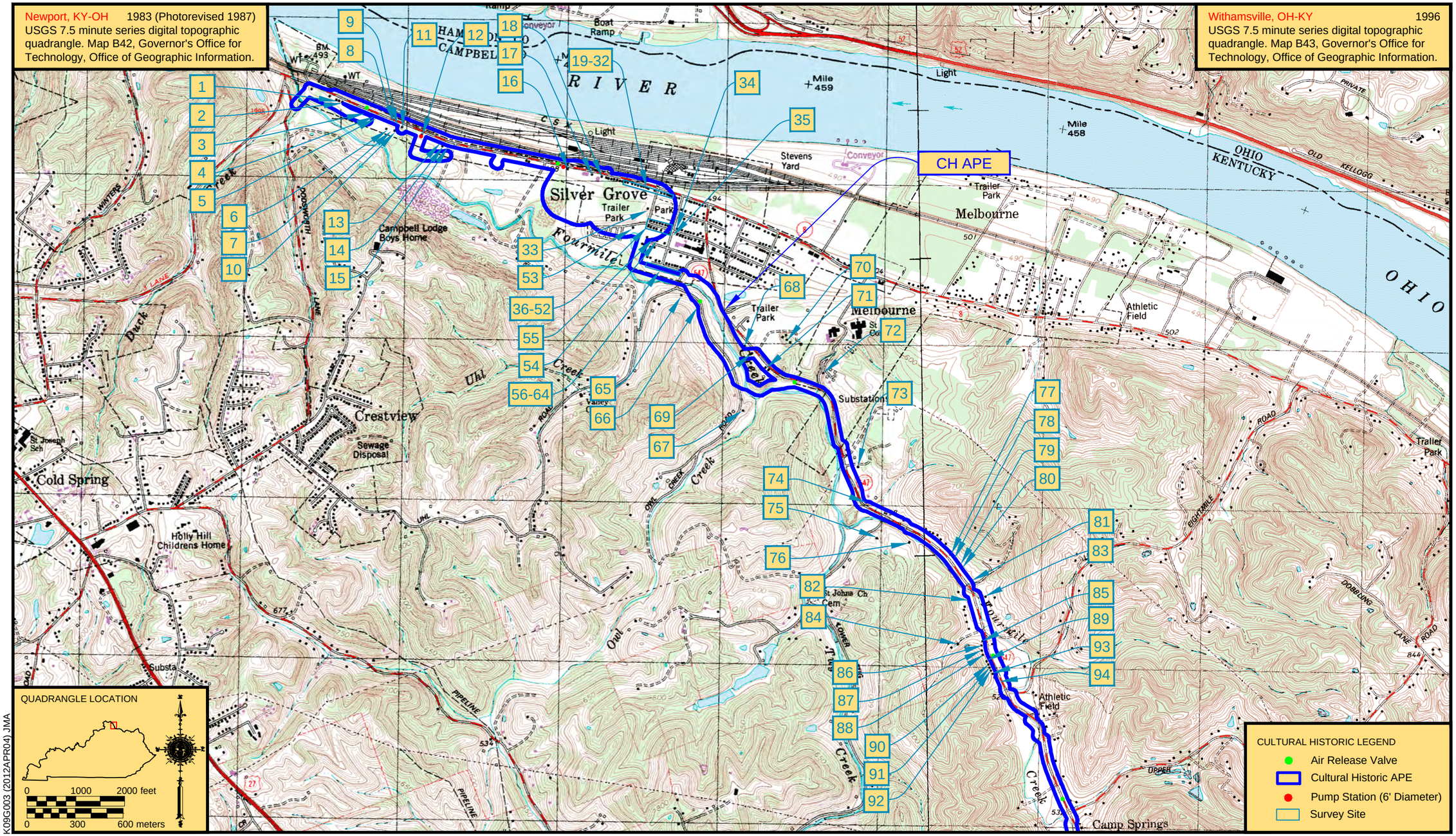
The following report is a summary of the survey findings. Matthew McMahan and George Seidelman of CRA completed the fieldwork described herein between February 20 and March 2, 2012. Fieldwork for the cultural historic survey was completed in 120 personnel hours. Weather conditions were generally cool and overcast. The owners of the NRHP-listed Andrew Ritter Farm (Site 131 [CP 92]) denied CRA personnel permission to document the property. No other restrictions or limitations were placed on the survey effort other than the inability to access the interior of some barns.

Eleven previously recorded properties—including 10 properties listed in the German Settlement, Four Mile Creek Area Thematic Resource (TR) NRHP nomination (Site 95 [CP 72], Site 98 [CP 71], Site 117 [CP 61], 119 [CP 91], Site 121 [CP 60], Site 122 [CP 62], Site 128 [CP 52], Site 130 [CP 81], Site 131 [CP 92], and Site 132 [CP 51]) and 1 property of undetermined NRHP status (Site 16 [CP 94])—and 122 previously undocumented properties (Sites 1–15 [CP 204–218], Sites 17–94 [CP 220–297], Sites 96–97 [CP 298–299], Sites 99–116 [CP 300–317], Site 118 [CP 318], Site 120 [CP 319], Sites 123–127 [CP 320–324], Site 129 [CP 325], and Site 133 [CP 326]) were identified during the field survey. To facilitate efficient assessment of common property types and potential historic districts, several of the previously undocumented properties were documented and evaluated as groups, including 41 resources in Silver Grove (Sites 18–32, 34, 36–42, 44–53, 56–62, and 64), 10 American Small Houses on Four Mile Road (Sites 68, 77, 79, 85, 86, 94, 102, 105, 124, and 125), and 12 Ranch houses on Four Mile Road (Sites 80, 81, 87–93, 97, 99, and 108). CRA recommends that the Dutle Inn (Site 16 [CP 94]) and all of the previously undocumented properties (Sites 1–15 [CP 204–218], Sites 17–94 [CP 220–297], Sites 96–97 [CP 298–299], Sites 99–116 [CP 300–317], Site 118 [CP 318], Site 120 [CP 319], Sites 123–127 [CP 320–324], Site 129 [CP 325], and Site 133 [CP 326]) are ineligible for listing in the NRHP under Criterion A, B, or C, both individually and as part of a potential historic district. In addition, Site 119 (CP 91) has undergone major unsympathetic alterations since the time of its listing in the NRHP and no longer retains sufficient integrity to convey its historical significance as a German settlement property in the Camp Springs area. The nine other NRHP-listed properties (Site 95 [CP 72], Site 98 [CP 71], Site 117 [CP 61], Site 121 [CP 60], Site 122 [CP 62], Site 128 [CP 52], Site 130 [CP 81], Site 131 [CP 92], and Site 132 [CP 51]) remain eligible for listing as part of the German Settlement, Four Mile Creek Area TR.

The proposed project will not directly impact any of the contributing features associated with these NRHP-listed sites, and, as described in the following sections, it appears that GRW and SD1 have taken sufficient measures to minimize the project's potential effects to these historic properties, including those effects related to construction noise, odor caused by air release valves, damage to fragile mortar joints caused by construction activities, tree removal, and potential system failure. Also, in addition to prohibiting blasting within 200 ft of listed structures, SD1 has committed to seismographic monitoring at the NRHP-listed sites when blasting or mechanical rock excavation occurs near the site to ensure that there are no construction-related damages to the historic buildings. Assuming that the steps outlined are implemented to minimize effects on historic properties, CRA recommends a No Adverse Effect determination for this project.

Newport, KY-OH 1983 (Photorevised 1987)
USGS 7.5 minute series digital topographic quadrangle. Map B42, Governor's Office for Technology, Office of Geographic Information.

Withamsville, OH-KY 1996
USGS 7.5 minute series digital topographic quadrangle. Map B43, Governor's Office for Technology, Office of Geographic Information.



K09G003 (2012APR04).JMA

Figure 2a. Topographic map depicting the locations of Sites 1-94 within the APE.

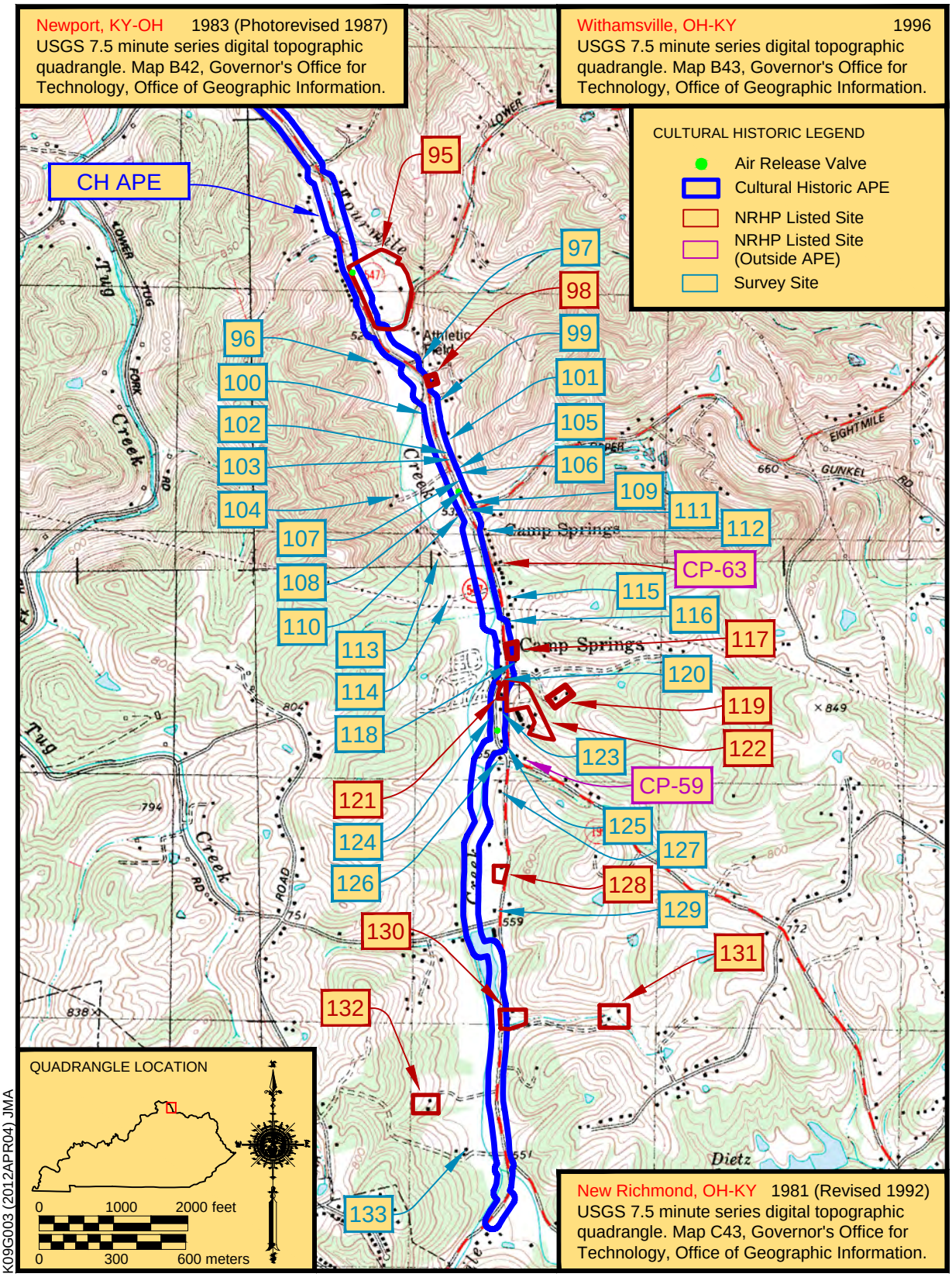


Figure 2b. Topographic map depicting the locations of Sites 95-133 within the APE.

II. PROJECT DESCRIPTION

The purpose of the project is to construct a pump station and force main to eliminate up to 25.6 million gallons per year of sewage from spilling into the Ohio River as a result of combined sewer overflows in the city of Silver Grove. The project area begins at an existing pump station adjacent to Mary Ingles Highway in Silver Grove, Kentucky; encompasses three alternate locations for the proposed new pump station near Ash Street; and continues south-southeast, paralleling Four Mile Road through the community of Camp Springs to the existing Riley Road pump station northeast of the community of Alexandria. These improvements are related to compliance with a Federal Consent Decree to adhere to mitigation requirements related to sanitary and combined sewer overflows in SD1's wastewater collection system.

The pump station near Ash Street will be a 65 ft x 68 ft L-shaped building rising 31 ft above ground level (see rendering in Appendix B). The exterior will feature masonry block construction and a 4/12 or 5/12 pitched shingle roof. One of the proposed pump station sites includes an abandoned Works Progress Administration (WPA) pumping station, described in this report as Site 33 (CP 236). The City of Silver Grove has deeded this property to SD1 with the agreement that the structure be demolished. The other two pump station sites under consideration do not contain any aboveground structures. Potential indirect effects associated with the pump station include odor, noise, and visual effects of the building itself and its lighting. GRW and SD1 have taken several steps to minimize these effects through the use of specialized odor control systems and through the structure's design, as described in detail in Appendix A.

In addition to the main pump station site, the project will include the installation of two small pump stations to service individual properties along Mary Ingles Highway (see Figures 2a and 3a). The only aboveground component of these structures will be their associated control panels. Each will feature two large manholes: a 6 ft diameter hole for the wet well and a 4 ft diameter hole for the valve vault (see diagram in Appendix B). The effects of each of these structures on aboveground resources will be minimal.

The potential effects of the force main include construction noise, odors associated with the project's six air release valves (see Figures 2a–2b and 3a–3c), damage to fragile mortar joints of historic buildings caused by construction activities, tree removal and other direct impacts within NRHP property boundaries, and potential force main system failure. GRW and SD1 have taken several steps to minimize these effects. In all cases, the force main is located on the opposite side of the street from the NRHP-listed buildings or at a significant distance from the NRHP boundaries. Construction and blasting activities will comply with all applicable local and state ordinances to limit the impacts of noise and construction vibrations. No blasting will be conducted within 200 ft of NRHP-listed buildings; blasting peak particle velocities (PPV) will be limited to .25 inches per second, well below the state maximum allowance of 2.0 inches per second; and all NRHP-listed properties will be subject to pre-blast inspections and seismographic monitoring when blasting or mechanical rock excavation occurs near the site to ensure that construction activities do not damage these historic buildings. This consideration will be extended to the two NRHP-listed properties (CP 59 and CP 63, see Figures 2a–2b and 3a–3c) that fall outside of the 100 ft APE but within the immediate vicinity of the proposed project. Should any damage be detected, work will stop immediately and the KHC will be contacted for additional consultation.

In addition, the project has been designed to minimize the potential impacts of odors at air release valves, and additional odor mitigation measures are being implemented to scrub the released air. When tree removal is necessary, trees will be replaced with native trees of significant size. The project design takes all reasonable measures to avoid potential system failure, and a plan is in place to respond to any breaks or leaks promptly to repair the system, clean up any spilled materials, and return the affected area to its original condition. Each of these measures is described in greater detail in Appendix A.

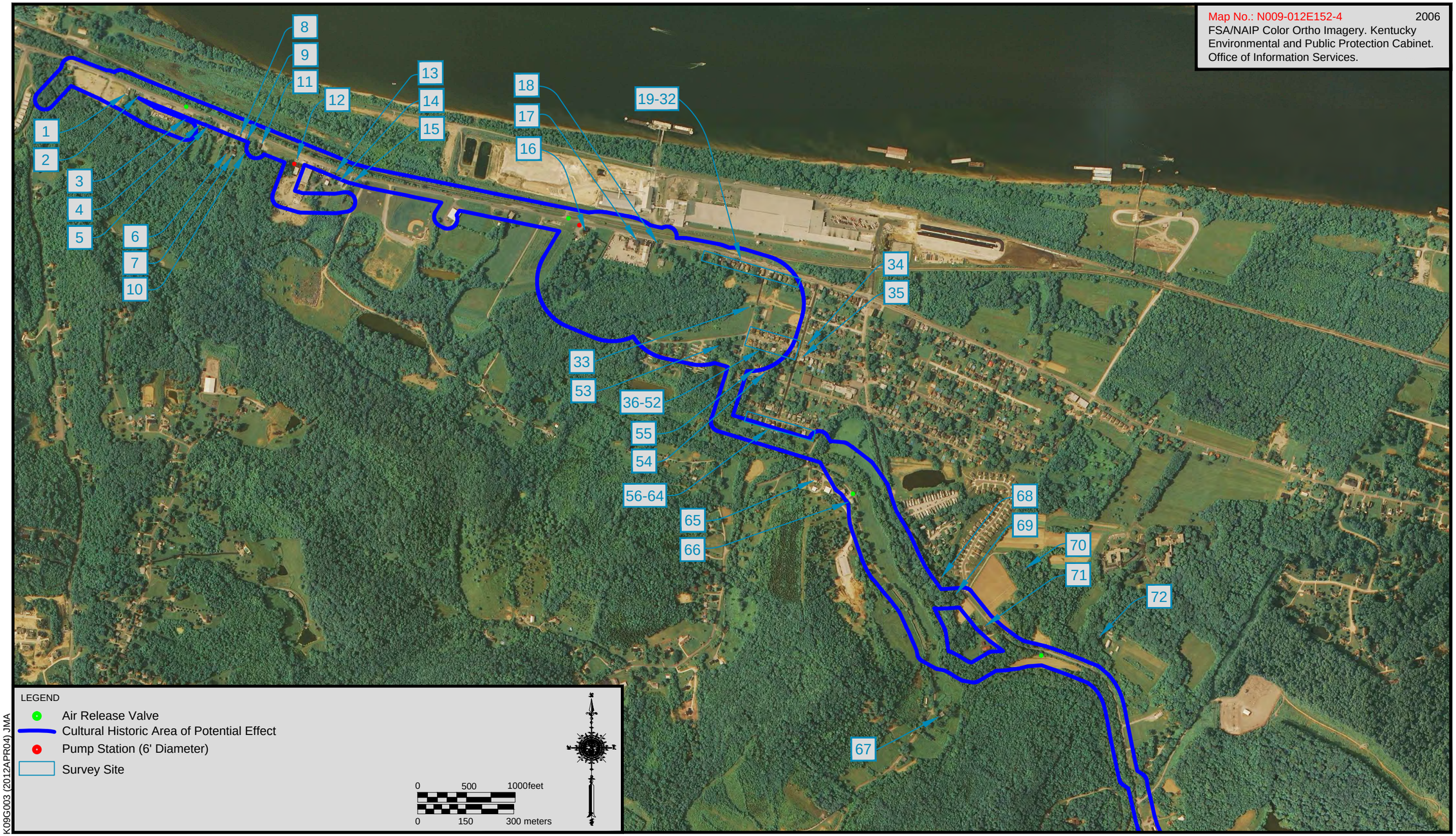


Figure 3a. Aerial photograph depicting the locations of Sites 1-72 within the APE.

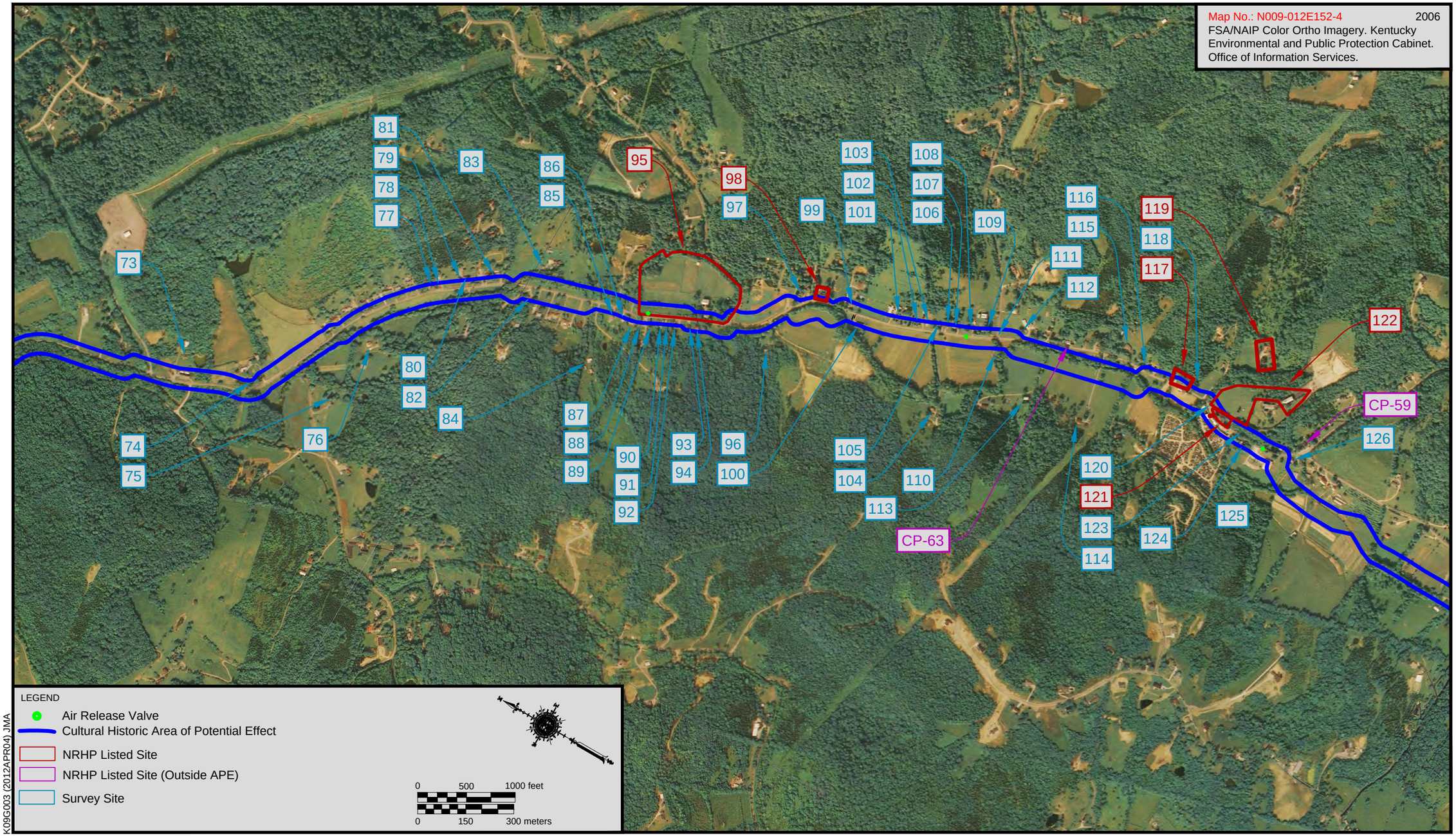


Figure 3b. Aerial photograph depicting the locations of Sites 73-126 within the APE.

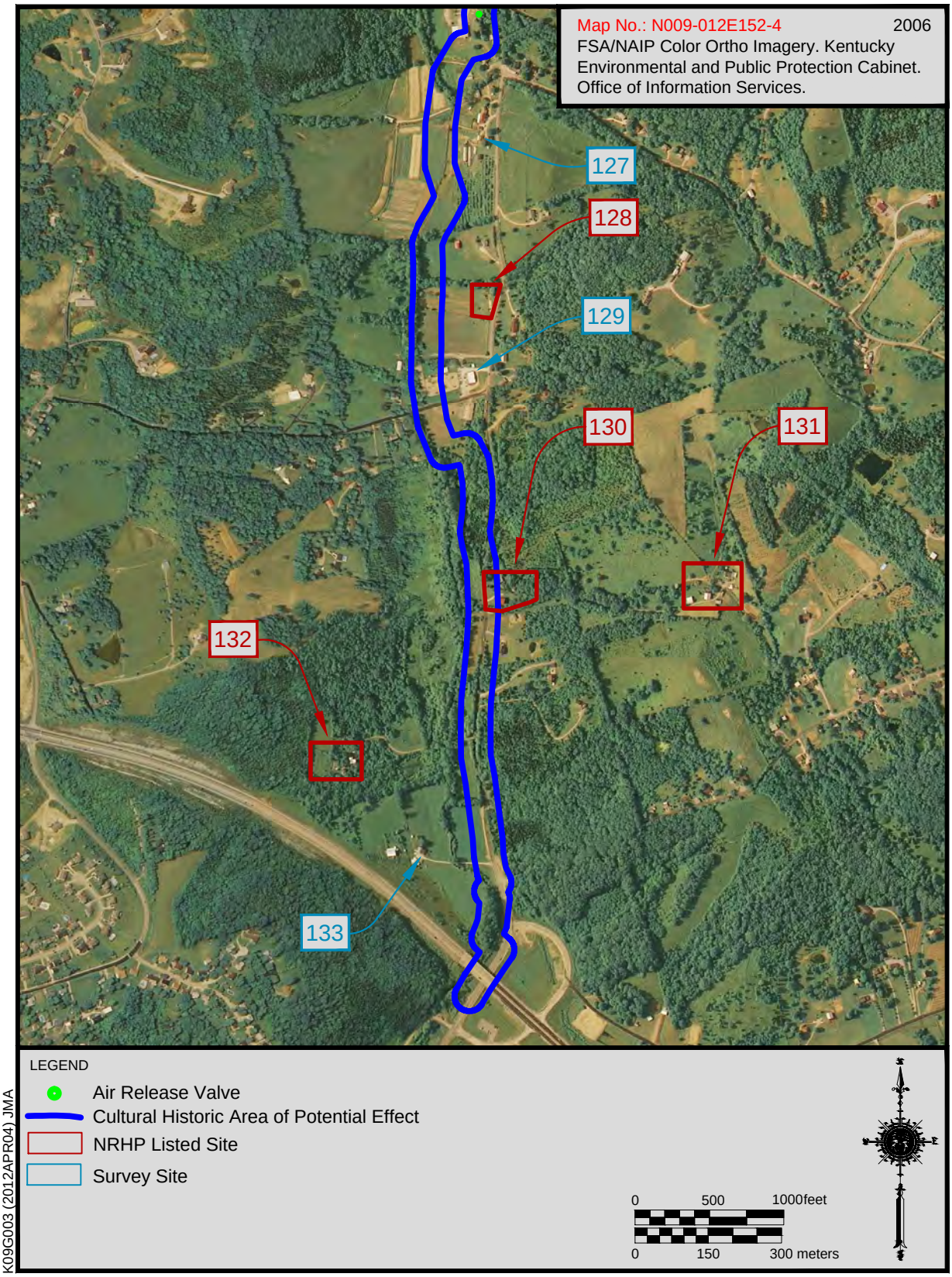


Figure 3c. Aerial photograph depicting the locations of Sites 127-133 within the APE.

Taking into consideration each of these potential effects and after consultation with the KHC and the USACE, the APE for the cultural historic survey was defined as a 200 ft corridor, 100 ft to either side of the centerline of the proposed force main, and a 500 ft radius buffer surrounding the proposed pump station sites in Silver Grove (see Figures 2a–2b and 3a–3c). If any portion of a property fell within the APE, it was recorded in its entirety.

III. ENVIRONMENTAL SETTING

The project area is located in the eastern portion of Campbell County in the Outer Bluegrass region of Kentucky. The topography of the Outer Bluegrass is characterized by rolling, high-grade limestone uplands that are slightly to moderately dissected. The majority of the project area consisted of floodplains and terraces with a few ridgetop, hillside, and dissected upland settings. Slopes ranged from nearly level to moderate. Elevations within the project area ranged between approximately 530 and 623 ft above mean sea level (AMSL) (see Figures 2a–2b and 3a–3c). The project area lies within the Licking River drainage (McGrain and Currens 1978).

The project area begins at its north end at an existing pump station in the community of Silver Grove, passes at its center through the community of Camp Springs, and terminates at its south end at another existing pump station 1.7 mi northeast of the community of Alexandria. For most of its length, the proposed force main parallels the Mary Ingles Highway and Four Mile Road (KY 547) (see Figures 2a–2b and 3a–3c).

Terrain within the current project area consisted of floodplains and terraces with a few small dissected upland ridges. Elevations ranged between 530 ft AMSL along the Mary Ingles Highway in the northern portion of the project area and approximately 623 ft AMSL along upland ridges in the southern portion of the project area along Four Mile Road.

The northern portion of the APE is characterized by early- to mid-twentieth-century residential and commercial development along Mary Ingles Highway (Figure 4) and early-twentieth-century residential development in Silver Grove (Figure 5). The southern portion of the APE passes through the Four Mile Creek Valley (Figure 6), a predominantly rural area featuring both nineteenth-century agricultural properties (Figure 7) and twentieth-century residential development (Figure 8). At the valley's center is the Camp Springs settlement, a collection of farmsteads, commercial buildings, and religious properties established by German immigrants in the mid- to late nineteenth century. The historical development of Camp Springs and Silver Grove is summarized in Section V of this report. The Lafarge drywall plant (see Figure 4) now occupies the former site of the Stevens railyard, which was fundamental to the early-twentieth-century development of Silver Grove, and the John Y. Brown, Jr., AA Highway intersects Four Mile Road at the southern terminus of the APE.

IV. RESEARCH AND SURVEY METHODOLOGY

The survey was conducted in accordance with the "Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines" (National Park Service [NPS] 1983). In addition, guidelines offered in the following documents were followed: *National Register Bulletin #24 Guidelines for Local Surveys: A Basis for Preservation Planning* (NPS 1985); *Kentucky Historic Resources Survey Manual* (Kentucky Heritage Council, n.d.); and *Specifications for Conducting Fieldwork and Preparing Cultural Resource Assessment Reports* (Sanders 2006).

Figure 4. West-northwesterly overview along Mary Ingles Highway from Ash Street.

Figure 5. Easterly overview of early-twentieth-century residential development along West Fourth Street in Silver Grove.

Figure 6. Easterly overview of Four Mile Creek Valley from Reitman Road.

Figure 7. Northerly overview along Four Mile Road near Gubser-Schuchter Farm (Site 130 [CP 81]).

Figure 8. Northerly overview depicting mid-twentieth-century residential development along Four Mile Road.

Before entering the field, available surveys, reports, studies, maps, and other data pertinent to the project area were identified and reviewed. This task began with an investigation of the records of the KHC (FY12-1192). Geographic information system (GIS) data requested from the KHC indicated that 11 previously documented cultural historic resources were located within the area of potential effect, including 1 previously surveyed property in Silver Grove (Site 16 [CP 94, the Dutle Inn]) and 10 properties in Camp Springs that are listed in the NRHP as part of the German Settlement, Four Mile Creek Area TR (Site 95 [CP 72, John Weber Farm], Site 98 [CP 71, Camp Springs House], Site 117 [CP 61, Blau's Four Mile House], Site 119 [CP 91, Leick House], Site 121 [CP 60, Reitman's St. Joseph House], Site 122 [CP 62, St. Joseph's Catholic Church and Cemetery], Site 128 [CP 52, Baumann House], Site 130 [CP 81, Gubser-Schuchter Farm], Site 131 [CP 92, Andrew Ritter Farm], and Site 132 [CP 51, Ort-Heeb Farm]). Two additional NRHP-listed properties (CP 59 and CP 63) included in the German Settlement, Four Mile Creek Area TR were identified in the vicinity of the APE during a previous records review (FY10-0749) and are depicted in Figures 2b and 3b (KHC survey and NRHP files).

In 1979, the KHC conducted a survey of historic sites located in Campbell County. All 13 of the aforementioned sites were documented as a result of the survey, though none were evaluated in terms of their eligibility for listing in the NRHP (KHC survey and NRHP files).

In 1983, approximately 30 mid- to late-nineteenth-century properties located in the Camp Springs vicinity were listed in the NRHP as contributing resources included in the German Settlement, Four Mile Creek Area TR. These properties, including Sites 98, 117, 119, 121, 122, 128, and 130–132,

> are significant for their historical context within the cultural development of Kentucky and as a manifestation of nineteenth and early twentieth century German settlement….Collectively, the German settlement properties represent a significant deviation from the dominant expressions of material culture in

> Northern Kentucky and the Ohio Valley. [Gordon 1982:8-1]

These properties are defined by their German vernacular architecture, which is described in Section V of this report. A number of German settlement properties located in the Four Mile vicinity were omitted from the 1983 NRHP nomination due to loss of integrity, and other properties thought to have been established by German immigrants were excluded based on a lack of supporting documentation. In 2007, the John Weber Farm (Site 95) was listed in the NRHP under Criterion A for its association with German ethnic heritage and was added to the group of properties included in the 1983 German Settlement, Four Mile Creek Area TR (Daniels 2007; Gordon 1982:7-4).

In 2010, Mark A. Ramler, a Camp Springs native and Masters of Historic Preservation candidate at the University of Kentucky, published *Preservation and Design Guidelines for the Camp Springs Area of Campbell County* with a matching grant from the National Trust for Historic Preservation. The publication describes, evaluates, and offers guidelines for the preservation of several German settlement properties included in the 1983 German Settlement, Four Mile Creek Area TR, including Sites 95, 98, 117, 119, 121, 122, 128, and 130–132 (Ramler 2010).

In addition to the file search, the archival research included a review of available maps, which were used to help identify potential historic properties within the APE. The following maps were reviewed:

> 1883 An Atlas of Boone, Kenton and Campbell Counties, Kentucky (Griffing);
>
> 1900 East Cincinnati, Ohio–Kentucky, 15-minute series topographic quadrangle (United States Geological Survey [USGS]);
>
> 1914 East Cincinnati, Ohio–Kentucky, 15-minute series topographic quadrangle (USGS);
>
> 1936 Alexandria, Kentucky-Ohio, 7.5-minute series topographic quadrangle (USGS);
>
> 1937 Highway and Transportation Map, Campbell County, Kentucky (Kentucky Department of Highways [KDH]);
>
> 1952 Newport, Kentucky-Ohio, 7.5-minute series topographic quadrangle (USGS);
>
> 1952 General Highway Map, Campbell County, Kentucky (Kentucky State Highway Department [KSHD]);
>
> 1953a New Richmond, Kentucky–Ohio, 7.5-minute series topographic quadrangle (USGS);
>
> 1953b Withamsville, Ohio–Kentucky, 7.5-minute series topographic quadrangle (USGS);
>
> 1955 Newport, Kentucky-Ohio, 7.5-minute series topographic quadrangle (USGS);
>
> 1961a Newport, Kentucky-Ohio, 7.5-minute series topographic quadrangle (USGS);
>
> 1961b (Photorevised 1970 and 1974) Newport, Kentucky-Ohio, 7.5-minute series topographic quadrangle (USGS);
>
> 1961c Withamsville, Ohio–Kentucky, 7.5-minute series topographic quadrangle (USGS);
>
> 1972 New Richmond, Kentucky–Ohio, 7.5-minute series topographic quadrangle (USGS);
>
> 1974 Withamsville, Ohio–Kentucky, 7.5-minute series topographic quadrangle (USGS);
>
> 1981 New Richmond, Kentucky–Ohio, 7.5-minute series topographic quadrangle (USGS);
>
> 1983a Newport, Kentucky-Ohio, 7.5-minute series topographic quadrangle (USGS);
>
> 1983b Withamsville, Ohio–Kentucky, 7.5-minute series topographic quadrangle (USGS).

The 1883 county atlas depicts Camp Springs at the height of settlement, including buildings associated with or located in the vicinity of Sites 66, 72, 74, 75, 84, 95, 96, 98, 101, 104, 109, 113, 115–119, 121, 122, 127, 128, and 130–133 (Figure 9). The 1900 and 1914 topographic quadrangles illustrate the early development of Silver Grove in the 1910s with the advent of the Stevens railyard (Figures 10 and 11). Later maps depict measured residential development throughout the APE during the mid-twentieth century. The current topographic quadrangles do not depict the Lafarge drywall plant, which is located on the former site of the Stevens railyard, or the AA Highway (see Figures 2a–2b) (Griffing 1883:45, 47, 49; USGS 1900, 1914, 1981, 1983a, 1996).

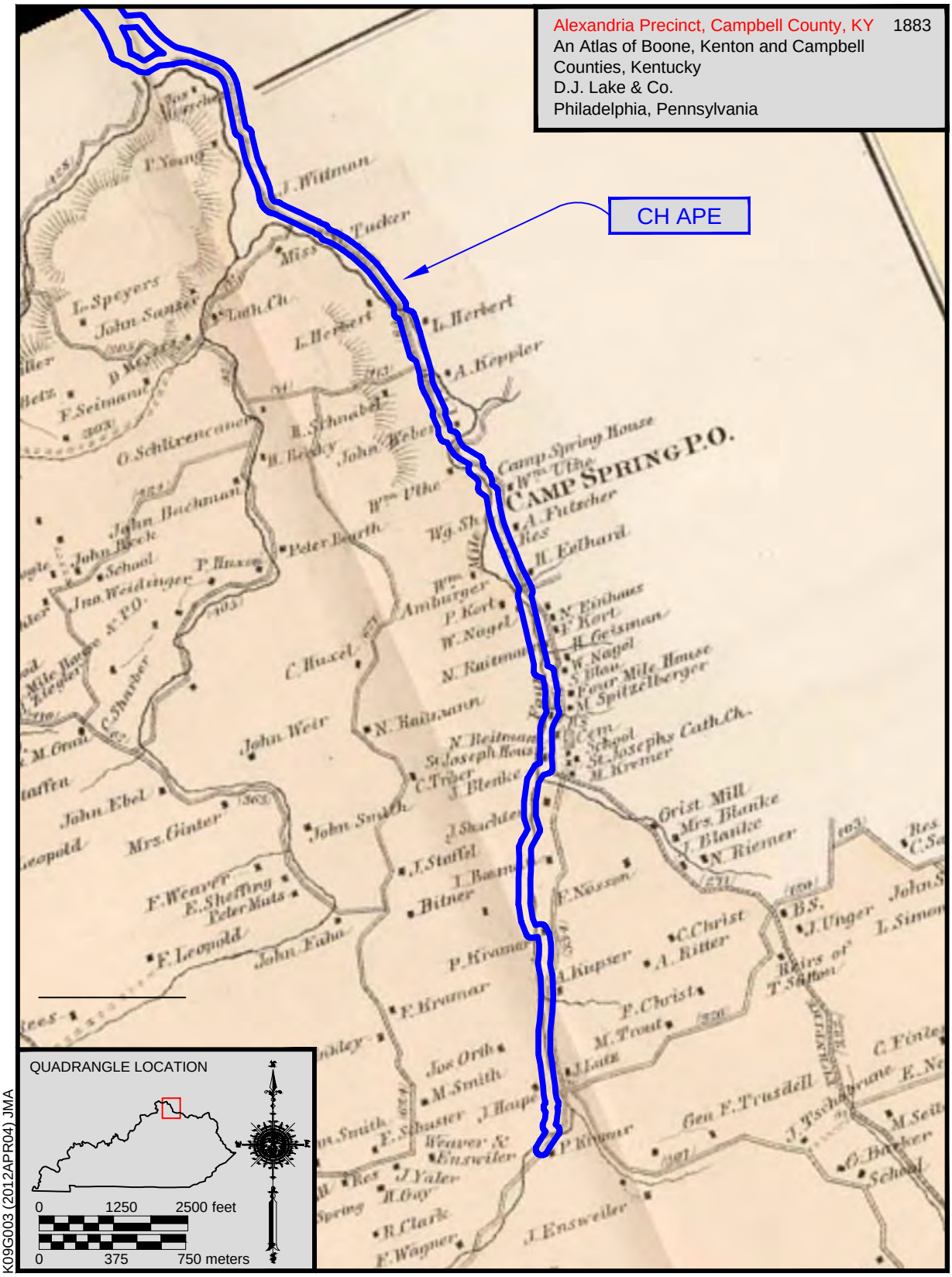


Figure 9. 1883 atlas excerpt depicting southern portion of APE.

Additional documents identified during the archival research are listed in the bibliography. The sources identified during this research were also used to develop Section V of this report.

Following the preliminary archival research, CRA staff conducted a field survey of the APE during which all properties 50 years of age or older were identified. A topographic map and aerial photographs were used to determine the locations of potential historic properties within the APE (see Figure 2a–2b and 3a–3c). Buildings, structures, and other pertinent resources were mapped and photographed, and when appropriate, CRA personnel attempted to obtain owner permission to document and analyze the interiors of outbuildings. Specific instances in which CRA personnel were unable to secure landowner permission to access the interiors of outbuildings are noted in the descriptions of the respective resources.

In addition to documenting individual properties, CRA also considered the potential for historic districts (including rural historic districts) within the APE. While much of the APE—with the exception of Silver Grove—exhibits a rural character, modern development is interspersed throughout the area at-large, land use patterns have changed, and the integrity of extant historical agricultural properties has by and large been compromised, as is further detailed in the individual resource descriptions. As a result, no properties or subareas of the APE conveying the requisite characteristics of a NRHP-eligible rural historic district were identified. In addition, due to the demolition of the associated railroad-related structures that spurred the development of the community, Silver Grove was found to lack the integrity required for consideration as a historic district, as detailed in Section VI of this report.

Ten previously surveyed properties (Sites 16, 95, 98, 117, 119, 121, 122, 128, 130, and 132) and 122 previously unrecorded properties (Sites 1–15, 17–94, 96, 97, 99–116, 118, 120, 123–127, 129, and 133) were identified during the survey. The owners of the NRHP-listed Andrew Ritter Farm (Site 131) denied CRA personnel permission to document the property.

In general, in order for a property to be eligible for listing in the NRHP, it must be at least 50 years old and possess both historic significance and integrity. Significance may be found in three aspects of American history recognized by these National Register criteria:

A. association with historic events or activities;

B. association with important persons; or

C. distinctive design or physical characteristics.

A property must meet at least one of the criteria for listing. Integrity must also be evident through historic qualities, including location, design, setting, materials, workmanship, feeling, and association.

V. HISTORICAL CONTEXT

In 1776, before Kentucky had attained statehood, the Virginia General Assembly had created Kentucky County from its western lands, and that county would exist more or less within the same boundaries as the current state. This county was divided in 1780 into three counties, Fayette, Lincoln, and Jefferson, which would collectively become the District of Kentucky in 1783 (Hammon 1992:495; Kleber 1992a:267). The Kentucky District would in 1792 disappear in favor of the Commonwealth of Kentucky, and the counties that then comprised this district would over the years be divided and subdivided into the 120 counties that presently make up Kentucky.

Campbell County was created by the Kentucky General Assembly on December 17, 1794, from portions of Harrison, Mason, and Scott Counties and 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).

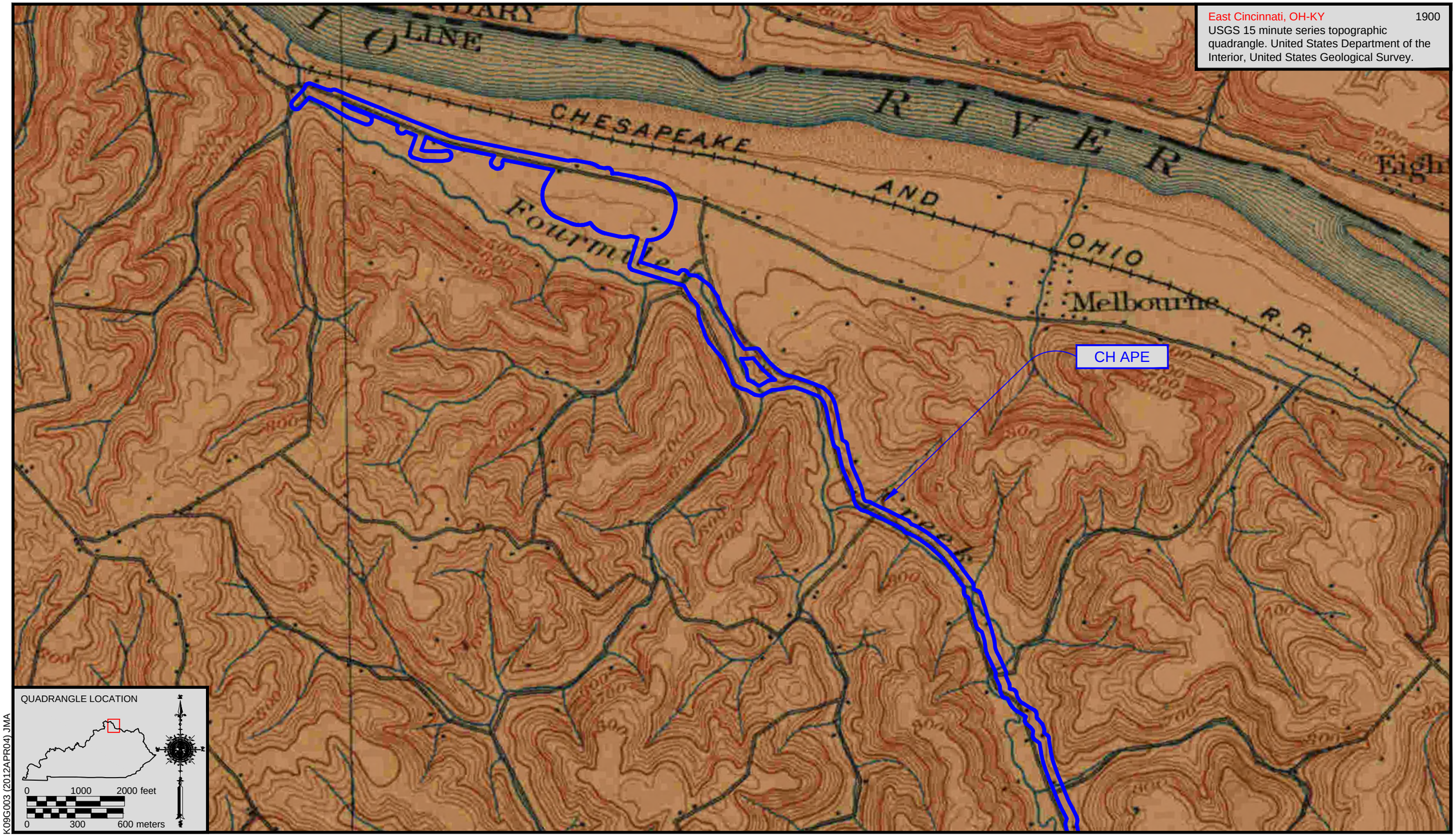


Figure 10. 1900 topographic quadrangle depicting northern portion of APE.

East Cincinnati, OH-KY 1914
USGS 15 minute series topographic quadrangle. United States Department of the Interior, United States Geological Survey.

School No 67
LINE
RIVER
CHESAPEAKE AND OHIO
Silver Grove
Melbourne
CH APE
Camp Springs School
QUADRANGLE LOCATION
0 1000 2000 feet
0 300 600 meters
K09G003 (20FEB2012)

Figure 11. 1914 topographic quadrangle depicting northern portion of APE.

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 1992b: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 1992b: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 1992b: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 over 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 1992c: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 1992b: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; Steely 1992a: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 over 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 2012).

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).

Camp Springs

Camp Springs is an unincorporated community located approximately 3 mi north-northeast of Alexandria in northeastern Campbell County. Formerly known as Indian Springs, this isolated rural hamlet was established by German immigrants who settled in the Four Mile Creek valley during the second half of the nineteenth century (Daniels 2009:38–39; Gordon 1982:7-1).

Beginning in the 1840s, political turmoil in Europe precipitated an exodus of immigrants into the Ohio River Valley. Over the course of a decade, the population of Campbell County tripled, and by 1850, 25 percent of its residents were foreign born. Among these immigrants were German families who had left their home states after the failure of the March Revolution of 1848.

Finding that the region's most fertile land had already been claimed, those not inclined to settle in urban areas such as Cincinnati, Covington, and Newport established small farms in the Eden Shale Hills of northern Kentucky. By 1860, German immigrants constituted the dominant population group in the Four Mile Creek valley. Hailing from Prussia, Bavaria, Wurttemberg, Austria, and Switzerland, the settlers of the valley brought with them cultural traditions that varied significantly from those of their Anglo-American contemporaries in the Bluegrass (Daniels 2009:38–39; Gordon 1982:8-1).

While the economy of the settlement was primarily agrarian, the topography and shallow soils of the Four Mile Creek valley were not well suited for the field crops typically grown in the region's more fertile areas. However, many of the valley's settlers, having emigrated from wine producing districts in the German states, found that its climate, steep slopes, sandy soils, and abundant supply of water were ideal for the growing of grapes, which were processed at nearby wine presses in Bracken County, Kentucky; Cincinnati; and Clermont County, Ohio. Campbell County ranked first in the state in wine production in 1850, and in 1860, Kentucky was surpassed in wine production only by California and Ohio, with Campbell County accounting for 40 percent of the wine produced in the state. After a blight decimated the region's vineyards in the 1870s, many farmers in the Camp Springs area refocused their efforts on the production of garden and orchard crops, eggs, and cider, which were sold in urban markets in Cincinnati and Newport. Others began commuting to jobs in nearby urban areas (Daniels 2009:39; Gordon 1982:8-1–8-3; Ramler 2010:7).

The earliest German immigrants to the Four Mile Creek valley were Roman Catholics and Lutherans, and both groups established churches in the area. St. Joseph Church (Site 123 [CP 62]) was founded in 1854 and is the county's earliest rural Catholic church. Associated with the parish is St. Joseph School. Established in 1868, it is the oldest elementary school in the Diocese of Covington. Local Lutherans founded St. John's Church in 1860, which was also attended by congregants residing in southern Ohio. Many of the valley's original settlers were interred in the cemeteries associated with these churches (Gordon 1982:8-2; Ramler 2010:49; St. Joseph Parish 2012).

The settlers of Camp Springs were practitioners of a virtually unadulterated German vernacular building tradition, examples of which constitute much of the historical built environment of the area. Local oral tradition holds that Nicholas Reitman, John Braun, and other Germans were involved in the construction of buildings in the Four Mile Creek valley. Using abundant surface limestone as their primary building material, they constructed dwellings, commercial buildings, and dependencies that differ significantly from those constructed contemporaneously by the region's Anglo-American residents. The builders frequently employed hillside construction, which provided direct ground-level access to multiple levels and helped conserve precious bottomland for agricultural pursuits. Vaulted cellars used for storing wine, food, vinegar, and beer were incorporated into buildings associated with both residential and commercial properties (Sites 121 [CP 60], 130 [CP 81], and 131 [CP 92]). Fences and retaining walls of native limestone construction are ubiquitous throughout the valley (Daniels 2009:39; Gordon 1982:7-2–7-3, 8-1–8-2; Ramler 2010:7, 26, 40, 42).

Farmhouses are typically of rubble limestone construction and exhibit two- or two-and-one-half-story, double-pile, side-gabled massing and a central-passage plan. Architectural ornamentation is generally limited to stonecutters' marks on corner sections and segmental-arched stone lintels. Stone service ells are common, and two of the valley's three surviving log dwellings (Sites 130 and 131) have stone additions (Daniels 2009:39; Gordon 1982:7-2–7-3, 8-1–8-2; Ramler 2010:7, 26, 42–43).

Outbuildings were ordinarily constructed in the immediate vicinity of the farmhouse. A characteristic assemblage would have included a barn, chicken house, smokehouse, cistern, and cellar. Many of the outbuildings are of stone construction in the German vernacular tradition, including smokehouses, poultry houses, and storage buildings. Distinctive round stone smokehouses are associated with the Karl Heiert Farm (CP 58), Reitman's St. Joseph House (Site 121 [CP 60]), and Hilbert Farm (CP 65), and a circa 1891 stone bank barn is located on the Andrew Ritter Farm (Site 131 [CP 92]). Traditional timber-frame bank barns with stone foundations are associated with many local farms. The lower level of the barn typically housed livestock, and the upper level was used for storing hay and agricultural implements. According to Ramler, bank barns and smokehouses emerged post-blight as farmers in the valley adapted to the raising of livestock (Gordon 1982:7-2, 7-4; Ramler 2010:7, 25, 28, 40, 42).

Settlement-era commercial buildings are concentrated along Four Mile Road, the valley's primary thoroughfare, and are similar in form and construction to the vernacular stone residences already described. Four taverns—the Matthius Kremer House (CP 59), Uthe's Camp Springs House (Site 98 [CP 71]), Blau's Four Mile House (Site 117 [CP 61]), and Reitman's St. Joseph House—served the early residents of Camp Springs, and the latter two establishments were also inns. All four of these buildings were constructed in the 1860s. Kort Grocery (CP 63) was built in 1880, and that same year a grocery was established in a frame addition to the Matthias Kremer House (Gordon 1982:7-2–7-3; Ramler 2010:19, 30, 34, 40, 52).

Twentieth-century residences located in the Camp Springs area are indicative of an influx of Anglo-Americans into the rural German enclave. I-houses and bungalows were introduced into the valley in the first quarter of the twentieth century, followed by popular mid-century house forms constructed on sub-divided parcels. Non-residential twentieth-century development in the valley is limited to the Camp Springs Volunteer Fire Department, Reitman Auto Parts (Site 121 [CP 60]), the Northern Kentucky Saddle Club (Site 129 [CP 326]), and the Campbell County Animal Shelter, all of which are located along Four Mile Road.

Silver Grove

The city of Silver Grove proper, located along the Ohio River in Campbell County, was historically a portion of the Hugh Mercer Patent in possession of Hugh Mercer, a Scottish-born surgeon and captain in the French and Indian War of 1755. It was for his service to the British during the war that King George granted Mercer this area of land on the bank of the Ohio River, although Mercer is never recorded as having occupied this area. Following Mercer's death, the land passed to his sons and then to Hancock Taylor, who had purchased the patent by 1817 (Daniels 2003:24).

Despite nearby development south of Silver Grove in the unincorporated area of Camp Springs in the 1870s, the area did not witness substantial development until the late nineteenth and early twentieth centuries, following the establishment of rail lines along the Ohio River corridor. Indeed, following the establishment of the Cincinnati & South Eastern Railroad line along the bank in 1883, the area was developed as the Phoenix Grove Resort, built to accommodate passengers on passing trains that stopped at the northwest end of the future city of Silver Grove and steamboats along the Ohio River. This area was eventually sold to the U.S. Corps of Engineers, who built a dam at the site. In 1890, a second resort opened in the area. Silver Grove Park, so named for the large number of silver maple trees in the area, included amenities such as a clubhouse, dance hall, and electric light plant. However, the resort was short lived, and it was shut down just a year later in 1891 due to failure to pay debt (Daniels 2003:27; Losey, Gerald F., paper prepared for the Campbell County Historical Society, 8 April 1993, Campbell

County Historical Society, Alexandria, Kentucky).

Activity in Silver Grove would pick up again in the 1910s as a result of railroad investment. In association with the opening of the Stevens railyard, the Chesapeake & Ohio (C&O) chartered the Silver Grove Land and Building Company in order to develop a community for railroad employees. The company purchased a portion of the Mercer Patent encompassing 11 blocks bounded by present-day Ash Street, River Road, Four Mile Pike, and Third Street. By 1915, development of the community was underway, with George A. DeLong of the C&O's real estate department providing oversight for the development (Daniels 2003:28; Losey 1993:2).

Although the rail company laid out the lots and provided the infrastructure, the railroad employees were responsible for purchasing their own lots. In addition, the railroad did not operate any businesses within the community, leaving it up to private ventures to provide such services. The original plan conceived of 400 homes on lots sold for $750 each. Utilities were provided to each home as an extension of those servicing the nearby railyard. Electricity was provided via a tap to lines running through the yard, and water was provided from the artesian well serving the railyard. Each home to be built in the community had to be approved by General Manager C. E. Roland. Homes were built on standard lot arrangements with setbacks of 23 ft from the curb. Commercial buildings were to be constructed at the sidewalk. Each house was also required to have a furnace. Homes were complemented by the landscaping, with trees whitewashed each year to maintain the "silver" appearance. Other amenities included a school and park developed on land set aside by the C&O (Daniels 2003:28).

C&O management of the town ended in August 1948 when residents were left to their own devices and infrastructure was sold off to private entities, such as the Union Light Heat and Power Company and the Campbell County Water Service. The reason for the end of the C&O's management of the town is linked to a local campaign during which a group of residents protested that the C&O was illegally in the light and water business when it was not authorized to be. The authenticity of the campaign has been challenged, however, as rumors swirled that the C&O funded the campaign so that they would have a defensible excuse for leaving the town on its own. Regardless, following the release of the town from C&O management, any remaining residential lots were sold for $100 each through a private realtor. With the railroad company no longer managing the town, residents, totaling 800 in the town and approximately 200 in the general vicinity, pushed for incorporation as an independent city. Incorporation occurred on January 2, 1951, when Silver Grove was designated as a sixth class city (Daniels 2003:28; Losey 1993:3).

It was during this era of dispossession that the railyard also began to experience a decrease in personnel. Whereas 425 persons had been employed by the yard in 1927, by 1967, there were only 350 persons employed. Work itself kept pace into the mid-1960s, with 20,000 to 25,000 cars being handled each week and 30 to 40 engines and 600 to 1,000 cars being repaired each day, but eventually the work dropped off in the last years of the decade and into the 1970s as the culture of transportation shifted. With diminishing need, the yard was abandoned in 1981. At this time, the City of Silver Grove annexed an additional 504 acres, zoning the land for industrial use. Following in quick succession, Landmark Grain Terminal, Mid States Terminal, and Countrymark Cooperative, Inc., were all established throughout the 1980s and early 1990s. The most recent such development was that of the Lafarge gypsum plant, a $90 million investment on the site of the former railyard, which resulted in the construction of a half-mile long industrial complex that also required the reconfiguration of the local road network along River Road and Four Mile Pike (Daniels 2003: 27, 33–34).

VI. INVENTORY OF SURVEYED RESOURCES

The results of the cultural historic survey are presented in Table 1, and the locations of the cultural historic resources are mapped on Figures 2a–2b and 3a–3c. To facilitate efficient assessment of common property types and potential historic districts, several of the previously undocumented properties were documented and evaluated as groups, including 41 resources in Silver Grove (Sites 18–32, 34, 36–42, 44–53, 56–62, and 64), 10 American Small Houses on Four Mile Road (Sites 68, 77, 79, 85, 86, 94, 102, 105, 124, and 125), and 12 Ranch houses on Four Mile Road (Sites 80, 81, 87–93, 97, 99, and 108). These grouped properties are described below and summarized in Tables 2, 3, and 4. Information obtained from the Campbell County Property Valuation Administration (PVA) office, historical maps, and architectural analysis was used to establish an approximate date of construction for each resource. Excepting certain outbuildings, CRA personnel did not access the interiors of surveyed resources. All statements regarding the interiors of residences are based on information derived from the PVA.

Site 1

KHC Survey #: CP 204

Photographs: Figure 12

Map: Figures 2a and 3a

Zone: 16

Quad: Newport, KY-OH 1983 (Photorevised 1987)

UTMs: E: 723555 N: 4324696

Property Address: 4586 Mary Ingles Highway
Cold Spring, KY 41076

Owner Information: Othie R. Dishman
4312 Winters Lane
Cold Spring, KY 41076

Deed Book/Page: 290/722

Construction Date: circa 1925

Description: Site 1 (CP 204) consists of a frame house situated on a narrow residential lot on the southwest side of Mary Ingles Highway approximately 1,100 ft southeast of the intersection of Mary Ingles Highway and Industrial Road (KY 1998) (see Figures 2a and 3a). The residence (Figure 12), oriented to the northeast, sits back approximately 25 ft from the right-of-way (ROW) and is accessed from Mary Ingles Highway via a gravel drive. The property was surveyed from the public ROW.

A residence is first depicted in the approximate location of Site 1 on the 1952 Newport, Kentucky-Ohio, topographic quadrangle. According to PVA records, the house was built circa 1925 (USGS 1952).

The single-story, three-bay (w/d/w), front-gabled frame residence comprises approximately 900 sq ft of living space and has an asymmetrical façade fenestration. The dwelling rests on a foundation of unknown material with walls clad in aluminum siding beneath an asphalt-shingle roof. The façade has a central shed-roofed porch sheltering a single-leaf entry that is off-center to the right, possibly suggesting an original double-door configuration. The façade entry is filled with a four-light replacement panel door set behind an aluminum storm door. The portion of the façade sheltered by the front porch is clad in brick veneer. The porch is supported by wood posts resting upon brick piers. The windows flanking the façade porch are filled with replacement eight-over-eight-light, double-hung sashes. The current façade section of the house may be an original recessed porch that has been enclosed since it is clad in vertical wood or vinyl panels. A replacement exterior brick chimney is located along the northwest elevation of the residence. The northwest elevation also has windows filled with replacement one-over-one, double-hung sashes.

Figure 12. Site 1 (CP 204): single-story, three-bay, front-gabled frame residence.

NRHP Evaluation: Ineligible. The house associated with Site 1 is a typical example of an early-twentieth-century, front-gabled frame form but lacks extraordinary architectural details, such as those indicative of a particular architectural style. Modifications to the residence include the apparent enclosure of the original porch, the addition of the current porch, replacement siding, windows, front door, and brick chimney. These alterations have compromised the residence's integrity of design, materials, and workmanship. The residence is not an outstanding example of a particular architectural type, period, or method of construction, and archival research indicated no association between Site 1 and events or persons of historical significance. 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

Site 2

KHC Survey #: CP 205

Photographs: Figure 13

Map: Figures 2a and 3a

Zone: 16

Quad: Newport, KY-OH 1983 (Photorevised 1987)

UTMs: E: 723589 N: 4324689

Property Address: 4594 Mary Ingles Highway
Cold Spring, KY 41076

Owner Information: Danny B. and Brenda Vickers

Deed Book/Page: 179/238

Construction Date: circa 1925

Table 1. Surveyed Properties.

CRA Resource #	KHC Inventory #	Name/Description of Property	Construction Date	NRHP Eligibility	Effect	Photo Figure #	Earliest Map Reference	Group
1	CP 204	Single-story, three-bay, front-gabled frame residence	circa 1925	Ineligible	N/A	12	1952	
2	CP 205	Single-story, three-bay, front-gabled frame residence	circa 1925	Ineligible	N/A	13	1952	
3	CP 206	Two-story, multi-bay, flat-roofed commercial building	circa 1941	Ineligible	N/A	14	1952	
4	CP 207	Two-story, three-bay, side-gabled frame residence	circa 1945	Ineligible	N/A	15	1952	
5	CP 208	Two-story, three-bay, front-gabled frame residence	circa 1917	Ineligible	N/A	16	1952	
6	CP 209	Single-story, three-bay, gable-roofed frame residence	circa 1910	Ineligible	N/A	17	1914	
7	CP 210	Single-story, four-bay, side-gabled, frame residence	circa 1910	Ineligible	N/A	18	1914	
8	CP 211	One-and-one-half-story, three-bay, side-gabled frame residence	circa 1910	Ineligible	N/A	19	1914	
9	CP 212	One-story, three-bay, front-gabled frame residence	circa 1935	Ineligible	N/A	20	1952	
10	CP 213	One-story, three-bay, frame residence	circa 1932	Ineligible	N/A	21	1952	
11	CP 214	Community Freewill Baptist Church	circa 1900–1924	Ineligible	N/A	22	1952	
12	CP 215	Two-story, five-bay, flat-roofed commercial building	circa 1950	Ineligible	N/A	23	1952	
13	CP 216	One-and-one-half-story, three-bay, side-gabled frame residence	circa 1910	Ineligible	N/A	24	1914	
14	CP 217	One-story, four-bay, side-gabled residence	circa 1900	Ineligible	N/A	25	1900	
15	CP 218	One-story, four-bay, front-gabled frame residence	circa 1920	Ineligible	N/A	26	1952	
16	CP 94	Dutle Inn	circa 1912	Ineligible	N/A	27–29	1914	
17	CP 220	One-story, four-bay, flat-roofed concrete-block commercial building	circa 1960	Ineligible	N/A	30	1983	
18	CP 221	Southern Bungalow	circa 1920	Ineligible	N/A	308	1952	A
19	CP 222	One-and-one-half-story, side-gabled residence	circa 1900	Ineligible	N/A	309	1914	A
20	CP 223	One-and-one-half-story, side-gabled residence	circa 1905	Ineligible	N/A	310	1914	A
21	CP 224	One-and-one-half-story, side-gabled residence	circa 1905	Ineligible	N/A	311	1914	A
22	CP 225	Two-and-one-half-story, front-gabled duplex	circa 1920	Ineligible	N/A	312	1952	A
23	CP 226	Two-and-one-half-story, front-gabled duplex	circa 1920	Ineligible	N/A	313	1952	A
24	CP 227	Two-and-one-half-story, front-gabled duplex	circa 1920	Ineligible	N/A	314	1952	A
25	CP 228	Two-and-one-half-story, front-gabled duplex	circa 1923	Ineligible	N/A	315	1952	A
26	CP 229	Two-and-one-half-story, front-gabled duplex	circa 1920	Ineligible	N/A	316	1952	A
27	CP 230	Two-and-one-half-story, front-gabled duplex	circa 1920	Ineligible	N/A	317	1952	A
28	CP 231	Two-and-one-half-story, front-gabled duplex	circa 1920	Ineligible	N/A	318	1952	A
29	CP 232	American Bungalow	circa 1920	Ineligible	N/A	319	1952	A
30	CP 233	American Bungalow	circa 1920	Ineligible	N/A	320	1952	A
31	CP 234	Single-story, side-gabled residence	circa 1925	Ineligible	N/A	321	1952	A
32	CP 235	Single-story, side-gabled residence	circa 1925	Ineligible	N/A	322	1952	A
33	CP 200	WPA-constructed reinforced-concrete pump station	circa 1936	Ineligible	N/A	31 and 32	1952	
34	CP 237	One-and-one-half-story, cross-gabled residence	circa 1920	Ineligible	N/A	323	1952	A
35	CP 238	Silver Grove Christian Church	circa 1917	Ineligible	N/A	33 and 34	1952	
36	CP 239	Southern Bungalow	circa 1925	Ineligible	N/A	324	1952	A
37	CP 240	Two-story, cross-gambreled residence	circa 1925	Ineligible	N/A	325	1952	A
38	CP 241	Single-story, hip-roofed cottage	circa 1922	Ineligible	N/A	326	1952	A
39	CP 242	Southern Bungalow	circa 1922	Ineligible	N/A	327	1952	A
40	CP 243	One-and-one-half-story, cross-gabled residence	circa 1911	Ineligible	N/A	328	1952	A
41	CP 244	Side-gabled bungalow	circa 1922	Ineligible	N/A	329	1952	A
42	CP 245	Two-story, side-gambreled residence	circa 1922	Ineligible	N/A	330	1952	A
43	CP 246	One-story, five-bay, front-gabled frame Ranch house	circa 1956	Ineligible	N/A	35	1961	
44	CP 247	Side-gabled bungalow	circa 1922	Ineligible	N/A	331	1952	A
45	CP 248	California Bungalow	circa 1922	Ineligible	N/A	332	1952	A
46	CP 249	Two-story, front-gabled residence	circa 1920	Ineligible	N/A	333	1952	A
47	CP 250	Two-story, front-gambreled residence	circa 1920	Ineligible	N/A	334	1952	A
48	CP 251	Single-story, hip-roofed cottage	circa 1926	Ineligible	N/A	335	1952	A
49	CP 252	Side-gabled bungalow	circa 1922	Ineligible	N/A	336	1952	A
50	CP 253	Single-story, hip-roofed cottage	circa 1920	Ineligible	N/A	337	1952	A
51	CP 254	Side-gabled bungalow	circa 1922	Ineligible	N/A	338	1952	A
52	CP 255	Side-gabled bungalow	circa 1920	Ineligible	N/A	339	1952	A
53	CP 256	Two-story, three-bay, front-gabled concrete-block and frame residence	circa 1957	Ineligible	N/A	36	1961	
54	CP 257	One-story, three-bay, side-gabled American Small House	circa 1957	Ineligible	N/A	37	1955	
55	CP 258	Four-bay, side-gabled, split-level frame house	circa 1955	Ineligible	N/A	38	1955	
56	CP 259	Side-gabled bungalow	circa 1925	Ineligible	N/A	340	1952	A
57	CP 260	Southern Bungalow	circa 1925	Ineligible	N/A	341	1983	A
58	CP 261	Southern Bungalow	circa 1925	Ineligible	N/A	342	1952	A
59	CP 262	Southern Bungalow	circa 1926	Ineligible	N/A	343	1952	A
60	CP 263	Side-gabled bungalow	circa 1925	Ineligible	N/A	344	1952	A
61	CP 264	Side-gabled bungalow	circa 1925	Ineligible	N/A	345	1952	A
62	CP 265	Southern Bungalow	circa 1925	Ineligible	N/A	346	1955	A
63	CP 266	Two-story, two-bay, front-gabled frame residence	circa 1954	Ineligible	N/A	39	1955	
64	CP 267	Southern Bungalow	circa 1925	Ineligible	N/A	347	1952	A
65	CP 268	One-and-one-half-story, three-bay frame American Bungalow	circa 1925	Ineligible	N/A	40 and 41	1952	

CRA Resource #	KHC Inventory #	Name/Description of Property	Construction Date	NRHP Eligibility	Effect	Photo Figure #	Earliest Map Reference	Group
66	CP 269	Two-story, five-bay, double-pile, side-gabled frame residence	circa 1890	Ineligible	N/A	42–45	1883	
67	CP 270	One-story, three- or four- bay, Linear-with-Clusters Ranch house	circa 1961	Ineligible	N/A	46 and 47	1961	
68	CP 271	American Small House	circa 1925–1949	Ineligible	N/A	348	1955	B
69	CP 272	Single-story, two-bay, gable-roofed frame residence	circa 1900–1924	Ineligible	N/A	48–51	1914	
70	CP 273	Single-story, three-bay, gable-roofed frame residence	circa 1951	Ineligible	N/A	52–54	1952	
71	CP 274	Nineteenth-century farmstead	circa 1875–1899	Ineligible	N/A	55–60	1914	
72	CP 275	Nineteenth-century farmstead associated with St. Anne Convent	circa 1850–1875	Ineligible	N/A	61–68	1883	
73	CP 276	Single-story, three-bay, side-gabled frame residence	circa 1901	Ineligible	N/A	69 and 70	1900	
74	CP 277	Nineteenth-century farmstead	circa 1873	Ineligible	N/A	71–85	1883	
75	CP 278	One-and-one-half-story, three-bay, side-gabled frame residence	circa 1890	Ineligible	N/A	86–88	1883	
76	CP 279	One-and-one-half-story, three-bay, cross-gabled frame residence	circa 1953	Ineligible	N/A	89	1952	
77	CP 280	American Small House	circa 1950	Ineligible	N/A	349	1953	B
78	CP 281	One-and-one-half-story, two-bay frame residence	circa 1951	Ineligible	N/A	90	1953	B
79	CP 282	American Small House	circa 1925–1949	Ineligible	N/A	350	1961	B
80	CP 283	Linear Ranch house	circa 1956	Ineligible	N/A	358	1961	C
81	CP 284	Linear Ranch house	circa 1958	Ineligible	N/A	359	1961	C
82	CP 285	One-and-one-half story, three-bay, side-gabled frame residence	circa 1948	Ineligible	N/A	91	1953	
83	CP 286	American Bungalow	circa 1937	Ineligible	N/A	92	1953	
84	CP 287	Nineteenth-century farmstead	circa 1850	Ineligible	N/A	93–102	1883	
85	CP 288	American Small House	circa 1940	Ineligible	N/A	351	1953	B
86	CP 289	American Small House	circa 1954	Ineligible	N/A	352	1961	B
87	CP 290	Linear Ranch house	circa 1957	Ineligible	N/A	360	1961	C
88	CP 291	Linear Ranch house with Clusters	circa 1959	Ineligible	N/A	361	1961	C
89	CP 292	Linear Ranch house with Clusters	circa 1956	Ineligible	N/A	362	1961	C
90	CP 293	Linear Ranch house	circa 1959	Ineligible	N/A	363	1974	C
91	CP 294	Linear Ranch house	circa 1959	Ineligible	N/A	364	1961	C
92	CP 295	Compact Ranch house	circa 1961	Ineligible	N/A	365	1961	C
93	CP 296	Compact Ranch house	circa 1959	Ineligible	N/A	366	1961	C
94	CP 297	American Small House	circa 1953	Ineligible	N/A	353	1961	B
95	CP 72	John Weber Farm	1865	Listed	No Adverse Effect	103–109 and 111	1883	
96	CP 298	Nineteenth-century farmstead	circa 1900	Ineligible	N/A	112–117	1883	
97	CP 299	Linear Ranch house	circa 1959	Ineligible	N/A	367	1961	C
98	CP 71	Camp Springs House	circa 1860	Listed	No Adverse Effect	118–122	1883	
99	CP 300	Linear Ranch house	circa 1959	Ineligible	N/A	368	1961	C
100	CP 301	Dry-laid rock fence fragment	unknown	Ineligible	N/A	124	N/A	
101	CP 302	Nineteenth-century farmstead	circa 1851	Ineligible	N/A	125–131	1883	
102	CP 303	American Small House	circa 1942	Ineligible	N/A	354	1953	B
103	CP 304	One-story, three-bay, front-gabled frame residence	circa 1925	Ineligible	N/A	132	1953	
104	CP 305	Nineteenth century farmstead	circa 1850–1874	Ineligible	N/A	133–143	1883	
105	CP 306	American Small House	circa 1953	Ineligible	N/A	355	1961	B
106	CP 307	Southern Bungalow	circa 1954	Ineligible	N/A	142–144	1961	
107	CP 308	American Bungalow	circa 1928	Ineligible	N/A	145 and 146	1953	
108	CP 309	Half-Courtyard Ranch house	circa 1961	Ineligible	N/A	369	1983	C
109	CP 310	Nineteenth-century farmstead	circa 1890	Ineligible	N/A	147–151	1883	
110	CP 311	Dry-laid rock retaining wall fragment	unknown	Ineligible	N/A	152	N/A	
111	CP 312	Reinforced-concrete slab bridge	unknown	Ineligible	N/A	153 and 154	N/A	
112	CP 313	Single-story, side-gabled frame residence	circa 1947	Ineligible	N/A	155–158	1961	
113	CP 314	Timber-frame bank barn	circa 1875-1899	Ineligible	N/A	159–162	1883	
114	CP 315	Frame outbuildings	circa 1925-1949	Ineligible	N/A	163–167	1981	
115	CP 316	Nineteenth-century farmstead	circa 1890	Ineligible	N/A	168–174	1883	
116	CP 317	Two-and-one-half story, front-gabled frame residence	circa 1890	Ineligible	N/A	175 and 176	1883	
117	CP 61	Blau's Four Mile House	circa 1850–1874	Listed	No Adverse Effect	177–184	1883	
118	CP 318	One-and-one-half story, three-bay, cross-gabled, frame L-plan residence	circa 1865	Ineligible	N/A	185 and 186	1883	
119	CP 91	Leick House	circa 1865	Listed	No Adverse Effect	187–199	1883	
120	CP 319	Reinforced-concrete T-beam box culvert	1937	Ineligible	N/A	201–203	N/A	
121	CP 60	Reitman's St. Joseph House	circa 1868	Listed	No Adverse Effect	204–212	1883	
122	CP 62	St. Joseph's Catholic Church and Cemetery	1864	Listed	No Adverse Effect	214–229	1883	
123	CP 320	Single-story, four-bay, side-gabled concrete-block garage	circa 1960	Ineligible	N/A	231	1972	
124	CP 321	American Small House	circa 1953	Ineligible	N/A	356	1953	B
125	CP 322	American Small House	circa 1951	Ineligible	N/A	357	1981	B
126	CP 323	American Bungalow	circa 1924	Ineligible	N/A	232–235	1953	
127	CP 324	Neltner Farm	circa 1925	Ineligible	N/A	236–257	1883	
128	CP 52	Baumann House	circa 1852	Listed	No Adverse Effect	258–263	1883	
129	CP 325	Northern Kentucky Saddle Club	circa 1940	Ineligible	N/A	265–267	1981	
130	CP 81	Gubser-Schuchter Farm	circa 1850	Listed	No Adverse Effect	268–277	1883	
131	CP 92	Andrew Ritter Farm	circa 1875–1899	Listed	No Adverse Effect	N/A	1883	
132	CP 51	Ort-Heeb Farm	1885	Listed	No Adverse Effect	280–292	1883	

CRA Resource #	KHC Inventory #	Name/Description of Property	Construction Date	NRHP Eligibility	Effect	Photo Figure #	Earliest Map Reference	Group
133	CP 326	Nineteenth-century farmstead	circa 1890	Ineligible	N/A	294–307	1883	

Table 2. Group A: Surveyed Properties.

CRA Resource #	KHC Inventory #	Address	Property Type	Style/Form	Construction Date	Stories	Roof	Roof Materials	Foundation	Walls	Garage(s)
18	CP 221	4988 Mary Ingles Dr.	residential	Southern Bungalow	circa 1920	1	Gambrel	asphalt shingles	Concrete block	Brick/Vinyl	none
19	CP 222	5024 Mary Ingles Dr.	residential	1.5 story, side gable	circa 1900	1.5	Side-gabled	asphalt shingles	Concrete block	Vinyl/Vertical board	none
20	CP 223	5034 Mary Ingles Dr.	residential	1.5 story, side gable	circa 1905	1.5	Side-gabled	asphalt shingles	Concrete block	Vinyl	none
21	CP 224	5044 Mary Ingles Dr.	residential	1.5 story, side gable	circa 1905	1.5	Side-gabled	asphalt shingles	Concrete block	Wood/Composite (modern)	none
22	CP 225	5048-5050 Mary Ingles Dr.	residential (duplex)	2.5 story, front gable	circa 1920	2.5	Front-gabled	asphalt shingles	Concrete block	Vinyl	none
23	CP 226	5052-5054 Mary Ingles Dr.	residential (duplex)	2.5 story, front gable	circa 1920	2.5	Front-gabled	asphalt shingles	Brick	Vinyl	none
24	CP 227	5058 Mary Ingles Dr.	residential converted to commercial	2.5 story, front gable with addition	circa 1920	2.5	Front-gabled	asphalt shingles	Concrete block	Brick	none
25	CP 228	5068 Mary Ingles Dr.	residential converted to FOP Lodge	2.5 story, front gable with addition	circa 1923	2.5	Front-gabled	asphalt shingles	Concrete block	Vinyl/Brick	none
26	CP 229	5072 Mary Ingles Dr.	residential converted to commercial	2.5 story, front gable with addition	circa 1920	2.5	Front-gabled	asphalt shingles	Concrete block	Vinyl/Brick	none
27	CP 230	5076-5078 Mary Ingles Dr.	residential (duplex)	2.5 story, front gable	circa 1920	2.5	Front-gabled	asphalt shingles	Concrete block	Vinyl	none
28	CP 231	5080-5082 Mary Ingles Dr.	residential (duplex)	2.5 story, front gable	circa 1920	2.5	Front-gabled	asphalt shingles	Unknown	Vinyl	none
29	CP 232	5084 Mary Ingles Dr.	residential	American Bungalow	circa 1920	2.5	Side-gabled	asphalt shingles	Pargeted/Unknown	Aluminum	none
30	CP 233	5088 Mary Ingles Dr.	residential	American Bungalow	circa 1920	1.5	Side-gabled	asphalt shingles	Concrete block	Vinyl	detached
31	CP 234	5092 Mary Ingles Dr.	residential	1 story, side gable	circa 1925	1	Side-gabled	asphalt shingles	Concrete block	Vinyl	none
32	CP 235	5094 Mary Ingles Dr.	residential	1 story, side gable	circa 1925	1	Side-gabled	asphalt shingles	Concrete block	Vinyl	none
34	CP 237	117 W. 2nd St.	residential	1.5 story, cross-gable	circa 1920	1.5	Cross-gabled	asphalt shingles	Poured concrete	Brick/Wood shingles	none
36	CP 239	201 W. 2nd St.	residential	Southern Bungalow	circa 1925	1.5	Front-gabled	asphalt shingles	Concrete block	Brick/Vinyl	none
37	CP 240	202 W. 2nd St.	residential	2 story, cross-gambrel	circa 1925	2	Gambrel	asphalt shingles	Concrete block	Brick/Vinyl	none
38	CP 241	203 W. 2nd St.	residential	1 story, hip roof cottage	circa 1922	1	Hipped	asphalt shingles	Concrete block	Brick/Aluminum	detached
39	CP 242	205 W. 2nd St.	residential	Southern Bungalow	circa 1922	1.5	Front-gabled	asphalt shingles	Concrete block	Brick/Vinyl	detached
40	CP 243	206 W. 2nd St.	residential	1.5 story, cross-gable	circa 1911	1.5	Cross-gabled	asphalt shingles	Unknown	Brick/Vinyl	none
41	CP 244	207 W. 2nd St.	residential	side-gable Bungalow	circa 1922	1.5	Side-gabled	asphalt shingles	Concrete block	Brick/Vinyl	none
42	CP 245	209 W. 2nd St.	residential	2 story, side gambrel	circa 1922	2	Gambrel	asphalt shingles	Concrete block	Brick/Vinyl	none
44	CP 247	211 W. 2nd St.	residential	side-gable Bungalow	circa 1922	1	Side-gabled	asphalt shingles	Concrete block	Brick/Composite	none
45	CP 248	213 W. 2nd St.	residential	California Bungalow	circa 1922	1	Front-gabled	asphalt shingles	Concrete block	Brick/Vinyl	detached
46	CP 249	214 W. 2nd St.	residential	2 story, front gable	circa 1920	2	Front-gabled	asphalt shingles	Brick	Brick	none
47	CP 250	215 W. 2nd St.	residential	2 story, front gambrel	circa 1920	2	Gambrel	asphalt shingles	Concrete block	Brick/Vinyl	none
48	CP 251	216 W. 2nd St.	residential	1 story, hip roof cottage	circa 1926	1	Hipped	asphalt shingles	Concrete block	Brick	none
49	CP 252	217 W. 2nd St.	residential	side-gable Bungalow	circa 1922	1	Side-gabled	asphalt shingles	Concrete block	Brick/Aluminum	detached
50	CP 253	218 W. 2nd St.	residential	1 story, hip roof cottage	circa 1920	1	Hipped	asphalt shingles	Concrete block	Brick	attached (basement)
51	CP 254	219 W. 2nd St.	residential	side-gable Bungalow	circa 1922	1	Side-gabled	asphalt shingles	Concrete block	Brick/Aluminum	none
52	CP 255	220 W. 2nd St.	residential	side-gable Bungalow	circa 1920	1	Side-gabled	asphalt shingles	Concrete block	Brick/Aluminum	attached (basement)
56	CP 259	110 W. 4th St.	residential	side-gable Bungalow	circa 1925	1.5	Side-gabled	asphalt shingles	Concrete block	Brick/Aluminum	none
57	CP 260	118 W. 4th St.	residential	Southern Bungalow	circa 1925	1	Front-gabled	asphalt shingles	Concrete block	Brick/Composite	attached (basement)
58	CP 261	120 W. 4th St.	residential	Southern Bungalow	circa 1925	1	Clipped front-gabled	asphalt shingles	Concrete block	Brick/Aluminum	none
59	CP 262	122 W. 4th St.	residential	Southern Bungalow	circa 1926	1	Front-gabled	asphalt shingles	Poured concrete	Brick/Vinyl	attached (basement)
60	CP 263	124 W. 4th St.	residential	side-gable Bungalow	circa 1925	1	Side-gabled	asphalt shingles	Concrete block	Brick/Vinyl	none
61	CP 264	202 W. 4th St.	residential	side-gable Bungalow	circa 1925	1	Side-gabled	asphalt shingles	Concrete block	Brick/Vinyl	none
62	CP 265	204 W. 4th St.	residential	Southern Bungalow	circa 1925	1.5	Front-gabled	asphalt shingles	Concrete block	Vinyl	none
64	CP 267	212 W. 4th St.	residential	Southern Bungalow	circa 1925	1.5	Front-gabled	asphalt shingles	Concrete block	Vinyl	attached (basement)

Table 3. Group B: Surveyed Properties.

CRA Resource #	KHC Inventory #	Address	Property Type	Style/Form	Construction Date	Stories	Roof	Roof Materials	Foundation	Walls	Sq ft	Garage(s)
68	CP 271	5300 Four Mile Rd.	house	American Small House	circa 1925–1949	1.5	side gable	asphalt shingle	undetermined	vinyl	unknown	none
77	CP 280	5961 Four Mile Rd.	house	American Small House	circa 1950	1.5	side gable	asphalt shingle	poured concrete	vinyl	1260	attached via hyphen
79	CP 282	5977 Four Mile Rd.	house	American Small House	circa 1925–1949	1	front gable	asphalt shingle	concrete block	concrete block	unknown	none
85	CP 288	6142 Four Mile Rd.	house	American Small House	circa 1940	1	side gable	asphalt shingle	concrete block	vinyl	1800	attached (basement)
86	CP 289	6154 Four Mile Rd.	house	American Small House	circa 1954	1	side gable	asphalt shingle	concrete block	vinyl	1954	attached (basement)
94	CP 297	6240 Four Mile Rd.	house	American Small House	circa 1953	1.5	side gable	asphalt shingle	undetermined	brick veneer	1664	detached
102	CP 303	6469 Four Mile Rd.	house	American Small House	circa 1942	1.5	side gable	asphalt shingle	undetermined (parged)	brick veneer	1092	detached
105	CP 306	6489 Four Mile Rd.	house	American Small House	circa 1953	1.5	side gable	asphalt shingle	poured concrete	vinyl	1312	attached (basement)
124	CP 321	6830 Four Mile Rd.	house	American Small House	circa 1953	1.5	side gable	asphalt shingle	concrete block	vinyl & asbestos	1040	detached carport
125	CP 322	6883 Four Mile Rd.	house	American Small House	circa 1951	1.5	side gable	asphalt shingle	poured concrete	asbestos	1314	attached (basement)

Table 4. Group C: Surveyed Properties.

CRA Resource #	KHC Inventory #	Address	Property Type	Style/Form	Construction Date	Stories	Roof	Roof Materials	Foundation	Walls	Sq ft	Garage(s)
80	CP 283	5985 Four Mile Rd.	house	Linear Ranch	circa 1956	1	side gable	asphalt shingle	undetermined	board and batten	1336	detached
81	CP 284	6023 Four Mile Rd.	house	Linear Ranch	circa 1958	1	side gable	asphalt shingle	poured concrete	vinyl	1176	attached
87	CP 290	6166 Four Mile Rd.	house	Linear Ranch	circa 1957	1	hip	asphalt shingle	undetermined	brick veneer	1275	detached
88	CP 291	6174 Four Mile Rd.	house	Linear Ranch with Clusters	circa 1959	1	cross gable	asphalt shingle	undetermined	vinyl and stone veneer	2044	attached
89	CP 292	6178 Four Mile Rd.	house	Linear Ranch with Clusters	circa 1956	1	cross gable	asphalt shingle	poured concrete	brick veneer	1956	detached
90	CP 293	6198 Four Mile Rd.	house	Linear Ranch	circa 1959	1	hip	asphalt shingle	undetermined	brick veneer	1222	attached
91	CP 294	6208 Four Mile Rd.	house	Linear Ranch	circa 1959	1	side gable	asphalt shingle	poured concrete	brick veneer	1080	attached (basement)
92	CP 295	6210 Four Mile Rd.	house	Compact Ranch	circa 1961	1	side gable	v-crimp metal panel	poured concrete	vinyl	1040	attached via hyphen
93	CP 296	6222 Four Mile Rd.	house	Compact Ranch	circa 1959	1	side gable	asphalt shingle	poured concrete	aluminum	832	attached (basement)
97	CP 299	6343 Four Mile Rd.	house	Linear Ranch	circa 1959	1	hip	asphalt shingle	poured concrete	brick veneer	1740	attached (modified)
99	CP 300	6389 Four Mile Rd.	house	Linear Ranch	circa 1959	1	Dutch hip	asphalt shingle	undetermined	vinyl	1144	attached carport
108	CP 309	6521 Four Mile Rd.	house	Half Courtyard Ranch ("L")	circa 1961	1	cross gable	asphalt shingle	poured concrete	brick veneer	1443	attached

Description: Site 2 (CP 205) consists of a frame house situated on a residential lot on the southwest side of Mary Ingles Highway approximately 1,200 ft southeast of the intersection of Mary Ingles Highway and Industrial Road (see Figures 2a and 3a). The residence (Figure 13), oriented to the northeast, sits back approximately 25 ft from the ROW and is accessed from Mary Ingles Highway via a gravel drive. The property was surveyed from the public ROW.

A residence is first depicted in the approximate location of Site 2 on the 1952 Newport, Kentucky-Ohio topographic quadrangle. PVA records indicate that the house was built circa 1925 (USGS 1952).

The single-story, three-bay (d/d/w), front-gabled frame residence comprises approximately 900 sq ft of living space and has a two-bay, side-gabled addition on its southeast elevation. The dwelling rests on a rusticated-concrete-block foundation with walls clad in vinyl siding beneath an asphalt-shingle roof. The façade has a gable-roofed porch extending nearly the width of the original block of the house and sheltering two single-leaf entries. The façade entry to the left along the façade is filled with a replacement panel door exhibiting a decorative glass panel filling the top half of the door. The central single-leaf entry is set behind a twelve-light aluminum storm door. The porch roof is supported by square, brick columns resting on a concrete deck. The porch has a concrete-block foundation. The window filling the third bay of the original block's façade has replacement one-over-one-light, double-hung sashes. Along the northwest elevation is a window filled with similar replacement sashes and a larger window opening that appears to have a three-part sash or storm window. The southeast addition's façade and southeast gable end elevations have windows filled with six-over-six-light, double-hung vinyl sashes. The addition appears to be supported by a concrete-block foundation. A brick chimney pierces the ridgeline and northwest roof slope of the original block of the residence. A wood deck is located to the rear of the dwelling's side-gabled addition.

Figure 13. Site 2 (CP 205): single-story, three-bay, front-gabled frame residence.

NRHP Evaluation: Ineligible. The house associated with Site 2 is a typical example of an early-twentieth-century, front-gabled frame form but lacks extraordinary architectural details, such as those indicative of a particular architectural style. Modifications to the residence include the addition to the southeast elevation of the original portion of the dwelling, replacement siding, windows, and two façade doors. These alterations have compromised the residence's integrity of design, materials, and workmanship. The residence is not an outstanding example of a particular architectural type, period, or method of construction, and archival research indicated no association between Site 2 and events or persons of historical significance. Therefore, CRA recommends that Site 2 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Site 3

KHC Survey #: CP 206

Photographs: Figure 14

Map: Figures 2a and 3a

Zone: 16

Quad: Newport, KY-OH 1983 (Photorevised 1987)

UTMs: E: 723740 N: 4324622

Property Address: 4634 Mary Ingles Highway
Cold Spring, KY 41076

Owner Information: C&N Construction Company, Inc.
21 North Crescent Avenue
Fort Thomas, KY 41076

Deed Book/Page: 284/749

Construction Date: circa 1941

Description: Site 3 (CP 206) consists of a commercial building situated on a 3.787-acre lot on the southwest side of Mary Ingles Highway approximately 1,775 ft southeast of the intersection of Mary Ingles Highway and Industrial Road (see Figures 2a and 3a). The commercial building (Figure 14), oriented to the northeast, sits back approximately 25 ft from the ROW and is accessed from Mary Ingles Highway via a gravel and paved parking lot. The property was surveyed from the public ROW.

Figure 14. Site 3 (CP 206): two-story, multi-bay, flat-roofed commercial building.

A building is first depicted in the approximate location of Site 3 on the 1952 Newport, Kentucky-Ohio topographic quadrangle. According to PVA records, the building was built circa 1941 (USGS 1952).

The two-story commercial building comprises approximately 4,032 sq ft of interior space and has a nearly flat roof. A single-story, four-bay, flat-roofed concrete-block addition is located along the original section's northeast elevation. The original portion of the building rests on a foundation of undetermined material. The first-story walls are clad in masonry, while the second story has been clad in vinyl siding. The original façade of the building appears to have been oriented to the northwest since this elevation has a centered, double-leaf entry with a transom flanked by large plate-glass windows. The entry is filled with aluminum-frame commercial glass doors. A shed-roofed awning currently shelters the entry. Three large windows filled with plate glass are located along the northeast elevation near the entry to the building. To the southeast of the ribbon of three windows, the wall plane projects outward, and it originally continued to the southeast. At the corner created by the change in wall planes are two single-leaf entries, one oriented to the northwest and the second to the northeast. A window with a replacement single-light sash is located along the northeast elevation of the second story, while a window with a similar sash is located along the northwest elevation. Also along the northeast elevation is a window filled with a three-light sash. The roof of the original section of the building has a very deep eave along the narrower northwest and northeast portions of the original section, while the remaining portion of the northeast elevation has a narrower eave. The southeast elevation also has a very deep eave.

The single-story, four-bay (d/d/d/d), flat-roofed, concrete-block portion of the building, located along the northeast elevation facing Mary Ingles Highway, appears to be a later addition. Three of the entries contain overhead glass-and-metal-frame garage doors, while the fourth is a pedestrian entry. The left garage bay is partially below grade and has a larger opening than the other two garage bays. Five windows are located along the southeast elevation of the addition, each filled with three-over-three-light sashes, possibly awning sashes. The cornice of this addition appears to be constructed of vertical metal panels.

Although it's unclear, the original portion of this building may have contained a roadside restaurant or other roadside commercial establishment since the plate-glass windows indicate a commercial venture reliant upon traffic from the adjacent highway. Photographs taken prior to the current remodeling of the building indicate the second story was possibly utilized for residential or lodging purposes, as a porch has been removed that extended from the second story under the deeper eaves of the northwest and northeast elevations. A deck or porch may also have been located along the southeast elevation of the building's second story. A photograph on the Campbell County PVA website also shows numerous windows and a pair of sliding glass doors opening onto the upstairs porch that have been enclosed with vinyl siding.

NRHP Evaluation: Ineligible. The commercial building associated with Site 3 is an unremarkable example of a mid-twentieth-century roadside commercial building. Modifications to this commercial building include the garage addition to the northeast elevation of the original portion of the building, replacement siding and windows, enclosure of former windows and entries, and the removal of the second-story porches/decks. These alterations have compromised the building's integrity of design, materials, and workmanship. Site 3 is not an outstanding example of a particular architectural type, period, or method of construction, and archival research indicated no association between Site 3 and events or persons of historical significance. Therefore, CRA recommends that Site 3 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Site 4

KHC Survey #: CP 207

Photographs: Figure 15

Map: Figures 2a and 3a

Zone: 16

Quad: Newport, KY-OH 1983 (Photorevised 1987)

UTMs: E: 723797 N: 4324598

Property Address: 4648 Mary Ingles Highway
Cold Spring, KY 41076

Owner Information: Michael and Sharon Feiler

Deed Book/Page: 230/575

Construction Date: circa 1945

Description: Site 4 (CP 207) consists of a frame house situated on a 2-acre lot on the southwest side of Mary Ingles Highway approximately 1,960 ft southeast of the intersection of Mary Ingles Highway and Industrial Road (see Figures 2a and 3a). The residence (Figure 15), oriented to the northeast, sits back approximately 40 ft from the ROW and is accessed from Mary Ingles Highway via a gravel drive. The property was surveyed from the public ROW.

A residence is first depicted in the approximate location of Site 4 on the 1952 Newport, Kentucky-Ohio topographic quadrangle. The house was built circa 1945, according to PVA records (USGS 1952).

The two-story, three-bay (w/d/w), side-gabled frame residence comprises approximately 1,520 sq ft of living space. It rests on a raised cast-concrete or concrete-block basement foundation and has walls clad in vinyl siding. The side-gabled roof has a slight pitch, and the roof sheathing is not visible. The soffits and fascia boards of the house have been clad in aluminum or vinyl siding. The façade has a three-quarter-width gable-roofed porch sheltering a single-leaf entry flanked by windows. The façade entry is filled with a wood panel, half-light door set behind a full-light aluminum storm door.

Figure 15. Site 4 (CP 207): two-story, three-bay, side-gabled frame residence.

The porch is supported by decorative metal posts resting on a concrete deck. The windows flanking the façade entry are filled with single-over-single-light, double-hung sashes and are covered with storm windows. The window sashes appear to be replacements, although this is unclear. Two small, nearly square windows are located along the second floor just above the façade porch and aligned with the first-floor façade windows. These upper-story windows are filled with single-light sashes and covered with storm windows. The northwest elevation exhibits four windows, two on each floor. Three of the windows are similar to the façade first-floor windows, while one of the first-floor windows has narrow, rectangular sashes. A raised screen porch addition extends from the rear elevation of the dwelling. An interior brick chimney pierces the roof of the residence.

Situated approximately 30 ft west-southwest of the residence is an outbuilding with a rather large footprint. That portion of the outbuilding visible from the ROW appears to have a nearly flat roof with a shed-roofed section along the northwest elevation that may be a later addition. The northeast elevation of the single-story outbuilding, oriented to Mary Ingles Highway, is clad in vinyl siding and exhibits a single-leaf pedestrian entry at the northeast corner. This entry is filled with a modern metal door. The northeast elevation of the shed-roofed section has a window filled with one-over-one-light sashes. A vertical-wood-plank fence/gate obscures the southeast portion of the outbuilding, although portions of this elevation appear to be clad in particle board.

NRHP Evaluation: Ineligible. The house associated with Site 4 is an unusual example of a mid-twentieth-century, two-story frame residence. The massing, low pitch of the roof, and small second-floor façade windows are not typical of mid-twentieth-century residences. The dwelling lacks extraordinary architectural details, and modifications have compromised its integrity of design, materials, and workmanship. Alterations to the house include the replacement siding that obscures the original window trim, window sills, and the façade's entry trim; cladding of the soffits and fascia boards; possible replacement windows; and the apparent rear screen porch addition. The residence is not an outstanding example of a particular architectural type, period, or method of construction. The outbuilding associated with Site 4 lacks integrity and architectural significance. Archival research indicated no association between Site 4 and events or persons of historical significance. Therefore, CRA recommends that Site 4 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Site 5

KHC Survey #: CP 208

Photographs: Figure 16

Map: Figures 2a and 3a

Zone: 16

Quad: Newport, KY-OH 1983 (Photorevised 1987)

UTMs: E: 723818 N: 4324588

Property Address: 4654 Mary Ingles Highway
Cold Spring, KY 41076

Owner Information: Pearl and Nettie Baker
P.O. Box 141
Silver Grove, KY 41085

Deed Book/Page: 119/399

Construction Date: circa 1917

Description: Site 5 (CP 208) consists of a frame house situated on a residential lot of approximately 1.22 acres on the southwest side of Mary Ingles Highway approximately 2,050 ft southeast of the intersection of Mary Ingles Highway and Industrial Road (see Figures 2a and 3a). The residence (Figure 16), oriented to the northeast, sits back approximately 60 ft from the ROW and is accessed from Mary Ingles Highway via a gravel drive. The property was surveyed from the public ROW along the highway.

Figure 16. Site 5 (CP 208): two-story, three-bay, front-gabled frame residence.

A residence is first depicted in the approximate location of Site 5 on the 1952 Newport, Kentucky-Ohio topographic quadrangle. PVA records indicate that the residence was built circa 1917 (USGS 1952).

The single-story, three-bay (w/d/w), front-gabled frame residence comprises approximately 965 sq ft of living space. The front portion of the dwelling rests on a possible concrete foundation, although it may be covered in a parge coating. The middle section of the residence is supported by a mortared-stone foundation. The exterior walls are clad in vinyl siding beneath an asphalt-shingle roof. The soffits and fascia boards are clad in vinyl or aluminum. The façade has a front-gabled section that may be a later addition to the original side-gabled section of the house, or the house may have been a T-plan with the roofline altered, although this is speculative. If it is an addition, it could still be over 50 years of age. The front-gabled façade section has an asymmetrical roofline and a recessed porch along its southeast portion. The integral porch shelters a window and single-leaf entry along the façade wall plane and a second single-leaf entry along the southeast wall plane. Both entries are filled with replacement doors, and the window has replacement six-over-six-light, double-hung sashes. The porch is supported by two box columns resting on brick piers, and a third support is a simple, square wood post. The porch appears to have a wood deck. The window along the northwestern portion of the façade is filled with a replacement sixteen-light fixed sash. The southeast elevation of the dwelling has a side-gabled roof section, while the rear of the house has a gabled roof similar to the façade section. Four bays are located along the southeast elevation, including three windows with replacement six-over-six-light, double-hung sashes and a single-leaf entry filled with a replacement metal panel door. This side entry opens onto a wood porch with wood steps.

A modern, prefabricated outbuilding is located to the rear of the house. Aerial photographs indicate that it was erected between 2007 and 2009.

NRHP Evaluation: Ineligible. The house associated with Site 5 is an unexceptional example of an early-twentieth-century, frame, single-story residence that lacks noteworthy architectural details, such as those indicative of a particular architectural style. Alterations to the residence include the replacement siding, windows, cladding of the soffits and fascia boards, and three entry doors. These alterations have compromised the residence's integrity of design, materials, and workmanship. The residence is not an outstanding example of a particular architectural type, period, or method of construction, and archival research indicated no association between Site 5 and events or persons of historical significance. Therefore, CRA recommends that Site 5 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Site 6

KHC Survey #: CP 209

Photographs: Figure 17

Map: Figures 2a and 3a

Zone: 16

Quad: Newport, KY-OH 1983 (Photorevised 1987)

UTMs: E: 723871 N: 4324524

Property Address: 4670 Mary Ingles Highway
Cold Spring, KY 41076

Owner Information: Robert R. and Kathy S. Poynter

Deed Book/Page: 276/836

Construction Date: circa 1910

Description: Site 6 (CP 209) consists of a frame house situated on an 87-x-437 ft residential lot on the southwest side of Mary Ingles Highway approximately 2,300 ft southeast of the intersection of the highway and Industrial Road (see Figures 2a and 3a). The residence (Figure 17), oriented to the northeast, sits back approximately 180 ft from the ROW and is accessed from Mary Ingles Highway via a gravel drive.

Figure 17. Site 6 (CP 209): single-story, three-bay, gable-roofed frame residence.

A residence is first depicted in the approximate location of Site 6 on the 1914 East Cincinnati, Ohio-Kentucky 15-minute topographic quadrangle (see Figure 11). The house was built circa 1910, according to PVA records (USGS 1914).

The single-story, three-bay (w/d/w), frame residence comprises approximately 1,015 sq ft of living space. It exhibits asymmetrical massing and has a gabled roof. The façade portion of the foundation is obscured, but the southeast elevation is supported by a rusticated concrete-block foundation. The exterior walls are clad in vinyl siding beneath an asphalt-shingle roof. The soffits and fascia boards are clad in vinyl or aluminum. The façade has a side-gabled and front-gabled roof configuration. A shed-roofed porch shelters the single-leaf entry and the window to the right of the entry. The window to the left of the entry has three-part horizontal sliding replacement sashes. The window to the right of the entry is filled with two-light, horizontal sliding replacement sashes. The shed-roofed porch is supported by squared wood posts resting on a wood deck. The porch wraps around to the northwest elevation of the dwelling. The three windows along the southeast elevation of the residence are filled with replacement one-over-one-light, double-hung sashes.

NRHP Evaluation: Ineligible. The house associated with Site 6 is an unexceptional example of an early-twentieth-century, frame, single-story residence with numerous alterations, including replacement siding, windows, and cladding of the soffits and fascia boards. The wrap-around porch also does not appear to be 50 years of age. These alterations have compromised the residence's integrity of design, materials, and workmanship. The residence is not an outstanding example of a particular architectural type, period, or method of construction, and archival research indicated no association between Site 6 and events or persons of historical significance. Therefore, CRA recommends that Site 6 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Site 7

KHC Survey #: CP 210

Photographs: Figure 18

Map: Figures 2a and 3a

Zone: 16

Quad: Newport, KY-OH 1983 (Photorevised 1987)

UTMs: E: 723871 N: 4324524

Property Address: 4672 Mary Ingles Highway
Cold Spring, KY 41076

Owner Information: Robert and Brenda Schwarberg

Deed Book/Page: 232/428

Construction Date: circa 1910

Description: Site 7 (CP 210) consists of a frame house situated on an 85-x-140 ft residential lot on the southwest side of Mary Ingles Highway approximately 2,315 ft southeast of the intersection of Mary Ingles Highway and Industrial Road (see Figures 2a and 3a). The residence (Figure 18), oriented to the northeast, sits back approximately 185 ft from the ROW and is accessed from Mary Ingles Highway via a gravel drive.

A residence is first depicted in the approximate location of Site 7 on the 1914 East Cincinnati, Ohio-Kentucky, 15-minute topographic quadrangle (see Figure 11). PVA records indicate that the house was built circa 1910 (USGS 1914).

The single-story, four-bay (w/d/w/d), side-gabled frame residence comprises approximately 672 sq ft of living space. It is supported by a raised concrete-block foundation. The exterior walls are clad in vinyl siding beneath an asphalt-shingle roof. The soffits and fascia boards are clad in vinyl or aluminum. A flat-roofed metal porch extends nearly the entire width of the façade, sheltering the four façade bays. The asymmetrical fenestration of the façade includes two single-leaf entries, one with a

multi-light replacement door. Both entries have aluminum frame storm doors. The southeast façade window is filled with replacement six-over-six-light, double-hung sashes. The three-part bay window located between the two façade entries has replacement sashes. The front porch is supported by decorative metal posts resting on a wood deck and is accessed by wood steps. Two windows are located on the northwest gable end. A modern wood deck surrounding an aboveground swimming pool is located to the rear of the house.

Located to the rear of the residence is a single-story, three-bay (d/d/d), side-gabled frame garage. The garage, oriented to the northwest, appears to rest on a concrete-block or formed-concrete foundation, and the exterior walls are clad in vertical wood panels. The roof is covered in asphalt shingles. The northeast bay along the façade of the garage is a single-leaf entry filled with a replacement door. Two garage bays along the façade have sectional overhead doors.

NRHP Evaluation: Ineligible. The house associated with Site 7 is an unremarkable example of an early-twentieth-century single-story frame residence with numerous alterations and lacks extraordinary architectural details, such as those indicative of a particular architectural style. Alterations to the residence include the replacement siding, door, windows, and cladding of the soffits and fascia boards. The porch also does not appear to be 50 years of age. These alterations have compromised the residence's integrity of design, materials, and workmanship. The residence is not an outstanding example of a particular architectural type, period, or method of construction, and archival research indicated no association between Site 7 and events or persons of historical significance. The outbuilding associated with Site 7 lacks integrity and architectural significance and may not be over 50 years of age. Therefore, CRA recommends that Site 7 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Figure 18. Site 7 (CP 210): single-story, four-bay, side-gabled frame residence.

Site 8

KHC Survey #: CP 211

Photographs: Figure 19

Map: Figures 2a and 3a

Zone: 16

Quad: Newport, KY-OH 1983 (Photorevised 1987)

UTMs: E: 723907 N: 4324568

Property Address: 4674 Mary Ingles Highway

Cold Spring, KY 41076

Owner Information: T and R Heating and Air Conditioning

11345 South Licking Pike

Alexandria, KY 41001

Deed Book/Page: 259/550

Construction Date: circa 1910

Description: Site 8 (CP 211) consists of a frame house situated on a 0.41-acre residential lot and an adjacent 50-x-140 ft lot on the southwest side of Mary Ingles Highway approximately 2,330 ft southeast of the intersection of Mary Ingles Highway and Industrial Road (see Figures 2a and 3a). The residence (Figure 19), oriented to the northeast, sits back approximately 15 ft from the ROW and is accessed from Mary Ingles Highway via a large paved drive/parking lot. The property was surveyed from the public ROW.

A residence is first depicted in the approximate location of Site 8 on the 1914 East Cincinnati, Ohio-Kentucky, 15-minute topographic quadrangle (see Figure 11). According to PVA records, the house was constructed circa 1910 (USGS 1914).

The one-and-one-half-story, three-bay (w/d/w), side-gabled frame residence comprises approximately 1,117 sq ft of living space. The foundation material cannot be determined, as most of the siding extends to grade. The exterior walls are clad in vinyl siding beneath an asphalt-shingle roof. The soffits and fascia boards are clad in vinyl or aluminum. A shed-roofed, enclosed former porch extends along the façade. The three façade bays are along this former porch. The central single-leaf entry is filled with a nine-light replacement door. Flanking the entry are paired windows filled with either storm windows or one-over-one-light, double-hung sashes. Similar windows are located along the southeast elevation of the porch and on the northwest elevation. The former front porch is accessed by a wood deck. Four small windows, essentially paired, are located along the façade's upper story. They are filled with small one-over-one-light, double-hung sashes. Two long, narrow windows are located on both side-gable elevations of the residence, one window on both the first and second stories. It is unclear if these replacement windows are fixed or not. The rear elevation has a shed-roofed section extending the width of the dwelling. The northwest elevation of this shed-roof section has a single bay filled with two windows exhibiting replacement four-over-four-light, double-hung sashes with a spacer between the windows, similar to the upper story façade windows.

Located approximately 65 ft to the rear of the residence is a small single-story, front-gabled garage. This garage is oriented to the northwest.

Located to the south of the residence is a one-story, two-bay (d/d), side-gabled frame garage that may date to the last quarter of the twentieth century. Oriented to the northeast, the southeasternmost façade bay is a single-leaf pedestrian entry filled with a one-light door. The large garage bay to the right of the pedestrian entry has a sectional overhead door. The building appears to be clad in vinyl siding.

Located to the southeast of the larger garage is a small late-twentieth-century prefabricated outbuilding. This frame, gambrel-roofed outbuilding, oriented to the northeast, has a double-leaf entry.

Figure 19. Site 8 (CP 211): one-and-one-half-story, three-bay, side-gabled frame residence.

NRHP Evaluation: Ineligible. The house associated with Site 8 is an unexceptional example of an early-twentieth-century, one-and-one-half-story, side-gabled frame residence with numerous alterations, and it lacks extraordinary architectural details, such as those indicative of a particular architectural style. Alterations to the residence include the replacement siding, door, windows, and cladding of the soffits and fascia boards. The former front porch appears to have been enclosed within the last 50 years. These alterations have compromised the residence's integrity of design, materials, and workmanship. The residence is not an outstanding example of a particular architectural type, period, or method of construction, and archival research indicated no association between Site 8 and events or persons of historical significance. The three outbuildings associated with Site 8 lack integrity and architectural significance and may not be over 50 years of age. Therefore, CRA recommends that Site 8 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Site 9

KHC Survey #: CP 212

Photographs: Figure 20

Map: Figures 2a and 3a

Zone: 16

Quad: Newport, KY-OH 1983 (Photorevised 1987)

UTMs: E: 723931 N: 4324553

Property Address: 4680 Mary Ingles Highway
Cold Spring, KY 41076

Owner Information: Delbert Combs
4680 Mary Ingles Highway
Cold Spring, KY 41076

Deed Book/Page: 280/589

Construction Date: circa 1935

Description: Site 9 (CP 212) consists of a frame house situated on a 73.62-x-150 ft lot on the southwest side of Mary Ingles Highway approximately 2,415 ft southeast of the intersection of Mary Ingles Highway and Industrial Road (see Figures 2a and 3a). The

residence (Figure 20), oriented to the northeast, sits back approximately 25 ft from the ROW and is accessed from Mary Ingles Highway via a gravel drive.

A residence is first depicted in the approximate location of Site 9 on the 1952 Newport, Kentucky-Ohio topographic quadrangle. PVA records indicate that the house was built circa 1935 (USGS 1952).

The one-story, three-bay (w/d/w), front-gabled residence comprises approximately 850 sq ft of living space. It is clad in vinyl siding and rests on a raised concrete-block basement foundation. The soffits are clad in vinyl or aluminum. An offset gable-roofed porch shelters two of the façade bays. The central single-leaf entry has a six-light wood-panel door. The two flanking windows have replacement one-over-one-light, double-hung sashes. Similar sashes are found throughout the residence. The porch roof is supported by decorative metal posts resting on a concrete deck. A single-leaf entry is located along the southeast elevation and opens onto a wood deck.

Located approximately 40 ft to the rear of the residence is a single-story, front-gabled prefabricated outbuilding. The outbuilding, apparently dating to the late twentieth century, has a double-leaf entry.

NRHP Evaluation: Ineligible. The house associated with Site 9 is an unexceptional example of a Depression-era, single-story, front-gable residence with numerous alterations, and it lacks extraordinary architectural details, such as those indicative of a particular architectural style. Alterations to the residence include the replacement siding, windows, and cladding of the soffits. These alterations have compromised the residence's integrity of design, materials, and workmanship. The residence is not an outstanding example of a particular architectural type, period, or method of construction, and archival research indicated no association between Site 9 and events or persons of historical significance. The outbuilding associated with Site 9 does not appear be over 50 years of age. Therefore, CRA recommends that Site 9 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Figure 20. Site 9 (CP 212): one-story, three-bay, front-gabled frame residence.

Site 10

KHC Survey #: CP 213

Photographs: Figure 21

Map: Figures 2a and 3a

Zone: 16

Quad: Newport, KY-OH 1983 (Photorevised 1987)

UTMs: E: 723931 N: 4324553

Property Address: 4686 Mary Ingles Highway
Cold Spring, KY 41076

Owner Information: Robert L. and Brenda Schwarberg
4672 Mary Ingles Highway
Cold Spring, KY 41076

Deed Book/Page: 251/484

Construction Date: circa 1932

Description: Site 10 (CP 213) consists of a frame house situated on a residential lot on the southwest side of Mary Ingles Highway approximately 2,500 ft southeast of the intersection of Mary Ingles Highway and Industrial Road (see Figures 2a and 3a). The residence (Figure 21), oriented to the southeast, sits back approximately 145 ft from the ROW and is accessed from Mary Ingles Highway via a gravel drive. The property was surveyed from the public ROW.

A residence is first depicted in the approximate location of Site 10 on the 1952 Newport, Kentucky-Ohio, topographic quadrangle. According to PVA records, the house was built circa 1932 (USGS 1952).

The one-story, three-bay (w/d/w), frame residence comprises approximately 1,120 sq ft of living space and formerly exhibited a T-plan form. A former porch enclosed by a nearly flat roof section forms a single wall plane along the façade. The exterior walls are clad in vinyl or aluminum siding, and the roof is sheathed in asphalt shingles. The asymmetrical façade fenestration includes a single-leaf entry sheltered by a metal awning. Various types of replacement windows are found throughout the dwelling, including one-over-one-light, double-hung sashes and horizontal sliding sashes.

Figure 21. Site 10 (CP 213): one-story, three-bay, frame residence.

NRHP Evaluation: Ineligible. The house associated with Site 10 is an unexceptional example of a single-story, cross-gabled T-plan residence with numerous alterations, and it lacks extraordinary architectural details, such as those indicative of a particular architectural style. Alterations to the residence include the application of replacement siding, installation of replacement windows, and enclosure of the former porch. These alterations have compromised the residence's integrity of design, materials, and workmanship. The residence is not an outstanding example of a particular architectural type, period, or method of construction, and archival research indicated no association between Site 10 and events or persons of historical significance. Therefore, CRA recommends that Site 10 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Site 11

KHC Survey #: CP 214

Photographs: Figure 22

Map: Figures 2a and 3a

Zone: 16

Quad: Newport, KY-OH 1983 (Photorevised 1987)

UTMs: E: 723972 N: 4324538

Property Address: 4690 Mary Ingles Highway
Cold Spring, KY 41076

Owner Information: N/A

Deed Book/Page: N/A

Construction Date: circa 1900–1924

Description: Community Freewill Baptist Church, Site 11 (CP 214), consists of an early-twentieth-century frame building situated on the southwest side of Mary Ingles Highway approximately 2,555 ft southeast of the intersection of Mary Ingles Highway and Industrial Road (see Figures 2a and 3a). The church (Figure 22), oriented to the northeast, sits back approximately 35 ft from the ROW and is accessed from Mary Ingles Highway via a gravel drive. The property was surveyed from the public ROW.

Figure 22. Site 11 (CP 214): Community Freewill Baptist Church.

The church is first depicted on the 1952 Newport, Kentucky-Ohio, topographic quadrangle. PVA records provided no construction date for the building (USGS 1952).

The one-story, single-bay (d), front-gabled frame church building is supported by a rusticated concrete-block foundation. The rear addition has a foundation composed of typical concrete block. The exterior walls are clad in vinyl siding, and the roof is sheathed in asphalt shingles. The soffits and fascia boards are clad in vinyl or aluminum. The façade fenestration includes a double-leaf entry with replacement doors accessed by concrete steps. Five bays are located along each side elevation. Five windows are located along the northwest elevation and four along the southeast elevation. The windows all have replacement one-over-one-light, double-hung sashes. A single-leaf entry with a replacement door is found on the southeast elevation, and it opens onto a small wood deck with a wood ramp. An exterior brick chimney is also found on the southeast elevation. A small, square, hip-roofed steeple clad in vinyl siding caps the roof's ridgeline at the front of the building.

NRHP Evaluation: Ineligible. The *National Register Bulletin: How to Apply the National Register Criteria for Evaluation* states that under Criterion Consideration A "A religious property requires justification on architectural, artistic, or historic grounds to avoid any appearance of judgment by government about the validity of any religion or belief" (National Park Service 1990:26). The Community Freewill Baptist Church (Site 11) exhibits a number of alterations, including the replacement windows, replacement doors, vinyl siding, wrapped window surrounds, and replacement clad soffits and fascia boards. The alterations to the building compromise the historic qualities of design, materials, workmanship, and feeling necessary to convey its significance. Archival research indicated no association between Site 11 and events or persons of historical significance. Therefore, CRA recommends that Site 11 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Site 12

KHC Survey #: CP 215

Photographs: Figure 23

Map: Figures 2a and 3a

Zone: 16

Quad: Newport, KY-OH 1983 (Photorevised 1987)

UTMs: E: 724090 N: 4324477

Property Address: 4720 Mary Ingles Highway
Cold Spring, KY 41076

Owner Information: CAM Properties, LLC
P.O. Box 5285
Oak Brook, IL 60522

Deed Book/Page: 263/257

Construction Date: circa 1950

Description: Site 12 (CP 215) consists of a commercial building situated on a 3.0-acre tract on the southwest side of Mary Ingles Highway approximately 3,025 ft southeast of the intersection of Mary Ingles Highway and Industrial Road (see Figures 2a and 3a). The commercial building (Figure 23), oriented to the northeast, sits back approximately 70 ft from the ROW and is accessed from Mary Ingles Highway via a paved parking lot. The property was surveyed from the public ROW.

A building is first depicted in the approximate location of Site 12 on the 1952 Newport, Kentucky-Ohio topographic quadrangle. The two-story, five-bay (d/w/d/d/d), flat-roofed commercial building with a large rear addition was constructed circa 1950, per PVA records (USGS 1952).

The foundation material could not be determined because the walls appear to be covered in stucco or a parge coating that extends to grade. The first floor of the façade is comprised of five bays. The leftmost bay is filled with a double-leaf entry. This entry is part of an apparent shed-roof addition that contains a stairway to the second floor of the

building. The stairway may originally have been on the exterior of the building, but this is speculative. Continuing to the northwest along the façade, there is a window with a replacement single-light sash, a single-leaf entry with a single-light replacement door sheltered by an awning, and two garage entries with replacement overhead doors. Three windows with single-light replacement fixed sashes are located along the façade's second story. A faux mansard roof clad in wood shingles extends across the façade's roof parapet and across the southeast elevation at the top of the shed-roof enclosed stairway addition. The northeast elevation of the building has five windows, each apparently filled with a different type of sash. Two windows appear to retain original metal sashes along this elevation. Only one window, filled with replacement one-over-one sashes, appears to be located on the southeast elevation of the building. A small, flat-roofed projection is also located on the southeast elevation adjacent to the enclosed stairway addition.

Attached to the rear of the building, at a lower grade than the original portion of the commercial building, is a large, nearly flat-roofed addition clad in metal panels. Two large garage bays filled with metal overhead doors are located along the southeast elevation of this addition.

Located to the northeast of the commercial building is a flat-roof gasoline station canopy supported by two metal posts. The canopy shelters at least four gasoline pumps, although they do not appear to currently be in operation.

A second commercial building is also located on the tract. This additional commercial building, located to the southeast of the original building, has a much larger footprint than the original building and its addition. This gable-roof building has two single-light windows and a double-leaf entry along its northeast elevation, which faces Mary Ingles Highway. A number of large vehicular bays are found along the northwest elevation. This second commercial building does not appear on the Newport, KY-OH 1983 (Photorevised 1987) topographic map (USGS 1983).

Figure 23. Site 12 (CP 215): two-story, five-bay, flat-roofed commercial building.

NRHP Evaluation: Ineligible. The original commercial building associated with Site 12 is an unexceptional example of a mid-twentieth-century roadside commercial building. Modifications to this commercial building include the shed-roofed stairway addition, replacement windows and doors, the addition of the faux mansard roof, and the large garage addition to the rear elevation of the original portion of the building. These alterations have compromised the building's integrity of design, materials, and workmanship. Site 12 is not an outstanding example of a particular architectural type, period, or method of construction, and archival research indicated no association between Site 12 and events or persons of historical significance. Neither the second commercial building nor the gas station canopy is over 50 years of age. Therefore, CRA recommends that Site 12 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Site 13

KHC Survey #: CP 216

Photographs: Figure 24

Map: Figures 2a and 3a

Zone: 16

Quad: Newport, KY-OH 1983 (Photorevised 1987)

UTMs: E: 724202 N: 4324450

Property Address: 4744 Mary Ingles Highway
Cold Spring, KY 41076

Owner Information: Clifford, Jr., and Darlene Johnston

Deed Book/Page: 150/268

Construction Date: circa 1910

Description: Site 13 (CP 216) consists of a frame house situated on a 90-x-503.25 ft residential lot on the southwest side of Mary Ingles Highway approximately 3,390 ft southeast of the intersection of Mary Ingles Highway and Industrial Road (see Figures 2a and 3a). The residence (Figure 24), oriented to the northeast, sits back approximately 24 ft from the ROW and is accessed from Mary Ingles Highway via a drive. The property was surveyed from the public ROW.

Figure 24. Site 13 (CP 216): one-and-one-half-story, three-bay, side-gabled frame residence.

A residence is first depicted in the approximate location of Site 13 on the 1914 East Cincinnati, Ohio-Kentucky, 15-minute topographic quadrangle (see Figure 11). PVA records indicate that the residence was constructed circa 1910 (USGS 1914).

The one-and-one-half-story, three-bay (w/d/w), side-gabled residence comprises approximately 1,960 sq ft of living space. The foundation is composed of rusticated concrete blocks, although the rear portion of the house appears to be supported by a concrete-block or poured-concrete foundation. The exterior walls are clad in vinyl siding beneath an asphalt-shingle roof. The soffits and fascia boards are clad in vinyl or aluminum. A gable-roofed porch shelters the three first-floor bays of the façade. The central single-leaf entry is filled with a panel door set behind a full-light aluminum-frame storm door. A picture window with four-light sidelights is located southeast of the entry, and to the right of the entry is a window with replacement one-over-one-light, double-hung sashes. Similar sashes fill the windows of the side elevations of the dwelling. The porch is supported by decorative metal posts resting on a concrete deck. The porch foundation is composed of rusticated concrete block. A long wood ramp extends from the northwest elevation of the porch to the drive at the rear of the house. The small upper-story façade windows are filled with replacement six-over-six-light, double-hung sashes. A single-story, shed-roofed section spans the rear elevation. This section, which appears to rest on a concrete basement foundation, has windows on both side elevations. A second shed-roof section is located along the rear elevation of the previous shed-roof section. An exterior concrete-block chimney is found on the northwest elevation of the dwelling.

Located approximately 60 ft to the rear of the residence is a single-story, two-bay, front-gabled garage. This garage, oriented to the northwest, has a pedestrian door and a large vehicular bay filled with a metal overhead garage door. The garage is clad in metal panels and has a metal roof. This garage does not appear to be over 50 years of age.

NRHP Evaluation: Ineligible. The house associated with Site 13 is an unexceptional example of an early-twentieth-century, one-and-one-half-story, side-gabled frame residence with numerous alterations, and it lacks extraordinary architectural details, such as those indicative of a particular architectural style. Alterations to the residence include the replacement siding, windows, and cladding of the soffits and fascia boards. These alterations have compromised the residence's integrity of design, materials, and workmanship. The residence is not an outstanding example of a particular architectural type, period, or method of construction, and archival research indicated no association between Site 13 and events or persons of historical significance. The garage associated with Site 13 does not appear to be over 50 years of age. Therefore, CRA recommends that Site 13 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Site 14

KHC Survey #: CP 217

Photographs: Figure 25

Map: Figures 2a and 3a

Zone: 16

Quad: Newport, KY-OH 1983 (Photorevised 1987)

UTMs: E: 724232 N: 4324426

Property Address: 4748 Mary Ingles Highway
Cold Spring, KY 41076

Owner Information: Paul E. and Denise Dennis
P.O. Box 403
Silver Grove, KY 41085

Deed Book/Page: 227/93

Construction Date: circa 1900

Description: Site 14 (CP 217) consists of a frame house situated on a 1.49-acre lot on the southwest side of Mary Ingles Highway approximately 3,500 ft southeast of the intersection of Mary Ingles Highway and

Industrial Road (see Figures 2a and 3a). The residence (Figure 25), oriented to the northeast, sits back approximately 70 ft from the ROW and is accessed from Mary Ingles Highway via a drive. The property was surveyed from the public ROW.

A residence is first depicted in the approximate location of Site 14 on the 1900 East Cincinnati, Ohio–Kentucky, 15-minute series topographic quadrangle (see Figure 10). According to PVA records, the house was built circa 1900 (USGS 1900).

The one-story, four-bay (w/d/w/w), side-gabled residence comprises approximately 2,341 sq ft of living space. The foundation material is obscured since the vinyl siding of the exterior walls extends nearly to grade. The roof is sheathed in asphalt shingles. An offset gable-roofed vestibule projects from the façade wall plane and contains a single-leaf entry filled with a replacement door set behind a two-light storm door. This entry opens onto a wood porch with a wood deck and railing. Flanking the projecting vestibule are paired windows with replacement one-over-one-light, double-hung sashes. Similar replacement sashes are found throughout the dwelling. From the ridgeline of the roof, the northwest portion of the façade appears to be a later addition. The asymmetrical gable roof, visible along the southeast gable end, indicates that additions—possibly over 50 years of age—have been made to the rear elevation. A shed-roofed addition is also visible along the rear elevation. A brick chimney pierces the southwest roof slope.

NRHP Evaluation: Ineligible. The house associated with Site 14 is an unexceptional example of an early-twentieth-century, single-story, side-gabled frame residence with numerous alterations, and it lacks extraordinary architectural details, such as those indicative of a particular architectural style. Alterations to the residence include the replacement siding, windows, and door. These alterations, and additions possibly constructed within the last 50 years, have compromised the residence's integrity of design, materials, and workmanship. The residence is not an outstanding example of a particular architectural type, period, or method of construction, and archival research indicated no association between Site 14 and events or persons of historical significance. Therefore, CRA recommends that Site 14 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Figure 25. Site 14 (CP 217): one-story, four-bay, side-gabled residence.

Site 15

KHC Survey #: CP 218

Photographs: Figure 26

Map: Figures 2a and 3a

Zone: 16

Quad: Newport, KY-OH 1983 (Photorevised 1987)

UTMs: E: 724265 N: 4324421

Property Address: 4760 Mary Ingles Highway
Cold Spring, KY 41076

Owner Information: William L. and Diana M. Fink

Deed Book/Page: 215/664

Construction Date: circa 1920

Description: Site 15 (CP 218) consists of a frame house situated on a 0.5-acre lot on the southwest side of Mary Ingles Highway approximately 3,625 ft southeast of the intersection of Mary Ingles Highway and Industrial Road (see Figures 2a and 3a). The residence (Figure 26), oriented to the northeast, sits back approximately 45 ft from the ROW and is accessed from Mary Ingles Highway via a gravel drive. The property was surveyed from the public ROW.

A residence is first depicted in the approximate location of Site 15 on the 1952 Newport, Kentucky-Ohio, 7.5-minute series topographic quadrangle. The house was built circa 1920, according to PVA data (USGS 1952).

The one-story, four-bay (w/d/w/w), front-gabled frame residence comprises approximately 716 sq ft of living space. A rusticated concrete-block foundation supports the residence, which is clad in vinyl siding. The roof is sheathed in asphalt shingles. A gable-roofed projection along the southeast portion of the façade contains an offset single-leaf entry with a replacement nine-light door set behind a storm door. This entry opens onto a small porch with a wood deck and railing. The porch is also accessed by a wood ramp and steps. A window with two one-light, horizontal sliding replacement sashes is located to the left of the entry, and a narrow, small window is located to the right of the entry. Replacement double-hung and horizontal sliding sashes fill the windows along the façade and southeast elevations. A shed-roofed addition is located along the rear elevation. A brick chimney pierces the southeast roof slope.

A prefabricated shed located to the rear of the dwelling was visible from the ROW. Aerial photographs may depict a second outbuilding to the northwest of the first.

NRHP Evaluation: Ineligible. The house associated with Site 15 is an unremarkable example of an early-twentieth-century, single-story, front-gabled frame residence with numerous alterations, and it lacks extraordinary architectural details, such as those indicative of a particular architectural style. Alterations to the residence include the replacement siding, windows, and door. These alterations, and possibly an addition within the last 50 years, have compromised the residence's integrity of design, materials, and workmanship. The residence is not an outstanding example of a particular architectural type, period, or method of construction, and archival research indicated no association between Site 15 and events or persons of historical significance. The documented outbuilding associated with Site 15 does not appear to be over 50 years of age. Therefore, CRA recommends that Site 15 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Figure 26. Site 15 (CP 218): one-story, four-bay, front-gabled frame residence.

Site 16

KHC Survey #: CP 94

Photographs: Figures 27–29

Map: Figures 2a and 3a

Zone: 16

Quad: Newport, KY-OH 1983 (Photorevised 1987)

UTMs: E: 724996 N: 4324291

Property Address: 4936 Mary Ingles Highway
Silver Grove, KY 41085

Owner Information: Timothy E. Cain
P.O. Box 234
Silver Grove, KY 41085

Deed Book/Page: 286/47

Construction Date: circa 1912

Description: The Dutle Inn (Site 16 [CP 94]) is an early-twentieth-century commercial building (Figure 27) located on a 10.48-acre parcel on the south side of Mary Ingles Highway approximately 425 ft east of its intersection with Messer Road (see Figures 2a and 3a). It is oriented to the northeast and sits back approximately 10 ft from the ROW along Mary Ingles Highway. A gravel driveway trends southwest from the highway along the northwest side of the building and terminates in a gravel lot to its rear. The property was surveyed from the public ROW.

Site 16 was previously documented by KHC personnel during the 1979 countywide survey. However, KHC records indicate that the NRHP eligibility of the property has not yet been determined (KHC survey and NRHP files).

Figure 27. Site 16 (CP 94): Dutle Inn.

A building is first depicted in the approximate location of Site 16 on the 1914 East Cincinnati, Ohio–Kentucky, 15-minute series topographic quadrangle (see Figure 11). According to KHC records, the building was erected circa 1912, and its 11 upper-level rooms were rented to employees of the adjacent Stevens railroad yard, which was completed that same year. Depicted west of the building on the 1914 quadrangle is a racetrack, which appears to have been in operation during the years in which Ohio state law prohibited betting, resulting in the closure of the nearby Oakley Race Course, a well known thoroughbred track. Considering the building's apparent proximity to the racecourse and relative distance to the then nascent community of Silver Grove, it is plausible that the inn may have also served track patrons arriving via the adjacent C&O railway. The building is now a retail paintball facility (KHC survey and NRHP files; Prout 2012; USGS 1914).

The two-story, six-bay (w/d/w/w/d/w), brick commercial building includes approximately 4,072 sq ft of floor space within its rectangular plan. It has a stretcher-bond brick exterior and rests on a continuous rusticated concrete-block foundation. The building's roof, which discrepancies in the masonry of the southeast and northwest elevations indicate was raised at some point, features a parapet wall crowned with an Italianate-inspired bracketed cornice above the façade elevation (Figure 28). A single-story, hip-roofed porch with battered, boxed wood columns supported by brick piers shelters both single-leaf façade entries and the windows between them. Secondary single-leaf entries on the southeast elevation open onto a wood deck of recent construction. Projecting from the northwest elevation is a single-story, shed-roofed frame addition clad in vinyl siding (Figure 29). The building's entry and window bays feature stone lintels and sills. The pedestrian entries on the façade and southeast elevations have half-light and multi-light replacement doors and glass-block transoms.

Figure 28. Site 16: façade elevation of commercial building.

Figure 29. Site 16: façade and northwest elevations.

Lower-level windows have one-over-one-light, double-hung replacement sashes, while their upper-level counterparts retain their one-over-one-light, double-hung wood sashes. The central upper-level façade window bay features two windows separated by a decorative molded panel. Interior brick chimneys are located atop the southeast and northwest elevations.

Approximately 80 ft south of the commercial building is a frame gazebo, and a prefabricated metal storage building is located in a gravel lot approximately 100 ft to the southeast. Both appear to be of late-twentieth-century construction.

NRHP Evaluation: Ineligible. Archival research suggests historical associations between the Dutle Inn (Site 16), the C&O Railroad, and possibly the racetrack depicted on the 1914 quadrangle, but it revealed no definitive evidence that the inn's presence had a dramatic and permanent effect on the flow of people and development into the region or on the economic stability of Silver Grove in the early twentieth century. Furthermore, demolition of the railyard and racecourse has compromised the building's integrity of association and setting with regard to both. Research also revealed no evidence to suggest that the inn's proprietor was an individual of particular significance within the community of Silver Grove, and the inn is not associated with any other events or people of historic significance. The Dutle Inn is a typical example of early-twentieth-century commercial architecture that lacks distinctive architectural characteristics. Its form, massing, and architectural details—including its Italianate-inspired cornice—are common attributes associated with commercial buildings of the period, hundreds of which are found in commercial districts in towns and cities located throughout the state. Furthermore, modifications to the building, including the northwesterly frame addition and the installation of replacement doors and window sashes, have diminished its integrity of design, materials, and workmanship. Consequently, CRA recommends that Site 16 is ineligible for inclusion in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Site 17

KHC Survey #: CP 220

Photographs: Figure 30

Map: Figures 2a and 3a

Zone: 16

Quad: Newport, KY-OH 1983 (Photorevised 1987)

UTMs: E: 725155 N: 4324249

Property Address: 4982 Mary Ingles Highway
Silver Grove, KY 41085

Owner Information: Jeffrey D. Farris
P.O. Box 408
Silver Grove, KY 41085

Deed Book/Page: 215/371

Construction Date: circa 1960

Description: Site 17 (CP 220) consists of a commercial building situated on the southwest side of Mary Ingles Highway approximately 1,350 ft northwest of the intersection of Mary Ingles Highway and Ash Street (see Figures 2a and 3a). The commercial building (Figure 30), oriented to the northeast, sits back approximately 35 ft from the ROW and is accessed from Mary Ingles Highway via a paved parking lot. The property is currently utilized by Silver Grove Motors and was surveyed from the public ROW.

A building appears to first be depicted in the approximate location of Site 17 on the 1983 Newport, Kentucky–Ohio, 7.5-minute series topographic quadrangle. The owner estimates that it was constructed circa 1960 (personal communication 2012; USGS 1983).

This is a one-story, four-bay (d//d/d/w), flat-roofed, concrete-block commercial building with a faux mansard roof sheathed in asphalt shingles. The concrete-block exterior extends to grade. The building may have originally served as a gasoline station. The

southeast two bays of the façade are garage bays filled with metal overhead doors. Near the northwest corner of the façade is a single-leaf entry filled with a replacement aluminum-frame commercial door. Adjacent to the entry is a window filled with three fixed aluminum-frame replacement sashes. A window filled with similar sashes is located on the northwest elevation of the building along with two single-leaf entries with replacement doors (possibly originally accessing restrooms) and a garage bay with a replacement overhead door. The southeast elevation of the building has a window located near the soffit of the faux mansard roof. This window is filled with glass blocks.

Located to the southeast of the circa 1960 building is a later building with a large addition to the rear. This building does not appear to be over 50 years old, and it appears as a revision to the Newport, KY-OH 1983 (Photorevised 1987) topographic map. This later commercial structure is a single-story, front-gabled, concrete-block building with windows and pedestrian entries along the façade, which is oriented to the northeast toward Mary Ingles Highway. The northwest elevation has three garage bays. The addition is taller than the original block and exhibits three large garage bays (USGS 1983).

NRHP Evaluation: Ineligible. The original commercial building associated with Site 17 is an unremarkable example of a mid-twentieth-century roadside commercial building probably originally serving as a gasoline station. Modifications to this commercial building include the addition of the faux mansard roof and the installation of replacement windows and doors. These alterations have compromised the building's integrity of design, materials, and workmanship. Site 17 is not an outstanding example of a particular architectural type, period, or method of construction, and archival research indicated no association between Site 17 and events or persons of historical significance. The second commercial building is not over 50 years of age. Therefore, CRA recommends that Site 17 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Figure 30. Site 17 (CP 220): one-story, four-bay, flat-roofed, concrete-block commercial building.

Site 33

KHC Survey #: CP 200

Photographs: Figures 31 and 32

Map: Figures 2a and 3a

Zone: 16

Quad: Newport, KY-OH 1983 (Photorevised 1987)

UTMs: E: 725517 N: 4324057

Property Address: Ash Street

Silver Grove, KY 41085

Owner Information: Sanitation District Number 1

1045 Eaton Drive

Fort Wright, KY 41017

Deed Book/Page: 298/226

Construction Date: 1936

Description: Site 33 (CP 200) is a defunct reinforced-concrete sewage pumping station (Figure 31) located on a .11-acre parcel on the west side of Ash Street approximately 405 ft south of its intersection with Mary Ingles Highway (see Figures 2a and 3a). It is sited on the floodplain south of the Ohio River.

The pump station is first depicted on the 1952 Newport, Kentucky-Ohio, 7.5-minute series topographic quadrangle. Funded by bond issue and erected by the WPA in 1936, the sewage treatment facility served Silver Grove and discharged into the Ohio River until its function was taken over by the SD-1 Silver Grove pump station in 1965 (Daniels 2003:28; USGS 1952).

The pump station exhibits a raised concrete form, elevating it above Ohio River flood levels. The form, measuring approximately 21-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 to conceal graffiti. As depicted in a historical photograph of the structure, a metal staircase characterized by a short ground-level flight and long return flight was initially bolted to the east elevation, providing access to the raised platform. The stairwell exhibited a double handrail of rolled metal tubing (Kentuckiana Digital Library 2008). 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."

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 (Figure 32). Each is secured by a steel grate exhibiting 16 gridded divisions. From historical 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: Ineligible. 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 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.

Figure 31. Site 33 (CP 200): WPA-constructed reinforced-concrete pump station.

Figure 32. Site 33: north and west elevations of pump station.

NRHP-listed WPA-built utility structures are few in number and typically exhibit details associated with architectural styles of the period. Constructed by the WPA in 1938, the Hibbing Disposal Plant in Hibbing, Minnesota; the Verde Park Pump House in Phoenix, Arizona; and the Paradise Water Tower in Paradise, Kansas, exhibit Modern, Period Revival, and Art Deco details, respectively (NPS 2012).

The historical integrity of the pumping station associated with Site 33 has been compromised by the removal of the exterior staircase, which was 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 stylistically-indicative details that characterize 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 33 is not eligible for listing in the NRHP under Criterion C. Likewise, although the structure is 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 33 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A.

Site 35

KHC Survey #: CP 238

Photographs: Figures 33 and 34

Map: Figures 2a and 3a

Zone: 16

Quad: Newport, KY-OH 1983 (Photorevised 1987)

UTMs: E: 725678 N: 4323893

Property Address: 122 West Second Street
Silver Grove, KY 41085

Owner Information: Silver Grove Christian Church
P.O. Box 430
Silver Grove, KY 41085

Deed Book/Page: N/A

Construction Date: circa 1917

Description: Silver Grove Christian Church (Site 35 [CP 238]) is situated on the southeast corner of the intersection of West Second and Oak Streets (see Figures 2a and 3a). The church (Figure 33) is oriented to the northeast and sits back approximately 20 ft from the ROW along West Second Street. The property was surveyed from the public ROW along West Second and Oak Streets.

This church is first depicted in the approximate location of Site 35 on the 1952 Newport, Kentucky-Ohio, topographic quadrangle. According to the church's current pastor, Robert Brown, the building dates to circa 1917 (personal communication 2012; USGS 1952).

The church is a one-story, five-bay (w/w/w/w/d), side-gabled building with a gable-roofed façade projection and a brick exterior. It is supported by a raised-concrete basement foundation. The exterior walls are clad in brick, and the roof is sheathed in asphalt shingles. The soffits are clad in vinyl or aluminum. The off-center front-gable projection along the façade has three window

bays: a ribbon of three windows flanked by single window openings. The window bays feature brick soldier courses and square stone decorative elements. A ribbon of three Gothic arched windows within a segmental arch is found near the peak of the gable. All of the windows are filled with stained glass, and most have double-hung sashes, except for the two center windows. Similar, though larger, windows filled with double-hung, stained glass sashes are found throughout the building. The southeast elevation of the façade projection has a shed-roofed dormer filled with a ribbon of three windows. A square bell tower is located in the northwest corner of the building's façade. This brick bell tower has three stained glass windows and is capped by a wood belfry with Gothic-arched louvered vents and pyramidal finials topped by spheres. A flat-roofed façade porch supported by wood brackets shelters the double-leaf entry into the church through the bell tower. This entry has replacement nine-light doors. Both the southeast and northwest elevations feature large Gothic-arched windows with tracery and stained glass, which are flanked by narrower stained glass windows. A shed-roofed section partially clad in vinyl provides exterior access to the basement. This section is located on the southeast corner of the façade.

A large side-gabled addition is located to the rear of the church (Figure 34). This addition was constructed in the 1970s, according to Pastor Robert Brown (personal communication 2012). A section approximately 20 ft in width connects the rear of the church to the addition. The addition has a concrete foundation and is clad almost entirely in vinyl siding. A portion of the northwest end of the addition is clad in brick and extends above the roofline of the remaining portion of the structure, providing a skylight to this end of the addition. The footprint of the addition is approximately the same size as the original block of the church.

Figure 33. Site 35 (CP 238): Silver Grove Christian Church.

Figure 34. Site 35 (CP 238): northwest and rear elevations of church and addition.

NRHP Evaluation: Ineligible. The *National Register Bulletin: How to Apply the National Register Criteria for Evaluation* states that under Criterion Consideration A, "A religious property requires justification on architectural, artistic, or historic grounds to avoid any appearance of judgment by government about the validity of any religion or belief" (National Park Service 1990:26). Alterations to the Silver Grove Christian Church (Site 35) include replacement doors, vinyl- or aluminum-clad soffits, and most notably, the large rear addition. The addition nearly doubles the footprint of the building, and its circa 1970s materials, massing, and design are not sympathetic to the early-twentieth-century portion of the building. These modifications compromise the historic qualities of design, materials, workmanship, and feeling necessary to convey its significance. Archival research indicated no association between Site 35 and events or persons of historical significance. Therefore, CRA recommends that Site 35 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Site 43

KHC Survey #: CP 246

Photographs: Figure 35

Map: Figures 2a and 3a

Zone: 16

Quad: Newport, KY-OH 1983 (Photorevised 1987)

UTMs: E: 725588 N: 4323924

Property Address: 210 West Second Street
Silver Grove, KY 41085

Owner Information: Mary Lou Kroger and Charles C. Alley
P.O. Box 548
Silver Grove, KY 41085

Deed Book/Page: 224/601

Construction Date: circa 1956

Description: Site 43 (CP 246) consists of a Ranch house located on a 100-x-158 ft lot on the southwest side of West Second Street approximately 220 ft northwest of its intersection with Oak Street (see Figures 2a and 3a). The residence (Figure 35) is oriented to the northeast and sits back approximately 25 ft from the sidewalk. Site 43 was documented from the public ROW.

A residence is first depicted in the approximate location of Site 43 on the 1961 Newport, Kentucky-Ohio, 7.5-minute series topographic quadrangle. According to PVA records, the house was constructed circa 1956 (USGS 1961a).

The residence is a one-story, five-bay (d/w/w/w/w), front-gabled frame Ranch house. The house has a concrete foundation, and the exterior walls of the side elevations are clad in asbestos shingles. The roof has a low-pitched slope. The façade gable and the southeastern portion of the façade are clad in vinyl siding. The area below the façade windows is clad in brick veneer. The southeastern portion of the façade has been enclosed with vinyl siding and a single-leaf entry. It may have originally served as a carport, although this is speculative. The entry has a modern panel door with a decorative light. To the right of the façade entry is a ribbon of four windows filled with large, fixed central sashes flanked by narrower sashes. A single-leaf entry is located on the northwest elevation near its shared corner with the façade elevation. This entry has an aluminum-frame storm door.

NRHP Evaluation: Ineligible. Ranch houses similar to the one at Site 43 have been designated by the Georgia Historic Preservation Division as "Contemporary Ranch" houses. Attributes of the Contemporary Ranch house include overhanging eaves, plate-glass windows, sliding patio doors, the use of varying materials on the exterior of the residence, exposed beams, and the employment of voids and solid surfaces in the exterior design of the house. Contemporary Ranch designs can be first attributed to the 1930s concepts of southwestern Ranch houses and Usonian houses developed by Frank Lloyd Wright (Georgia Historic Preservation Division 2010).

Figure 35. Site 43 (CP 246): one-story, five-bay, front-gabled frame Ranch house.

The house associated with Site 43 is an unexceptional example of a mid-twentieth-century Contemporary Ranch residence with numerous alterations, and it lacks extraordinary architectural details. Alterations to the residence include the replacement siding, door, and possible enclosure of the original carport. These modifications to the house and the use of non-compatible replacement materials have compromised its integrity of design, materials, and workmanship. The residence is not an outstanding example of a Contemporary Ranch, and archival research indicated no association between Site 43 and events or persons of historical significance. Therefore, CRA recommends that Site 43 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Site 53

KHC Survey #: CP 256

Photographs: Figure 36

Map: Figures 2a and 3a

Zone: 16

Quad: Newport, KY-OH 1983 (Photorevised 1987)

UTMs: E: 725416 N: 4323935

Property Address: 2817 Ash Street
Silver Grove, KY 41085

Owner Information: Richard E. Oplinger
384 Indian Pointe Drive
Maineville, OH 45039

Deed Book/Page: 282/137

Construction Date: circa 1957

Description: Site 53 (CP 256) consists of a frame residence located at the corner of Ash and West Second Streets (see Figures 2a and 3a). The residence (Figure 36) is oriented to the east and sits back approximately 230 ft from Ash Street. It is accessed via an asphalt drive extending from the south side of West Second Street.

Figure 36. Site 53 (CP 256): two-story, three-bay, front-gabled concrete-block and frame residence.

A residence is first depicted in the approximate location of Site 53 on the 1961 Newport, Kentucky-Ohio, 7.5-minute series topographic quadrangle. According to PVA records, the house was built circa 1957 (USGS 1961a).

The first floor of the two-story, three-bay (w/d/w), front-gabled dwelling is constructed of concrete block, while the upper story is frame clad in asbestos shingles. The roof is sheathed in asphalt shingles. The gabled roof extends beyond the façade wall plane, creating an integral two-story stacked porch. Both the first and second stories of the façade have central single-leaf entries flanked by windows. The doors of the entries are set behind aluminum storm doors. Four of the façade windows are filled with twelve-light fixed sashes, while one window has replacement single-light horizontal sliding sashes. The porch is supported by boxed wood columns and exhibits wood railings. The first-floor porch has a concrete deck, while the upper porch has a wood deck. Window bays on the north and south elevations exhibit various types of sashes, including twelve-light and horizontal sliding sashes similar to those on the façade; a picture window with two-over-two, double-hung sidelights; horizontal two-over-two, double-hung sashes; and two-light fixed sashes. The rear elevation has a single-leaf entry and windows with horizontal sliding sashes. A brick chimney pierces the north slope of the roof.

Located approximately 45 ft west of the dwelling is a single-story, front-gabled, two-bay garage constructed of concrete block. Oriented to the north, the garage bays are filled with replacement metal overhead sectional doors. The north gable of the garage is clad in vertical wood panels, and the roof is sheathed in asphalt shingles. A gable-roofed shed is located to the rear of the garage.

NRHP Evaluation: Ineligible. The house associated with Site 53 is an example of a mid-twentieth-century, two-story, front-gabled residence, and it lacks extraordinary architectural details, such as those indicative of a particular architectural style. Additionally, the installation of various types of replacement window sashes has diminished the dwelling's integrity of materials and workmanship. The residence is not an outstanding example of a particular architectural type, period, or method of construction, and archival research indicated no association between Site 53 and events or persons of historical significance. The outbuildings associated with the residence do not appear to be over 50 years of age. Therefore, CRA recommends that Site 53 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Site 54

KHC Survey #: CP 257

Photographs: Figure 37

Map: Figures 2a and 3a

Zone: 16

Quad: Newport, KY-OH 1983 (Photorevised 1987)

UTMs: E: 725567 N: 4323858

Property Address: 209 West Third Street
Silver Grove, KY 41085

Owner Information: Don and Nancy C. Chandler
P.O. Box 129
Silver Grove, KY 41085

Deed Book/Page: 226/308

Construction Date: circa 1957

Description: Site 54 (CP 257) consists of an American Small House located on the north side of West Third Street approximately 270 ft northwest of its intersection with Oak Street (see Figures 2a and 3a). The residence (Figure 37) is oriented to the southwest and sits back approximately 40 ft from the street. A gravel drive provides vehicular access to the dwelling, which was surveyed from the public ROW.

Figure 37. Site 54 (CP 257): one-story, three-bay, side-gabled American Small House.

A residence is first depicted in the approximate location of Site 54 on the 1955 Newport, Kentucky-Ohio, 7.5-minute series topographic quadrangle. However, PVA records indicate that the residence was built circa 1957 (USGS 1955).

Site 54 is a one-story, three-bay (w/d/w), side-gabled dwelling. The foundation material could not be determined, and the exterior walls are clad in Bedford-stone veneer. The roof is sheathed in asphalt shingles. The façade's off-center single-leaf entry has an unglazed door set behind an aluminum frame storm door. The entry opens onto a wood porch with wood railings that appears to have been constructed within the last 20 years. Windows flank the façade entry: to the right the window is filled with one-over-one-light, double-hung sashes, and to the left is a three-light picture window. The windows have Bedford-stone sills. A single-leaf entry also appears to be located on the northwest gable end. A small wood porch with wood railings is located along the northwest elevation of the residence. This porch, which appears to date to the construction of the front porch, is accessed by a wood ramp. A vent or chimney, currently covered in plastic, pierces the rear roof slope.

Two outbuildings are associated with the dwelling. Located to the immediate northwest of the residence is a front-gable, frame garage oriented to the southwest. The façade gable is clad in vinyl siding, and exposed vertical wood boards are visible along the right side of the front of the garage. Much of the garage's façade was obscured by vehicles parked in the driveway.

A second outbuilding is not visible from the street but is indicated on an aerial map. This second outbuilding is located approximately 20 ft to the northeast of the rear of the residence. No other information could be gleaned from the aerial map.

NRHP Evaluation: Ineligible. Modest houses similar to the residence associated with Site 54 have been referred to by many names, including minimal traditional, but as described by the Georgia Historic Preservation Division, they are perhaps most accurately described as

the "American Small House," a house type constructed from the 1930s to 1950s to address the increased demand for housing and to meet Federal Housing Administration (FHA) minimum standards. The American Small House represents the predominant house type constructed in the United States in the mid-twentieth century. As such, examples must demonstrate exceptional significance and integrity in order to be recommended as eligible for listing in the NRHP (Georgia Historic Preservation Division 2008).

The residence associated with Site 54 is a typical example of an American Small House, exhibiting a compact rectangular plan with a side-gabled roof. However, the residence lacks distinctive architectural details, and the addition of the front and side porches to the house has altered its original design. Archival research indicated no association between Site 54 and events or persons of historical significance. The outbuildings associated with the property are common and well documented building forms dating to the second half of the twentieth century, and they lack architectural details that might otherwise lead to their architectural significance. Therefore, CRA recommends that Site 54 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Site 55

KHC Survey #: CP 258

Photographs: Figure 38

Map: Figures 2a and 3a

Zone: 16

Quad: Newport, KY-OH 1983 (Photorevised 1987)

UTMs: E: 725538 N: 4323869

Property Address: 215 West Third Street
Silver Grove, KY 41085

Owner Information: Matthew and Heather Mitchell
P.O. Box 157
Silver Grove, KY 41085

Deed Book/Page: 287/849

Construction Date: circa 1955

Description: Site 55 (CP 258) consists of a split-level house located on a 100-x-158 ft lot on the northeast side of West Third Street approximately 325 ft northwest of its intersection with Oak Street (see Figures 2a and 3a). The residence (Figure 38) is oriented to the southwest and sits back approximately 50 ft from the street. A concrete drive provides vehicular access to the dwelling.

A residence is first depicted in the approximate location of Site 55 on the 1955 Newport, Kentucky-Ohio, 7.5-minute series topographic quadrangle. PVA records indicate that the residence was constructed circa 1955 (USGS 1955).

The split-level, four-bay (w/w/d/d), side-gabled frame house has four bedrooms and a single bathroom and comprises approximately 2,160 sq ft of living space. The poured-concrete foundation supports the southeast portion of the house, while the northwest section of the dwelling rests on a concrete-block foundation. The exterior walls are clad in vinyl siding. The side-gabled roof is sheathed in asphalt shingles. The façade's off-center single-leaf entry is located at grade and opens directly onto the concrete drive. The entry has a replacement metal panel door. To the right of the pedestrian entry is a vehicular entry filled with a replacement sectional overhead door. Both entries are located in the poured-concrete section of the dwelling's foundation. Above the façade entry and garage, the upper portion of the house extends slightly beyond the wall plane of the foundation. The southeast section of the residence, supported by the poured-concrete foundation, appears to be a late-twentieth-century addition. The windows of the upper level are filled with replacement six-over-six- or nine-over-nine-light, double-hung sashes. Two windows are located on the southeast gable end. A brick chimney pierces the front roof slope of the residence.

Figure 38. Site 55 (CP 258): four-bay, side-gabled, split-level frame house.

NRHP Evaluation: Ineligible. The house associated with Site 55 is an unexceptional example of a mid-twentieth-century split-level house that lacks extraordinary architectural details. Alterations to the residence, including the replacement siding, windows, and door, have diminished its integrity of materials and workmanship. The residence is not an outstanding example of a split-level Ranch house, and archival research indicated no association between Site 55 and events or persons of historical significance. Therefore, CRA recommends that Site 55 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Site 63

KHC Survey #: CP 266

Photographs: Figure 39

Map: Figures 2a and 3a

Zone: 16

Quad: Newport, KY-OH 1983 (Photorevised 1987)

UTMs: E: 725551 N: 4323705

Property Address: 208 West Fourth Street
Silver Grove, KY 41085

Owner Information: Peggy A. and Maurice P. Hehman III
P.O. Box 233
Silver Grove, KY 41085

Deed Book/Page: 277/506

Construction Date: circa 1954

Description: Site 63 (CP 266) consists of a residence located on a 50-x-158 ft lot on the south side of West Fourth Street approximately 160 ft northwest of its intersection with Oak Street (see Figures 2a and 3a). The residence (Figure 39) is oriented to the northeast and sits back approximately 25 ft from the street. A concrete drive provides vehicular access to the dwelling.

Figure 39. Site 63 (CP 266): two-story, two-bay, front-gabled frame residence.

A residence is first depicted in the approximate location of Site 63 on the 1955 Newport, Kentucky-Ohio, 7.5-minute series topographic quadrangle. PVA records indicate that the house was built circa 1954 (USGS 1955).

The two-story, two-bay (d/d), front-gabled frame dwelling comprises approximately 1,120 sq ft of living space. The foundation is composed of concrete blocks, and the exterior walls are clad in vinyl siding. The roof is sheathed in asphalt shingles. The façade has two garage entries with replacement four-light sectional overhead doors. Directly above the garage entries are two windows filled with replacement sashes comprised of a larger central one-light sash flanked by narrower single-light sashes. A small window in the gable appears to have horizontal sliding single-light sashes. The northwest elevation exhibits a single-leaf entry with a two-light door set behind an aluminum frame storm door. Windows flanking the entry appear to be filled with glass blocks. The three upper-story windows on this elevation have replacement one-over-one-light, double-hung sashes. The southeast elevation has similar replacement upper-story windows, while the first-floor windows appear to have two-over-two-light sashes. A shed-roofed porch extends from the second floor of the rear elevation, and the first floor of the porch is obscured by vegetation. A brick chimney pierces the northwest roof slope near the ridgeline.

NRHP Evaluation: Ineligible. The house associated with Site 63 is an unremarkable example of a mid-twentieth-century, two-story, front-gabled frame residence with numerous alterations, and it lacks extraordinary architectural details, such as those indicative of a particular architectural style. Alterations to the residence include the various types of replacement windows, replacement garage doors, and replacement siding. These alterations have compromised the residence's integrity of design, materials, and workmanship. The residence is not an outstanding example of a particular architectural type, period, or method of construction, and archival research indicated no association between Site 63 and events or persons of historical significance. Therefore,

CRA recommends that Site 63 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Site 65

KHC Survey #: CP 268

Photographs: Figures 40 and 41

Map: Figures 2a and 3a

Zone: 16

Quad: Newport, KY-OH 1983 (Photorevised 1987)

UTMs: E: 725726 N: 4323519

Property Address: 5210 Owl Creek Road
Melbourne, KY 41059

Owner Information: Greg K. and Anna M. Zinkhon
5210 Owl Creek Road
Melbourne, KY 41059

Deed Book/Page: 192/480

Construction Date: circa 1925

Description: Site 65 (CP 268) consists of an American Bungalow and a late-twentieth-century pole barn located on a .97-acre tract on the southwest side of Owl Creek Road immediately southeast of the road's intersection with Uhl Road (see Figures 2a and 3a). The residence is oriented to the northeast and sits back approximately 70 ft from the road. A gravel drive circumscribes the residence and connects both buildings with Owl Creek Road.

A residence is first depicted in the approximate location of Site 65 on the 1952 Newport, Kentucky-Ohio, 7.5-minute series topographic quadrangle. PVA records indicate that the house was built circa 1925 (USGS 1952).

The one-and-one-half-story, three-bay (ww/d/ww) frame residence (Figure 40) comprises approximately 1,674 sq ft of living space and exhibits a typical American Bungalow form. The house is clad in vinyl replacement siding and rests on a continuous rusticated concrete-block foundation beneath an asphalt-shingle roof. A carport addition with a corrugated-metal-panel roof spans the rear elevation. Aerial photographs indicate that the carport was added circa 2005.

A single-story, shed-roofed, Craftsman-influenced porch spans the façade elevation of the residence (Figure 41). The porch roof is supported by battered, boxed wood columns located atop brick piers, which are integrated into a brick balustrade. The single-leaf façade entry features a half-light wood-panel door. On the rear elevation beneath the carport is a secondary double-leaf entry with full-light replacement doors. Windows throughout the house have one-over-one-light, double-hung replacement sashes. A central gabled dormer is located on the northeasterly roof slope above the porch, and an interior brick chimney projects from the rear roof slope.

The aforementioned pole barn is located approximately 110 ft southeast of the residence. Several other late-twentieth- and early-twenty-first-century outbuildings are located south and south-southeast of the residence on an adjacent 34.54-acre parcel owned by the Zinkhons.

NRHP Evaluation: Ineligible. The house associated with Site 65 is a commonplace example of an American Bungalow that lacks distinctive architectural details. The Craftsman-influenced façade porch details are typical of houses of this type. Modifications to the residence, including construction of the rear carport addition, application of replacement siding, and installation of replacement doors and window sashes, have compromised its integrity of design, materials, and workmanship. The outbuildings associated with the residence are not 50 years of age or older and lack architectural significance. Furthermore, archival research indicated no association between Site 65 and events or persons of historical significance. Therefore, CRA recommends that Site 65 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Figure 40. Site 65 (CP 268): one-and-one-half-story, three-bay frame American Bungalow.

Figure 41. Site 65: façade elevation of residence.

Site 66

KHC Survey #: CP 269

Photographs: Figures 42–45

Map: Figures 2a and 3a

Zone: 16

Quad: Newport, KY-OH 1983 (Photorevised 1987)

UTMs: E: 725842 N: 4323453

Property Address: 5250 Owl Creek Road
Melbourne, KY 41059

Owner Information: Carl J. and Alta F. Bennett
5250 Owl Creek Road
Melbourne, KY 41059

Deed Book/Page: 155/583

Construction Date: circa 1890

Description: Site 66 (CP 269) consists of a residence and bank barn (Figure 42) located on a 50.52-acre parcel on the southwest side of Owl Creek Road approximately .1 mi southeast of the road's intersection with Uhl Road (see Figures 2a and 3a). The residence is oriented to the east and sits back approximately 20 ft from the road. Both buildings are accessed via a gravel drive that extends westward from Owl Creek Road. The property was documented from the public ROW.

The residence of an F. Neltner is depicted in the vicinity of Site 66 in the 1883 county atlas. However, a search of census records yielded no information pertaining to this individual. PVA records indicate that the house was built circa 1890 (Griffing 1883:47).

The two-story, five-bay (w/d/w/d/w), double-pile, side-gabled frame residence (Figure 43) comprises approximately 1,674 sq ft of living space. The house is clad in aluminum replacement siding and rests on a continuous pargeted stone foundation beneath an asphalt-shingle roof. Its elongated massing and slightly asymmetrical façade fenestration may be indicative of additions to one or both gable ends.

Both single-leaf façade entries feature half-light replacement doors set behind aluminum storm doors. The rightmost entry opens onto a concrete-block stoop, and a section of exposed stone foundation beneath the rightmost entry indicates that a similar stoop may have been located there as well. Secondary single-leaf entries on the south gable end and rear elevation exhibit similar doors. An upper-level entry on the rear elevation is accessed via an exterior metal staircase. Windows have one-over-one-light, double-hung replacement sashes. An interior brick ridge chimney projects from the roof near the north gable end, and an exterior concrete-block chimney is located on the façade to the right of the leftmost entry.

Located approximately 75 ft northwest of the residence is a frame bank barn (Figure 44). The interior of the barn was not accessed, but based on its architectural similarities with other German vernacular bank barns in the area, it most likely has a pegged mortise-and-tenon frame. The barn is clad in vertical-board siding and rests on a continuous stone foundation beneath a metal-panel roof. An upper-level vehicular bay with suspended sliding vertical-board doors is centrally located on the south elevation. The vehicular bay is accessed via an embankment that is supported by a stone retaining wall along its eastern flank. An inaccessible threshing bay with a single suspended sliding vertical-board door is located on the north elevation (Figure 45). The east gable features three owl holes, two of which are heart shaped. The lower level of the barn is accessed via single-leaf pedestrian entries with vertical-board doors and wood lintels, entries located on the north and east elevations of its stone foundation. Window bays on the foundation have one-over-one-light, double-hung wood sashes, some of which are missing their glazing, as well as wood lintels. Projecting from the barn's west gable end is a gable-roofed equipment shelter with metal supports.

Figure 42. Site 66 (CP 269): southerly overview of property.

Figure 43. Site 66: façade and south elevations of residence.

Figure 44. Site 66: bank barn located northwest of residence.

Figure 45. Site 66: north and east elevations of bank barn.

NRHP Evaluation: Ineligible. The residence associated with Site 66 is not an excellent example of late-nineteenth-century rural domestic architecture. It is not indicative of a particular architectural type, period, or method and exhibits a number of modifications, including possible additions to its north and south gable ends, application of replacement siding, installation of replacement doors and window sashes, installation of the metal staircase and concrete-block chimney, and removal of the left façade stoop. These alterations to the residence have compromised its historical integrity of design, materials, and workmanship. The bank barn associated with Site 66 is not an exceptional representative of its type, several examples of which are associated with NRHP-listed properties included in the German Settlement, Four Mile Creek Area TR, and the equipment shelter extending from its west gable end has diminished its integrity of design. Archival research indicated no association between Site 66 and events or persons of historical significance. Therefore, CRA recommends that Site 66 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Site 67

KHC Survey #: CP 270

Photographs: Figures 46 and 47

Map: Figures 2a and 3a

Zone: 16

Quad: Newport, KY-OH 1983 (Photorevised 1987)

UTMs: E: 725551 N: 4323705

Property Address: 5469 Owl Creek Road

Melbourne, KY 41059

Owner Information: Barry R. Dalton

Deed Book/Page: 243/176

Construction Date: circa 1961

Description: Site 67 (CP 270) consists of a Ranch house situated on an 11.72-acre tract on the east side of Owl Creek Road approximately .57 mi southeast of its intersection with Uhl Road (see Figures 2a and 3a). The residence (Figure 46) is oriented to the northwest and sits approximately 60 ft from the ROW of Owl Creek Road. A gravel drive provides vehicular access to the dwelling.

A residence is first depicted in the approximate location of Site 67 on the 1961 Newport, Kentucky-Ohio, 7.5-minute series topographic quadrangle. PVA records indicate that the house was built circa 1961 (USGS 1961a).

The one-story, three- or four- bay, Linear-with-Clusters Ranch sub-type dwelling comprises approximately 1,470 sq ft of living space. The foundation is composed of concrete blocks, and the exterior walls are clad in brick veneer. The roof is sheathed in asphalt shingles. The overall form of the dwelling is a side-gabled house with a gable-roofed projection creating a truncated L-shape. To the left of the projection, extending along the façade of the side-gable portion of the residence, is a flat-roofed porch supported by boxed wood columns resting on a concrete deck. A railing of vertical wood panels extends along the façade, and screens have been added to the porch. The screens obscure the façade bays sheltered by the porch. A window with replacement horizontal sliding single-light sashes fills the window along the façade of the gable-roofed projection. Other windows were not clearly visible. An exterior brick chimney is located on the southwest gable end of the dwelling. Also located on this gable end is a large gable-roofed addition with open sides. An aerial view of the property indicates a large deck located along the rear of the house.

Two outbuildings are associated with the house. A prefabricated carport with a metal roof and open sides is located to the immediate southwest of the gable-roof addition.

Figure 46. Site 67 (CP 270): one-story, three- or four- bay, Linear-with-Clusters Ranch sub-type dwelling.

The second outbuilding (Figure 47), oriented to the northwest, is located approximately 85 ft to the southwest of the residence on the edge of a slope. This single-story, one-bay (d), front-gabled frame outbuilding is clad in wood bead board siding, and the roof is sheathed in asphalt shingles. The roof extends forward beyond the façade wall plane, sheltering the entry. The single-leaf entry has a replacement nine-light door. The outbuilding also has a square window opening along its southwest elevation and exhibits exposed rafter tails.

NRHP Evaluation: Ineligible. The house associated with Site 67 is an unexceptional example of a mid-twentieth-century Linear-with-Clusters Ranch with numerous alterations, and it lacks extraordinary architectural details, such as those indicative of a particular architectural style. Alterations to the residence, including modifications to the façade porch, the addition to the southwest gable end, and the installation of replacement window sashes, have compromised its integrity of design, materials, and workmanship. The residence is not an outstanding example of a particular architectural type, period, or method of construction, and archival research indicated no association between Site 67 and events or persons of historical significance. Therefore, CRA recommends that Site 67 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A.

Figure 47. Site 67: front-gabled frame outbuilding located northwest of residence.

Site 69

KHC Survey #: CP 272

Photographs: Figures 48–51

Map: Figures 2a and 3a

Zone: 16

Quad: Newport, KY-OH 1983 (Photorevised 1987)

UTMs: E: 726186 N: 4323164

Property Address: 5322 Four Mile Road
Melbourne, KY 41059

Owner Information: N/A

Deed Book/Page: N/A

Construction Date: circa 1900–1924

Description: Site 69 (CP 272) consists of a residence and two outbuildings located on a 1.52-acre parcel on the southwest side of Four Mile Creek Road opposite Providence Trace Drive (see Figures 2a and 3a). The residence is oriented to the northeast and sits back less than 5 ft from the road. A graveled area is located on the shoulder of Four Mile Creek Road approximately 20 ft northwest of the house.

A residence is first depicted in the approximate location of Site 69 on the 1914 East Cincinnati, Ohio–Kentucky, 15-minute series topographic quadrangle. PVA records yielded no information regarding the property. However, based on the form of the residence, it was likely constructed during the first quarter of the twentieth century (USGS 1914).

The single-story, two-bay (d/w), gable-roofed frame residence (Figure 48) exhibits an L-shaped plan comprised of a front-gabled wing oriented perpendicular to Four Mile Creek Road with a shorter wing projecting parallel to the road from its northwestern elevation along a common façade plane. The house is clad in composite shingles and rests on a continuous stone foundation beneath a metal-panel roof.

Figure 48. Site 69 (CP 272): single-story, two-bay, gable-roofed frame residence.

A shed-roofed porch with replacement metal supports and a poured-concrete deck shelters the southeastern half of the façade, including a central single-leaf entry with a half-light wood-panel door (Figure 49). A window bay may have formerly been located to the left of the entry on the front-gabled portion of the façade. A shed-roofed porch is located on the rear elevation in the void between the two wings. Windows feature six-over-six-, one-over-one-, and two-over-one-light, double-hung wood sashes. An exterior brick chimney is located on the northwest gable end. To the right of the chimney is a bulkhead basement entry with metal doors.

A front-gabled concrete-block garage (Figure 50) is located approximately 60 ft northwest of the residence at the southwestern edge of the aforementioned graveled area. Twin vehicular bays on its northeast gable end have four-light segmented overhead doors. On its southeast elevation is a single-leaf pedestrian entry with an unglazed metal door that is sheltered beneath a corrugated-metal awning. Windows on the southeast and northwest elevations have one-by-one sliding metal sashes.

Approximately 100 ft northwest of the residence is a shed-roofed frame outbuilding (Figure 51). It is clad in prefabricated wood siding beneath a metal-panel roof. Windows on its east elevation have single six-light sashes, and a window on its north elevation is covered over with chicken wire.

NRHP Evaluation: Ineligible. The residence associated with Site 69 is an unexceptional example of an early-twentieth-century frame residence that lacks distinctive architectural details, such as those associated with a particular housing form, style, or construction method. Modifications to the residence, including a possible alteration to the façade fenestration, replacement of the façade porch supports, and application of replacement siding, have diminished its integrity of design, materials, and workmanship. The outbuildings associated with Site 69 are likewise lacking in both architectural significance and integrity. Archival research indicated no association between Site 69 and events or persons of historical significance. Consequently, CRA recommends that Site 69 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Figure 49. Site 69: façade elevation of residence.

Figure 50. Site 69: front-gabled concrete-block garage located northwest of residence.

Figure 51. Site 69: shed-roofed frame outbuilding located northwest of residence.

Site 70

KHC Survey #: CP 273

Photographs: Figures 52–54

Map: Figures 2a and 3a

Zone: 16

Quad: Newport, KY-OH 1983 (Photorevised 1987)

UTMs: E: 726363 N: 4323266

Property Address: 5333 Four Mile Road
Melbourne, KY 41059

Owner Information: Eda M. and Jacob J. Tape
P.O. Box 406
Silver Grove, KY 41085

Deed Book/Page: 217/75

Construction Date: circa 1951

Description: Site 70 (CP 273) (Figure 52) consists of a residence and associated carport located on a .81-acre parcel on the northeast side of Four Mile Creek Road immediately southeast of Providence Trace Drive (see Figures 2a and 3a). The residence is oriented to the southwest and sits back approximately .11 mi from the road. A gravel drive connects the property with Four Mile Road.

A residence is first depicted in the approximate location of Site 70 on the 1952 Newport, Kentucky-Ohio, 7.5-minute series topographic quadrangle. PVA records indicate that the residence associated with Site 70 was constructed circa 1951 (USGS 1952).

The single-story, three-bay (ww/d/www), gable-roofed frame residence (Figure 53) comprises approximately 1,216 sq ft of living space and has been significantly enlarged through the construction of multiple additions. It is clad in vinyl replacement siding and rests on a continuous pargeted foundation beneath an asphalt-shingle roof.

Figure 52. Site 70 (CP 273): east-southeasterly overview of property.

Figure 53. Site 70: single-story, three-bay, gable-roofed frame residence.

Comprising the northwestern corner of the dwelling's front-gabled façade projection is a recessed porch supported by a single boxed wood column atop a poured-concrete deck. The porch shelters the single-leaf façade entry, which features a three-light wood-panel door. Located to the right of the porch on the gable end of the façade projection is a tripartite picture window. A single-bay, gable-roofed frame garage addition projects from the northwest gable end of the main block. The vehicular bay on its southwest elevation features a two-light segmented overhead door. The main block has been extended to the southeast, and a gable-roofed addition projects from its southeast gable end (Figure 54). Windows have been fitted with replacement sashes, except for a window on the northwest gable end of the garage addition with two-over-two-light, double-hung wood sashes. An interior brick chimney with a corbelled top projects from the front roof slope at the junction of the main block and its southeasterly extension.

Located approximately 85 ft northwest of the residence is a metal carport (see Figure 52). The structure consists of a corrugated-metal-panel clad roof with slender metal supports.

NRHP Evaluation: Ineligible. The residence associated with Site 70 is an unremarkable example of a mid-twentieth-century frame residence that lacks distinctive architectural details, such as those associated with a particular architectural style. Modifications to the residence, including the construction of various additions, application of replacement siding, and installation of replacement window sashes, have compromised its integrity of design, materials, and workmanship. The carport associated with Site 70 does not appear to be 50 years of age. Archival research indicated no association between Site 70 and events or persons of historical significance. Consequently, CRA recommends that Site 70 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Figure 54. Site 70: façade and southeast elevations of residence.

Site 71

KHC Survey #: CP 274

Photographs: Figures 55–60

Map: Figures 2a and 3a

Zone: 16

Quad: Newport, KY-OH 1983 (Photorevised 1987)

UTMs: E: 726278 N: 4323051

Property Address: 5380 Four Mile Road

Melbourne, KY 41059

Owner Information: Anthony W. and Donna Vogel

5380 Four Mile Creek Road

Melbourne, KY 41059

Deed Book/Page: 255/536

Construction Date: circa 1900–1924

Description: Site 71 (CP 274) consists of a nineteenth-century farmstead located on a 98.68-acre parcel on the southwest side of Four Mile Creek Road approximately 420 ft southeast of the road's intersection with Providence Trace Drive (see Figures 2a and 3a). The building cluster associated with the farmstead is comprised of two residences, a bank barn, and two frame outbuildings situated on a terrace above Four Mile Creek. A gravel drive connects the property with Four Mile Road. Site 71 was surveyed from the public ROW.

A residence is first depicted in the approximate location of Site 71 on the 1914 East Cincinnati, Ohio–Kentucky, 15-minute series topographic quadrangle. According to property owner Donna Vogel, the three-bay (w/d/w), gable-roofed frame I-house (Figure 55) associated with the property was built in the late nineteenth century by German forebears of her husband, Anthony W. Vogel (personal communication 2012). The two-and-one-half-story, three-bay (ww/d/ww), hip-roofed, brick-clad residence (Figure 56) located approximately 25 ft northwest of the I-house is of early-twentieth-century construction. Census records list a 65-year-old widow named Margaret Vogel as a head-of-household residing in the Four Mile Pike area in 1930. Both of Vogel's parents were born in Germany. Living with her were her widowed daughter-in-law, Margaret, and two boys, Edward and Frank, sons of one of the women. Two Margaret Vogels, born in 1865 and 1897, are buried in St. Joseph's Cemetery (Site 122 [CP 62]) (Jensen and Moore 2012; USBC 1930; USGS 1914).

The I-house is clad in weatherboard siding and rests on a continuous stone foundation beneath a corrugated-metal-panel roof. Its central single-leaf façade entry features an unglazed wood-panel door and a single-light transom. Located at the base of its southeast gable end is a bulkhead basement entry with metal doors. Windows visible from the ROW retain their vertically-oriented two-over-two-light, double-hung wood sashes.

The stretcher-bond masonry of the later residence is suggestive of frame construction clad in a brick veneer. This dwelling rests on a continuous rusticated concrete-block foundation beneath a roof of asphalt shingles. A single-story, three-quarter-width, hip-roofed porch shelters the lower-level façade bays (Figure 57). The Craftsman-inspired porch features simple columns situated atop brick piers, which are set within a decorative brick balustrade, and a poured-concrete deck. The central, single-leaf façade entry consists of a half-light wood-panel door set behind an eight-light wood-panel storm door (Figure 58). A decorative enframement comprised of single-light sidelights and a full transom light surrounds the entry. Matching decorative moldings underlie the glazing on the door and sidelights. Windows visible from the ROW along Four Mile Road have one-over-one-light, double-hung replacement sashes. At the base of the southeast elevation is a bulkhead basement entry with metal doors. The dwelling's soffits and fascia boards have been reclad in aluminum. Hip-roofed dormers are centrally located on the northeast, southeast, and northwest roof slopes, and an interior brick chimney with a corbelled top projects from the rear roof slope.

Figure 55. Site 71 (CP 274): three-bay, gable-roofed frame I-house.

Figure 56. Site 71: two-and-one-half-story, three-bay, hip-roofed, brick residence with Craftsman-inspired details located northwest of I-house.

Figure 57. Site 71: façade elevation of residence located northwest of I-house.

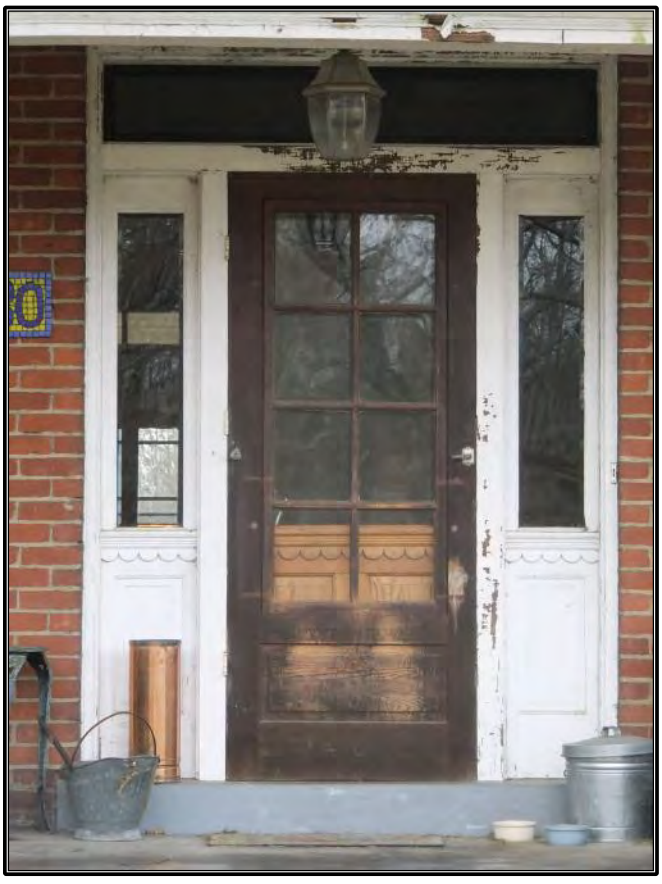


Figure 58. Site 71: façade entry detail on residence located northwest of I-house.

Approximately 130 ft south of the I-house is a frame bank barn (Figure 59). The barn is clad in vertical-board siding beneath a metal-panel roof. The eastern half of the barn rests on a continuous brick and concrete-block foundation and features a central vehicular bay with suspended sliding vertical-board doors on its north elevation, which is accessed via an earthen ramp. A basement-level window with a single multi-light sash is located on the east gable end. The western half of the barn, which appears to be of later construction, is supported by a continuous rusticated-block foundation with a single-leaf entry and several window bays on its north elevation. The entry features a Dutch door, and the windows have multi-light wood sashes. Above the lower-level entry is an inaccessible threshing bay with a suspended sliding vertical-board door.

A shed-roofed frame outbuilding (Figure 60, foreground) is located approximately 120 ft south of the I-house. Its walls are covered in wood latticework, and its roof is comprised of metal panels. A single-leaf pedestrian entry is located on the northwest elevation, and a frame and wire chicken coop projects from the southeast elevation.

Approximately 165 ft south of the I-house is a gable-roofed frame outbuilding (Figure 60, background). It is clad in vertical-board siding beneath a corrugated-metal-panel roof.

Aerial photographs indicate that another gable-roofed outbuilding was located approximately 100 ft southwest of the I-house. This outbuilding was razed sometime between August 2009 and July 2010.

NRHP Evaluation: Ineligible. I-houses represent a ubiquitous folk house form that has been well documented throughout Kentucky and the eastern United States (Montell and Morse 1976:32). Therefore, examples must demonstrate exceptional architectural merit in order to be considered eligible for inclusion in the NRHP under Criterion C. While the I-house associated with Site 71 retains a high degree of integrity with regard to design, materials, and workmanship, it lacks extraordinary architectural details that might otherwise increase its significance, such as those indicative of a particular style.

Like the I-house, the early-twentieth-century residence associated with Site 71 retains its historical integrity of design, materials, and workmanship but is architecturally unremarkable, exhibiting Craftsman-inspired porch details commonly applied to earlier and contemporaneous residences of various types. The craftsmanship of the façade entry is impressive but does not constitute architectural significance as defined under Criterion C. Alterations to the residence, including the installation of replacement window sashes and application of aluminum cladding to its soffits and fascia boards, have diminished its integrity of materials and workmanship.

The bank barn associated with Site 71 is an unremarkable representative of its type, several better examples of which are associated with NRHP-listed properties included in the German Settlement, Four Mile Creek Area TR. The addition to its western end has effectively doubled the footprint of the barn, thereby compromising its integrity of design. Furthermore, the foundation of the barn's original portion is constructed of brick and concrete-block rather than stone, indicating that either the barn is one of the area's later examples of the form or, more likely, that the original foundation was replaced.

Despite the property's association with the Vogel family, it lacks the manifestations of nineteenth-century German material culture exhibited by the contributing properties included in the German Settlement, Four Mile Creek Area TR. The bank barn is the only German vernacular building associated with Site 71, and as previously stated, alterations to the barn have compromised its historical integrity. Archival research indicated no association with other events or individuals of historical significance, including members of the Vogel family. Consequently, CRA recommends that Site 71 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Figure 59. Site 71: frame bank barn located south of I-house.

Figure 60. Site 71: frame outbuildings located south of I-house.

Site 72

KHC Survey #: CP 275

Photographs: Figures 61–68

Map: Figures 2a and 3a

Zone: 16

Quad: Newport, KY-OH 1983 (Photorevised 1987)

UTMs: E: 726634 N: 4323040

Property Address: 1000 St. Anne Drive
Melbourne, KY 41059

Owner Information: Sisters of Divine Providence
1000 St. Anne Drive
Melbourne, KY 41059

Deed Book/Page: 210/51

Construction Date: circa 1850–1875

Description: Site 72 (CP 275) is a nineteenth-century farmstead (Figure 61) associated with St. Anne Convent (CP 93). The farmstead, comprised of a residence, smokehouse, bank barn, and several later buildings, is located in a clearing within a wooded area on the southwestern portion of the 120-acre property on the northeast side of Four Mile Creek Road approximately .3 mi southeast of the road's intersection with Providence Trace Drive (see Figures 2a and 3a). It is accessed via gravel drives extending northward from Four Mile Road and southward from the convent.

St. Anne Convent was documented by KHC personnel during the 1979 countywide survey. However, the farm complex was not recorded despite its location on the convent property. KHC records indicate that the NRHP eligibility of St. Anne Convent has not yet been determined (KHC survey and NRHP files).

Figure 61. Site 72 (CP 275): farm complex associated with St. Anne Convent.

The farm is first depicted on the 1952 Newport, Kentucky-Ohio, 7.5-minute series topographic quadrangle, though the house foundation, smokehouse, and bank barn are clearly of mid- to late-nineteenth-century German vernacular construction. The Sisters of Divine Providence acquired the property in 1909 as a gift from Peter O'Shaughnessy and occupied the nineteenth-century residence of Peter Young (depicted in the 1883 county atlas) until construction of the main convent building (Figure 62) was completed in 1919. The nuns of St. Anne operated the farm for several years, according to Sister Marilyn Hoffman, who facilitated documentation of Site 72 (personal communication 2012). At the time of the field survey, a 10-acre parcel comprising the farm complex was up for sale (Griffing 1883:49; USGS 1952).

The APE for the proposed force main includes a slender 30-x-925 ft band of the 120-acre property located south-southwest of the farm complex along the northeast side of Four Mile Creek Road. This portion of the property is contained within the 10-acre parcel associated with the nineteenth-century farm and is located approximately .16 mi southwest of the convent complex. While Site 72 was utilized by the nuns of St. Anne Convent for a number of years during the twentieth century, the farmstead's earlier period of construction, tentative association with the convent complex, and isolated location on the southwestern portion of the property dissociate it from CP 93 both historically and spatially, as suggested by the farmstead's exclusion from previous documentation of the property. As such, only the farm parcel was documented for evaluation with regard to the proposed project.

The two-story, five-bay (www/d/w/w/w), single-pile, cross-gabled residence (Figure 63) is located at the northwestern end of the aforementioned clearing and is oriented to the southeast. Its exterior walls and roof are clad in replacement metal panels, and its rubble limestone foundation is exposed along the southwest and rear elevations (Figure 64). A shed-roofed porch with a continuous cast-concrete foundation spans the façade elevation. The southwestern portion of the porch has been enclosed, and the remainder has been screened in. An offset cross gable is located above the southwestern portion of the façade. The central, single-leaf façade entry has a replacement wood-panel door, as does a secondary single-leaf entry on the northeast gable end. Windows feature one-over-one-light, double-hung replacement sashes of various sizes, and the rear fenestration has been reconfigured. An exterior brick chimney is located on the northeast gable end, and immediately to its right is a metal flue encased in a metal-panel conduit.

Approximately 5 ft northeast of the residence is a mortared-stone smokehouse with a pyramidal roof (Figure 65). The smokehouse features a central single-leaf pedestrian entry with a replacement door on its southeast elevation and a replacement metal-panel roof.

A side-gabled frame and stone barn (Figure 66) is located approximately 55 ft southeast of the residence. Its walls are clad in vertical-board siding, and its roof is covered in metal panels. The barn is similar in construction and massing to German vernacular bank barns in the vicinity, exhibiting a raised rubble limestone foundation and pegged mortise-and-tenon frame; central vehicular bays with suspended sliding vertical-board doors on its southeast and northwest elevations; and single-leaf pedestrian entries with Dutch doors on the southeast, southwest, and northeast elevations of its foundation. Windows on the foundation feature six-over-six-light, double-hung wood sashes. Unlike other German vernacular barns in the area, however, this barn was not constructed in a banked configuration. Instead, all entries appear to access the barn's lower level. A cast-concrete pad and a wall segment are located to the left of the vehicular entry on the southeast elevation, and aerial photographs indicate that a cylindrical silo was removed from the southwest gable end sometime between May 2007 and October 2008.

Figure 62. CP 93: St. Anne Convent.

Figure 63. Site 72: two-story, five-bay, single-pile, cross-gabled residence.

Figure 64. Site 72: northeast and rear elevations of residence and stone smokehouse.

Figure 65. Site 72: southeast and northeast elevations of mortared-stone smokehouse located northeast of residence.

Figure 66. Site 72: side-gabled frame and stone barn located southeast of residence.

Located approximately 165 ft southeast of the residence is a front-gabled frame garage (Figure 67). The garage is clad in metal-panel siding and rests on a continuous concrete foundation beneath a corrugated-metal-panel roof. A vehicular bay with a segmented overhead metal door spans its northeast gable end.

Approximately 175 ft southeast of the residence is a side-gabled frame barn (see Figure 67). It is clad entirely in metal panels and rests upon a continuous concrete foundation. Three vehicular bays with metal panel doors are located on the barn's northwest elevation. To the right of the southwesternmost vehicular bay is a bulkhead basement entry with metal doors. A single-leaf loft bay with a replacement door is located in the northeast gable.

West of the aforementioned metal-clad barn is a low embankment supported on its western side by a horizontally-coursed dry-laid stone retaining wall (see Figure 67). The embankment likely contains a cistern.

Three mid- to late-twentieth-century ancillary buildings (Figure 68) are also associated with the farm complex. Located approximately 55 ft east-northeast of the residence is a front-gabled concrete-block outbuilding with a metal-panel roof. A central single-leaf pedestrian entry with an unglazed wood door is located on its northwest gable end. Windows feature one-over-one-light, double-hung wood sashes. Below each window bay is a narrow ventilation bay. According to Sister Marilyn Hoffman, the building was used to house pigs (personal communication 2012).

A second gable-roofed concrete-block outbuilding with a metal-panel roof (see Figure 68) is located approximately 110 ft east of the residence. It features an offset single-leaf pedestrian entry with a replacement door on its northeast elevation and windows with two-over-two-light, double-hung wood sashes on its southwest elevation.

Figure 67. Site 72: gable-roofed frame barn and garage located southeast of residence.

Figure 68. Site 72: mid- to late-twentieth-century ancillary buildings located northeast and east of residence.

Approximately 160 ft east of the residence is a shed-roofed outbuilding with a gable-roofed greenhouse extending from its southeast end (see Figure 68). The shed-roofed portion of the building is clad in metal-panel siding and rests on a formed-concrete foundation beneath a metal-panel roof. Single-leaf pedestrian entries with multi-light doors are located on its northeast and northwest elevations. This building appears to be of later construction than the two previously described concrete-block outbuildings.

NRHP Evaluation: Ineligible. Based on the architectural characteristics of the nineteenth-century residence, smokehouse, and barn associated with Site 72 (CP 93), the farmstead is apparently one of several German settlement properties located in the Camp Springs area, approximately 30 of which are included as contributing properties within the NRHP-listed German Settlement, Four Mile Creek Area TR. The rubble limestone masonry of the house foundation, smokehouse, and barn foundation is indicative of the local German vernacular building tradition, as are the formal characteristics of the smokehouse and barn.

Alterations to the residence, including construction of the façade porch, modifications to the rear fenestration, application of replacement siding, and installation of replacement doors and window sashes, have compromised its integrity of design, materials, and workmanship. Aside from the exposed sections of rubble limestone foundation on the southwest and rear elevations, the house is visually unrecognizable as a mid- to late-nineteenth-century German vernacular residence. The stone smokehouse is typical in form and execution of several such outbuildings associated with German settlement properties in the Four Mile Creek vicinity, but the replacement of its original door and roof has diminished its architectural integrity. The frame and stone barn is in many ways indicative of the German vernacular barns associated with settlement-era farmsteads in the area but doesn't exhibit the hillside construction that is a defining characteristic of their design.

The German vernacular buildings comprising the nineteenth-century farmstead associated with Site 72 retain their location and setting among the other German settlement properties in the Four Mile Creek Valley, but they otherwise lack the historical significance and integrity exhibited by neighboring NRHP-listed properties included in the German Settlement, Four Mile Creek Area TR. Furthermore, archival research yielded nothing to suggest that the farmstead played any more than a subsidiary role in the development or day-to-day operations of St. Anne Cathedral during the years of its association with the institution, nor did it reveal any associations between the property and other events or persons of historical significance. None of the buildings associated with the farmstead is an outstanding example of a particular architectural type, period, or method, and the modern outbuildings compromise the integrity of the farmstead as a whole. Therefore, CRA recommends that Site 72 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Site 73

KHC Survey #: CP 276

Photographs: Figures 69 and 70

Map: Figures 2a and 3b

Zone: 16

Quad: Newport, KY-OH 1983 (Photorevised 1987)

UTMs: E: 726894 N: 4322465

Property Address: 5659 Four Mile Road
Melbourne, KY 41059

Owner Information: Victor and Doris Brooks
Box 53D Gunkel Rd. #1
Melbourne, KY 41059

Deed Book/Page: 282/56

Construction Date: circa 1901

Description: Site 73 (CP 276) consists of a frame house and outbuildings situated on a

30.08-acre parcel on the east side of Four Mile Road approximately 182 ft north of its intersection with Grays Crossing (See Figures 2a and 3b). The residence sits approximately 237 ft from the ROW and is accessed from Four Mile Road via a gated gravel drive. The property was surveyed from the public ROW.

A residence is first depicted in the approximate location of Site 73 on the 1900 East Cincinnati, Ohio–Kentucky, 15-minute series topographic quadrangle (see Figure 10). PVA records indicated the residence was constructed in 1901 (USGS 1900).

The residence comprises approximately 1,408 sq ft of living space. It is oriented to the southwest and exhibits a one-and-one-half-story, three-bay (w/dd/w), single-pile, side-gabled form with a rear ell projection (Figure 69). It rests on a brick and stone foundation and is protected by a metal-panel roof with boxed eaves and cornice returns. The walls are sheathed in vinyl replacement siding. The façade is characterized by a central double-leaf entry fitted with louvered wood-panel doors. Flanking the entry are two-over-two-light, double-hung wood-sash windows. Located along the second level is a central cross gable featuring a single-leaf entry that leads to a small frame balcony. The balcony is enclosed with wood railings and shelters the primary entry below. It is supported by wood posts. The northwest elevation of the main block features a two-over-two-light, double-hung wood-sash window in the first level and a one-over-one-light, double-hung wood-sash window in the second level. The northeast elevation features an ell projection clad in vinyl replacement siding beneath a metal-panel roof that is pierced by a brick chimney along the ridgeline. The ell projection features a one-over-one-light, double-hung wood-sash window in the first level and a sliding-sash window in the upper level.

Located approximately 75 ft east of the residence and oriented to the southwest is a single-story, front-gabled, metal-clad barn/garage (Figure 70). From the public ROW it appears the barn/garage no longer retains portions of its wall cladding. Other details were indiscernible from the ROW.

Figure 69. Site 73 (CP 276): single-story, three-bay, side-gabled frame residence.

Figure 70. Site 73: easterly overview of property.

Approximately 30 ft to the southeast and oriented to the west is a single-story, side-gabled, metal-clad outbuilding (see Figure 70). Other details were indiscernible from the ROW due to overgrown vegetation.

NRHP Evaluation: Ineligible. The residence associated with Site 73 (CP 276) is a typical example of a one-and-one-half story, side-gabled frame residence with a rear ell, a vernacular building form constructed in rural Kentucky in the nineteenth and early twentieth centuries. The building exhibits architectural details, including a central cross gable and cornice returns, which are often applied to buildings of this type, but the detailing is not executed in a manner that would distinguish it as an exceptional example of the type or as a noteworthy example of a particular style. Additionally, the installation of vinyl replacement siding diminishes the integrity of design, materials, and workmanship of the historic house, thus rendering the dwelling ineligible for listing in the NRHP under Criterion C. The associated outbuildings appear to date later than the residence and are common types lacking architectural significance. Research indicated no association between Site 73 and events or persons of historic significance. Therefore, CRA recommends that Site 73 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Site 74

KHC Survey #: CP 277

Photographs: Figures 71–85

Map: Figures 2a and 3b

Zone: 16

Quad: Newport, KY-OH 1983 (Photorevised 1987)

UTMs: E: 726890 N: 4322244

Property Address: 5757 Four Mile Road

Melbourne, KY 41059

Owner Information: Dennis J. and Sue R. Heiert

5713 Four Mile Road

Melbourne, KY 41059

Deed Book/Page: 207/93

Construction Date: circa 1850–1874

Description: Site 74 (CP 277) is a nineteenth-century farmstead (Figure 71) located on a 1.97-acre parcel on the northeast side of Four Mile Road approximately 340 ft west-northwest of the road's intersection with Lower Tug Fork Road (see Figures 2a and 3b). The farm complex is situated on a terrace overlooking the Four Mile Creek Valley. Asphalt and gravel drives link the property with Four Mile Road.

The residence of a J. Wittman is depicted in the vicinity of Site 74 in the 1883 county atlas (see Figure 9). Census records indicate that Jacob Wittmann, a farmer and Hessian immigrant, was residing in the Alexandria precinct of Campbell County in 1870 along with his wife, Barbra, also a Hessian native, and their five children. The two oldest children, Lizzie and Susan, were born in Ohio, suggesting that the Wittmanns, like many other German families that immigrated to the region in the mid-nineteenth century, may have first settled in the Cincinnati area before relocating to the Four Mile Creek area. According to PVA records, the house was built circa 1873, which corresponds with the date engraved in the lintel above the smokehouse entry (Griffing 1883:45; USBC 1870).

The one-and-one-half-story, three-bay (w/d/w), gable-roofed frame residence comprises approximately 2,313 sq ft and exhibits an asymmetrical form suggestive of two parallel single-pile, cross-gabled dwellings oriented to the east and west and linked at the rear by a central ell (Figures 72 and 73). It is clad in aluminum replacement siding and rests on a continuous stone foundation beneath a metal-panel roof.

The south gable end of the dwelling's westernmost parallel wing projects from the façade plane. To the right of this projection, a shed-roofed porch with replacement wood supports shelters a single-leaf entry on the central ell and a window bay on the south gable end of the easternmost wing (Figure 74). Central entries beneath the cross gables of the two wings are conspicuously absent. Projecting from the rear elevation of the central ell and spanning the west elevation of the easternmost wing is an enclosed shed-roofed porch with a Craftsman-inspired stone balustrade (Figure 75). A single-leaf entry with a replacement storm door is located on the porch's rear elevation. Most of the house's windows have been fitted with one-over-one-light, double-hung replacement sashes. Exceptions include small upper-level windows with single-light replacement sashes on the east and west elevations and two windows with six-light wood sashes on the west elevation of the enclosed rear porch. The northernmost lower- and upper-level window bays on the east elevation have been enclosed. A bulkhead basement entry with metal doors is located beneath the southernmost window bay on this same elevation. Architectural ornamentation is limited to cornice returns on the gables.

Immediately to the rear of the residence is a mortared-stone smokehouse with a pyramidal roof (Figure 76). It features a central single-leaf entry with a vertical-board door on its east elevation. Engraved on the stone lintel above the entry are the name "Wittmann" and the year "1873" (Figure 77). The roof of the smokehouse is covered in asphalt shingles and features a louvered cupola. A shed-roofed frame addition connects the north elevation of the smokehouse to the south elevation of a shed-roofed frame privy. The addition is clad in board-and-batten siding and asbestos shingles. On its east elevation is a doorless single-leaf pedestrian entry. The privy is clad in prefabricated wood panels and features a single-leaf pedestrian entry with a vertical-board door on its east elevation.

Figure 71. Site 74 (CP 277): nineteenth-century farmstead.

Figure 72. Site 74: one-and-one-half-story, three-bay, gable-roofed frame residence.

Figure 73. Site 74: west elevation of residence.

Figure 74. Site 74: façade elevation of residence.

Figure 75. Site 74: rear elevation of residence.

Figure 76. Site 74: mortared-stone smokehouse located to rear of residence.

Figure 77. Site 74: detail of engraved stone lintel above smokehouse entry.

Flanking a sidewalk approximately 50 ft north of the residence is a pair of mortared-stone gateposts (Figure 78). The gateposts are of horizontally-coursed rough-cut rubble construction and feature pyramidal mortar caps.

A shed-roofed frame outbuilding (Figure 79) is located approximately 75 ft north of the residence. Its walls and roof are clad in corrugated-metal panels. On its southeast elevation is a single-leaf pedestrian entry with a corrugated-metal-panel door. Immediately south of the outbuildings is a poured-concrete cistern.

Approximately 100 ft north of the residence is a gable-roofed stone and frame outbuilding with a continuous mortared-stone foundation and a metal-panel roof (Figure 80). The outbuilding exhibits an L-shaped footprint. The southeastern portion of its longer wing is of rubble limestone construction and features a recessed southwest wall plane. A single-leaf pedestrian entry elevated slightly above grade is centrally located on its southwest elevation. To the right of the entry is a frame projection clad in vertical-board siding. An access bay with a hinged vertical-board door is located on the southwest elevation of the projection just above the foundation. On the southeast gable end of the building is a single window with a four-light metal sash. The remainder of the building is of frame construction clad in corrugated-metal, plywood, vertical-board, and board-and-batten siding. Located on the southwest elevation of the outbuilding's longer wing to the left of the stone section are a single-leaf pedestrian entry with a corrugated-metal-panel door and a doorless vehicular bay. On the southeast elevation of the shorter wing are a single-leaf pedestrian entry with a replacement half-light door and a garage bay with four-light segmented overhead metal door. A single window with a six-light wood sash is located on the southwest gable end of the shorter wing. Spanning the northwest elevation of the outbuilding is a shed-roofed frame projection. Located on the southwest end of the projection is a single-leaf entry with a half-light replacement door. Windows on its northeast and northwest elevations have six-light wood sashes. An interior brick chimney protrudes from the roof of the projection.

Figure 78. Site 74: mortared-stone gateposts located north of residence.

Figure 79. Site 74: shed-roofed frame outbuilding and cistern located north of residence.

Figure 80. Site 74: gable-roofed stone and frame outbuilding located north of residence.

A two-story, front-gabled frame outbuilding (Figure 81) is located approximately 110 ft east of the residence. It is clad in weatherboard siding and rests on mortared-stone foundation walls beneath a standing-seam metal roof. Like many German vernacular buildings in the area, this outbuilding exhibits hillside construction. Single-leaf entries with unglazed wood doors located on the outbuilding's northeast and southwest gable ends access its lower and upper levels, respectively. Paired upper-level windows on the southeast and northwest elevations have fixed single-light wood sashes. A dry-laid stone retaining wall extends in a south-southeasterly arc from the outbuilding's easternmost corner.

Located approximately 160 ft east-northeast of the residence is a German vernacular bank barn (Figure 82). The interior of the barn was not accessible, but based on architectural similarities with other such barns associated with German settlement properties in the Four Mile Creek area, it likely has a pegged mortise-and-tenon frame. It is clad in vertical-board siding and rests on a continuous mortared-stone foundation beneath a replacement metal-panel roof. A central vehicular bay with suspended sliding metal-panel replacement doors on the barn's northwest elevation accesses its upper level. Single-leaf pedestrian entries with vertical-board doors on the southwest elevation of the foundation provide lower-level access. A shed-roofed addition with a mortared-stone foundation spans the southeast elevation. Shed-roofed equipment shelters are located on the northwest elevation to the left of the aforementioned vehicular bay and on the northeast gable end (Figure 83). Located to the right of the equipment shelter on the northeast gable end is a shed-roofed wood-stave silo. Near the barn's westernmost corner is a poured-concrete cistern with a crank-operated pump.

A single-story, front-gabled frame granary (Figure 84) is located approximately 180 ft northeast of the residence. It is clad in vertical-board siding and supported by concrete-block piers beneath a standing-seam metal roof. A single-leaf pedestrian entry with an unglazed wood-panel door is located on its southeast gable end.

Figure 81. Site 74: two-story, front-gabled frame outbuilding located east of residence.

Figure 82. Site 74: bank barn located east-northeast of residence.

Figure 83. Site 74: northeast and northwest elevations of bank barn.

Figure 84. Site 74: gable-roofed frame granary located northeast of residence.

A dry-laid, horizontally-coursed stone retaining wall is located along the northeastern side of the asphalt drive south of the residence and along the western side of the gravel drive located to its east and southeast (Figure 85). Integrated mortared-stone steps lead upslope from the asphalt driveway to the residence. The retaining wall terminates at the easternmost corner of the aforementioned two-story, front-gabled frame outbuilding (see Figure 81). A second, much shorter stone retaining wall is located along the south side of the cistern west of the bank barn.

NRHP Evaluation: Ineligible. Site 74 is one of many mid- to late-nineteenth-century German settlement properties located in the Camp Springs vicinity, approximately 30 of which are included as contributing properties within the NRHP-listed German Settlement, Four Mile Creek Area TR. The farm was settled by Hessian immigrants Jacob and Barbra Wittmann, and several of its buildings, including the stone smokehouse; the gable-roofed stone and frame outbuilding located north of the residence; the two-story, front-gabled frame outbuilding located east of the residence; and the bank barn, are to varying degrees indicative of the local German vernacular building tradition. However, these buildings and the property as a whole lack the requisite integrity for listing in the NRHP, hence the exclusion of the farmstead from the NRHP-listed German Settlement, Four Mile Creek Area TR.

The farmhouse associated with Site 74 is an unremarkable example of a rural mid- to late-nineteenth-century frame dwelling and is not indicative of German vernacular residences in the Four Mile Creek area, which are typically two-story, double-pile, side-gabled buildings of rubble limestone construction. It is not representative of a particular type, period, or method of construction, and extensive modifications, including apparent changes to the fenestrations of the east and west elevations, construction of the façade and rear porches, application of replacement siding, and installation of replacement doors and window sashes, have compromised its historical integrity of design, materials, and workmanship.

Figure 85. Site 74: northerly overview of property depicting stone retaining wall located along asphalt and gravel drives.

The stone smokehouse is representative of a vernacular outbuilding form associated with many of the German settlement properties in the Four Mile Creek Valley, including several properties comprising the NRHP-listed German Settlement, Four Mile Creek Area TR. It is also the only such smokehouse with an engraved lintel observed during the field survey. However, alterations to the smokehouse, including its asphalt-shingle roof and, more noticeably, the frame addition connecting it with a nearby privy, have compromised its architectural integrity.

The bank barn is characteristic in form and construction of German vernacular barns associated with mid- to late-nineteenth-century farmsteads throughout the area. Nonetheless, its integrity of design, materials, and workmanship has been compromised through the construction of several additions and installation of replacement doors on its northwesterly vehicular bay.

The gable-roofed stone and frame outbuilding and the two-story, front-gabled frame outbuilding located north and east of the residence, respectively, are not representative of specific building forms, but both outbuildings exhibit architectural characteristics associated with the local German vernacular building tradition. The southeasternmost portion of the former and the foundations of both buildings are of rubble limestone construction, and the latter exhibits hillside construction. These two buildings lack architectural significance as well as integrity.

The buildings comprising Site 74 retain their location and setting among the other German settlement properties in the Four Mile Creek Valley but otherwise lack the historical significance and integrity exhibited by neighboring NRHP-listed properties included in the German Settlement, Four Mile Creek Area TR. Furthermore, archival research indicated no association between the property and other events or persons of historical significance, including the Wittmann family. None of the buildings associated with the farmstead is an outstanding example of a particular architectural type, period, or method. Therefore, CRA recommends that Site 74 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Site 75

KHC Survey #: CP 278

Photographs: Figures 86–88

Map: Figures 2a and 3b

Zone: 16

Quad: Newport, KY-OH 1983 (Photorevised 1987)

UTMs: E: 726975 N: 4322006

Property Address: 5849 Lower Tug Fork Road
Melbourne, KY 41059

Owner Information: Sharon H. Ivy and Leslie Mason
4 Cedar Crest Trail
Bahama, NC 27503

Deed Book/Page: 299/662

Construction Date: circa 1890

Description: Site 75 (CP 278) consists of a residence and outbuildings situated on a 43.49-acre parcel on the southeast side of Lower Tug Fork Road approximately .10 mi southwest of its intersection with Four Mile Road (see Figures 2a and 3b). The residence sits approximately 190 ft from the ROW and is accessed from Lower Tug Fork Road via a two-track gravel drive. The property was surveyed from the public ROW.

The residence of a Miss E. Tucker is depicted in the approximate location of Site 75 in the 1883 county atlas (see Figure 9). However, a search of census records yielded no information pertaining to this individual. PVA records indicate the residence associated with Site 75 was constructed circa 1890 (Griffing 1883:45).

The residence comprises approximately 1,666 sq ft of living space. It is oriented to the west and exhibits a one-and-one-half-story, three-bay (d/w/w), double-pile, side-gabled form (Figure 86). The frame residence rests on a brick and stone foundation and is protected by an

asphalt-shingle roof. The walls are clad in vinyl replacement siding. The façade is characterized by gable-oriented projection with an integral lean-to. Windows along the façade projection have one-over-one-light, double-hung vinyl sashes. Located at the northernmost end of the façade is a single-leaf entry with a modern replacement door. The entry is sheltered by a shed-roof porch, which is supported by wrought-iron columns set upon a concrete deck. The south elevation features a shed-roofed porch supported by wrought-iron columns set upon a concrete deck. Due to the distance from the public ROW, other details of the residence were indiscernible.

Situated approximately 50 ft southwest of the residence and oriented to the northwest is a single-story, single-bay, front-gabled concrete-block garage (Figure 87). The garage features a single vehicular entry with a metal-panel roller door.

Located approximately 328 ft west-southwest of the residence and oriented to the northwest is a single-story, single-bay, front-gabled frame corn crib or granary (Figure 88). The outbuilding is protected by a metal-panel roof and is clad with evenly-spaced vertical boards. The off-center single-leaf entry features a hinged vertical-board door. Situated to the north-northeast of the outbuilding are the remnants of a stone foundation.

NRHP Evaluation: Ineligible. The residence associated with Site 75 (CP 278) lacks notable architectural elements indicative of a particular type or style. Additionally, the façade projection alters the original plan of the house, and the house features replacement siding, windows, and doors, thus compromising its integrity of design, materials, and workmanship and rendering it ineligible for listing in the NRHP under Criterion C. The associated outbuildings are representative of common types and lack significant architectural features that would qualify them as individually eligible for listing in the NRHP under Criterion C. The loss of the building that used to sit on the stone foundation compromises the setting, feeling, and association of the property, which does not retain adequate historical resources or exhibit historical land use patterns to qualify it for listing as a rural historic landscape. Research revealed no associations between Site 75 and events or persons of historical significance. Consequently, CRA recommends that Site 75 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Figure 86. Site 75 (CP 278): one-and-one-half-story, three-bay, side-gabled frame residence.

Figure 87. Site 75: single-story, front-gabled concrete-block garage located southwest of residence.

Figure 88. Site 75: single-story, front-gabled corncrib or granary and remnants of stone foundation located west-southwest and west of residence, respectively.

Site 76

KHC Survey #: CP 279

Photographs: Figure 89

Map: Figures 2a and 3b

Zone: 16

Quad: Newport, KY-OH 1983 (Photorevised 1987)

UTMs: E: 727176 N: 4321988

Property Address: 5878 Four Mile Road
Melbourne, KY 41059

Owner Information: Dorothy Saverbeck and Regina Murphy
5878 Four Mile Road
Melbourne, KY 41059

Deed Book/Page: 294/598

Construction Date: circa 1953

Description: Site 76 (CP 279) consists of a residence situated on a 22.25-acre parcel located on the south side of Four Mile Road approximately .16 mi southeast of its intersection with Lower Tug Fork Road (see Figures 2a and 3b). The residence sits approximately 244 ft from the ROW and is accessed from Four Mile Road via a two-track gravel drive. A small residential concrete slab bridge carries the drive over Four Mile Creek. The property was surveyed from the public ROW.

A residence is first depicted in the approximate location of Site 76 on the 1952 Newport, Kentucky-Ohio, 7.5-minute series topographic quadrangle. PVA records indicate the residence was constructed circa 1953 (USGS 1952).

The residence comprises approximately 810 sq ft of living space. It is oriented to the northeast and exhibits a one-and-one-half-story, three-bay (w/w/www), double-pile, cross-gabled form (Figure 89). The dwelling rests on a continuous concrete foundation, is protected by an asphalt-shingle roof that is pierced by an exterior brick chimney along the northwest roof slope, and has walls clad in aluminum siding. The façade is characterized by a partial-width recessed porch supported by square wood posts that rest upon a concrete deck. The walls protected by the porch are clad in vertical vinyl siding and stone veneer. The porch shelters a single-leaf entry, which allows access into the cross-gabled portion of the façade. Windows along the façade feature replacement vinyl sashes. The southeast and northwest elevations feature one-over-one-light, double-hung vinyl-sash windows. The northwest elevation features a gabled dormer in the second level. The southwest elevation features a shed-roof addition.

NRHP Evaluation: Ineligible. The residence associated with Site 76 lacks significant architectural details that are indicative of a particular style. Additionally, the installation of vinyl replacement windows and the presence of the rear shed-roofed addition diminish its integrity of design, materials, and workmanship. Thus, the residence is not an outstanding example of an architectural type, style, or method of construction. The concrete slab bridge associated with the property is a small residential bridge type that lacks significant architectural details that would elevate its significance to make it worthy of inclusion in the NRHP under Criterion C. Furthermore, research revealed no associations between Site 76 and events or persons of historical significance. Therefore, CRA recommends that Site 76 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Figure 89. Site 76 (CP 279): one-and-one-half-story, three-bay, cross-gabled frame residence.

Site 78

KHC Survey #: CP 281

Photographs: Figure 90

Map: Figures 2a and 3b

Zone: 16

Quad: Withamsville, OH-KY 1983 (Revised 1992)

UTMs: E: 727460 N: 4321895

Property Address: 5973 Four Mile Rd.
Melbourne, KY 41059

Owner Information: Christopher Fuchs
5973 Four Mile Rd.
Melbourne, KY 41059

Deed Book/Page: 222/319

Construction Date: 1951

Description: Site 78 consists of a residence located at 5973 Four Mile Road approximately .11 mi. northwest of its intersection with Cardinal Trail. It is situated on a grassy, approximately .57-acre lot that slopes gently upward from the road before rising steeply into a wooded area. A prefabricated shed is also associated with the property. It is located to the rear of the residence. Site 78 is first depicted on the 1953 Withamsville, OH-KY topographic quadrangle. PVA records indicate that the house was built circa 1951 (USGS 1953b).

The residence is a one-and-one-half-story, two-bay (w/ww) frame residence oriented to the southeast (Figure 90). It is situated on a concrete-block foundation beneath an asphalt-shingle roof. The residence is constructed into the hillside so that the front portion of the foundation is exposed. It is clad with vinyl siding. The residence comprises approximately 1,305 sq ft of living space.

Figure 90. Site 78 (CP 281): northerly view of residence.

The main entry is not visible from the ROW. It appears to be located on the rear elevation of the residence. Windows consist of one-over-one, double-hung replacement sashes. The façade windows are sheltered beneath metal awnings. A side-gabled dormer extends from the center of the roof. A sliding sash window is located at the center of the dormer. It is also sheltered beneath a metal awning. A one-story shed-roof addition is attached to the southwest (side) elevation. It is clad with the same wall and roof material as the primary portion of the residence. Paired sliding sash windows are located at the center of the northwest and southwest elevations of the addition.

A garage bay is located at the western corner of the façade foundation. It has been enclosed with particle board. Glass block windows are located at the northern corners of the façade and northeast elevations.

NRHP Evaluation: Ineligible. The residence associated with Site 78 appears to be a highly modified example of an American Bungalow or American Small House, two common forms dating to the first half of the twentieth century. Given its current condition, its original appearance is unclear. The addition of replacement siding and windows, the reconfiguration of the primary entry, and the construction of a side addition have compromised the structure's integrity of design, materials, and workmanship. Research also indicated no association between Site 78 and events or persons of historical significance. Consequently, CRA recommends that Site 78 is not eligible for inclusion in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A.

Site 82

KHC Survey #: CP 285

Photographs: Figure 91

Map: Figures 2a and 3b

Zone: 16

Quad: Withamsville, OH-KY 1983 (Revised 1992)

UTMs: E: 727554 N: 4321629

Property Address: 6056 Four Mile Rd.
Melbourne, KY 41059

Owner Information: Leonard and Charlene Beck
6024 Four Mile Rd.
Melbourne, KY 41059

Deed Book/Page: 253/228

Construction Date: 1948

Description: Site 82 consists of a residence located at 6056 Four Mile Road approximately .06 mi south of its intersection with Cardinal Lane. It is situated on a level, primarily grassy approximately 1.01-acre lot. An asphalt drive leads from the road to the residence, which is oriented to the east. Site 82 is first depicted on the 1961 Withamsville, OH-KY topographic quadrangle.

The residence is a one-and-one-half story, three-bay (w/d/w), side-gabled frame house with a front-gabled extension (Figure 91). It is situated beneath an asphalt-shingle roof and clad with stucco. The foundation material is not visible. The residence comprises approximately 1,440 sq ft of living space.

The central façade entry consists of an aluminum screen door. It opens onto a concrete-block porch. The front-gabled extension above the porch is supported by tapered, wood porch posts. A brick knee wall runs the perimeter of the porch. The asymmetrically arranged flanking windows consist of one-over-one, double-hung aluminum and vinyl sashes. Another entry is located at the eastern corner of the south (side) elevation. It consists of a metal screen door sheltered beneath a metal awning. It opens onto a poured-concrete stoop.

Figure 91. Site 82 (CP 285): northwesterly view of residence.

A side-gabled garage is attached to the southern corner of the rear elevation. It is clad with the same wall and roof material as the residence, except for the front elevation, which is clad with drop siding.

NRHP Evaluation: Ineligible. The residence located at Site 82 is an undistinguished building form that lacks the architectural significance or integrity necessary to warrant NRHP eligibility under Criterion C. It is not of a specific style or significant design, nor does it appear to represent a significant or early construction method. The installation of replacement window sashes has diminished the dwelling's integrity of design, materials, and workmanship. Research indicated no association between Site 82 and events or persons of historical significance. Consequently, CRA recommends that Site 82 is not eligible for inclusion in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A.

Site 83

KHC Survey #: CP 286

Photographs: Figure 92

Map: Figures 2a and 3b

Zone: 16

Quad: Withamsville, OH–KY 1996

UTMs: E: 727684 N: 4321603

Property Address: 6037 Four Mile Road
Melbourne, KY 41059

Owner Information: Nancy A. and Barone Kremer
6037 Four Mile Road
Melbourne, KY 41059

Deed Book/Page: 284/773

Construction Date: circa 1937

Description: Site 83 (CP 286) (Figure 92) consists of an American Bungalow and associated outbuildings situated on a 26.2-acre parcel located on the east side of Four Mile Road approximately 132 ft south of its intersection with Cardinal Trail (see Figures 2a and 3b). The residence sits approximately 222 ft from the ROW and is accessed from Four Mile Road via a two-track gravel drive. Despite multiple attempts, CRA personnel were unable to secure permission to access the property, which is largely obscured from view along the ROW by dense vegetation.

A residence is first depicted in the approximate location of Site 83 on the 1953 Withamsville, Ohio–Kentucky, 7.5-minute series topographic quadrangle. PVA records indicate the residence was constructed circa 1937 (USGS 1953b).

The residence comprises approximately 1,984 sq ft of living space. It is oriented to the west and exhibits a three-bay (w/d/w) American Bungalow form. The frame dwelling rests on a concrete-block foundation, is protected by an asphalt-shingle roof that is pierced by an exterior brick chimney on the eastern slope, and has walls clad in brick veneer. The façade is characterized by a full-width porch supported by brick posts. Situated in the second level is a gabled dormer. Windows feature one-over-one-light, double-hung vinyl replacement sashes and occur singly and in pairs. The north elevation features a garage addition. The south and rear elevations also feature additions.

Three outbuildings are associated with the property. Located approximately 123 ft northwest of the residence is a two-story, side-gabled frame barn/stable, and situated approximately 170 ft northeast of the residence is a single-story, shed-roof frame garage. These two outbuildings appear to be of late-twentieth-century construction. Approximately 257 ft southeast of the residence is a third frame outbuilding, the details of which were indiscernible from the ROW.

Figure 92. Site 83 (CP 286): southeasterly overview of property.

NRHP Evaluation: Ineligible. The American Bungalow associated with Site 83 is an unremarkable example of its type, which occurs ubiquitously in both rural and suburban areas throughout Kentucky and the United States. The residence lacks distinctive architectural details, such as those associated with the Craftsman style. Furthermore, its three major additions and the installation of replacement doors and window sashes have compromised its integrity of design, materials, and workmanship. Additionally, research indicated no associations between Site 83 and events or persons of historical significance. Consequently, CRA recommends that Site 83 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Site 84

KHC Survey #: CP 287

Photographs: Figures 93–102

Map: Figures 2a and 3b

Zone: 16

Quad: Withamsville, OH–KY 1996

UTMs: E: 727488 N: 4321364

Property Address: 6122 Four Mile Road
Melbourne, KY 41059

Owner Information: Donald and Kelli A. Bricking
5083 Gary Lane
Cold Springs, KY 41076

Deed Book/Page: 288/204

Construction Date: circa 1850

Description: Site 84 (CP 287) is a nineteenth-century farmstead (Figure 93) located on a 16.23-acre parcel on the west side of Four Mile Road approximately .18 mi south of its intersection with Cardinal Trail (see Figures 2a and 3b). The residence sits approximately .11 mi from the ROW and is accessed from Four Mile Road via a gravel drive. A mortared-stone watercourse (Figure 94) contains an unnamed tributary of Four Mile Creek between the driveway and Four Mile Road.

Figure 93. Site 84 (CP 287): nineteenth-century farmstead.

Figure 94. Site 84: mortared-stone watercourse located between driveway and Four Mile Road.

The residence of an H. Schnabel is depicted in the approximate location of Site 84 in the 1883 county atlas (see Figure 9). Census records indicate that German immigrants Henry and Barbra Schnabel and their five Kentucky-born children were residing in the Alexandria precinct of Campbell County in 1870. Henry (Heinrich) Schnabel, a farmer, was interred at St. John's Church Cemetery in 1915. According to PVA records, the house was built circa 1850 (Griffing 1883:45; Jensen and Moore 2012; USBC 1870).

The residence comprises approximately 1,482 sq ft of living space. It is oriented to the northeast and exhibits a one-and-one-half-story, four-bay (w/w/d/w), single-pile, side-gabled form (Figure 95). According to property owner Donald Bricking, the main block of the house and the single-story shed-roofed addition on its rear elevation (Figure 96) are of log and stone construction, respectively (personal communication 2012). However, the southeasternmost portion of the main block appears to be a frame addition. The residence is clad in aluminum replacement siding beneath a metal-panel roof. Its main block is supported by a continuous pargeted foundation. A portion of rubble limestone masonry comprising the rear addition is visible below the siding on the rear elevation of the residence.

A single-story, front-gabled porch with replacement decorative metal supports and a poured-concrete deck shelters the single-leaf façade entry, which features a wood replacement door set behind an aluminum storm door. A secondary entry on the shed-roofed rear addition has a three-light wood-panel door, and a single-leaf basement entry on the southeast gable end has a vertical-board door. Lower-level windows have horizontally-oriented two-over-two-light, double-hung wood sashes, and those located on the façade are flanked by decorative louvered shutters. Smaller upper-level windows have one-over-one-light, double-hung sashes of unknown material. Pargeted interior chimneys project from the rear roof slope of the main block and from the roof of the addition. A well or cistern with a replacement wood cap and a crank-operated pump is located immediately northeast of the façade porch (see Figure 95).

A front-gabled frame privy and a frame kindling shed (Figure 97) are located approximately 60 ft north-northwest of the residence. The privy is clad in vertical-board siding beneath an asphalt-shingle roof and features a single-leaf entry with a vertical-board door. The sides and roof of the kindling shed are clad in metal panels.

Approximately 35 ft west of the residence is a front-gabled concrete-block garage (Figure 98). Twin vehicular bays on its southwest gable end feature three-light segmented overhead wood doors. A single-leaf pedestrian entry with a four-light wood-panel door is located near the northeast end of the southeast elevation (Figure 99). Windows on the northeast, southeast, and northwest elevations of the garage have one-by-one-light sliding metal sashes.

A gable-roofed frame bank barn (Figure 100) is located approximately 70 ft west-southwest of the residence. It is clad in vertical-board siding and rests on a continuous mortared-stone foundation beneath a replacement metal-panel roof. The upper level of the barn is accessed via a central vehicular bay with suspended sliding vertical-board doors on its northwest elevation. Lower-level access is gained through a pedestrian entry on the northeast elevation of the foundation. A frame equipment shed addition spans the southwest gable end, and a gable-roofed concrete-block addition projects from the southeast elevation beneath a Palladian window of recent installation (Figure 101). Cast-concrete and mortared-stone retaining walls are located immediately southwest of the gable-roofed addition.

Located approximately 230 ft southwest of the residence is a front-gabled frame barn with flanking sheds (Figure 102). Aerial photographs indicate that the barn was constructed between August 2009 and July 2010.

Figure 95. Site 84: one-and-one-half-story, four-bay, single-pile, side-gabled log residence.

Figure 96. Site 84: rear elevation of residence.

Figure 97. Site 84: front-gabled frame privy and frame kindling shed located north-northeast of residence.

Figure 98. Site 84: front-gabled concrete-block garage located west of residence.

Figure 99. Site 84: northeast and southeast elevations of garage.

Figure 100. Site 84: frame bank barn located west-southwest of residence.

Figure 101. Site 84: southeast and southwest elevations of bank barn.

Figure 102. Site 84: early-twenty-first-century barn located southwest of residence.

NRHP Evaluation: Ineligible. Site 84 is one of many mid- to late-nineteenth-century German settlement properties located in the Camp Springs vicinity, approximately 30 of which are included as contributing properties within the NRHP-listed German Settlement, Four Mile Creek Area TR. The farm was settled by German immigrants Henry and Barbra Schnabel, and the residence and bank barn are indicative of the local German vernacular building tradition. However, these buildings and the property as a whole lack the requisite integrity for listing in the NRHP, hence the exclusion of the farmstead from the NRHP-listed German Settlement, Four Mile Creek Area TR.

The log and stone farmhouse associated with Site 84 is atypical of the residences generally associated with German settlement properties in the Four Mile Creek vicinity, which are conventionally two-story, double-pile, side-gabled buildings of rubble limestone construction. However, its hillside construction and the rubble-limestone construction of the rear addition are denotative of German vernacular building techniques. Modifications to the residence, including construction of the existing façade porch, application of replacement siding, installation of replacement window sashes and the façade door, and pargeting of the foundation, have compromised its historical integrity of design, materials, and workmanship.

The bank barn is characteristic in form and construction of German vernacular barns associated with mid- to late-nineteenth-century farmsteads throughout the area. Nonetheless, the additions to its southeast and southwest elevations and the installation of the Palladian window have compromised its integrity of design, materials, and workmanship.

The remaining outbuildings are typical examples of well-documented building types that lack architectural significance. Neither the garage nor the circa 2009 barn contribute to the farmstead's integrity as a mid-nineteenth-century German settlement property.

The buildings comprising Site 84 retain their location and setting among the other German settlement properties in the Four Mile Creek Valley but otherwise lack the historical significance and integrity exhibited by neighboring NRHP-listed properties included in the German Settlement, Four Mile Creek Area TR. Furthermore, archival research indicated no association between the property and other events or persons of historical significance, including the Schnabel family. None of the buildings associated with the farmstead is an outstanding example of a particular architectural type, period, or method. Consequently, CRA recommends that Site 84 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Site 95

KHC Survey #: CP 72

Photographs: Figures 103–109 and 111

Maps: Figures 2b and 3b

Zone: 16

Quad: Withamsville, OH–KY 1996

UTMs: E: 727793 N: 4321124

Property Address: 6231 Four Mile Road
Melbourne, KY 41059

Owner Information: Kenneth and Elissa Plattner
6231 Four Mile Road
Melbourne, KY 41059

Deed Book/Page: 140/646

Construction Date: 1852

Description: The John Weber Farm (Site 95 [CP 72]) (Figure 103) is an NRHP-listed property comprised of a mid-nineteenth-century Italianate-influenced residence and dependencies located on a 14.66-acre parcel on the northeast corner of the intersection of Four Mile and Eight Mile Roads (see Figures 2b and 3b). The property is situated on the

Four Mile Creek floodplain and is accessed via a concrete driveway that extends eastward from Four Mile Road, circumscribing the residence. The residence is oriented to the west.

Site 95 was previously documented by KHC personnel during the 1979 countywide survey. In 2007, the John Weber Farm was listed in the NRHP under Criterion A for its association with German ethnic heritage and was added to the group of properties included in the 1983 German Settlement, Four Mile Creek Area TR. Ramler subsequently evaluated the building in his suggested preservation and design guidelines for the Camp Springs area (Daniels 2007:8-1; KHC, survey and NRHP files; Ramler 2010:57).

The John Weber residence is depicted in the 1883 county atlas (see Figure 9). Weber, a German immigrant, established one of two mid-nineteenth-century dairy farms located in the Camp Springs area. Andrew Ritter, a Bavarian stonemason and Camp Springs resident, oversaw construction of the house, which began in 1852, according to Daniels. The Weber family owned and operated the dairy farm into the 1940s. Comprising between 118 and 136 acres in its prime, the farm was significantly larger than neighboring farms in the Four Mile Creek Valley. Subsequent owners parceled off various sections of the property, reducing it to its current acreage (Daniels 2007:7-1–7-2, 8-3; Griffing 1883:45).

The two-story, double-pile, five-bay (w/w/d/w/w), hip-roofed residence comprises approximately 1,908 sq ft and exhibits architectural elements associated with the Italianate style, including a low-pitched roof with projecting eaves, cornice lines characterized by large brackets and a broad band of paneled trim, and bracketed crowns above the façade windows (Figure 104). It is of 7:1 common-bond brick construction and rests on a mortared-stone foundation beneath a roof of multi-colored slate shingles. According to previous research, the bricks of which the house was constructed were produced using locally quarried clay and were fired on-site, and the basement features a vaulted limestone ceiling (Daniels 2007:7-2; Ramler 2010:57).

Figure 103. Site 95 (CP 72): John Weber Farm.

Figure 104. Site 95: two-story, double-pile, five-bay, hip-roofed brick residence with Italianate-style details.

The recessed façade entry features a replacement door, and its original surround has been altered to accommodate a replacement transom. Replacement one-over-one-light, double-hung wood window sashes were installed after a 1996 fire (Ramler 2010:57). The two-story porch with squared columns that shelters the central three façade bays was added in 1958 and is crowned with a balustrade similar to that of a widow's walk atop the roof of the main block. (Daniels 2007:7-2; Ramler 2010:57). Extending from the northern portion of the rear elevation is a two-story, gable-roofed brick ell (Figure 105). A secondary single-leaf entry with a half-light wood-panel door is located on the ell's north elevation. Spanning the remainder of the rear elevation is a single-story, hip-roofed brick addition. Interior brick end chimneys project from the north and south roof slopes of the main block and the gable end of the rear ell.

A mortared-fieldstone smokehouse with a pyramidal roof (Figure 106) is located approximately 35 ft east of the residence. On its north elevation is a central, single-leaf pedestrian entry with a solid batten door. Louvered vents are located above the entry and on the south and west elevations. The roof of the smokehouse is covered in bi-colored slate shingles and features a spired cupola. A brick chimney protrudes from the east roof slope.

Approximately 70 ft east-northeast of the residence is a timber-frame bank barn with a fieldstone foundation (Figure 107). It features a pegged mortise-and-tenon frame and is clad in asbestos siding beneath a replacement metal-panel roof. The upper level of the barn is accessed via a central vehicular bay with a segmented overhead garage door on its west elevation, and its lower level is accessed via pedestrian and livestock bays with wood-panel doors on its south gable end (Figure 108). Windows feature both wood and metal sashes, and most have been painted over. Three louvered, hip-roofed cupolas are located atop the barn's roof ridge. Situated at the barn's southwest corner is a cistern with a crank-operated pump.

Figure 105. Site 95: rear elevation of residence.

Figure 106. Site 95: stone smokehouse located east of residence.

Figure 107. Site 95: bank barn located east-northeast of residence.

Figure 108. Site 95: south gable end of barn.

A pair of mortared-stone retaining walls is also associated with the property. One is located southeast of the cistern and terminates at the barn's southwestern corner (see Figure 108), and the other is located along the northern bank of Four Mile Creek near the property's southwest corner (Figure 109). Both retaining walls are of horizontally-coursed construction.

Two non-contributing frame run-in barns are located in the pastures east of the residence. According to Daniels, both were constructed circa 1985 (Daniels 2007:7-3).

NRHP Evaluation: Listed. In 2007, the John Weber Farm (Site 95) was listed in the NRHP under Criterion A for its association with German ethnic heritage and was added to the group of properties comprising the 1983 German Settlement, Four Mile Creek Area TR. The NRHP boundary for the property is depicted in Figure 110 and includes the entire 14.66-acre parcel on which Site 95 is located.

No apparent alterations have been made to the property's contributing resources—the residence, smokehouse, bank barn, and cistern—since its nomination for listing in the NRHP. As such, the John Weber Farm retains the aspects of its integrity that convey its historical significance as a mid-nineteenth-century German settlement property in the Camp Springs area, including its original location, rural setting in proximity to contemporaneous German settlement properties in the area, and association with German immigrants John Weber and Andrew Ritter (Daniels 2007:7-3–7-4).

Determination of Effect: No Adverse Effect. As depicted in Figure 110, a portion of the proposed force main measuring approximately 520 ft in length is to be located within the NRHP boundary for Site 95 along the east side of Four Mile Road and approximately 170 ft northwest of the residence. This portion of the force main coincides with a line of young trees located along the west side of the pasture to the north of the primary building cluster (Figure 111). This tree line is less than 50 years old and does not appear to have been installed as a soil stabilization measure. Additionally, an air release valve is to be located on the proposed force main within the NRHP boundary, approximately 445 ft north-northwest of the residence.

Figure 109. Site 95: mortared-stone retaining wall along northern bank of Four Mile Creek.

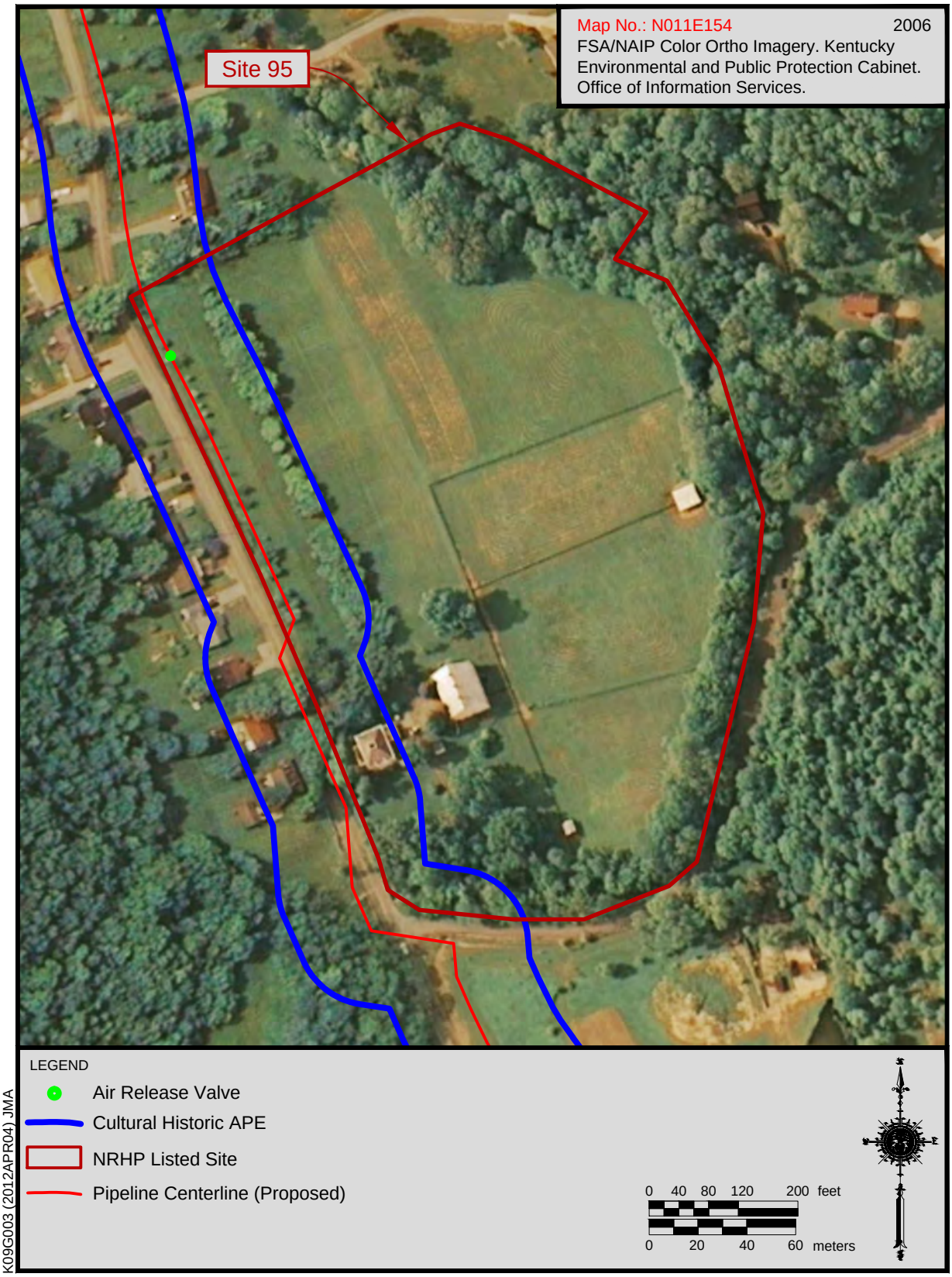


Figure 110. Site 95: aerial photograph depicting NRHP boundary in relation to APE.

Figure 111. Site 95: southeasterly overview of tree line along western property boundary.

Potential effects to be considered with regard to Site 95 include construction noise, odors associated with the aforementioned air release valve, mortar-joint damage, tree removal, and force main system failure. These potential effects have been addressed by SD1 in the project design as summarized in Section II of this report and outlined in Appendix A: Assessment of Adverse Effects.

Pertaining specifically to potential adverse effects within the NRHP boundary for Site 95, measures have been taken in designing the proposed force main to mitigate the potential for odors, including minimizing the potential for air accumulation in the line; venting released air through the ground where it is scrubbed, rather than directly into the atmosphere; and installing and routinely maintaining chemical-impregnated carbon canisters at all entries. Additionally, no blasting will be conducted within 200 linear ft of the historic structures associated with Site 95, thereby minimizing the potential for mortar-joint damage. If permission is granted by the property owner, pre-blast inspections and seismographic monitoring will be conducted in conjunction with construction activities. Such monitoring will be conducted by a pre-approved consultant specializing in blasting and construction vibrations. If potentially-damaging seismic levels resulting from project-related construction are detected, or if damage to NRHP-listed resources is noted, blasting will cease immediately, and the KHC will be notified and engaged in consultation to address said issues. Based on project mapping provided by GRW Engineers, Inc., it appears that installation of the force main will require removal of the aforementioned tree line. These young trees do not directly contribute to the NRHP eligibility of Site 95, and SD1 plans to replace the trees as outlined in Appendix A, resulting in no lasting impact to the setting of the property. Thus, assuming that the steps outlined are implemented to minimize effects to this historic property, CRA recommends a No Adverse Effect determination for Site 95.

Site 96

KHC Survey #: CP 298

Photographs: Figures 112–117

Map: Figures 2b and 3b

Zone: 16

Quad: Withamsville, OH-KY 1983 (Revised 1992)

UTMs: E: 727797 N: 4320908

Property Address: 6306 Four Mile Rd.
Melbourne, KY 41059

Owner Information: Matthew Hackman
6078 Saddle Ridge Dr.
Burlington, KY 41005

Deed Book/Page: 260/86

Construction Date: 1900

Description: Site 96 (CP 298) consists of a residence and summer kitchen, outbuilding, cistern, retaining wall, and bridge located at 6306 Four Mile Road approximately .1 mi south of its intersection with Eight Mile Road. The residence is situated at the end of a gravel drive approximately 288 ft from the ROW. The structures are situated on a partially wooded, approximately 2.98-acre lot amidst rolling hills. Four Mile Creek runs along the road near the eastern property boundary. The Campbell County PVA record dates the residence to 1900. However, Site 96 is first depicted on the 1883 Atlas of Boone, Kenton and Campbell Counties, Kentucky, as belonging to William Uthe, a German immigrant and original owner of the Camp Springs House, a stagecoach stop, tavern, and inn. Based on the structure form and design, it appears to date to circa 1875–1899.

The residence is a two-story, three-bay (w/d/w), single-pile, side-gabled frame house oriented to the northeast (Figure 112). It is situated on a rubble limestone foundation beneath an asphalt shingle roof. The house is constructed into the hillside so that the eastern portion of the foundation is exposed. The majority of the foundation has been repointed. It is clad with aluminum siding. The residence comprises approximately 1,664 sq ft of living space.

Figure 112. Site 96 (CP 298): three-bay, gable-roofed I-house.

The slightly off-center façade entry consists of an ornate wood paneled door with a single light (Figure 113). The door is ornamented with a carved wreath and torch. The window frame is carved to resemble fluted pilasters with Ionic capitals beneath a denticulated cornice. The door is surrounded by a decorative wood frame with carved corner blocks. A three-light wood transom window is located above. The entry opens onto a partial-width wood porch. The porch is supported by the rubble foundation. The shed-roof porch is supported by wood posts. A wood railing runs the perimeter of the porch. Windows consist of one-over-one, double-hung vinyl sashes. A wood-paneled door is located slightly off-center within the façade foundation. It is flanked by a sidelight that has been partially enclosed with vertical board. An interior brick chimney extends from the slope of the northwest corner of the roof.

A shed-roof addition is attached to the southern half of the rear elevation. It is clad with the same wall and roof material. An entry consisting of a French door with a transom window is located at the northern corner of the rear elevation of the addition.

A summer kitchen is located approximately 5 ft southwest of the residence. It is a one-story, side-gabled rubble limestone structure oriented to the southeast (Figure 114). It was originally oriented to the northeast toward the residence, but the orientation has been changed because it is now connected to the residence via a front-gable frame addition. An entry is located at the center of the southeast elevation. It consists of a non-historic wood paneled door with six lights. An interior brick chimney extends above the roof peak at the southwest end of the roof.

An outbuilding is located approximately 30 ft southeast of the residence (Figure 115). The structure exhibits the general form of front-gabled mortared-stone smokehouses associated with other German settlement properties in the area. It is a one-story, front-gabled frame structure oriented to the northeast. It is situated on a rubble limestone foundation beneath a standing-seam metal roof. The rear elevation is clad with horizontal board. It is constructed into the hillside so that the northern and eastern portions of the foundation are visible. The entry located at the center of the front elevation consists of a recessed door set partially within the foundation wall. Two window openings are located above the entry beneath the gable. Another entry is located at the center of the rear elevation. It consists of a hinged vertical-board door.

A cistern is located approximately 54 ft southeast of the residence (Figure 116). It is a circular structure capped by a rectangular stone. The area surrounding the cistern is covered with grass. Two mortared-stone retaining walls create a stepped slope.

The reinforced-concrete slab and steel girder bridge is located approximately 30 ft south of the ROW (Figure 117). It crosses Four Mile Creek and forms a portion of the driveway leading to the residence. The decking is comprised of the reinforced-concrete slab. The slab appears to have been replaced. It is supported by three steel girders. The bridge is situated on mortared-stone abutments that have been reinforced with cast-concrete caps.

NRHP Evaluation: Ineligible. Site 96 is one of many mid- to late-nineteenth-century German settlement properties located in the Camp Springs vicinity, approximately 30 of which are included as contributing properties within the NRHP-listed German Settlement, Four Mile Creek Area TR. The farm was settled by German immigrant William Uthe, and several of its buildings, including the residence, summer kitchen, and smokehouse, are to varying degrees indicative of the local German vernacular building tradition. However, as a whole, the property lacks the requisite integrity for listing in the NRHP, hence the exclusion of the farmstead from the NRHP-listed German Settlement, Four Mile Creek Area TR.

Figure 113. Site 96: detail of façade entry on I-house.

Figure 114. Site 96: rear elevation of residence.

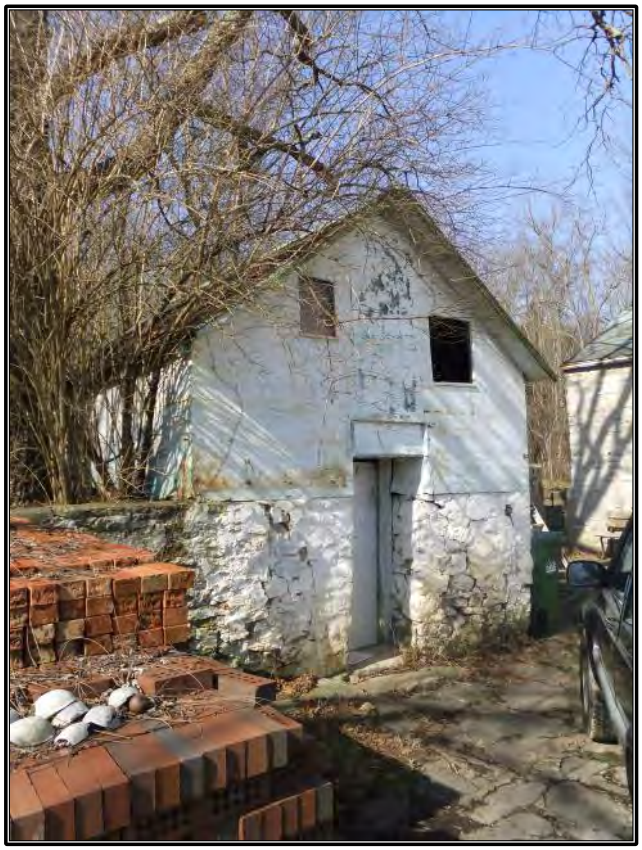


Figure 115. Site 96: mortared-stone outbuilding located southeast of residence.

Figure 116. Site 96: cistern and retaining wall located southeast of residence.

Figure 117. Site 96: reinforced-concrete slab and steel girder bridge.

Although the residence exhibits hillside construction and a rubble limestone foundation, it does not display the two- or two-and-one-half-story, double-pile, side-gabled massing typical of the finest examples of German vernacular architecture in the Camp Springs area. Instead, the basic house form appears typical of rural architecture found throughout Kentucky. Additionally, the addition of replacement siding, windows, and doors have compromised the house's integrity of design, materials, and workmanship. The outbuilding has also been significantly altered from its original state.

Concrete girder bridges may be considered significant if they represent an example from the early twentieth century or if they possess engineering or historical significance, such as association with major infrastructure projects or significant and expansive public works programs (Parsons Brinckerhoff 2005: 3-94). The bridge located at Site 96 is a driveway bridge and cannot be traced to the transportation plans of the state highway department. Additionally, very little historic bridge material remains.

The buildings comprising Site 96 retain their location and setting among the other German settlement properties in the Four Mile Creek Valley but otherwise lack the historical significance and integrity exhibited by neighboring NRHP-listed properties included in the German Settlement, Four Mile Creek Area TR. Although the property is associated with William Uthe, a Prussian immigrant and local entrepreneur, it is neither the most significant nor best preserved site associated with this individual. Site 98, the NRHP-listed Camp Springs house, is more representative of Uthe's significance within the Camp Springs community. Research indicated no association between Site 96 and any other events or persons of historical significance. Consequently, CRA recommends that Site 96 is not eligible for inclusion in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A.

Site 98

KHC Survey #: CP 71

Photographs: Figures 118–122

Maps: Figures 2b and 3b

Zone: 16

Quad: Withamsville, OH–KY 1996

UTMs: E: 728030 N: 4320845

Property Address: 6361 Four Mile Road
Melbourne, KY 41059

Owner Information: John, Jr., and Carolyn Allender
6361 Four Mile Road
Melbourne, KY 41059

Deed Book/Page: 239/393

Construction Date: circa 1860

Description: The Camp Springs House (Site 98 [CP 71]) (Figure 118) is an NRHP-listed property located on a 2.76-acre parcel on the east side of Four Mile Road approximately .17 mi southeast of its intersection with Eight Mile Road (see Figures 2b and 3b). Situated on the Four Mile Creek floodplain, the building sits back approximately 10 ft from the ROW along Four Mile Road and is oriented to the west. An asphalt driveway encircles the building, connecting it with Four Mile Road. Four Mile Circle, a residential street with mid-twentieth-century residences located along its north, east, and west sides, circumscribes the property. CRA personnel surveyed Site 98 from the ROW along Four Mile Road and Four Mile Circle.

KHC staff documented the Camp Springs House during the 1979 countywide survey, and it was listed in the NRHP in 1983 as a contributing property within the German Settlement, Four Mile Creek Area TR. The property was included in Ramler's 2010 suggested preservation and design guidelines for the Camp Springs area (Gordon 1982; KHC survey and NRHP files; Ramler 2010:52–53).

Constructed in the early 1860s, the Camp Springs House is depicted as the property of William Uthe in the 1883 county atlas (see Figure 9). Uthe, a Prussian native, developed the property for use as a tavern, inn, and residence. Uthe's son August operated a post office out of the building, and it has since served as a grocery, café, mid-twentieth-century tavern, and bed-and-breakfast (Griffing 1883:45; KHC survey and NRHP files; Ramler 2010:52).

The three-story, five-bay (w/d/w/w/w), double-pile, side-gabled building (Figure 119) comprises approximately 4,500 sq ft of floor space. Its hillside construction, rubble limestone masonry, segmental-arched window bays, and tooled cornerstones are characteristic of the German vernacular building tradition that defines the historical built environment of the Camp Springs area. A single-story, gable-roofed stone ell extends from the southern portion of the rear elevation, and a vaulted cellar accessed via the lower level of the building is located in the hillside to the rear (Ramler 2010:52). The roof of the building is clad in asphalt shingles, and an exterior concrete-block chimney is located on its south gable end.

The Camp Springs house has undergone a number of alterations since it was listed in the NRHP in 1979. A single-story, shed-roofed porch with boxed wood supports now spans the façade, and the primary entry is sheltered within a frame and glass enclosure. Below the porch roof, the façade is clad in cedar board-and-batten siding. A single-story, gable-roofed concrete-block addition projecting from the north gable end of the main block has been enlarged, and a single-story, shed-roofed frame addition spans the rear elevation north of the aforementioned stone ell (Figure 120). Windows feature vinyl one-over-one-light, double-hung replacement sashes with metal grids.

Figure 118. Site 98 (CP 71): Camp Springs House.

Figure 119. Site 98: façade and south elevations of Camp Springs House.

Figure 120. Site 98: north and rear elevations of Camp Springs House.

Three outbuildings (Figure 121) are associated with Site 98. Located approximately 25 ft east of the Camp Springs House is a front-gabled stone garage. KHC records indicate that the garage was once a smokehouse; however, its form and massing are not consistent with those of other stone smokehouses in the Camp Springs area. Appended to its east elevation is a dilapidated gable-roofed frame garage clad in corrugated siding. Both garages feature doorless vehicular bays on their north gable ends and asphalt-shingle roofs. A gable-roofed frame and concrete-block picnic shelter located approximately 45 ft east-southeast of the main primary building was constructed sometime after the property was surveyed by KHC personnel in 1979 (KHC survey and NRHP files).

Three stone retaining wall remnants (Figure 122) were observed along the perimeter of the property. All three are of dry-laid, horizontally-coursed construction and are highly fragmented.

NRHP Evaluation: Listed. The Camp Springs House (Site 98) was listed in the NRHP in 1983 as one of approximately 30 properties included in the German Settlement, Four Mile Creek Area TR. The NRHP boundary for the property is depicted in Figure 123 and includes both the Camp Springs House and the associated stone garage.

Alterations to the building since its listing include the expansion of the existing northerly concrete-block addition, construction of the rear addition and façade porch, application of board-and-batten siding to the lower portion of the façade, and installation of vinyl replacement window sashes. While similar modifications to a building of more general historical significance might compromise its integrity, in the case of the Camp Springs House—a mid-nineteenth-century German vernacular tavern and inn associated with a rural ethnic enclave situated within an otherwise Anglo-American cultural landscape—these changes must be considered within a more specific context.

Figure 121. Site 98: outbuildings located east and east-southeast of Camp Springs House.

Figure 122. Site 98: one of three stone retaining wall fragments associated with the property.

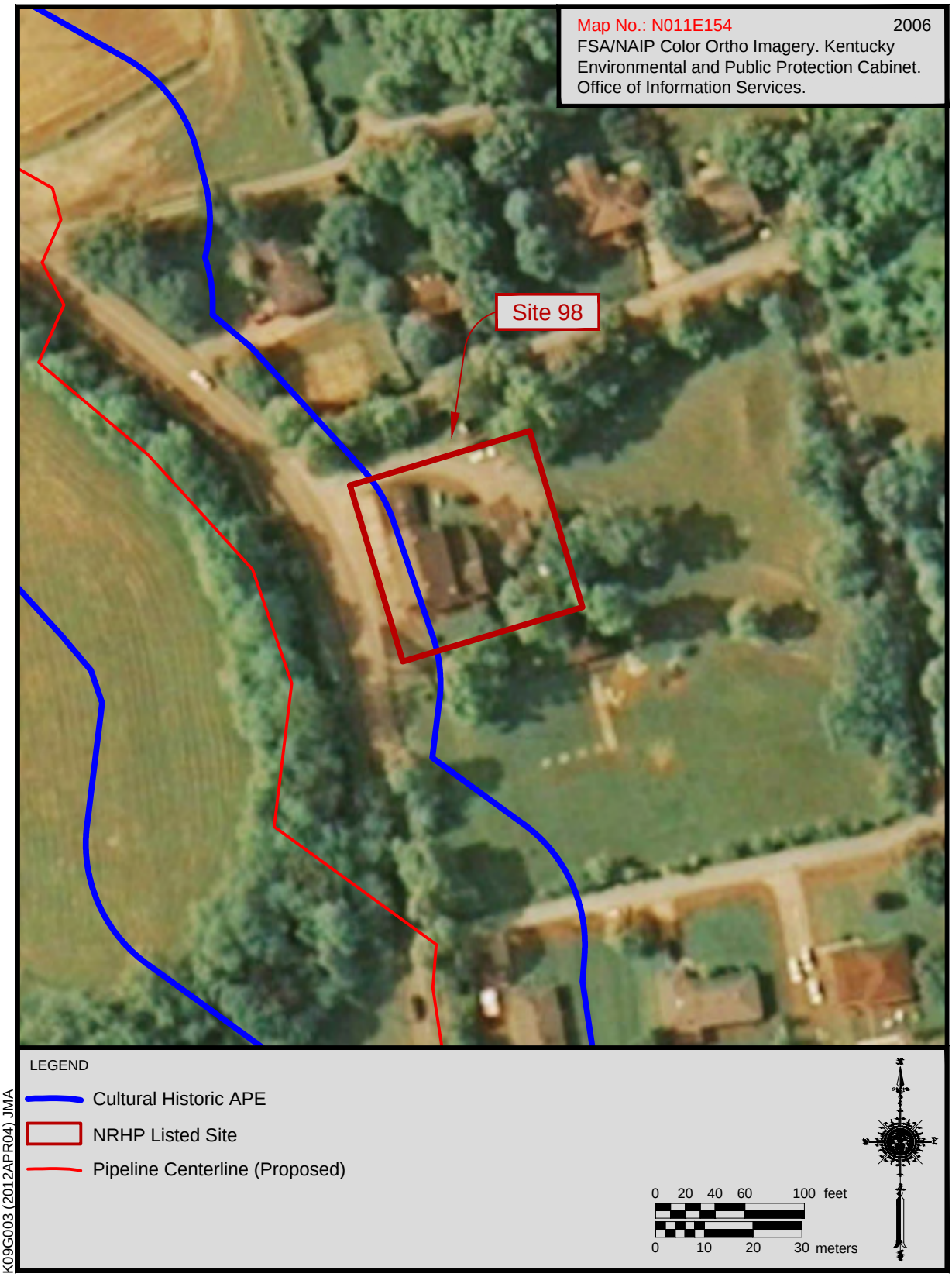


Figure 123. Site 98: aerial photograph depicting NRHP boundary in relation to APE.

The aforementioned modifications to the Camp Springs House have not affected the aspects of its integrity that denote its association with mid-nineteenth-century German settlement in the Four Mile Creek area, specifically its location on Four Mile Road, the settlement's principal thoroughfare; its setting within the Four Mile Creek Valley in proximity to more than two dozen concurrent German settlement properties; the attributes of its construction that are demonstrative of its association with the local German vernacular building tradition, including its form and massing, hillside construction, rubble limestone masonry, segmental-arched window bays, tooled cornerstones, and vaulted cellar; and its association with Prussian immigrant and local entrepreneur William Uthe.

Determination of Effect: No Adverse Effect. The proposed force main is to be located across the road and across the creek from this site. It will come within approximately 125 ft of the Camp Springs House (Site 98) at its closest point (see Figure 123) and will have no direct effects on this NRHP-listed property. The nearest air release valve associated with the force main is to be located .32 mi northwest of Site 98 at Site 95.

Potential indirect effects to be considered with regard to Site 98 include construction noise, mortar-joint damage, and force main system failure. These potential effects have been addressed by SD1 in the project design, as summarized in Section II of this report and outlined in Appendix A. With regard to mortar-joint damage specifically, the route of the proposed force main has been designed to avoid Site 98, and no blasting will be conducted within 200 linear ft of the historic structures associated with the property, thereby minimizing the potential for mortar-joint damage. If permission is granted by the property owner, pre-blast inspections and seismographic monitoring will be conducted in conjunction with construction activities. Such monitoring will be conducted by a pre-approved consultant specializing in blasting and construction vibrations. If potentially-damaging seismic levels resulting from project-related construction are detected, or if damage to NRHP-listed resources is noted, blasting will cease immediately, and the KHC will be notified and engaged in consultation to address said issues. Thus, assuming that the steps outlined are implemented to minimize effects to this historic property, CRA recommends a No Adverse Effect determination for Site 98.

Site 100

KHC Survey #: CP 301

Photographs: Figure 124

Map: Figures 2b and 3b

Zone: 16

Quad: Withamsville, OH-KY 1996

UTMs: E: 727993 N: 4320624

Property Address: undetermined

Owner Information: undetermined

Deed Book/Page: undetermined

Construction Date: unknown

Description: Site 100 (CP 301) consists of a segment of dry-laid stone fence situated in a stand of trees on the west side of Four Mile Road between its intersections with Eight Mile Road and Nine Mile Road (see Figures 2b and 3b). The fence (Figure 124) sits back approximately 150 ft from the ROW and is not associated with any other standing structures. CRA was unable to obtain permission to access the property, so the fence was surveyed from the public ROW.

The stone fence may be associated with the property of Wg. Sh. identified on the 1883 map of the Alexandria Precinct (see Figure 9). Due to the lack of extant buildings and other evidence, this association could not be confirmed, and the actual date of construction of the fence is unknown (Griffing 1883:45).

The dry-laid stone fence is constructed of surface limestone like that employed for the foundations of several of the early German buildings identified in the project APE. The fence is sagging and collapsing in areas, obscuring its original coursing. It does not appear to feature the distinctive coping or other features typical of stone fencing in the Bluegrass region. Extending from the east end of the fence is a berm measuring approximately 3 ft high, 10 inches wide, and 25 ft long.

Figure 124. Site 100 (CP 301): overview of Site 100. Note the fence line visible within the stand of trees.

NRHP Evaluation: Ineligible. Site 100 is a common example of stone fencing that lacks distinctive design features and does not exhibit the exceptional workmanship associated with significant examples of the type in central Kentucky. The stone fence is surrounded by overgrown vegetation, is in deteriorated condition, and is unassociated with any other extant historic resources; thus, it lacks integrity of setting, design, workmanship, and association. Archival research indicated no association between Site 100 and events or persons of historical significance. Therefore, CRA recommends that Site 100 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Site 101

KHC Survey #: CP 302

Photographs: Figures 125–131

Map: Figures 2b and 3b

Zone: 16

Quad: Withamsville, OH–KY 1996

UTMs: E: 728094 N: 4320609

Property Address: 6435 Four Mile Road
Melbourne, KY 41059

Owner Information: Joseph J., Jr., and Victorian Heeb
6435 Four Mile Road
Melbourne, KY 41059

Deed Book/Page: 104/247

Construction Date: circa 1850–1874

Description: Site 101 (CP 302) is a nineteenth-century farmstead (Figure 125) located on a 28.58-acre parcel on the east side of Four Mile Road approximately .21 mi north-northwest of the road's intersection with Nine Mile Road (see Figures 2b and 3b). The farm complex is situated low on the westerly slope of a ridge spur just above the Four Mile Creek floodplain and is delineated from the pasture areas to its north and east by post-and-wire fencing. The residence sits back approximately 60 ft from the road and is oriented to the west. A gravel drive connects the property with Four Mile Road.

Figure 125. Site 101 (CP 302): nineteenth-century farmstead.

The A. Futscher residence is depicted in the vicinity of Site 101 in the 1883 county atlas (see Figure 9). Census records indicate that Austrian immigrants Alois and Eva Futscher, their four children, and two boarders were residing in the Eight Mile precinct of Campbell County in 1870. Alois Futscher was a blacksmith. The Futschers' two oldest children, Josephine and Andrew, were born in Ohio, suggesting that the Futschers, like many other German families that immigrated to the region in the mid-nineteenth century, may have first settled in the Cincinnati area before relocating to the Four Mile Creek area. According to PVA records, the house was built circa 1851 (Griffing 1883:45; USBC 1870).

The two-story, five-bay (w/w/d/w/w), double-pile, side-gabled frame residence (Figure 126) comprises approximately 1,872 sq ft of living space. It is clad in vinyl replacement siding and exhibits a metal-shingle roof. PVA records indicate that the foundation, which was not visible, is of masonry construction. A single-story, gable-roofed frame ell projects from the southernmost portion of the rear elevation (Figure 127).

A single-story, hip-roofed porch with replacement turned wood supports and a poured-concrete deck shelters the central three façade bays. The single-leaf façade entry features a replacement door and a two-light wood transom. Spanning the north elevation of the rear ell is an enclosed shed-roofed frame porch. Secondary entries on the rear elevations of the main block and the enclosed porch have half-light wood-panel doors. Projecting from the north elevation is a gable-roofed frame vestibule that shelters a basement entry. All four entries have metal storm doors. Most of the dwelling's windows feature one-over-one-light, double-hung replacement sashes, and those located on the façade and north and west gable ends are flanked by decorative louvered shutters. Lower-level picture windows with fixed single-light sashes have been installed on the north elevation of the enclosed rear porch and on the rear elevation of the main block. An exterior brick chimney is centrally located on the south gable end, and an interior brick end chimney projects from the roof ridge of the rear ell.

Figure 126. Site 101: two-story, five-bay, double-pile, side-gabled frame residence.

Figure 127. Site 101: north and rear elevations of residence.

Located approximately 60 ft north of the residence is a side-gabled frame outbuilding (Figure 128). It is clad in vinyl replacement siding beneath a metal-panel roof. On its east elevation is a single-leaf entry with an unglazed wood-panel door. Windows on all four of its elevations have single-light wood sashes.

A timber-frame bank barn (Figure 129) is located approximately 55 ft north of the residence and immediately east of the aforementioned outbuilding. It features a pegged mortise-and-tenon frame clad in vertical-board siding beneath a standing-seam metal roof. The western portion of the barn rests on a raised mortared-stone foundation, and its central and eastern portions are supported by a continuous poured-concrete foundation. A single-leaf pedestrian entry with a vertical-board door is located on the south elevation of the stone foundation near the west gable end. A double-leaf vehicular bay with suspended sliding vertical-board doors is centrally located on the barn's south elevation, and to its right, on what appears to be an easterly extension of the barn's main block, is a garage bay with a segmented overhead door. A cantilevered shed roof shelters the garage bay. Metal-clad equipment sheds project from the barn's north and east elevations.

Approximately 40 ft east of the residence is a gable-roofed frame granary (Figure 130). It is clad in vertical-board siding beneath a corrugated-metal-panel roof and rests on a series of ceramic or cast-concrete pipe segments. An offset single-leaf pedestrian entry located on its north gable end features a vertical-board door, as do loading bays on its west elevation. A pair of square vents have been cut into the siding beneath the south gable.

Immediately east of the granary is a frame shed clad in vertical-board siding beneath a metal-panel roof (see Figure 130). A single-leaf pedestrian entry with a vertical-board door is located on its south elevation.

A second frame shed (Figure 131) is located approximately 80 ft southeast of the residence. Its exterior walls and roof are covered in metal panels, and a vehicular bay on its south elevation features hinged corrugated-metal-panel doors.

Figure 128. Site 101: side-gabled frame outbuilding located north of residence.

Figure 129. Site 101: timber-frame bank barn located north of residence.

Figure 130. Site 101: granary, frame shed, and pole barn located east of residence.

Figure 131. Site 101: frame shed and pole barn located southeast and east-southeast of residence, respectively.

Two gable-roofed pole barns (see Figures 130 and 131) are also associated with the property. Both appear to be of late-twentieth-century construction.

NRHP Evaluation: Ineligible. Site 101 is one of many mid- to late-nineteenth-century German settlement properties located in the Camp Springs vicinity, approximately 30 of which are included as contributing properties within the NRHP-listed German Settlement, Four Mile Creek Area TR. However, of the buildings associated with Site 101, only the bank barn is indicative of the local German vernacular building tradition. Both the barn and the farmstead as a whole lack the requisite integrity for listing in the NRHP, hence the exclusion of Site 101 from the NRHP-listed German Settlement, Four Mile Creek Area TR.

The farmhouse associated with Site 101 is an unremarkable example of a rural mid- to late-nineteenth-century frame dwelling and is not representative of German vernacular residences in the Four Mile Creek area, which are typically two-story, double-pile, side-gabled buildings of rubble limestone construction. It is not an outstanding example of a particular type, period, or method of construction, and extensive modifications, including alterations to the façade porch, enclosure of the rear porch, changes to the fenestration of the rear elevation, application of replacement siding, and installation of replacement façade door and window sashes, have compromised its historical integrity of design, materials, and workmanship.

While the bank barn is certainly of German vernacular construction, its overall form is somewhat of a deviation from that of other such barns in the area. Rather than having two vertically-separated levels accessed via vehicular and pedestrian entries on adjacent elevations, this barn features what appears to be a sunken western end, which is accessed through a pedestrian entry located to the left of the vehicular bay on the south elevation. Multiple additions to the easternmost portion of the barn have compromised its integrity of design, materials, and workmanship. The remaining outbuildings associated with Site 101 are typical examples

of well-documented building forms that lack architectural significance.

The buildings comprising Site 101 retain their location and setting among the other German settlement properties in the Four Mile Creek Valley but otherwise lack the historical significance and integrity exhibited by neighboring NRHP-listed properties included in the German Settlement, Four Mile Creek Area TR. Furthermore, archival research indicated no association between the property and other events or persons of historical significance, including the Futscher family. None of the buildings associated with the farmstead is an outstanding example of a particular architectural type, period, or method. As a result, CRA recommends that Site 101 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A.

Site 103

KHC Survey #: CP 304

Photographs: Figure 132

Map: Figures 2b and 3b

Zone: 16

Quad: Withamsville, OH-KY 1983 (Revised 1992)

UTMs: E: 728129 N: 4320527

Property Address: 6481 Four Mile Rd.
Melbourne, KY 41059

Owner Information: Carol Futscher
6481 Four Mile Rd.
Melbourne, KY 41059

Deed Book/Page: 276/869

Construction Date: 1925

Description: Site 103 consists of a residence located at 6481 Four Mile Road approximately .14 mi northwest of its intersection with Nine Mile Road. It is situated on a grassy lot atop a hill on an approximately .43-acre lot. A fence comprised of chicken wire forms the northern property boundary. A concrete driveway leads from the road to the rear of the residence. Site 103 is first depicted on the 1953 Withamsville, OH-KY topographic quadrangle.

The residence is a one-story, three-bay (w/d/w), front-gabled frame house oriented to the southwest (Figure 132). It is situated on a pressed-concrete-block foundation beneath an asphalt-shingle roof. It is clad with vinyl siding. The residence comprises approximately 952 sq ft of living space.

The slightly off-center façade entry consists of a wood paneled door that opens onto a full-width wood porch. The hipped porch roof is supported by fluted columns. A railing runs the perimeter of the porch. Cast-concrete steps lead up to the porch at its center. The area beneath the porch is fronted by wood latticework. Windows consist of one-over-one, double-hung vinyl sashes flanked by louvered shutters. An interior brick chimney extends from the roof peak at the center of the roof.

Another entry is located at the eastern corner of the southeast (side) elevation. It consists of a multi-light wood paneled door set behind a storm door. It opens onto a single-bay porch. The hip-roof porch is supported by fluted columns.

NRHP Evaluation: Ineligible. The residence located at Site 103 is an undistinguished building form that lacks the architectural significance or integrity necessary to warrant NRHP eligibility under Criterion C. It is not of a specific style or significant design, nor does it appear to represent a significant or early construction method. The addition of replacement siding and windows has compromised the residence's integrity of design, materials, and workmanship. Furthermore, research indicated no association between Site 103 and events or persons of historical significance. Therefore, CRA recommends that Site 103 is not eligible for inclusion in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A.

Figure 132. Site 103 (CP 304): northeasterly view of residence.

Site 104

KHC Survey #: CP 305

Photographs: Figures 133–141

Map: Figures 2b and 3b

Zone: 16

Quad: Withamsville, OH–KY 1996

UTMs: E: 727906 N: 4320372

Property Address: 6486 Four Mile Road
Melbourne, KY 41059

Owner Information: Michael and Myra Harris
6486 Four Mile Road
Melbourne, KY 41059

Deed Book/Page: 298/213

Construction Date: circa 1850–1874

Description: Site 104 (CP 305) is a nineteenth-century farmstead (Figure 133) located on a 24.01-acre parcel on the west side of Four Mile Road approximately .13 mi north-northwest of the road's intersection with Nine Mile Road (see Figures 2b and 3b). The farm complex sits approximately .15 mi west of Four Mile Road and is situated at the eastern base of a ridge spur just west of Four Mile Creek. A long gravel drive connects the group of buildings with Four Mile Road.

Although the PVA records date the residence to 1900, the Wm. Amburger property is depicted in the vicinity of Site 104 in the 1883 county atlas (see Figure 9). Census records indicate William Amburger, a farmer, and his family were living in the Hayfield precinct of Campbell County in 1900. Amburger could not be identified in earlier census records. Amberger was born in 1841 in Ohio to German parents, suggesting that the Amburgers, like many other German families that immigrated to the region in the mid-nineteenth century, may have first settled in the Cincinnati area before relocating to the Four Mile Creek area (USBC 1900). William Amburger and several of his relatives are buried in the St. Joseph's Roman Catholic Church cemetery in Camp Springs (Jensen and Moore 2012).

The one-and-one-half-story, three-bay (w/d/w), single-pile, side-gable frame residence features a shed-roof extension, possibly an addition, spanning its rear elevation (Figures 134 and 135). It is clad in vinyl replacement siding and rests on a continuous stone foundation beneath an asphalt-shingle roof.

The façade features a full-width, hip-roof porch sheltering the central front entrance. The porch roof is supported by simple square wooden posts spanned by a simple balustrade, and the wooden porch deck is supported by concrete piers spanned by lattice. The entrance contains a single-light, wood-panel door with a metal storm door and a simple transom. The windows flanking the entrance contain one-over-one-light, double-hung replacement vinyl sashes, as do the small windows into the upper half story. The central cross gable features a full-height window with two-over-two-light, double-hung wood sashes. The side elevations exhibit similar replacement windows. A modern wood deck extends from the back of the south elevation, and the north elevation features two exterior concrete-block chimneys. The rear of the building is spanned by a shed-roof porch supported by wood posts and sheltering a single-leaf entrance flanked by single windows.

A front-gable, frame garage (Resource A) sits approximately 30 ft west of the residence (Figure 136). Oriented to the south, the building rests on a dry-laid stone foundation, is clad in vinyl siding and particle board, and is covered with an asphalt-shingle roof. The south elevation features a large segmented overhead garage door, and the east elevation exhibits two two-light wood windows. The north elevation reveals vertical-board siding suggestive of the building's original appearance (Figure 137).

A square, mortared rubble-stone smokehouse (Resource B) sits immediately north of the garage (see Figures 136 and 137). Built into a hillside, it exhibits the simple square form typical of other smokehouses observed in the Camp Springs area. The south elevation features an entrance with a wood-panel door. The original roofing material has been replaced with asphalt shingles like those seen on the house and garage.

Figure 133. Site 104 (CP 305): overview of property from Four Mile Creek, facing west.

Figure 134. Site 104: façade and south elevation of residence.

Figure 135. Site 104: rear and south elevations of residence.

Figure 136. Site 104: overview of garage (Resource A), smokehouse (Resource B), and new barn to the west of the residence, facing northwest.

Figure 137. Site 104: north and east elevations of the smokehouse (Resource B) and garage (Resource A).

A concrete-block well cover and a small segment of dry-laid stone retaining wall sit between the garage and the house (see Figure 136). Other discrete segments of retaining wall exhibiting the same method of construction are found throughout the property. A recently constructed, wood-clad pole barn is located north of the garage. Apparently constructed within the last year, the barn does not appear on 2011 aerial photographs of the property.

A bank barn (Resource C) sits approximately 100 ft west-southwest of the residence (Figures 138 and 139). Oriented to the north, the barn exhibits features such as hillside construction, mortise and tenon joinery, and a rubble limestone foundation typical of the other German influenced bank barns observed in the Camp Springs area. The building is clad in vertical-board siding and is covered by a standing-seam metal roof. The north elevation features two entrances covered with suspended, sliding vertical-board doors. The lower level of the building is fully exposed on the east elevation, revealing a single-leaf pedestrian entrance covered with a storm door, a small window containing a four-light window, and a large opening that has been fitted with a modern, segmented, metal, overhead garage door. The partially exposed foundation level of the south elevation exhibits two window openings filled with plywood. A large metal-clad equipment and hay storage shed has been constructed on the west elevation.

A dry-laid stone retaining wall has been constructed to support the banks of a small drainage running to the south of the barn. A small, frame, shed-roof building (Resource D) sits to the east of the barn on the edge of the creek embankment. The shed is clad in vertical-board siding beneath a standing-seam metal roof with exposed rafter tails. A wood-panel door provides access to the north elevation, and a small window with replacement one-over-one-light sashes pierces the east elevation (see Figure 139). A second shed-roof building (Resource E) sits well to the west of the barn. Clad in plywood beneath a corrugated metal roof, the building is in badly deteriorated condition (Figure 140).

Approximately 230 ft east of the house and approximately 535 ft southwest of Four Mile Road, a bridge (Resource F) provides access to the property over Four Mile Creek. The bridge appears to be a replacement structure constructed on top of original mortared-stone abutments. The bridge features a light Warren deck truss structure supporting a concrete deck protected by riveted metal-panel side rails (Figure 141). The bridge sits on concrete piers constructed on top of the creek banks and supported by the original stone abutments. Also accessed by way of the property's bridge and long driveway, a recently constructed residence is located to the south of Site 104 on a subdivided parcel.

NRHP Evaluation: Ineligible. Site 104 is one of many mid- to late-nineteenth-century German settlement properties located in the Camp Springs vicinity, approximately 30 of which are included as contributing properties within the NRHP-listed German Settlement, Four Mile Creek Area TR. The farm was settled by a first generation German-American family, and several of its buildings, including the stone smokehouse and the bank barn, are to varying degrees indicative of the local German vernacular building tradition. The form of the residence, however, is typical of Kentucky's vernacular building tradition rather than that of the German settlers, and as a whole, the property lacks the requisite integrity for listing in the NRHP, hence the exclusion of the farmstead from the NRHP-listed German Settlement, Four Mile Creek Area TR.

The farmhouse associated with Site 104 is an unremarkable example of a rural mid- to late-nineteenth-century frame dwelling and is not indicative of German vernacular residences in the Four Mile Creek area, which are typically two-story, double-pile, side-gabled buildings of rubble limestone construction. The application of vinyl siding and replacement windows has compromised its historical integrity of materials and workmanship. Also, the porch does not appear to be original to the structure, and the rear shed-roof portion of the building may be an addition, further compromising the residence's integrity of design.

Figure 138. Site 104: north and west elevations of the bank barn (Resource C).

Figure 139. Site 104: south and east elevations of the bank barn (Resource C) and small shed (Resource D).

Figure 140. Site 104: north and east elevations of the second small shed (Resource E).

Figure 141. Site 104: southern elevation of the driveway bridge (Resource F) over Four Mile Creek.

Likewise, the outbuildings associated with Site 104 have experienced alterations that have compromised their integrity. Although the bank barn is characteristic in form and construction of German vernacular barns associated with mid- to late-nineteenth-century farmsteads throughout the area, the barn has been significantly altered by the addition of a large metal-clad shed to its west elevation and the introduction of a modern garage door to its east elevation. Although the application of an asphalt-shingle roof to the property's stone smokehouse is a relatively minor alteration, the survey recorded several other similar stone smokehouses associated with many of the German settlement properties in the Four Mile Creek Valley, including several NRHP-listed properties included in the German Settlement, Four Mile Creek Area TR, and this particular smokehouse does not stand out as an individually noteworthy example of the type. The garage, which may have originally served a different function, exhibits a stone foundation and vertical-board siding on one elevation, but the other sides of the building have been wrapped in modern materials, obscuring its original appearance. The other small outbuildings associated with the property are unexceptional examples of common building types that do not contribute to the property's significance.

The bridge associated with the property does not date to the potential period of significance of the farmstead and is not an outstanding example of a Warren deck truss bridge, a form widely utilized by state highway departments throughout much of the twentieth century. Constructed to provide access to this farmstead, the bridge is not an early or important example of this bridge type, nor is it an example of the standardized plans of the state highway department; thus, it does not merit consideration for individual listing in the NRHP under Criterion C (Parsons Brinckerhoff 2005: 3-39).

The buildings comprising Site 104 retain their location and setting among the other German settlement properties in the Four Mile Creek Valley but otherwise lack the historical significance and integrity exhibited by neighboring NRHP-listed properties included in the German Settlement, Four Mile Creek Area TR. Furthermore, archival research revealed no information to suggest that the Amberger family was particularly significant within the founding and growth of Camp Springs, nor did it indicate any other association between the property and other events or persons of historical significance. None of the buildings associated with the farmstead is an outstanding example of a particular architectural type, period, or method. Therefore, CRA recommends that Site 104 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A.

Site 106

KHC Survey #: CP 307

Photographs: Figures 142–144

Map: Figures 2b and 3b

Zone: 16

Quad: Withamsville, OH-KY 1983 (Revised 1992)

UTMs: E: 728153 N: 4320468

Property Address: 6493 Four Mile Rd.
Melbourne, KY 41059

Owner Information: James and Virginia
Spencer
6493 Four Mile Rd.
Melbourne, KY 41059

Deed Book/Page: 186/43

Construction Date: 1954

Description: Site 106 consists of a residence and outbuilding located at 6493 Four Mile Road approximately .1 mi northwest of its intersection with Nine Mile Road. The structure is situated on a grassy, approximately .5-acre lot that rises to the northeast from the road. Scattered trees are located northeast of the residence. A poured-concrete parking area is located along the road and extends to the garage. It is bounded by a mortared-stone retaining wall. Site 106 is first depicted on the 1961 Withamsville, OH-KY topographic quadrangle.

The residence is a one-and-one-half-story, three-bay (ww/d/www) frame Southern Bungalow oriented to the southwest (Figure 142). It is situated on a poured-concrete foundation beneath an asphalt-shingle roof. It is primarily clad with a brick veneer. The southern half of the façade beneath the porch is clad with a stone veneer. The area beneath the façade gable is half-timbered. The residence is constructed into the hillside so that the façade foundation is exposed. The residence comprises approximately 1,434 sq ft of living space.

The central façade entry consists of a wood door with a diamond view light set behind a metal storm door. It opens onto a half-width, concrete porch situated to the south of a front-gable façade projection. The shed-roof porch is supported by metal columns. A metal railing runs the perimeter of the porch. Windows consist of single and paired two-over-two, double-hung aluminum sashes. The window south of the entry consists of a large picture window flanked by smaller aluminum sash windows. A garage bay is located at the northern corner of the foundation wall beneath the paired windows of the front-gable projection. It is fronted by a wood sectional garage door. A front-gabled dormer extends from the center of the northwest (side) elevation roof.

Another entry is located at the center of the southwest (side) elevation (Figure 143). It consists of a door with eight lights. It opens onto a single-bay concrete-block porch. The front-gabled porch roof is supported by metal columns. A metal railing runs the perimeter of the porch. Another porch roof is attached to the rear elevation. It is supported by metal columns. No other details are visible from the ROW.

The outbuilding is located approximately 142 ft east of the residence (Figure 144). It is a one-story, hip-roof frame structure oriented to the southeast. It is situated on a concrete-block foundation beneath an asphalt-shingle roof. It is clad with a brick veneer. An entry is located at the center of the front elevation. It consists of a wood paneled door with a single window. A window is situated at the center of the southwest (side) elevation. A front-gabled extension is located above the entry. It consists of a two-over-two, single-hung aluminum sash.

Figure 142. Site 106 (CP 307): easterly view of residence.

Figure 143. Site 106: northeasterly view of residence.

Figure 144. Site 106: northeasterly view of outbuilding.

NRHP Evaluation: Ineligible. The Southern Bungalow is a common house type throughout Kentucky dating to the early twentieth century. As such, examples of this type must demonstrate exceptional architectural significance and integrity to be considered eligible for inclusion in the NRHP under Criterion C. Site 106 is not an exceptional example. It does not exhibit a significant design, nor does it appear to represent a significant or early construction method. Although the building's exterior material treatment suggests the influence of the Tudor Revival style, a style not often associated with the bungalow form, it is not a notable execution of the style. The outbuilding is also not a significant style or design. Furthermore, research indicated no association between Site 106 and events or persons of historical significance. Therefore, CRA recommends that Site 106 is not eligible for inclusion in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A.

Site 107

KHC Survey #: CP 308

Photographs: Figures 145 and 146

Map: Figures 2b and 3b

Zone: 16

Quad: Withamsville, OH-KY 1983 (Revised 1992)

UTMs: E: 728164 N: 4320445

Property Address: 6505 Four Mile Rd.
Melbourne, KY 41059

Owner Information: Charles Holz; Deanna Heiert
6505 Four Mile Rd.
Melbourne, KY 41059

Deed Book/Page: 256/567

Construction Date: 1928

Description: Site 107 consists of a residence located at 6505 Four Mile Road approximately .08 mi northwest of its intersection with Nine Mile Road. It is situated on a grassy approximately 50-x-100 ft lot. A poured-concrete driveway runs from the road to the rear of the residence. Site 107 is first depicted on the 1953 Withamsville, OH-KY topographic quadrangle.

The residence is a one-and-one-half-story, three-bay (ww/d/ww) frame American Bungalow oriented to the southwest (Figure 145). It is situated on a concrete-block foundation beneath an asphalt-shingle roof. It is primarily clad with aluminum siding. The façade and the bottom portion of the southeast (side) elevation are clad with permastone. The residence comprises approximately 1,260 sq ft of living space.

The off-center façade entry consists of a multi-light wood door that opens onto a poured-concrete porch. The shed-roof porch is supported by tapered porch posts. A metal railing runs the perimeter of the porch. Windows, including those on the building's central gable-roof dormer, consist of single and paired one-over-one, double hung vinyl sashes.

Another entry is located slightly off-center on the rear elevation (Figure 146). It consists of a wood paneled door with a single window set behind a metal storm door. It opens onto a full-length poured-concrete patio. The patio is sheltered beneath a shed roof. The roof is supported by metal poles. An interior brick chimney extends above the slope of the roof along the northern edge.

Figure 145. Site 107 (CP 308): northeasterly view of residence.

Figure 146. Site 107: rear elevation of residence.

NRHP Evaluation: Ineligible. The American Bungalow with its broad gables, dormers, and front porch is a common house type throughout Kentucky and much of the United States dating to the early twentieth century. As such, examples of this type must demonstrate exceptional architectural significance and integrity to be considered eligible for inclusion in the NRHP under Criterion C. Site 107 is not an outstanding example. The integrity of design of the residence has been compromised due to the addition of replacement siding and permastone. Additionally, the possible double-door fenestration suggested by the off-center entry has been changed, further compromising the structure's integrity. Research also indicated no association between Site 107 and events or persons of historical significance. Consequently, CRA recommends that Site 107 is not eligible for inclusion in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A.

Site 109

KHC Survey #: CP 310

Photographs: Figures 147–151

Map: Figures 2b and 3b

Zone: 16

Quad: Withamsville, OH-KY 1996

UTMs: E: 728396 N: 4319703

Property Address: 6537 Four Mile Road

Owner Information: Fred F. and Wilma M. Mashinot

6521 Four Mile Road

Melbourne, KY 41059

Deed Book/Page: 248/82

Construction Date: circa 1890

Description: Site 109 (CP 310) consists of an I-house, a large outbuilding, and a bank barn situated on a 35.092-acre parcel on the northeast side of Four Mile Road immediately northwest of its intersection with Nine Mile Road in Camp Springs (see Figures 2b, 3b, and 147). The house is oriented to the southwest and sits approximately 40 ft from the public ROW. The house and barns are located on a slight rise above a tributary of Four Mile Creek that parallels Nine Mile Road. The property is accessed by an asphalt driveway running to the north of the house. The property was recorded from the public ROW along Four Mile Road and Nine Mile Road.

PVA records date the house to 1890, but the dwelling is first depicted on the 1883 map of the Alexandria Precinct where it appears to be identified with "H. Felhard" (see Figure 9). This likely refers to Harry Felhart, an immigrant from Baden, a region of southwest Germany, who is listed in the 1870 census as a farmer living in Eight Mile, Campbell County, Kentucky (Griffing 1883:45; USBC 1870).

The five-bay (w/w/d/w/w), side-gabled frame I-house with a rear ell and a one-story rear addition comprises approximately 1,800 sq ft of living space (Figure 148). The dwelling rests on a mortared rock-faced stone foundation with walls clad in aluminum siding beneath a standing-seam metal roof. The roof is pierced by a brick chimney near its southeast end, and the gable ends feature cornice returns. The façade is spanned by a full-width, hip-roof porch that appears to date to the early to mid-twentieth century. The porch features four square brick piers spanned by a brick knee wall laid in an open diaper pattern. The porch's concrete deck rests on a rusticated concrete-block foundation, and the porch roof is covered with asphalt shingles. Beneath the porch, the central entrance features a wooden storm door with eight lights set above a single panel. The flanking windows contain two-over-two-light, double-hung wood window sashes. The second level features similar windows flanked by fixed shutters.

The southeast elevation of the dwelling features single windows in each level of the gable end and an entrance into the side of the ell. The entrance is accessed by a concrete stoop and sheltered by a small hip-roofed hood extending from the side of a small hip-roofed, one-story addition constructed to the northeast

of the side entrance. The addition sits on a concrete-block foundation and features a one-over-one-light, double-hung sash window on its southeast end. A typical window with two-over-two-light, double-hung sashes is located in the ell above the addition (Figure 149).

The northwest side elevation does not have any openings in the end of the main block. The rear elevation features a small replacement window in the lower level of the ell and a typical original window in the upper level of the ell. A one-story addition with sliding glass doors and a large awning supported by metal posts occupies the space at the intersection of the rear ell and the main block of the building.

A large gable-roofed outbuilding is located approximately 130 ft northeast of the residence (Figures 150 and 151). The exterior is clad in vertical boards and covered by a standing-seam metal roof. The southwest elevation of the building features two large doorways covered with sliding vertical-board doors and separated by a small pedestrian-scale doorway with a hinged vertical board door. A concrete-block foundation is visible beneath this central doorway. A small four-light window is centrally situated above the doorways. The interior of the building could not be accessed, so its function is unclear, but it appears to function as a carriage shop or for some other sort of vehicle or machinery storage.

Immediately to the southeast of this building sits a large bank barn (see Figures 150 and 151). The barn features an L-shaped plan and a shed roof addition that create a rectangular footprint. The barn sits on a mortared rubble limestone foundation, is clad in vertical boards, and is covered with a metal-panel roof. The L-shape of the barn is unusual for this area, and some details of the barn are confusing, suggesting that it may have been reconfigured at some point in time. CRA was not permitted to access the interior of the barn to help confirm such changes. At least a portion of the barn likely features timber-frame construction such as that seen in the other nineteenth-century bank barns recorded in the area.

Figure 147. Site 109 (CP 310): overview of property facing north-northeast.

Figure 148. Site 109: façade of residence.

Figure 149. Site 109: southeast and northeast elevations of the residence.

Figure 150. Site 109: southwest and southeast elevations of the bank barn with the gable-roofed outbuilding to the rear.

Figure 151. Site 109: southeast and northeast elevations of the bank barn with the gable-roofed outbuilding to the rear.

Facing the rear of the house, the southwest elevation of the barn features a side-gabled configuration with large paired, hinged vertical-board doors at its center. To the southeast of the entrance, the earth in front of the barn slopes down, allowing for two small windows and a pedestrian doorway into the lower level of the building. The stone foundation is raised above grade at the southeast side of the door, but it does not appear to continue to the other side of the entrance, suggesting that this portion of the building may be an addition. The southeast elevation of the building features an exposed lower level with an asymmetrical door-window-door fenestration pattern. Each opening is topped with a wood lintel. The frame building above the stone basement features a cross-gable roofline. On the rear elevation, the end of the ell features a doorway and a window into the lower level, and the back of the side-gabled portion of the building is spanned by a single-story, shed-roof addition.

NRHP Evaluation: Ineligible. Site 109 is one of many mid- to late-nineteenth-century German settlement properties located in the Camp Springs vicinity, approximately 30 of which are included as contributing properties within the NRHP-listed German Settlement, Four Mile Creek Area TR. The farm was settled by German immigrant Harry Felhart, and its bank barn is indicative of the local German vernacular building tradition. The form of the residence, however, is typical of Kentucky's vernacular building tradition rather than that of the German settlers, and as a whole, the property lacks the requisite integrity for listing in the NRHP, hence the exclusion of the farmstead from the NRHP-listed German Settlement, Four Mile Creek Area TR.

The residence associated with Site 109 is a typical but unremarkable example of a late-nineteenth-century I-house, a building type constructed in rural settings throughout Kentucky and much of the Eastern and Midwestern United States in the nineteenth century. The residence lacks distinctive architectural features that might distinguish it as a significant example of its type. Changes to the building, including the application of aluminum siding, the replacement of the house's original porch, and the construction of small side and rear additions, have compromised its integrity of materials, design, and workmanship. Consequently, the residence is not individually eligible for listing in the NRHP under Criterion C.

Although bank barns are not found with great frequency throughout Kentucky, they are quite common in Camp Springs and other areas identified with mid- to late-nineteenth-century German settlement. Almost all of the nineteenth-century residential properties recorded in Camp Springs feature a bank barn built into a hillside to allow for direct ground-level access to two levels. This design made efficient use of the lot while segregating livestock in the lower level from hay and equipment storage in the upper level. The barn and other outbuildings were typically closely grouped with the residence to accommodate the domestic and agricultural activities typical of this region. Although the bank barn associated with Site 109 exhibits some characteristics common to the other nineteenth-century German barns observed in Camp Springs, such as hillside construction and a rubble limestone foundation, the overall form of the barn is atypical for the area. Also, some details of the barn's construction suggest that it may be altered or reconfigured, and the rear shed-roof portion of the building is clearly an addition. Due to these irregularities, the structure does not appear to be a particularly noteworthy example of a bank barn within the context of Camp Springs. Likewise, the gable-roof outbuilding does not appear to be an outstanding example of a particular type, style, or method of construction. Thus, it appears that neither the barn nor the outbuilding is individually eligible for listing in the NRHP under Criterion C. Although the three buildings relate to one another in a manner typical of other farmsteads in the area, the property is lacking other outbuildings, such as a smokehouse and chicken house, found on many of Camp Springs' intact farmsteads, and collectively these buildings do not represent a significant example of this property type.

The buildings comprising Site 109 retain their location and setting among the other German settlement properties in the Four Mile Creek Valley but otherwise lack the historical significance and integrity exhibited by neighboring NRHP-listed properties included in the German Settlement, Four Mile Creek Area TR. Archival research identified no information to suggest that H. Felhart was an individual of particular historical significance within the Camp Springs community, nor did it reveal any other association between Site 109 and events or persons of historical significance. Therefore, CRA recommends that Site 109 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Site 110

KHC Survey #: CP 311

Photographs: Figure 152

Map: Figures 2b and 3b

Zone: 16

Quad: Withamsville, OH-KY 1996

UTMs: E: 728184 N: 4320309

Property Address: undetermined

Owner Information: undetermined

Deed Book/Page: undetermined

Construction Date: unknown

Description: Site 110 (CP 311) consists of a segment of dry-laid rock retaining wall (Figure 152) built into the banks of Four Mile Creek on the west side of Four Mile Road, opposite its intersection with Nine Mile Road in Camp Springs (see Figures 2b and 3b). The rock wall was surveyed from the public ROW in the vicinity of the bridge identified as Site 111.

The rock wall does not appear on any historic maps. Due to the lack of extant buildings and other evidence, the date of construction of the wall is unknown, but it may be contemporaneous with Camp Springs' stone structures associated with German settlement of the area.

Figure 152. Site 110 (CP 311): overview of Site 110.

The dry-laid rock retaining wall is constructed of roughly-shaped limestone blocks set into the creek banks. Some portions of the wall have slipped down the banks into the creek, obscuring its original coursing. Given the condition of the wall, little detail can be discerned about the wall's original design and appearance.

NRHP Evaluation: Ineligible. Site 110 is a common example of a rock retaining wall that lacks distinctive design features and does not exhibit the exceptional workmanship associated with significant examples of stone masonry in central Kentucky. The rock wall is collapsed in sections and unassociated with any other extant historic resources; thus, it lacks integrity of design, workmanship, and association. Archival research indicated no association between Site 110 and events or persons of historical significance. Therefore, CRA recommends that Site 110 is not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Site 111

KHC Survey #: CP 312

Photographs: Figures 153 and 154

Map: Figures 2b and 3b

Zone: 16

Quad: Withamsville, OH-KY 1983 (Revised 1992)

UTMs: E: 728195 N: 4320317

Property Address: Intersection of Four Mile and Nine Mile Rds.

Owner Information: n/a

Deed Book/Page: n/a

Construction Date: circa 1925–1949

Description: Site 111 consists of a deteriorated reinforced-concrete slab bridge (Figure 153) located at the intersection of Four Mile and Nine Mile Roads. The bridge crosses an unnamed tributary of Four Mile Creek. The northern end of the bridge is set on a mortared-stone abutment that possibly predates the current concrete structure. The southern end is set on a concrete abutment. The bridge appears to have been originally flanked by concrete wing walls. However, only the southern wing wall of the east side of the bridge remains. The underside of the bridge has been reinforced with steel plates and wood planks (Figure 154). Concrete parapet walls extend above the span. The decking is paved with asphalt. Site 111 is not depicted on any map.

NRHP Evaluation: Ineligible. The reinforced-concrete slab bridge is a common bridge type found throughout the United States. It is used for short spans of up to 40 ft. Reinforced-concrete slab bridges may be considered significant if they can be identified as having been built according to the standard plans of the transportation departments in the first quarter of the twentieth century, and those that were built within the first decade of the twentieth century are particularly significant (Parsons Brinckerhoff 2005:3-85). While this bridge dates to the early to mid-twentieth century, it is somewhat deteriorated and is missing its wing walls, which detracts from its integrity of design, materials, and workmanship. Research indicated no associations between Site 111 and engineers or builders of historical significance or any events of historical significance. Consequently, CRA recommends that Site 111 is not eligible for inclusion in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A.

Figure 153. Site 111 (CP 312): reinforced-concrete slab bridge.

Figure 154. Site 111: substructure of bridge.

Site 112

KHC Survey #: CP 313

Photographs: Figures 155–158

Map: Figures 2b and 3b

Zone: 16

Quad: Withamsville, OH-KY 1983 (Revised 1992)

UTMs: E: 728266 N: 4320241

Property Address: 6565 Four Mile Rd.
Melbourne, KY 41059

Owner Information: Jesse Guthier
6565 Four Mile Rd.
Melbourne, KY 41059

Deed Book/Page: 291/400

Construction Date: 1947

Description: Site 112 consists of a residence, shed, and garage located at 6565 Four Mile Road approximately .04 mi southeast of its intersection with Nine Mile Road. The structures are situated on a grassy, approximately 2.44-acre lot atop a hill. A gravel drive winds from the road to the garage. Site 112 is first depicted on the 1961 Withamsville OH-KY topographic quadrangle.

The residence is a one-story, side-gabled frame house oriented to the northeast (Figure 155). The façade elevation was not visible from the ROW. It is situated on a concrete-block foundation beneath an asphalt-shingle roof. The residence is constructed into the hillside so that the majority of the foundation is exposed. It is clad with vinyl siding. The residence comprises approximately 560 sq ft of living space.

A single-leaf pedestrian entry is located at the center of the northeast elevation. It consists of a replacement door with nine lights set behind a storm door. It opens onto a wood deck that wraps around to the façade. The deck is supported by wood posts. Windows consist of six-over-six, double-hung vinyl sashes flanked by louvered shutters. A metal flue pipe extends from the slope of the center of the roof.

Figure 155. Site 112 (CP 313): southerly view of residence.

A garage bay located within the foundation level at the western corner of the southwest (side) elevation has been enclosed with vertical board (Figure 156). An eight-light fixed metal window is located south of the enclosed garage bay.

The shed is located approximately 70 ft east of the residence (Figure 157). It is a one-story, shed-roof frame structure oriented to the northwest. It is situated on a brick foundation beneath a ribbed metal roof. It is clad with vinyl siding. An entry is located at the center of the front elevation. It consists of a vertical-board door. Metal sliding sash windows flank the entry.

The garage is located approximately 46 ft northeast of the residence (Figure 158). It is a one-story, front-gabled frame structure oriented to the southwest. It is situated beneath a ribbed-metal roof and is clad with ribbed metal. The foundation material is not visible. Two garage bays are located at the corners of the front elevation. They are fronted by sectional garage doors. A pedestrian entry is located at the western corner of the northwest (side) elevation. It consists of a door. It opens onto a wood deck supported by wood posts. The deck is sheltered beneath a shed roof supported by wood posts.

NRHP Evaluation: Ineligible. The structures located at Site 112 are undistinguished building forms that lack the architectural significance or integrity necessary to warrant NRHP eligibility under Criterion C. They are not of a specific style or significant design, nor do they appear to represent a significant or early construction method. The addition of replacement siding and windows has compromised the residence's integrity of design, materials, and workmanship. Research indicated no association between Site 112 and events or persons of historical significance. Consequently, CRA recommends that Site 112 is not eligible for inclusion in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A.

Figure 156. Site 112: northeasterly view of residence.

Figure 157. Site 112: shed.

Figure 158. Site 112: garage.

Site 113

KHC Survey #: CP 314

Photographs: Figures 159–162

Map: Figures 2b and 3b

Zone: 16

Quad: Withamsville, OH-KY 1996

UTMs: E: 728087 N: 4320134

Property Address: 6598 Four Mile Road

Owner Information: Edward H. and Madonna Saner

6598 Four Mile Road

Melbourne, KY 41059

Deed Book/Page: 252/550

Construction Date: circa 1875–1899

Description: Site 113 (CP 314) consists of a bank barn, a bridge, a 1977 residence, a carport, and a frame outbuilding situated on a 1.42-acre residential lot on the west side of Four Mile Road south of its intersection with Nine Mile Road in Camp Springs (see Figures 2b and 3b). The barn, oriented to the east-northeast, sits back approximately 590 ft from the ROW and is accessed from Four Mile Road via a gravel drive.

According to PVA records, the house was built in 1977. The bank barn clearly predates the current residence and may be associated with the property of P. Kort or W. Nagel depicted on the 1883 map of the Alexandria Precinct (see Figure 9). The 1880 census of Campbell County, Kentucky, lists a Peter Kort living in Alexandria with his family. He is identified as a farmer and as an immigrant from Prussia. Also, several Nagels, most of whom are German immigrants, appear in the 1880 census of Campbell County, Kentucky, including a 58-year-old rope maker named William Nagel who was born in Baden and resided in the community of Belleview. No additional information was identified about either individual (Griffing 1883:45; USCB 1880).

The bank barn consists of a timber frame constructed with mortise and tenon joinery, clad with vertical board siding, set upon a stone foundation, and sheltered by a standing-seam metal roof. The majority of the foundation is constructed of mortared rubble limestone, although a portion on the east-northeast elevation has been patched with concrete block, a portion near the southeast corner exhibits tooled stones and penciled mortar joints, and a portion on the west-southwesterly elevation is dry-laid. The east-northeasterly elevation is two stories tall, and six openings (d/w/d/w/d/d) pierce the stone foundation (Figure 159). The first five openings all feature wood lintels, while the sixth doorway is open to the bottom of the framing, providing a larger opening for farm machinery. The upper portion of the barn is clad in vertical board, and there is evidence of a large sliding doorway, now largely collapsed, at the center of the east-northeasterly elevation. The west-southwesterly elevation features central, paired, hinged, vertical-board doors to access the upper level at grade (Figure 160).

The driveway accessing the barn features a stone and concrete bridge crossing Four Mile Creek (Figure 161). The bridge features older mortared-stone abutments, likely dating to the same period as the barn, supporting a mid-twentieth-century concrete slab deck. Portions of the abutments are deteriorated and have been reinforced with long, rectangular concrete blocks. Central concrete piers have been built to further support the span. A low metal railing guards one edge of the bridge; the other is unprotected.

The 1977 residence is located approximately 425 ft northwest of the bank barn, further down the gravel drive within a yard surrounded by mature stands of trees (Figure 162). A carport and a shed dating to the period of the house are also located on this part of the property.

Figure 159 Site 113 (CP 314): east-northeasterly and south-southeasterly elevations of the bank barn.

Figure 160 Site 113: west-southwesterly and south-southeasterly elevations of the bank barn.

Figure 161 Site 113: bridge associated with the site.

Figure 162 Site 113: 1977 residence associated with the site.

NRHP Evaluation: Ineligible. Site 113 is one of many mid- to late-nineteenth-century German settlement properties located in the Camp Springs vicinity, approximately 30 of which are included as contributing properties within the NRHP-listed German Settlement, Four Mile Creek Area TR. Map evidence suggests that the farm was settled by German immigrants P. Kort or W. Nagel, and its bank barn is indicative of the local German vernacular building tradition. However, the residence historically associated with the property is no longer extant, and as a whole, the property lacks the requisite integrity for listing in the NRHP, hence the exclusion of the farmstead from the NRHP-listed German Settlement, Four Mile Creek Area TR.

Although bank barns are not found with great frequency throughout Kentucky, they are quite common in Camp Springs and other areas identified with mid- to late-nineteenth-century German settlement. Almost all of the nineteenth-century residential properties recorded in Camp Springs feature a bank barn built into a hillside to allow for direct ground-level access to two levels. This design made efficient use of the lot while segregating livestock in the lower level from hay and equipment storage in the upper level. The barn and other outbuildings were typically closely grouped with the residence to accommodate the domestic and agricultural activities typical of this region. The barn associated with Site 113 is a typical but unexceptional example of the type of bank barn found throughout the Camp Springs community, exhibiting characteristics such as a rubble stone foundation and mortise and tenon joinery found in the barns associated with several of Camp Springs' NRHP-listed farmsteads. The barn has undergone some minor alterations, such as patching of a portion of the foundation, that have moderately impacted its integrity of materials. More notably, however, the residence and other buildings historically associated with the barn have been demolished, and a non-compatible residence has been constructed on the property, dramatically altering the site's land use patterns and compromising the property's integrity of setting and association. The bridge—the one other resource dating from the same period as the barn—has been significantly altered by the introduction of a new deck and alterations to the substructure. Situated a significant distance from the road, the barn is not visually connected to any other resources associated with Camp Springs' founding and early growth, and the area as a whole has been found to lack the integrity necessary to merit consideration as a rural historic district. Archival research identified no information to suggest that P. Kort or W. Nagel was an individual of particular historical significance in the Camp Springs community, nor did it reveal any other association between Site 113 and events or persons of historical significance. Since several comparable bank barns, such as those associated with Sites 117, 130, and 132, survive within intact farmsteads, CRA recommends that the solitary bank barn and other resources associated with Site 113 are not eligible for listing in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A

Site 114

KHC Survey #: CP 315

Photographs: Figures 163–167

Map: Figures 2b and 3b

Zone: 16

Quad: New Richmond, OH-KY 1981 (Revised 1992)

UTMs: E: 728131 N: 4319825

Property Address: 6694 Four Mile Rd.
Melbourne, KY 41059

Owner Information: John and Debra Buckley
6694 Four Mile Rd.
Melbourne, KY 41059

Deed Book/Page: 240/634

Construction Date: circa 1925–1949

Description: Site 114 consists of a front-gabled barn, garage, outbuilding, and bridge located at 6694 Four Mile Road approximately .21 mi south of its intersection with Nine Mile Road. The structures are situated on a primarily grassy, approximately 4.074-acre lot. Four Mile Creek runs along the road at the eastern property boundary. A gravel drive runs from the road to the residence and garage. A secondary gravel drive runs south to the front-gabled barn. The structures are associated with a two-story, brick-veneered, split-level house constructed in 1978. Site 114 is first depicted on the 1981 New Richmond, Kentucky–Ohio, 7.5-minute series topographic quadrangle (USGS 1981).

The barn is located approximately 81 ft west of the non-historic residence. It is a frame structure oriented on an east–west axis (Figure 163). It is clad with vertical board beneath a corrugated metal roof. It is constructed using dimensional lumber and wire nails. The interior of the barn appears to have been reconfigured to accommodate livestock stalls. The western portal opening has been encompassed by a wood-slat fence.

The portal opening is located south of center. It is open through to the rear elevation. The northernmost portion of the opening has been enclosed to accommodate the livestock stalls. The loft opening is fronted by hinged vertical-board doors. A shed-roof addition is attached to the south (side) elevation. It is clad with the same wall and roof material. The north (side) elevation has been reconfigured with hinged vertical-board doors that open into a gravel area enclosed with chicken wire (Figure 164). The enclosed area is sheltered beneath a shed roof supported by wood posts.

The garage is located approximately 62 ft north of the non-historic residence (Figure 165). It is a one-story, front-gabled frame structure. It is clad with vertical wood siding. The foundation and roof materials are not visible. The two garage bays are fronted by sectional garage doors. A pedestrian entry is located at the southern corner of the front elevation. It consists of a paneled door with nine lights. Windows consist of one-over-one, single-hung aluminum sashes.

The outbuilding is located approximately 109 ft west of the garage, downslope from the front-gabled barn (Figure 166). It is a one-story, shed-roof frame structure. It is situated on a concrete-block pier foundation beneath a metal-panel roof. It is clad with horizontal wood siding. Portions of the siding are missing. An entry is located at the center of the west elevation. It is open. A window opening is located just west of the center of the north elevation. It is also open.

The bridge is located approximately 55 ft from Four Mile Road (Figure 167). It functions as part of the driveway across Four Mile Creek. It is a precast reinforced-concrete slab bridge. The bridge is set on mortared-stone abutments flanked by mortared-stone wing walls that likely predate the current slab bridge. The decking is comprised of a concrete slab. It appears to have been recently replaced. Metal guard rails line both sides of the bridge.

NRHP Evaluation: Ineligible. The structures located at Site 114 are undistinguished building forms that lack the architectural significance or integrity necessary to warrant NRHP eligibility under Criterion C. They are not of a specific style or significant design, nor do they appear to represent a significant or early construction method. The demolition of the site's historic residence has compromised the site's integrity of feeling and association.

The bridge associated with Site 114 is a typical example of its type, and the replacement of its deck has compromised its physical integrity. Research also indicated no association between Site 114 and events or persons of historical significance. Consequently, CRA recommends that Site 114 is not eligible for inclusion in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A.

Figure 163. Site 114 (CP 315): easterly view of front-gabled barn.

Figure 164. Site 114: southwesterly view of barn.

Figure 165. Site 114: southwesterly view of garage.

Figure 166. Site 114: southeasterly view of outbuilding.

Figure 167. Site 114: northerly view of concrete slab bridge.

Site 115

KHC Survey #: CP 316

Photographs: Figures 168–174

Map: Figures 2b and 3b

Zone: 16

Quad: New Richmond, OH-KY 1981 (Revised 1992)

UTMs: E: 728354 N: 4319871

Property Address: 6713 Four Mile Rd.
Melbourne, KY 41059

Owner Information: Tony Taylor
6713 Four Mile Rd.
Melbourne, KY 41059

Deed Book/Page: 272/77

Construction Date: 1890

Description: Site 115 consists of a residence, garage, outbuilding, barn, and retaining wall located at 6713 Four Mile Road approximately .13 mi north of its intersection with Leick Road. The structures are situated on a grassy, approximately 3.97-acre lot that rises sharply from the road. The residence is situated along the road approximately 7 ft from the ROW. A gravel drive leads from the road to the garage and encircles the southernmost outbuilding. A mortared-stone retaining wall runs along the northern half of the western property boundary along the road (Figure 168). A non-historic pole barn was under construction at the time of the survey. It is located east of the historic structures. The Campbell County PVA records date the residence to 1890. However, the site is first depicted on the 1883 Atlas of Boone, Kenton and Campbell Counties, Kentucky, as belonging to H. Geisman. Henry Geisman is listed in the 1880 census for Indian Springs, Campbell County, Kentucky, where he is identified as a Prussian immigrant and a farmer (USCB 1880).

The residence is a two-story, four-bay (w/w/w/w), gabled-ell frame house oriented to

the west (Figure 169). The orientation of the house appears to be altered from its original orientation. It is situated on a mortared cut-stone foundation beneath an asphalt-shingle roof. The foundation has been pargeted with concrete, and portions of the stone have been replaced with concrete block. The house is constructed into the hillside so that the western portion of the foundation is visible. It is clad with vinyl siding. The residence comprises approximately 1,512 sq ft of living space.

The primary entry is located at the western corner of the north (side) elevation. It consists of a multi-light wood door set behind an aluminum storm door. It opens onto a poured-concrete porch. The hip-roof porch is supported by wood posts. A brick knee wall runs the perimeter of the porch. The porch is supported by the concrete-block foundation wall of the garage. The garage bay is fronted by a sectional garage door.

Windows consist of six-over-six, wood and one-over-one, double-hung vinyl sashes. Façade windows are flanked by louvered shutters. Another entry is located slightly off-center in the foundation level of the façade. It consists of a metal door. A shed-roof addition is attached to the southeast corner of the residence (Figure 170). It is clad with the same wall and roof material. An entry is located at the eastern corner of the north elevation of the addition. It consists of a door set behind a metal storm door. Jalousie windows are located at the center of the rear elevation of the addition.

A garage is located approximately 12 ft south of the residence (Figure 171). It is a one-story, one-bay (d), front-gabled frame structure oriented to the south. It is situated on a raised poured-concrete foundation beneath an asphalt-shingle roof. It is clad with clapboard siding. The structure is deteriorated, exhibiting large cracks in the foundation and a sagging roof. The garage bay is open. Windows consist of six-over-six, single-hung wood sashes and six-light hopper sashes.

Figure 168. Site 115 (CP 316): mortared-stone retaining wall.

Figure 169. Site 115: southeasterly view of residence.

Figure 170. Site 115: rear elevation of residence.

Figure 171. Site 115: northwesterly view of garage.

An outbuilding is located approximately 18 ft east of the residence (Figure 172). It is a one-story, front-gabled frame structure oriented to the south. It is situated on a poured-concrete foundation beneath a standing-seam metal roof. It is clad with weatherboard. An entry is located at the center of the front elevation. It consists of a hinged vertical-board door. A two-light window is located at the center of the west (side) elevation.

A bank barn is located approximately 33 ft south of the garage (Figure 173). It is a front-gabled frame structure oriented on an east–west axis. It is situated on a mortared-stone foundation beneath a metal-panel roof. The barn has been constructed into the hillside so that a portion of the foundation is visible. It is clad with board and batten. The western portal opening has been enclosed with particle board. A loft opening above has also been enclosed. Another loft opening located directly beneath the gable is fronted by a hinged vertical-board door. A portal opening located at the western corner of the south elevation has been resized for a pedestrian entry. It consists of a hinged board and batten door. Numerous window openings have been enclosed on all elevations of the structure. A shed-roof addition is attached to the west elevation (Figure 174). It is situated on a concrete-block foundation beneath a metal panel roof. It is primarily clad with vertical board. Portions of the west and north elevations are clad with metal panels. The south elevation of the addition is fronted by hinged vertical-board doors.

NRHP Evaluation: Ineligible. Site 115 is one of many mid- to late-nineteenth-century German settlement properties located in the Camp Springs vicinity, approximately 30 of which

are included as contributing properties within the NRHP-listed German Settlement, Four Mile Creek Area TR. The farm was settled by Prussian immigrant Henry Geisman, and several of its buildings, including the residence, bank barn, and several outbuildings, are to varying degrees indicative of the local German vernacular building tradition. However, as a whole, the property lacks the requisite integrity for listing in the NRHP, hence the exclusion of the farmstead from the NRHP-listed German Settlement, Four Mile Creek Area TR.

Even though the residence utilizes several construction techniques of German immigrants who settled in the area, such as a stone foundation and hillside construction, the residence remains Anglo-American in form and design, with its gabled-ell frame form. The addition of replacement siding, windows, and doors, and the re-orientation of the primary entry have also compromised the residence's integrity of design, materials, and workmanship. Likewise, the bank barn has undergone several changes to its fenestration and the construction of an addition, which have compromised its integrity of design, materials, and workmanship. The remaining outbuildings are common forms that do not elevate the significance of the property.

The buildings comprising Site 115 retain their location and setting among the other German settlement properties in the Four Mile Creek Valley but otherwise lack the historical significance and integrity exhibited by neighboring NRHP-listed properties included in the German Settlement, Four Mile Creek Area TR. Archival research identified no information to suggest that H. Geisman was an individual of particular historical significance within the Camp Springs community, and the property has been altered to such an extent that it no longer exhibits a clear association with the region's German immigrants. Furthermore, archival research did not reveal any other association between Site 115 and events or persons of historical significance. Consequently, CRA recommends that Site 115 is not eligible for inclusion in the NRHP under Criterion A, B, or C.

Determination of Effect: N/A.

Figure 172. Site 115: northeasterly view of outbuilding.

Figure 173. Site 115: southwesterly view of barn.

Figure 174. Site 115: easterly view of barn.

Site 116

KHC Survey #: CP 317

Photographs: Figures 175 and 176

Map: Figures 2b and 3b

Zone: 16

Quad: Withamsville, OH-KY 1996

UTMs: E: 728366 N: 4319780

Property Address: 6733 Four Mile Road

Owner Information: Daniel L. Weinel and Joseph Weinel

7835 Licking Pike

Cold Springs, KY 41076

Deed Book/Page: 290/768

Construction Date: circa 1890

Description: Site 116 (CP 317) consists of a heavily modified dwelling situated on a 1-acre residential lot on the east side of Four Mile Road north of its intersection with Leick Road in Camp Springs (see Figures 2b and 3b). No outbuildings are associated with the property. The house, built into a hillside and currently oriented to the west, sits very close to the public ROW and is bordered to the north, west, and south by a concrete and gravel area, and to the east by a sloping grassy lot. The property was surveyed from the public ROW.

Although PVA records date the house to 1890, the dwelling is first depicted on the 1883 map of the Alexandria Precinct where it is identified with W. Nagel (see Figure 9). Several Nagels, most of whom are German immigrants, appear in the 1880 census of Campbell County, Kentucky, including a 58-year-old rope maker named William Nagel, who was born in Baden and resided in the community of Belleview. No additional information was identified about this individual (Griffing 1883:45; USCB 1880).

The two-and-one-half-story, 1,184 sq ft, frame residence is constructed into the hillside, with first-story entrances on the west and north elevations and second-story entrances on the south and, presumably, east elevations (Figures 175 and 176). It has been altered to such an extent that its original fenestration and orientation are not clear, and it exhibits material changes, including replacement windows and doors, vinyl siding, and an asphalt-shingle roof. The west elevation reveals that the building is constructed in two parts, with the original structure featuring a gable roof and a mortared rock-faced limestone foundation to the north and an addition featuring a shed roof and a concrete-block foundation to the south. The building's massing suggests that the addition may be an enclosed porch. The west elevation of the original portion of the building features two windows containing one-over-one-light, double-hung sashes in the first level and single windows with one-over-one-light, double-hung sashes in the second level and in the gable end. The addition features an entrance with a solid door in the first level and a small window with double-hung sashes in the second level. The north elevation features a double-leaf entrance with wood doors in the first level and sliding glass doors opening onto a small wooden balcony on the second level. The south elevation is spanned by a wooden deck and features a single window on the first level and a single-leaf entrance flanked by windows on the second level.

NRHP Evaluation: Ineligible. Site 116 is one of many mid- to late-nineteenth-century German settlement properties located in the Camp Springs vicinity, approximately 30 of which are included as contributing properties within the NRHP-listed German Settlement, Four Mile Creek Area TR. The property is associated with German immigrant W. Nagel, and the form of the house is indicative of the local German vernacular building tradition. However, the property lacks the requisite integrity for listing in the NRHP, hence the exclusion of the farmstead from the NRHP-listed German Settlement, Four Mile Creek Area TR.

Figure 175. Site 116 (CP 317): south and west elevations of the residence.

Figure 176. Site 116: north and west elevations of the residence.