Department of Energy

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MAR 19 2014

David Snyder, Ph.D.
Archaeological Reviews Manager
Ohio Historic Preservation Office
1982 Velma Avenue
Columbus, Ohio 43211

PPPO-03-2170825-14

Dear Dr. Snyder:

TRANSMITTAL OF THE SUMMARY REPORT OF HISTORIC-ERA ARCHAEOLOGICAL RESOURCES WITHIN THE PORTSMOUTH GASEOUS DIFFUSION PLANT, PIKE COUNTY, OHIO (RSI/PORTS-228)

Enclosed for your information is the report *"Summary Report of Historic-Era Archaeological Resources within the Portsmouth Gaseous Diffusion Plant, Pike County, Ohio" (RSI/PORTS-228).*

The enclosed report was prepared to summarize the archaeological surveys of historic-era sites that were conducted at the Portsmouth Gaseous Diffusion Plant (PORTS) beginning in 1996 and concluding in 2012. The surveys, which were performed by a number of professional archaeological firms, identified numerous sites including farmsteads, house sites, churches, cemeteries, and a school. Copies of the individual reports of these surveys are located at http://www.pppo.energy.gov/nhpa.html. While individual reports are necessary, they do not provide the broad perspective suited to overall interpretation of a resource. The enclosed Historic-Era Summary Report was prepared to offer that broader perspective and context. We also intended that the report could be used by the interested or general public to learn more about the PORTS site's history.

The Summary Report consolidates the extensive information gathered on the historic-era sites, providing a concise resource as well as a valuable comprehensive interpretive document. The PORTS historic-era archaeological resource summary offers a unique opportunity to link the abundance of the existing archaeological data presented in a series of archaeological survey reports with historical documentation in an effort to learn about life in rural southern Ohio from the late 1700's to the middle of the 20th century. Life on the farmsteads, in the house sites, schools and churcheswas abruptly interrupted by the United States government with the acquisition of the land that comprises the PORTS reservation for national security purposes. The result of this action was ultimately the preservation of a large sample of various kinds of historic-era archaeological sites that date to the mid-nineteenth to mid-twentieth centuries. The evaluation performed during this extensive investigation has documented abundant, high-quality information. Future researchers could use this existing data to develop a model of rural life in southern Ohio, or to use the data to better understand the actual people who lived in these places

and how they were tied together through the many kinds of familial, economic, and social relationships that form the structure of communities.

A copy of the reports is enclosed and can also be obtained at the Environmental Information Center by contacting 740-289-8898 or at eic@wems-llc.com. Additionally, an electronic copy can be found at http://www.pppo.energy.gov/nhpa.html.

If you have any questions please contact Amy Lawson of my staff at (740) 897-2112.

Sincerely,

Dr. Vincent Adams
Portsmouth Site Director
Portsmouth/Paducah Project Office

Enclosure:
Summary Report of Historic-Era Archaeological Resources within the Portsmouth Gaseous Diffusion Plant, Pike County, Ohio (RSI/PORTS-228)

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RSI/PORTS-228

OVAI Contract Report #2012-30

SUMMARY REPORT OF HISTORIC-ERA ARCHEOLOGICAL RESOURCES WITHIN THE PORTSMOUTH GASEOUS DIFFUSION PLANT, PIKE COUNTY, OHIO

By

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January 4, 2013
Revised May 7, 2013

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RSI/PORTS-228

OVAI Contract Report #2012-30

SUMMARY REPORT OF HISTORIC-ERA ARCHEOLOGICAL RESOURCES WITHIN THE PORTSMOUTH GASEOUS DIFFUSION PLANT, PIKE COUNTY, OHIO

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EXECUTIVE SUMMARY

Between 1997 and 2012, various types of archaeological surveys have been conducted within the 3,777-acre Portsmouth Gaseous Diffusion Plant (PORTS) (Schweikart et al. 1997; Klinge 2010; Klinge and Mustain 2011; Burks 2011a; Pecora 2011; Mustain and Klinge 2011; 2012; Vehling et al. 2011; Mustain 2012; Mustain and Lamp 2012; Garrard and Burden 2012; Norr 2012; Trader 2011; Pecora 2012; Pecora and Burks 2012a; 2012b). This work was conducted as part of an ongoing effort to document and evaluate archaeological resources within PORTS. The investigations were completed on behalf of the United States Department of Energy (DOE) and pursuant to Section 110 of the National Historic Preservation Act and in accordance with guidelines put forth by the Ohio Historic Preservation Office (OHPO 1994).

These surveys documented 61 historic-era archaeological sites, many of which are the remains of late nineteenth-early twentieth century farms or residences. Also included are cemeteries, schools, churches, refuse dumps, artifact scatters, and other miscellaneous sites with structural and/or artifact remains. Within PORTS, most of the historic-era archaeological sites date to the latter half of the nineteenth and/or first half of the twentieth century. An "archaeological site" is a location containing archaeological remains, such as artifacts and foundation remains. Archaeological sites containing artifacts from the historic-era are referred to as historic-era archaeological sites. The purpose of this report is to summarize information gathered from all known historic-era archaeological sites within PORTS.

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1. INTRODUCTION

Between 1997 and 2012, three consulting firms, Ohio Valley Archaeology, Inc. (OVAI), ASC Group, Inc. (ASC), and Gray & Pape, Inc., conducted various types of archaeological surveys within the Portsmouth Gaseous Diffusion Plant (PORTS) boundaries (Schweikart et al. 1997; Klinge 2010; Klinge and Mustain 2011; Burks 2011a; Pecora 2011; Mustain and Klinge 2011; 2012; Vehling et al. 2011; Mustain 2012; Mustain and Lamp 2012; Garrard and Burden 2012; Norr 2012; Trader 2011; Pecora 2012; Pecora and Burks 2012a; 2012b). This work was conducted to document and evaluate archaeological resources within the 3,777-acre PORTS reservation. The investigations were completed on behalf of the United States Department of Energy (DOE) and pursuant to Section 110 of the National Historic Preservation Act and in accordance with guidelines put forth by the Ohio Historic Preservation Office (OHPO 1994). The purpose of this report is to summarize information gathered from all known historic-era archaeological sites within PORTS.

The term "historic-era" refers to the period of time that post-dates the European, Asian, and African American occupation of North America. Euro-American entry into the Ohio Valley occurred as early as the seventeenth and eighteenth centuries, but widespread settlement and agricultural development in Ohio did not occur until after the Treaty of Greenville in 1795. Within PORTS, the historic-era archaeological sites date to the latter half of the nineteenth and/or first half of the twentieth century. An "archaeological site" is a location containing archaeological remains, such as artifacts and foundation remains. Archaeological sites containing artifacts from the historic-era are referred to as historic-era archaeological sites.

The archaeological surveys have documented 61 historic-era archaeological sites, many of which are the remains of late nineteenth-early twentieth century farms or residences, but also include cemeteries, schools, churches, refuse dumps, artifact scatters, and other miscellaneous sites with structural and/or artifact remains.

In the early 1950s, the acreage that currently makes up PORTS was purchased by the Atomic Energy Commission (AEC) to form the 3,777-acre the gaseous diffusion plant. Burks (2011) and subsequent research efforts have identified 68 historic-era building locations within the PORTS boundary based on a review of historical cartographic sources and aerial photographs that predated construction of the PORTS facilities. When the AEC took possession of the land, most of the standing structures and buildings within the bounds of the reservation were razed (Schweikart and Coleman 2003).

The historical map sources used by Burks (2011) to identify building locations within PORTS include the: 1. c.1905 Oil & Gas Map; 2. 1906 Waverly and 1915 Piketon, Ohio 15-minute USGS topographic maps; 3. 1952 AEC Property Acquisition Map; and 4. 1952 AEC topographic maps prepared to provide coverage of the area within and immediately surrounding Perimeter Road. The 1938/39 and 1952 aerial photographs show excellent detail about individual buildings and clusters of buildings, and many of these correspond with building locations depicted on the historical map sources. The aerials are particularly important because they are photographs that fairly accurately depict the dimensions and spatial distribution of buildings as they stood when the photographs were taken. The aerials also show the locations of land use features, including farm fields and pastures, gardens, wood lots, orchards, and planted tree groves.

Combined, the historical map and aerial photograph resources demonstrate that PORTS once contained approximately 68 building locations, or clusters of buildings, including 63

farmsteads and houses, a school, three churches, and two cemeteries (one collocated with a church). These 68 building locations identified by Burks (2011) through maps and photographs should not be confused with the 61 historic-era archaeological sites identified by recent surveys (Schweikart et al. 1997; Klinge 2010; Klinge and Mustain 2011; Burks 2011a; Pecora 2011; Mustain and Klinge 2011; 2012; Vehling et al. 2011; Mustain 2012; Mustain and Lamp 2012; Garrard and Burden 2012; Norr 2012; Trader 2011; Pecora 2012; Pecora and Burks 2012a; 2012b). It is also important to note that the number of building locations reflects what was present when the maps and aerials were made and does not include any buildings razed prior to preparation of the maps and aerial photographs. Regardless, the maps and aerial photographs provide the basis for understanding the archaeological potential for historic-era archaeological sites (cultural resources) within PORTS. Each historically mapped/photographed building location (hereafter referred to as "map location") is a potential historic-era archaeological site, but the map locations do not represent all possible historic-era archaeological sites within PORTS.

The archaeological surveys conducted to date have documented archaeological remains at many, but not all, of the map locations. Some of the map locations no longer contain archaeological remains due largely to the development of PORTS within Perimeter Road and other earth moving activities in areas outside Perimeter Road. In the surveys listed above, any location found to contain archaeological remains is referred to as a historic-era archaeological site and has been assigned an Ohio Archaeological Inventory (OAI) number. Archaeological remains may include such things as household ceramics and glass, foundation remains, nails, hardware, and a variety of other items and features that might accumulate around a building or set of buildings. Those map locations found to lack archaeological remains are not archeological sites and were not assigned OAI numbers. Moreover, the historical map locations are not the only potential historic-era archaeological sites contained within PORTS. Additional historic-era archaeological sites (cultural resources) include refuse dumps, artifact scatters, isolated finds, and bridges. These types of non-structural cultural resources are not depicted on the historical maps, but have been identified through more general archaeological field surveys. When found and documented during the various surveys, these non-structural cultural resources were classified as archaeological sites and, like the farmsteads, schools, churches and cemeteries, were assigned OAI numbers (for example, the OAI # for the Brodess Farmstead is 33Pk311 and the OAI # for a well/cistern and artifact scatter at Map Location 3 is 33Pk321).

The main objective of this report is to summarize the archaeological information from all known historic-era archaeological sites documented within PORTS. This information was gathered from the various archaeological studies conducted from 1997 through 2012. For many of the archaeological resources summarized herein, the currently available information is very limited. The reasons for this have to do with the scale of the investigations carried out at each of the archaeological sites. Many were not examined beyond a very limited Phase I survey level, either because they were thought to be very minor archaeological resources (e.g., isolated finds and small artifact scatters) or because they were found to be in poor archaeological condition because of earthmoving and other types of surface disturbance caused by modern development. For these reasons, no additional work beyond the Phase I level was recommended for many of the PORTS historic-era sites. By contrast, 15 of the PORTS farmstead sites have been subjected to intensive Phase II investigations and several more recently documented farmstead, school, and church sites have been investigated at an "enhanced" Phase I level. The archaeological information available for such sites is comparatively larger and more comprehensive.

The archaeological remains of historic-era sites at PORTS are a portion of one or more communities that occupied the PORTS area for approximately 150 years. By and large, the archaeological information recorded about these sites has been of a documentary nature, with data concerning the number, size, and layout of buildings; the distribution of artifacts (i.e., refuse) related to the occupations; and basic examinations of the kinds and ages of artifacts found. This information tells us about the shape, size, and layout of the farmsteads and other kinds of places inhabited and used over the generations on the PORTS landscape. In this document we attempt to summarize this archaeological information and make observations about patterns present in the data. Beyond locating and documenting property deed records, this work has not investigated the archival resources that may be associated with the people who lived at and created these historic-era archaeological sites. A thorough and intensive survey of available archival resources, such as tax and probate records, would be a different type of document than this report. Some anthropological questions of interest can be investigated using the archaeological data; other questions could be examined using the archival data. However, putting these two datasets together would provide the most complete record of the people who once lived and worked on the historic-era landscape that preceded PORTS.

1.1. ENVIRONMENTAL SETTING

PORTS is located in south-central Ohio, approximately 4 miles (7 km) south of the Village of Piketon and about 2.5 miles (4 km) east of the Scioto River, in Seal and Scioto townships, Pike County. It is flanked by US Route 23 to the west and State Route 32 (James A. Rhodes Appalachian Highway) to the north. The 3,777-acre PORTS grounds are located in a deeply dissected part of the Appalachian Plateau physiographic region. The terrain within this part of Pike County contains areas of narrow ridgetops with steep but gradual slopes and small V-shaped stream valleys. Upland elevations range between 558 feet (171 m) and 1,181 feet (360 m) above mean sea level (AMSL) with elevations averaging 551 feet (168 m) AMSL in the Scioto River Valley (Fenneman 1938). The subsurface geology of the immediate region consists of the Logan formation of the Waverly series, which contains limestones of the Mississippian system (Orton 1874). The PORTS boundary encompasses preglacial valleys and moderate to steeply sloped and dissected uplands, all covered by two soil areas: Olmulga soils and Shelocta-Latham soils (USDA, SCS 1990).

Prior to widespread Euro-American settlement in the early nineteenth century, the uplands within the PORTS area were vegetated in Mixed Mesophytic forest, which included associations of oak-chestnut-tuliptree, oak-hickory-tuliptree, white oak-beech-maple, and hemlock-beech-chestnut-red oak (Gordon 1966, 1969). Mixed Mesophytic forests prefer moister and more shaded areas that are often on north-facing slopes or in narrow valleys or hollows. The eastern portions of PORTS were once covered in Mixed Oak forests, and they included white oak-black oak-hickory, white oak-black oak-chestnut and chestnut oak-chestnut associations (Gordon 1966, 1969). Mixed Oak forests stood on the drier south-facing slopes or other areas prone to late summer drought.

The broad and expansive Scioto River and its floodplain bisect Pike County and lie west of the facility. Almost all of Pike County is drained by the Scioto River and its tributaries, such as Little Beaver Creek and Big Run Creek, which drain the northern and southern portions of PORTS. The Scioto River valley provides some of the highest quality farmland in Pike County,

while the uplands in areas like PORTS provide only marginal farmland due to the dissected and hilly topography. Despite the steep terrain, the earliest aerial photographs, dating to 1938 and 1939, show large pasture areas and small cultivated fields throughout the region. Though technically located in the uplands, PORTS sits in a basin-shaped landform with relatively flat land flanked by steep slopes and hills on all sides. Prior to the construction of the facility in the early 1950s, the interior of the basin was relatively flat farmland. This unique landform in the uplands provided an isolated tract of fairly good agricultural land (Pecora and Burks 2011). For historic-era inhabitants, the preglacial valleys and terraces of the PORTS landscape would have been good areas for crop or livestock production with convenient access to the Scioto River, the Ohio-Erie canal, and other routes for interregional communication and exchange (Mustain and Klinge 2012).

1.2. HISTORY OF PORTS ARCHAEOLOGICAL SURVEYS

Table 1 lists OAI and Ohio Historic Inventory (OHI) numbers for historic-era archaeological sites that have been documented to date within PORTS (Schweikart et al. 1997; Klinge 2010; Klinge and Mustain 2011; Burks 2011a; Pecora 2011; Mustain and Klinge 2011; 2012; Vehling et al. 2011; Mustain 2012; Mustain and Lamp 2012; Garrard and Burden 2012; Norr 2012; Trader 2011; Pecora 2012; Pecora and Burks 2012a; 2012b). The table lists the OAI number assigned to each archaeological site (including OHI numbers for two cemeteries and one farmstead), a site name, site type, level of investigation, and report reference. The site types used in this summary are defined in Section 2 (*Historic-Era Archaeological Site Type)* of this report. The archaeological site types listed in Table 1 include: farmsteads and houses (n=29), farmstead components (n=6), a recreational cabin (n=1), refuse dumps (n=5), artifact scatters (n=9), isolated finds (n=4), a bridge (n=1); cemeteries (n=2), churches (n=3), and a school (n=1). Appendix A lists similar information with locational coordinates. Figure 1 illustrates the locations of the documented sites on the current USGS topographic quadrangle map of the area and Figure 2 pinpoints the locations of the sites on a modern aerial photograph of the area; in both instances the PORTS boundaries are outlined in red.

Table 1. List of historic-era archeological sites recorded within the PORTS facility (sorted by site type).

OAI/OHI #	Name	Type	Level of Investigation	Report Reference
33Pk184	Davis Farmstead	Farmstead	Phase I&II	Schweikart et al. 1997; Klinge and Mustain 2011
33Pk185	South Shyville Farmstead	Farmstead	Phase I&II	Schweikart et al. 1997; Pecora and Burks 2012a
33Pk187	-	Farmstead	Phase I	Schweikart et al. 1997
33Pk194	North Shyville Farmstead	Farmstead	Phase I&II	Schweikart et al. 1997; Klinge and Mustain 2011
33Pk195	Beaver Road Farmstead	Farmstead	Phase I&II	Schweikart et al. 1997; Klinge and Mustain 2011
33Pk203	Ruby Hollow Farmstead	Farmstead	Phase I&II	Schweikart et al. 1997; Pecora and Burks 2012a
33Pk206	Terrace Farmstead	Farmstead	Phase I&II	Schweikart et al. 1997; Pecora and Burks 2012a
33Pk211	Bamboo Farmstead	Farmstead	Phase I&II	Schweikart et al. 1997; Pecora and Burks 2012a
33Pk212	Railside Farmstead	Farmstead	Phase I&II	Schweikart et al. 1997; Klinge 2010
33Pk213	Log Pen Farmstead	Farmstead	Phase I&II	Schweikart et al. 1997; Klinge 2010
33Pk217	Stockdale Road Dairy	Farmstead	Phase I&II	Schweikart et al. 1997; Pecora and Burks 2012a
33Pk311	Brodess Farmstead	Farmstead	Recon. &Phase I+	Pecora and Burks 2012b
33Pk315	Map Location 19	Farmstead	Recon.	Pecora 2011
33Pk318	Mechling Farmstead	Farmstead	Recon. & Phase I+	Pecora and Burks 2012b
33Pk320	Map Location 2	Farmstead	Recon. & Phase I+	Mustain and Klinge 2012
33Pk322	Map Location 4	Farmstead	Recon. & Phase I+	Mustain and Klinge 2012; Klinge 2012
33Pk324	Map Location 50	Farmstead	Recon. & Phase I+	Mustain and Klinge 2012
33Pk325	Map Location 25	Farmstead	Recon.	Trader 2011
33Pk326	Map Location 27	Farmstead	Recon. & Phase I+	Vehling et al. 2011
33Pk328	Map Location 36	Farmstead	Recon.	Trader 2011
33Pk329	Map Location 37	Farmstead	Recon.	Trader 2011
33Pk349	Emma Farmer Farmstead	Farmstead	Phase I & Phase II	Pecora 2012; Pecora and Burks 2013
33Pk218 (PIK-1205-9)	Cornett Farmstead	House Site/Farmstead	Phase I&II	Schweikart et al. 1997; Pecora and Burks 2012a
33Pk312	Condon Farmstead	House Site/Farmstead	Recon. & Phase I+	Pecora and Burks 2012b
33Pk313	Map Location 16	House Site/Farmstead	Recon.	Pecora 2011
33Pk316	Map Location 20	House Site/Farmstead	Recon.	Pecora 2011
33Pk317	Mechling House Site	House Site/Farmstead	Recon. & Phase I+	Pecora and Burks 2012b
33Pk319	Map Location 43	House Site/Farmstead	Recon.	Pecora 2011
33Pk321	Map Location 3	House Site/Farmstead	Recon. & Phase I+	Mustain and Klinge 2011
33Pk345	Gibson Cabin	Recreational Cabin	Phase I	Pecora 2012
33Pk193	Iron Wheel Farmstead	Farmstead Component	Phase I&II	Schweikart et al. 1997; Klinge and Mustain 2011
33Pk197	Dutch Run Road Farmstead	Farmstead Component	Phase I&II	Schweikart et al. 1997; Klinge and Mustain 2011
33Pk331	Map Location 53	Farmstead Component	Recon.	Trader 2011
33Pk359	-	Farmstead Component	Phase I	Garrard & Burden 2012
33Pk360	-	Farmstead Component	Phase I	Garrard & Burden 2012
33Pk364	-	Farmstead Component	Phase I	Norr 2012
33Pk191	-	Refuse Dump	Phase I	Schweikart et al. 1997
33Pk192	-	Refuse Dump	Phase I	Schweikart et al. 1997
33Pk215	-	Refuse Dump	Phase I	Schweikart et al. 1997
33Pk216	-	Refuse Dump	Phase I	Schweikart et al. 1997

OAI/OHI #	Name	Type	Level of Investigation	Report Reference
33Pk375	-	Refuse Dump	Phase I	Mustain and Lamp 2012
33Pk200	-	Artifact Scatter	Phase I	Schweikart et al. 1997
33Pk202	-	Artifact Scatter	Phase I	Schweikart et al. 1997
33Pk209	-	Artifact Scatter	Phase I	Schweikart et al. 1997
33Pk340	-	Artifact Scatter	Phase I	Mustain 2012
33Pk344	-	Artifact Scatter	Phase I	Pecora 2012
33Pk353	-	Artifact Scatter	Phase I	Pecora 2012
33Pk369	-	Artifact Scatter	Phase I	Norr 2012
33Pk374	-	Artifact Scatter	Phase I	Mustain and Lamp 2012
33Pk362	-	Artifact Scatter	Phase I	Garrard & Burden 2012
33Pk199	-	Isolated Find	Phase I	Schweikart et al. 1997
33Pk201	-	Isolated Find	Phase I	Schweikart et al. 1997
33Pk355	-	Isolated Find	Phase I	Garrard & Burden 2012
33Pk356	-	Isolated Find	Phase I	Garrard & Burden 2012
33Pk363	-	Historical Bridge	Phase I	Garrard & Burden 2012
33Pk189 (PIK-206-4)	Mount Gilead Cemetery	Cemetery and Church	Phase I & Recon.	Schweikart et al. 1997; Pecora 2011
33Pk214 (PIK-207-12)	Holt Cemetery	Cemetery	Phase I & Geophysical Survey	Schweikart et al. 1997; Burks 2009
33Pk314	Ferree Church	Church	Recon.	Pecora 2011
33Pk327	Map Location 28	Church	Recon. & Phase I+	Vehling et al. 2011
33Pk330	Map Location 52	Church	Recon. & Phase I+	Vehling et al. 2011
33Pk323	Moore School	School	Recon. & Phase I+	Mustain and Klinge 2012

The earliest PORTS survey occurred in 1997 and documented 25 archaeological sites with historic-era temporal components that pre-date the development of PORTS (Schweikart et al. 1997). Four additional historic-era sites documented by Schweikart et al. (1997) are post-1950s PORTS related building and structure remnants and are not considered in this report. The 1997 survey report recommended Phase II National Register of Historic Places (NRHP) evaluations for 13 of 14 sites defined as farmsteads (Schweikart et al. 1997). The remaining 11 of the 25 historic-era archaeological sites documented in the 1997 survey included four historic-era refuse dumps, three historic-era artifact scatters, two historic-era isolated finds, and two historic cemeteries. These 11 sites, like all known archaeological sites with historic-era temporal components within PORTS are also listed in Table 1. Later, between 2010 and 2012, Phase II investigations were completed for each of the 13 farmstead sites recommended for further analysis in the 1997 report (Klinge 2010; Klinge and Mustain 2011; Pecora and Burks 2012a).

The cartographic review conducted by Burks (2011) in preparation for Phase II surveys of several historic-era farmsteads at PORTS identified additional historical mapped building locations (map locations) representing potential farmsteads, house sites, schools, and churches. This review prompted a reconnaissance survey effort designed to verify the presence or absence of archaeological remains at 40 locations and to develop recommendations for additional survey work (Mustain and Klinge 2011; Pecora 2011; Trader 2011). Fourteen additional map locations identified by Burks (2011) were excluded from the reconnaissance effort because they are located in the developed portions of PORTS. The reconnaissance surveys documented historic-era archaeological sites (OAIs) at 22 of the 40 map locations. The remaining 18 map locations were found to lack archaeological remains, due to earth moving activities associated with the development of PORTS and roadways. Ultimately, 10 of 22 newly identified historic-era archaeological sites documented during the reconnaissance survey effort were selected for an "enhanced" Phase I-level documentation that was designed to document visible architectural remains (e.g., foundations, wells, cisterns, etc.) and sample the sites' artifact contents with close-

interval (5-meter) shovel testing. Of the enhanced Phase I-level surveys completed, additional fieldwork and historical research was recommended for only one farmstead (33Pk322) prior to any undertaking that may impact the site (Mustain and Klinge 2012). All of the sites were determined to be ineligible for the NRHP. An addendum Phase I survey report for site 33Pk322 concluded that it is not eligible for the NRHP (Klinge 2012).

In 2012, large-scale comprehensive surveys were conducted over all undeveloped portions of PORTS for the purposes of locating *prehistoric* archaeological sites and, in addition, any previously unknown historic-era archaeological sites (Pecora 2012; Norr 2012; Garrard and Burden 2012; Mustain 2012; Mustain and Lamp 2012). Of those 15 historic-era sites found, one (33Pk349) was recommended for a Phase II NRHP assessment study (Pecora 2012; Pecora and Burks 2013).

The basic goals of archaeological and historical research include the construction of cultural chronologies, the reconstruction of past lifeways, and the search for the processes of cultural change. The sites summarized within this report can be connected to the process of modernization through which the regionally distinct cultures found throughout the nation have merged into today's national American culture, with all the implications for consumption patterns, agricultural and industrial practices, and economic concerns that such a transformation implies (Klinge 2010). As a group, the PORTS farmstead and house sites represent a portion of a single, interrelated rural community; and other than being razed, they have not been significantly disturbed since the AEC acquired the land in the early 1950s. The current archaeological information has the potential to yield information about the evolution of these farmsteads, which show the evolution of rural agricultural life at the very northwestern edge of Appalachia, at a time when modernization and mechanization were transforming small, self-producing family farms into larger corporate farms. As a group, they represent an interrelated community made up of different farm types and sizes, single residences, churches, schools, and cemeteries. The farmsteads and other structural components, as they look today, do not at first glance reflect the full history of this once thriving rural community and it is likely that the components changed significantly in size, function, and layout over time (Pecora and Burks 2011).

The following text presents a brief historical context of the pre-1950s rural agricultural community located on what is now PORTS. This is followed by a discussion of historic-era archaeological site types and summary descriptions of each of the historic-era sites identified within PORTS and listed in Table 1. More detailed descriptions can be found in the original reports referenced throughout this document. Following the site summaries are discussions and comparisons of farmstead settings and layouts, farmstead building foundations, artifact assemblages, and temporal information. These sections lead ultimately to interpretations and discussions regarding the early farmsteads and any lifestyle information that can be gleaned from the archaeological remains identified at PORTS.

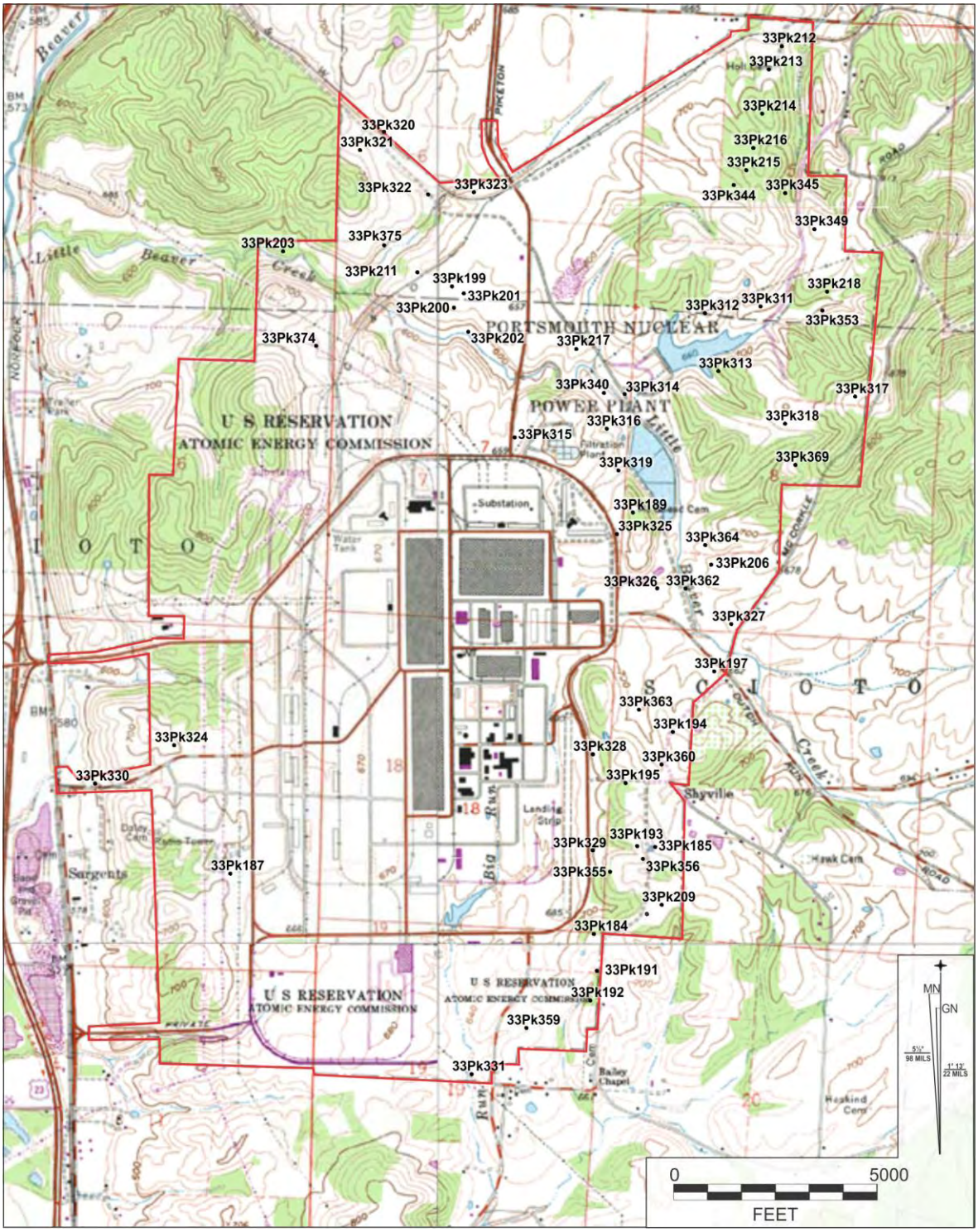

Figure 1. Portions of the 1992 Waverly South, 1961 (PR 1974, PI 1979) Piketon, 1961 (PR 1986) Wakefield, and 1961 (PR1975) Lucasville, Ohio 7.5" USGS topographic maps showing known historic-era archaeological site locations within PORTS.

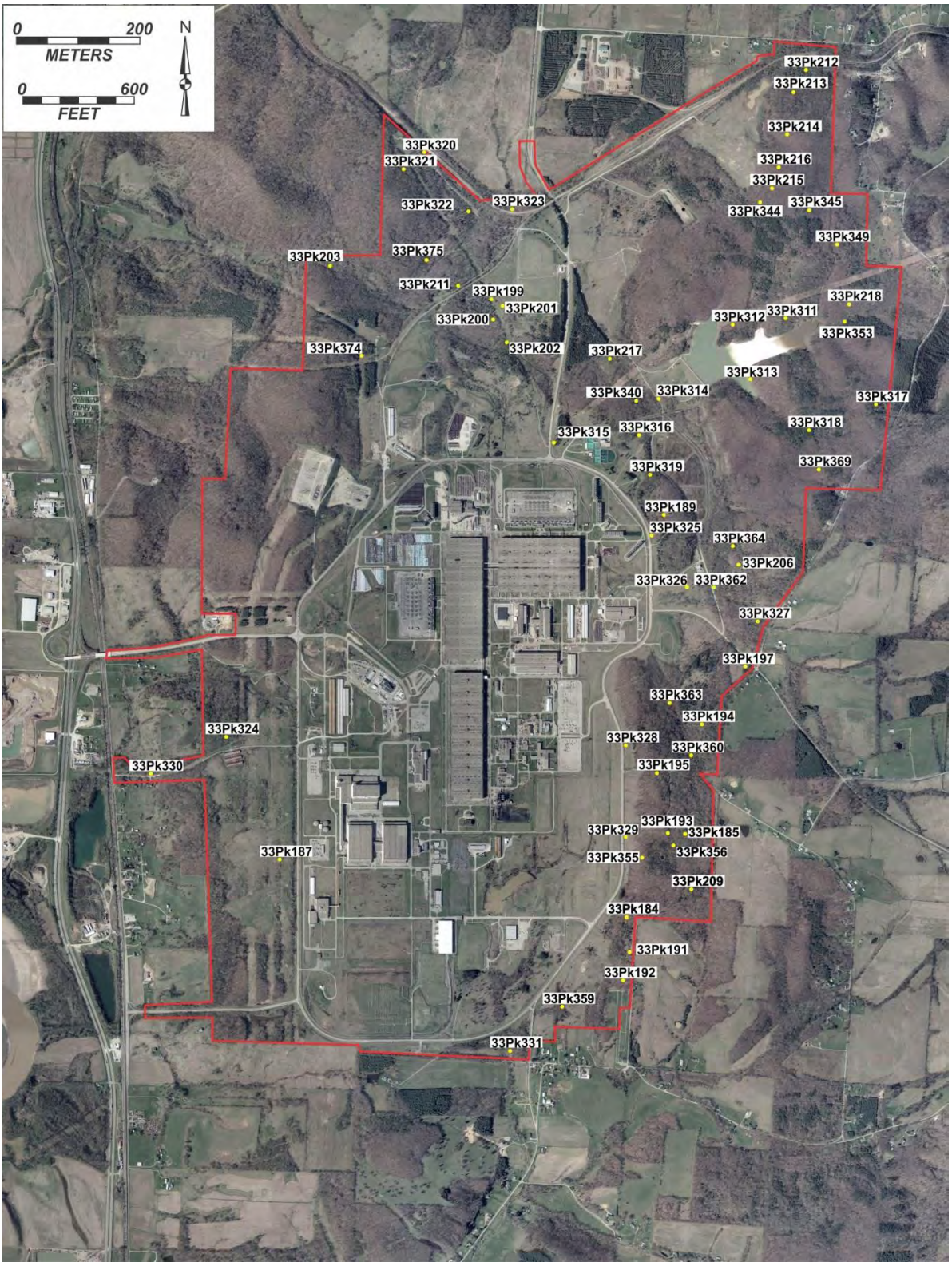

Figure 2. Modern aerial photograph showing known historic-era archaeological site locations within PORTS.

1.3. HISTORICAL CONTEXT

1.3.1. Early Euro-American Settlement

Though the earliest Euro-American settlers to Pike County came mainly from Pennsylvania, Virginia, and Germany in the mid-to-late 1790s, rising tensions between the Native Americans, British forces in Canada, and American troops slowed the rate of settlement in the years after the Treaty of Greenville (1795) and leading up to the War of 1812. Following the conflict, however, the pace of active settlement resumed, and both Pike County and the Village of Piketon were established in 1815 (Howe 1902). Contrary to settlement patterns in similar geographic regions, many of the first generation of settlers in Pike County did not settle along the fertile river valley bottoms, but rather established their farms on the more marginal hillsides (Jones 1983; U.S. Agricultural Census 1860-1880; United States General Land Office Records 1837-1840). Whether this phenomenon is due to the cultural backgrounds of the settlers or due to the densely overgrown river bottoms that might have required more labor force than was available to the families is unknown. Although the river valley floodplains are well-established and productive farmland today, the pattern of hillside subsistence farming persisted throughout the development of Pike County and it culturally connects the region to other portions of Appalachia (Jones 1983; Schweikart and Coleman 2003).

Pike County experienced rapid population growth in the first half of the nineteenth century and by mid-century the majority of property was in private hands, though much of it was likely still forested and undeveloped (Howe 1902; Klinge 2010; Pike County Auditor's Office n.d.; U.S. General Land Office Records 1837-1840). In the vicinity of the rural farming community discussed within these pages, were two hamlets that would have been vital sources of supplies to the farmers, not to mention they provided the area residents with community connections and support. Just outside the eastern boundary of the land that now constitutes PORTS, at the intersection of Zimmerman Road and Stockdale Road, is the small hamlet of Shyville, established ca. 1880 (Henry 1995). Shyville consisted of little more than a store and post office. The store was operated by the Shy family, who also owned several parcels of land in the area, including the parcel on which the hamlet was established (Hammond n.d.). Sargents, also known as Sargents Station, is located immediately adjacent to the western boundary of PORTS, along County Road 84/Wakefield Mound Road. Sargents Station was established along the Scioto Trail ca. 1800 and named after the three Sargent brothers, who ran an Underground Railroad station in the area (Pike County Genealogy and Historical Society 2010). The trail would later become the Columbus & Portsmouth Pike, which was paralleled by the Scioto River Railroad (later the Norfolk & Western) in 1877. For much of the nineteenth century, the Sargent, Barnes, and Vulgamore families owned much of the farmland around Sargents. Besides homes, the hamlet included a church, cemetery, and railway station as well as several major prehistoric Native American earthwork sites (see Burks 2011b).

1.3.2. Early Transportation

While Pike County's transportation arteries, in particular the Scioto River and the Ohio & Erie Canal, led to early growth, the county's industry was generally focused on agriculture, lumbering, and stone quarrying for much of the historical period (Canal Society of Ohio 1975;

Drury 1985; Hulbert 1900; Huntington, 1905; McCormick 1958; Pike County Genealogy and Historical Society 2010; Sheldon 1924). Corn was the most important crop of the early settlers, although wheat was also grown. Corn was produced primarily to be consumed on the farm by the family and as food for livestock, particularly since the method of cattle and hog feeding depended on the corn crop. It was invariably the first crop planted by early settlers as it did relatively well regardless of topography or soil conditions and was of benefit to the settlers during their first year (Beekman n.d.; Jones 1983). Unfortunately, the soils and topography of Pike County were not suited for large scale crop farming; therefore, cattle and hog farming was an important early industry brought by the settlers from western Virginia, Pennsylvania, and Kentucky. Cattle and hogs needed a minimum of care, they were generally free-range year-round, and milk and meat could be sold locally (Adkins 2003; Jones 1983).

After the initial period of settlement, transportation infrastructure played an important role in the economic development of Pike County, as it did elsewhere (Pecora and Burks 2012a). Many types of transportation were available over the years, including rivers, trails, roads, the Ohio and Erie Canal, and railroads. The use, construction and improvement of these transportation methods altered the pattern of settlement and farming (Aumann 1954). Settlers entered the area on the transportation routes that were available early on, and they typically preferred to live near a means of transportation. Easier access to markets provided material benefits in delivering marketable goods as well as securing goods and materials that were not produced at home. Improvements to transportation routes provided superior market access, which in turn provided the impetus for farmers to increase their cultivated land and their income (Noble and Korsok 1975; Noble and Wilhelm 1995).

In the historical period, the county was serviced by several major transportation networks: first by the Scioto River, then by the Ohio & Erie Canal, and finally by the Scioto River and Detroit, Toledo, and Ironton (DT&I) railroads. Several major north–south and east–west roads were also present (Canal Society of Ohio 1975; Drury 1985; Huntington and McClelland 1905; Sheldon 1924). Four distinct Native American trails are indicated in Pike County(Conway 1965; Hulbert 1900; Lewis and Dawley ca. 1902; Ohio Dept. of Highways 1930). The first and most important was the Scioto Trail (today, approximating the location of US Route 23), running through the Scioto Valley and connecting the Ohio River at the mouth of the Scioto with Lake Erie at Sandusky Bay. This was one of the most important north-south Native American trails in Ohio and it ran parallel and immediately adjacent to the western boundary of PORTS. The second distinct trail is an unnamed route running east-west through what is now Piketon, north of PORTS. It is approximated by Beaver Road, Zahns Corner Road, probably Prairie Road, and farther west, by SR 220 and SR 124. It primarily connected Pee Pee, the early settlement near Piketon, to the salt works at what is now Jackson, Ohio (Conway 1965; Lewis and Dawley ca.1902). Two other major trails were in the western part of Pike County. As early as 1910, the state began thinking in terms of a road network oriented toward the automobile. As an important state road, the Columbus & Portsmouth Road was paved and improved in the first quarter of the twentieth century, allowing for much-improved transportation. In 1925, it was designated as U.S. Rt. 23, running from Portsmouth through Columbus and Toledo to Mackinac, Michigan. U.S. Rt. 23 was one of 16 roads in Ohio that were considered of primary importance for interstate and continental traffic (Aumann 1954; Ohio Department of Highways 1930).

1.3.3. Historical Map Resources

Central to this summary report is the historical context for the documented historic-era archaeological sites. Historical documents, such as property deeds, aerial photographs, and a variety of maps, have played a vital role in the archaeological projects (e.g., Pecora and Burks 2012a). Each contributes in some way to the process of better understanding the archaeology sites, but each also seems to lack a most-needed bit of information. For example, the 1884 Map of Pike County (Overman 1884) was useful for identifying landownership, property boundaries, and acreage size, but unfortunately it does not show building or house locations. The other archival resources were useful in a variety of ways. The c.1905 Oil and Gas Lease maps show roadways, house locations, boundaries, acreage, and landowner names. The 1906 Waverly and 1917 Piketon, Ohio 15 minute USGS topographic maps show the topography and house locations, but typically do not show outbuilding locations. The 1938/39 and 1951 United States Department of Agriculture (USDA) aerial photographs were particularly useful because they show all building locations, including outbuildings, but also show farm fields, pastures, woodlots, orchards and other features such as roadways and garden plots. The 1952 AEC Property Acquisition Map (AEC 1952) shows the landowner names, building locations, roadways, and acreage. Finally, the Pike County deed records were useful for tracing property ownership, acreage, and land value (Pike County Auditor's Office n.d.; Record of Appraisal 1859; U.S. General Land Office Records 1837-1840). What was interesting about the deeds is that, with the exception of one or two, none referred to tenements, buildings, or houses.

Table 2 integrates information from the various map sources and aerial photographs for all building or building clusters within PORTS. This table was adapted from Burks (2011a) and the column headings are defined as follows:

Map Location #: An arbitrary number assigned to each building or cluster of buildings (n=68) indicated on the historical maps and aerials.

OAI#: Ohio Archaeological Inventory number. These archaeological site numbers were assigned only to those map locations found to contain archaeological remains. The term "none" refers to map locations that were examined but were found to lack archaeological remains. The initials "NS" (not surveyed) refer to map locations known to be located within the developed portions of PORTS that were not surveyed and are presumed to lack archaeological remains due to the high level of disturbance in these areas.

Name: Several of the map locations (some schools and churches) and historic-era archaeological farmstead sites have previously assigned site names. The historical maps sometimes label churches and schools (e.g., Moore School). The named farmsteads were named after specific site attributes, road names, and landowners by the archaeologists who recorded them.

Northing and Easting: Coordinates of the map location—State Plane, feet, datum=NAD 1983. For those map locations with archaeological remains (OAIs), the coordinates refer to the center or near center of each recorded site area based on GPS data. The coordinates for map locations lacking archaeological remains were obtained by Burks (2011a) using the historical map data overlaid onto modern mapping systems. Burks found that in many cases the map locations (the houses/buildings at these locations) were indicated on two or more historical maps or aerials.

Rarely, however, were they in the same exact place due to different levels of mapping precision and projection. When determining the coordinates, Burks selected a point between the two source locations. As such, these coordinates should be considered as estimates of the site locations.

1905 Oil & Gas Map: The Oil & Gas Maps were created around 1905 and show roads, section and township boundaries, property boundaries, landowner names, and house locations (plus schools and churches)—they do not show barns or other outbuildings. These maps are available at the Pike County Recorder's office in the Map Room, with each township printed on a separate sheet. In most cases houses that appear on the Oil & Gas Map also appear on the 15-minute USGS quadrangle maps. An "X" marked in the box means that a house, school, or church was identified on this map.

15" Quad: This column heading refers to the 15-minute topographic quadrangle maps made by the United States Geological Survey. PORTS encompasses portions of two quadrangle maps: the 1906 (surveyed 1905-1906) Waverly and the 1917 (surveyed 1915) Piketon, Ohio maps. These maps show topography, wooded areas, section and township boundaries, roads, and houses (plus schools and churches). In most cases houses that appear on the 15 min. quads also appear on the Oil & Gas Maps. An "X" marked in the box means that a house, school, or church was identified on this map.

1938/39 Aerial: These are 1938/39 aerial photos taken of the PORTS area by/for the United States Department of Agriculture. High resolution copies (scanned at 600-1200 dpi) were obtained from the Pike County Soil and Water Conservation Office (Burks 2011a). Buildings, roads, etc. are quite visible on these photos. Houses and buildings present on the Oil & Gas Map and 15-minute quadrangles but not on the 1938/39 aerials are assumed to have been razed before the aerial photos were taken. An "X" marked in the box means that a house, school, church, cemetery, or outbuildings were identified in these photos. A "?" marked in the box means that the image was not clear enough to determine if a structure was present or not.

***1951 Aerial*:** These are 1951 aerial photos taken of the PORTS area by/for the United States Department of Agriculture. High resolution copies (scanned at 600-1200 dpi) were obtained from the Pike County Soil and Water Conservation Office. Houses and buildings, roads, agricultural fields, wood lots, etc. are visible on these aerials. These photographs were taken just before construction began at PORTS. An "X" marked in the box means that a house, school, church, cemetery, or outbuildings were identified in these photos. A "?" marked in the box means that the image was not clear enough to distinguish if a structure was present or not.

1952 AEC Property: The AEC Property Acquisition Map was created by the Army Corps of Engineers in 1952. This map depicts houses and larger outbuildings, churches, schools, and cemeteries. It also shows roads, streams, and property boundaries. The map was initiated in 1952 and has been modified numerous times over the last 30-40 years, though the base map showing building locations (which dates to about 1952) remains the same. The property owner names on this map are critical to tracing back the landownership deeds for the parcels originally purchased for PORTS. A few of the outbuildings shown on this map appear in no other source, suggesting that they were built not long before construction began at PORTS. An "X" marked in

the box means that a house, school, church, cemetery, or main outbuilding was identified on this map.

House: This column heading indicates map locations that are thought to contain a house/residence. A house could be part of a farmstead or it could simply be a single residential unit. In a few cases houses are evident on the maps and aerial photos but no outbuildings are indicated or visible. The Oil & Gas Map and 15-minute quad maps show houses but not outbuildings. An "X" marked in the box means that one or more houses were identified on maps or in photos. A "?" marked in the box means that a house was not indicated on maps and the photo images were not clear enough to determine if a house was present or not.

Outbuildings: This column heading indicates which map locations contained outbuildings. In some cases the map locations contain only outbuildings—such locations do not appear on the Oil & Gas Maps or the 15 min. quad maps but are evident on the aerial photos and on the AEC property map. An "X" marked in the box means that one or more outbuildings were identified on maps or in photos. A "?" marked in the box means that outbuildings were not indicated on maps and the photo images were not clear enough to distinguish if outbuildings were present or not.

# of Buildings: This column heading is a minimum count of the buildings that once existed at each site. The aerial photos were the most useful archival source material for identifying buildings. This count of buildings should be considered a minimum number because these are only the latest buildings to be present at each map location—older buildings razed before the maps and photos were created are not reflected in this building count.

Table 2. List of map resources showing building locations within PORTS.

Map Location#	OAI #	Name	Northing USSP NAD83	Easting USSP NAD83	1905 Oil & Gas Map	1906 & 1917 15" Quad.	1938/39 Aerial	1951 Aerial	1952 AEC Property Map	House	Outbuildings	# of buildings
1	none	-	379792	1824989	-	X	-	-	-	-	?	1
2	33Pk320	-	378864	1825588	X	X	X	X	X	X	X	7-8
3	33Pk321	-	378572	1825209	X	X	X	X		?	?	1
4	33Pk322	-	377775	1826396	X	X	X	X	X	X	X	2
5	33Pk323	Moore School	377802	1827202	X	X	X	?	-	-	-	1
6	NS	-	377485	1827281	X	X	?	X	X	X	-	1
7	NS	-	377360	1827267	X	X	X	X	X	X	-	1
8	none	-	378877	1830573	X	X	-	-	-	X	-	1+
9	none	-	380112	1831826	X	X	?	?	-	X	?	1+
10	33Pk349	Emma Farmer Farmstead	377038	1833184	X	X	?	?	-	X	?	1
11	none	-	375701	1832634	X	X	?	?	-	?	-	1
12	none	-	375086	1832216	X	X	X	X	X	X	X	3+
13	33Pk311	Brodess Farmstead	375703	1831851	X	X	X	X	X	X	X	4+
14	33Pk312	Condon Farmstead	375614	1831239	X	X	X	?	-	X	?	1
15	NS	-	375139	1831430	X	X	X	X	X	X	X	5+
16	33Pk313	-	374591	1831459	X	X	X	X	-	X	?	1+
17	33Pk314	Ferree Church	374213	1829804	X	X	X	X	X	-	-	1
18	none	-	373993	1828659	X	X	-	-	-	X	-	1
19	33Pk315	-	373479	1827855	X	X	X	X	X	X	X	6+
20	33Pk316	-	373608	1829479	X	X	-	-	-	X	-	1
21	33Pk317	Mechling House Site	374108	1833859	X	X	X	X	-	X	X	2
22	33Pk318	Mechling Farmstead	373651	1832618	X	X	X	X	X	X	X	5+
23	none	-	372579	1830831	X	X	-	-	-	X	-	1

Map Location#	OAI #	Name	Northing USSP NAD83	Easting USSP NAD83	1905 Oil & Gas Map	1906 & 1917 15" Quad.	1938/39 Aerial	1951 Aerial	1952 AEC Property Map	House	Outbuildings	# of buildings
24	33Pk189	Mt. Gilead Church & Cemetery	372128	1829918	X	X	X	X	X	-	-	1
25	33Pk325	-	371751	1829630	X	X	X	X	-	X	X	3+
26	none	-	370835	1829557	X	X	X	X	X	X	X	5
27	33Pk326	-	370788	1830325	X	X	X	X	X	X	X	7+
28	33Pk327	Church	370140	1831619	X	X	-	-	-	-	-	1
29	none	-	369798	1829551	X	X	X	X	X	X	X	6+
30	NS	-	367887	1829152	X	X	?		-	X	-	1
31	NS	-	366199	1829124	X	X	-	-	-	X	-	1
32	none	-	369496	1821799	X	X	-	-	-	X	-	1
33	none	-	367293	1820687	X	X	?	?	X	-	-	1
34	NS	-	378816	1824952	X	X	X	X	X	X	?	1
35	NS	-	375460	1825652	X	X	X	X	X	X	X	3+
36	33Pk328	-	367885	1829149	X	X	X	X	X	X	X	5+
37	none	-	366197	1829121	X	X	X	?		X		1
38	NS	-	370155	1824410	X	X	X	X	X	X	X	4
39	NS	-	369479	1821781	X	X	?	?	-	X	-	1
40	none	-	379056	1824696	-	X	-	-	-	X	-	1
41	none	-	375454	1825547	-	X	X	X	X	X	X	5
42	NS	-	367509	1827188	-	-	X	X	-	?	X	3
43	33Pk319	-	372870	1829673	-	-	X	X	X	?	-	1
44	none	-	373978	1830126	-	X	X	X	-	X	X	3
45	none	-	369248	1829655	-	X	X	X	X	X	?	2
46	33Pk197	Dutch Run Road Farmstead	369312	1831306	-	-	X	X	-	-	X	1
47	none	-	369488	1831456	-	-	X	X	X	?	?	1
48	none	-	366419	1830733	-	X	-	-	-	X	-	1
49	NS	-	372396	1824516	-	-	X	?	-	-	X	1
50	33Pk324	Map Location 50	368153	1821783	-	X	X	X	X	X	X	7
51	NS	-	367268	1824394	-	-	-	X	X	X	-	1
52	33Pk330	Church	367497	1820382	X	X	X	X	X	-	-	1
53	33Pk331	-	362290	1826934	-	-	-	-	X	-	X	1
54	NS	-	377107	1827361	X	X	X	X	X	?	X	1
55	NS	-	364553	1826188	-	-	X	-	-	-	X	2
56	33Pk184	Davis Farmstead	364725	1829121	-	-	X	X	-	?	X	2+
57	33Pk185/193	South Shyville/ Iron Wheel Farmstead	366239	1830223	X	X	X	X	X	X	X	11
58	33Pk187	-	365880	1822738	-	X	X	X	-	X	X	5+
59	33Pk194	North Shyville Farmstead	368256	1830563	X	X	X	X	X	X	X	6+
60	33Pk195	Beaver Road Farmstead	367371	1829718	-	-	X	X	-	?	X	3
61	33Pk203	Ruby Hollow Farmstead	376811	1823828	X	X	X	X	X	X	X	8+
62	33Pk206/364	Terrace Farmstead	371190	1831281	X	X	X	X	X	X	X	11+
63	33Pk211	Bamboo Farmstead	376407	1826187	X	X	X	X	X	X	X	7+
64	33Pk212	Railside Farmstead	380290	1832659	X	X	X	X	X	X	X	3
65	33Pk213	Log Pen Farmstead	379883	1832424	X	X	X	X	X	X	X	3
66	33Pk217	Stockdale Road Dairy	375018	1828963	X	X	X	X	X	X	X	9
67	33Pk218	Cornett Farmstead	375911	1833525	-	X	X	X	X	X	X	5
68	33Pk345	Gibson Cabin	377679	1832682	-	X	X	X	X	X	X	3

"NS" = not surveyed but presumed to lack archaeological remains; "none" = surveyed but found to lack archaeological remains.

Through the historical map and aerial photo review, it was discovered that residences (farmsteads/houses) made up the majority of the buildings in the PORTS community. Roughly 43 percent of the 68 map locations are classified as farmsteads or farm complexes containing at least three buildings and, of these, 62 percent appear to be large farmstead complexes containing five or more buildings. Roughly 50 percent of the 68 map locations are small residential

complexes containing less than three buildings and it is possible that these residences were occupied by: (1) non-farming families, some of whom may have supplemented their incomes with small-scale agriculture; (2) tenant farmers; or (3) farm workers. Five (7%) of the 68 Map locations represent schools and churches.

Construction dates (or date of development) for the buildings are often unclear, making it difficult to determine with accuracy exactly when a farm, residence, church, or school was constructed. In addition, farm size and configuration changed over time, making new construction a fairly common occurrence. Rarely do the same families with the same incomes and the same economic foci occupy a given farm from construction to abandonment. Instead, farmsteads are initially developed and improved upon as economic conditions improve within families. Individual families rarely have appreciable wealth when they are young. The first iteration of a farmstead is usually small, with a few outbuildings and a humble home. In time and good economic conditions within a region, a farm will generally grow and improve. Houses might be improved or replaced and outbuildings may be added to or replaced with new and improved styles. Moreover, a change in farming method or focus would require different types of outbuildings. As time passed, parents of families aged and passed on wealth and property to their children, who again repeated the process—some would fail and some would prosper. Regardless, the configuration of the original farmstead would continue to evolve (Pecora and Burks 2012a).

Archaeological data, coupled with inferences made from limited deed research, from a sample of the PORTS farmstead sites, suggests that the majority of the documented farmstead/residential sites were developed and occupied in the latter half of the nineteenth century; and few were occupied as early as the early-to-mid nineteenth century. Of the 68 mapped building locations indicated on all available map resources, nearly 71 percent (n=48; questionable ["?"] locations are not included in any tallies) are indicated on the 1905 Oil & Gas Map, which demonstrates that they were standing when the map was made. Ten additional building locations were constructed between 1906 and 1917 when the 15-minute USGS topographic maps were made, yet only 49 (72%) and 46 (68%) of the 68 mapped building locations are clearly visible on the 1938/39 and 1951 aerial photographs, respectively. By 1952 (AEC Property Map), only 38 (56%) of the total mapped building locations were standing. This trend demonstrates that PORTS never contained more than 58 standing buildings or building complexes through the first half of the twentieth century, and by the 1950s only 38 were standing. This implies a fairly dynamic occupation of the PORTS community, with many short-lived farmsteads and residences. Only 55-percent (n=32) of the mapped building locations (or building complexes) that were standing in 1906 (n=58) were still standing in the 1950s.

The various PORTS archaeological surveys to date have found archaeological remains at 36 of the 68 historically mapped building locations (all Map Locations in Table 2 that have OAI numbers). All other map locations were found to either lack archaeological remains (18 Map Locations in Table 2 that have "none" in the OAI# column) due to disturbance from development and other forms of earth moving, or are presumed to lack archaeological remains (14 Map Locations in Table 2 that have "NS" in the OAI# column) because a modern PORTS structure currently sits there. Furthermore, the same surveys documented 23 additional previously unknown historic-era archaeological sites that are, for the most part, unassociated with historically mapped building locations. These sites are identified in Table 1 with a "-" in the Name column. A more thorough discussion of all historic-era archaeological sites is presented in *Section 2* of this report.

1.3.4. Historical Land Ownership

Three historic-era maps, including the *1884 Map of Pike County, Ohio*, the c.1905 Oil & Gas Map, and the 1952 AEC Property Acquisition Map illustrate property boundaries and land-owner names (Tables 3-5; Figures 3-5). This information is historically useful because it associates potential names with archaeological resources found on those properties. Additionally it provides insight into how land parcels, and perhaps their use, changed through time.

Prominent historical family names within the region include Sargent, Barnes, Vulgamore, and Talbot(t). As of 1884, members of these families owned nearly the entire western half of the lands that currently make up the 3,777-acre PORTS facility (Table 3; Figure 3). All of these families owned large tracts of land that extended to the west beyond the current PORTS boundary and into the Scioto River floodplain. The Shy, Shuster, and Hawk families, among others, are the more prominent landowners of parcels on the eastern side of PORTS. These families tended to own much smaller parcels than those on the west side, but they often owned several noncontiguous parcels.

By around 1905, the same families, with the addition of the Rittenours and the Chambers owned much of the land on the western side. In contrast, the eastern side includes many new names not found on the 1884 map (Table 4; Figure 4). The Shy family remains prominent in this area, with the addition of the Zimmermans, Farmers, Stavens, and others. By the time the properties were purchased by the AEC in the 1950s, all of these families were still prominent landowners with the exception of the Shy family, which owned just a single 120-acre parcel at this time.

In 1884, there were about 59 separate land parcels that contributed to what is now the PORTS facility. Excluding the very large tracts that extend west of the facility, the average parcel size was approximately 76 acres. By around 1905, the same area was divided into approximately 85 separate parcels averaging around 52 acres in size. Parcel acreage increased in size (reminiscent of 1884 parcels) by 1952 when this area contained 52 separate parcels averaging around 75 acres. Parcel size does not necessarily reflect farm size. Around 1905, for example, Fred Shy owned 13 separate land parcels totaling nearly 280 acres that was at the time one of the larger landholdings in this area.

Table 3. PORTS property ownership in 1884 *Map of Pike County, Ohio* (Overman 1884).

Parcel Owner Name	Acreage	OAI #		Parcel Owner Name	Acreage	OAI #
William Holt	80	33Pk212, 33Pk213, 33Pk214, 33Pk215, 33Pk216, 33Pk344		Alfred Moore	161	-
George Schuster	122			J. Perrill	40	-
R. Clarke	23	33Pk312		Ralph Daily	118	33Pk320
R. Clarke	41	-		Ralph Daily	79	33Pk321, 33Pk322, 33Pk323
J. F. P.	8	-		Noah Boiler	95	33Pk199, 33Pk200, 33Pk201, 33Pk211, 33Pk375
J.P.	12	-		R. Welty	59	-
J. W. Givens	20	33Pk345		G. T. Green	60	-
J. Zimmerman	17	33Pk218		J. M. Vulgamore	160	33Pk328
W. Zimmerman	15	33Pk311		William M. Vulgamore	116	-
W. Smith	72	33Pk349		R. Talbot	16	33Pk360
H. Hatfield	41	33Pk317		R. Talbot	40	33Pk203
W. H. Lankford	41	33Pk318 & 33Pk369		B. Talbott	120	-
T. Varney	41	33Pk313 & 33Pk353		B. Talbott	40	33Pk374
C. Schoonover	82	-		B. Talbott	40	-
Henry Shy	290	33Pk206, 33Pk327, 22Pk362, 33Pk364		B. Talbot	?	-
R. Beldman (sic?)	43	33Pk189 &33Pk326		J. Y Vanmeter (Heirs)	88	-
G. W. Hawk	12	-		T. W. Sargent Heirs and H. Sargent	200	-
G. W. Hawk	41	-		E. Barnes	101	-
Jonathan Stewart	82	33Pk197		W. Appleton	40	33Pk191, 33Pk192, 33Pk359
T. C. Wynn	19	33Pk194		M Porter	146	33Pk331
W. D.	6	33Pk363		J. M. Vulgamore	60	-
W. Cutlip	78	33Pk185, 33Pk193, 33Pk209, 33Pk195, 33Pk256		I. N. Barnes	430	-
L. E. B---?	4	-		H. Sargent	?	33Pk324 & 33Pk330
T. C. Wyant	80	33Pk329 & 33Pk355		T. W. Sargent (Heirs)	1296	-
H. Hankins	20	33Pk184		T. W. Sargent (Heirs)	1703	-
G. W. Hawk	151	-		William M. Vulgamore	675	-
G. M. Morgan	40	33Pk325		B. Talbott	900?	33Pk187
R. Morgan	80	33Pk315		R. Clarke	80	33Pk217, 33Pk202, 33Pk340
J. Moore	40	33Pk314, 33Pk316, 33Pk319				

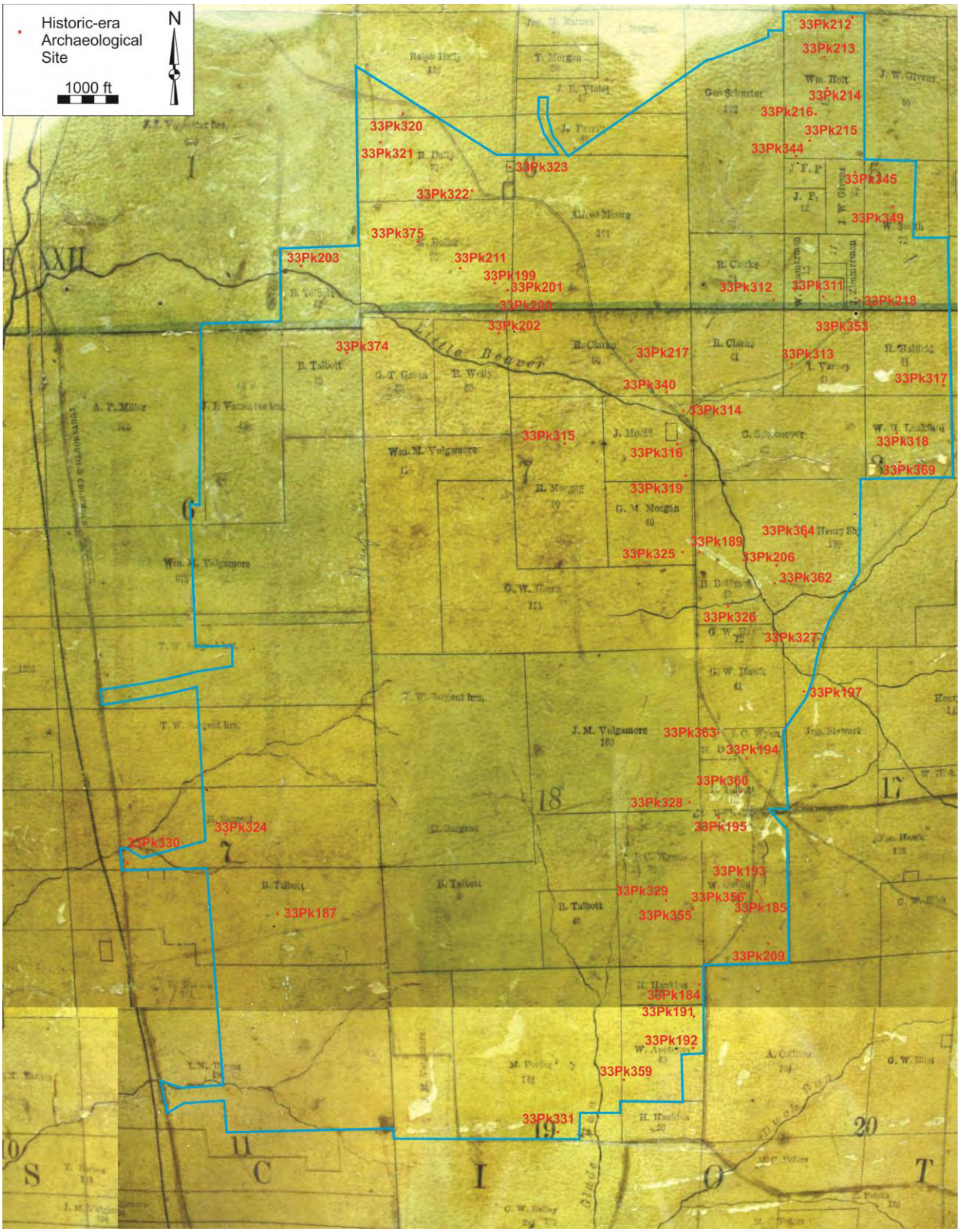

Figure 3. Portion of the *1884 Map of Pike County, Ohio* (Overman 1884) showing PORTS, landowner names, and historic-era archaeological site locations.

Table 4. PORTS property ownership on c.1905 Oil & Gas Map.

Parcel Owner Name	Acreage	OAI #		Parcel Owner Name	Acreage	OAI #
Brough Moore	21	33Pk212		Mahala C. Stewart	80	33Pk197
George Hunt	41	33Pk213, 33Pk214, 33Pk215 & 33Pk216		William S. Cutlip	79	33Pk185, 33Pk356, 33Pk193, 33Pk195, 33Pk209
? Hunt	21	-		C. K. Patterson	40	-
Louie D. Talbot	8	-		C. K. Patterson	40	33Pk329 & 33Pk355
Thomas Zimmerman	12	-		R. E. Stavens et al.	146	-
Thomas Zimmerman	12	-		R. E. Stavens et al.	40	33Pk359 & 33Pk331
Thomas Zimmerman	15	-		A. B. Middleton	20	-
John Zimmerman	19	33Pk311 & 33Pk353		James J. Pyle	62	-
John Zimmerman	2	-		William Brigner	40	33Pk192
Fred Shy	4	-		Stephen Brown	81.65	-
John Zimmerman	16	-		William Brigner	80	33Pk328
Emma Farmer Farmstead	40	33Pk349		Andrew Brigner	80	-
Hugh Farmer	8	33Pk345		Andrew Brigner	40	-
W. H. Taylor	20	-		Andrew Brigner	40.75	-
Raymond Daily	5	-		Melissa Scott et al.	80	-
Katie Frederick	15	33Pk218		Melissa Scott et al.	40	-
Sarah McDaniel	40	33Pk317		Melissa Scott et al.	40	-
William Zimmerman	8	-		G. M. Morgan	40	33Pk325
William Zimmerman	15	33Pk313		John Daniels	80	33Pk315
A. J. ?	8	-		Isaac S. Woodell	122	
A. J. ?	9.25	-		Louie D. Talbot	40	-
Charles Schoonover	80	-		William L. Talbot	80	33Pk187
Frank M. Vance	41.75	33Pk369 & 33Pk318		William L. Talbot	54	-
Emma Dowers[(sic)]	0.5	-		Joel Moore	161	-
Rebecca T. Boldman	46.9	33Pk189 & 33Pk326		Raymond Dailey	83	33Pk321, 33Pk322, 33Pk323
Charles L. Shy	40	-		Ira E. Hawk	95	33Pk200, 33Pk201, 33Pk211, 33Pk199, 33Pk375
Charles L. Shy	61	33Pk206/364, 33Pk362, 33Pk327		Prescila Dean	50	33Pk202
Charles L. Shy	35	-		Prescila Dean	50	-
Fred B. Shy	10	-		Millie Vulgamore	80	-
Fred B. Shy	2	-		Millie Vulgamore	40	-
Fred B. Shy	0.75	-		Millie Vulgamore	55	-
Fred B. Shy	12	-		William M. Vulgamore	52	-
Fred B. Shy	70	33Pk194, 33Pk360, 33Pk363		Jacob Scherer Jr.	40	33Pk203
Fred B. Shy	6	-		Jacob Scherer Jr.	41	33Pk374
Fred B. Shy	38	33Pk314, 33Pk316, 33Pk319		Hattie E. Sargent	160	-
Fred B. Shy	80	33Pk217 & 33Pk340		Henry Rittenour	150	33Pk330 & 33Pk324
Fred B. Shy	26	-		Moses Dailey	76	-
Fred B. Shy	34	33Pk312		U. G. & Terrena Chambers	191	-
Fred B. Shy	1	-		Henry C. Barnes	299	-
George Shy	54	-		John Fishburn	119	33Pk320
George Shy	40	-		William M. Vulgamore	635	-
Amanda B. Zimmerman	0.25	-		Hattie E. Sargent	1763	-
Frank Zimmerman	0.75	-		A.B. Middleton	20	33Pk184 & 33Pk191

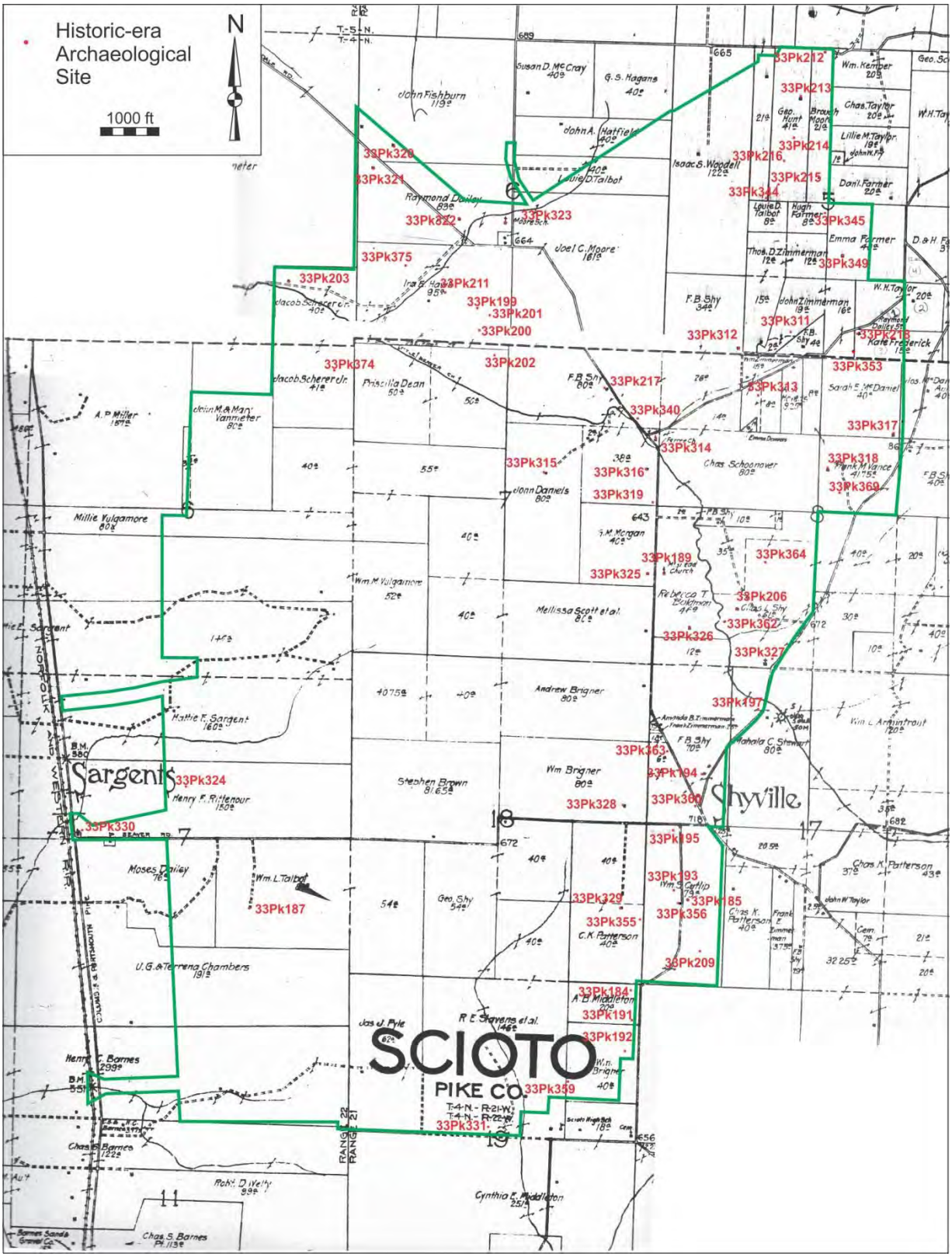

Figure 4. Portion of the c.1905 Oil & Gas Map showing PORTS, landowner names, and historic-era archaeological site locations.

Table 5. PORTS property ownership on 1952 AEC Property Acquisition Map.

Tract No.	Parcel Owner Name	Acreage	Historic-era OAI #
101	Charles Noel	144.00	33Pk187
102	E. F. Rittenour	92.60	33Pk324 & 33Pk330
103	John T. and Everett F. Rittenour	191.30	-
104	Orville M. Vulgamore, et al.	131.00	-
105	Dale D. and Patricia Seif	137.00	-
106	Joseph V. Vanmeter	69.86	-
107	Bronson Farmer	89.00	33Pk203 &33Pk374
108	Asa C. and Josephine Davis	100.00	33Pk202
109	Forrest M. Hawk	105.00	33Pk199, 33Pk200, 33Pk201, 33Pk211 & 33Pk375
110	A. D. Moore and Ora E. Moore	161.00	-
111	Ernest Newsom and Ruth Newsom	103.00	33Pk321
112	Daniel H. and Selma L. Farmer	7.50	-
114	Elmer and Martha Carter	108.00	
115	Matilda Condon, et al.	65.00	33Pk312
116	Lester M. Shy	120.00	33Pk217 ,33Pk316, & 33Pk319
117	Benjamin F. and Bertha Farmer	90.00	33Pk315
118	Elizabeth Freeland et al.	43.00	33Pk325
119	H. George Armintrout	312.30	-
120	Victor J. Darst	81.70	-
121	Della Vickers	125.20	33Pk328 & 33Pk329
122	Eldon Stroud	129.80	33Pk184
123	Willard C. and Cora Garden	68.00	-
124	S. L. and Ethel Wooldridge	108.00	33Pk331
125	L. T. Davis and Eunice Davis	20.00	33Pk184 & 33Pk191
126	Curtis and Jessie Rader	38.00	33Pk192 & 33Pk359
127	Vernell Pyle	79.00	33Pk185, 33Pk193, 33Pk195, 33Pk356, 33Pk355, 33Pk209
132	William L. Armintrout, et al.	14.50	33Pk197
133	Matilda Condon, et al.	92.80	33Pk194, 33Pk360, & 33Pk363
134	Paul R. Adams and Mary V. Adams	39.00	33Pk326
135	Arthur Farmer	13.25	-
136	Trustees of Mt. Gilead Chapel Christian Union Church	0.50	33Pk314
137	J. J. and Ellen Todd	96.00	33Pk362, 33Pk206/364, 33Pk327
148	Andre B. Steinhauer and Ruth Gibbs Steinhauer	83.00	-
150	Gladys Daily, et al.	25.20	-
151	Ernest J. Humphrey	112.80	-
155	Mary and Harry Zimmerman	21.17	33Pk322 & 33Pk323
157	D. H. Farmer	68.00	33Pk213, 33Pk214, 33Pk215, 33Pk216, 33Pk344
158	William E. Tackett and Dorothy Tackett	21.00	33Pk212
159	Ann Wynn Grace	8.25	-
160	Lydia J. Ramsey	1.65	-
161	Thomas O. Zimmerman	94.00	-
163	C. T. Wells and May Wells	97.37	33Pk359
165	Maurice J. and Charlotte Ann Caldwell	0.65	-
166	John M. Brodess	65.16	33Pk311 & 33Pk349
170	Thomas O. Zimmerman	59.50	33Pk313
171	William A. Gibson, et al.	8.00	33Pk345
172	Torrence I. and Ruth Mary Mechling	89.25	33Pk317, 33Pk318, & 33Pk369
181	Cecil Dean	132.00	33Pk320
184	George and Wilma H. Cornett	24.00	33Pk218 & 33Pk353
187	Trustees of Mt. Gilead Chapel Christian Union Church	1.50	33Pk189
197	Orville M. Vulgamore, et al.	3.00	-
201	William J. Beoddy	0.83	-
202	G. W. Rittenour	1.10	-

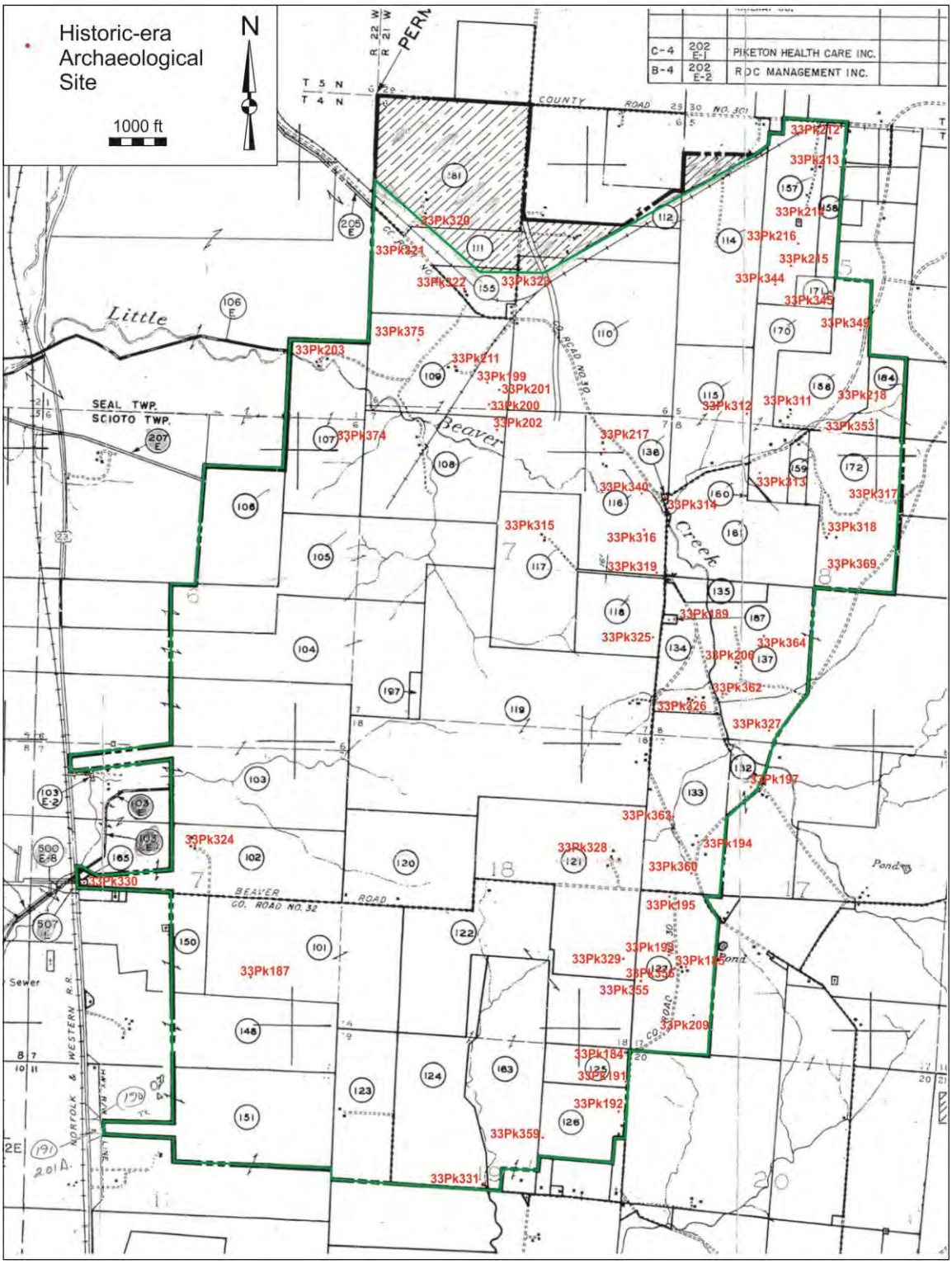

Figure 5. Portion of the 1952 AEC Property Acquisition Map showing PORTS, landowner names, and historic-era archaeological site locations.

The history of individual property ownership of parcels now within the PORTS reservation is complex and frequently confusing. It is very difficult to develop an understanding of how property ownership was related to farmstead occupancy through deed records (Pecora and Burks 2012a). The Shy family, for example, owned many properties at one point. This does not, however, necessarily mean that the Shys occupied all of those properties, but in fact, opens up the possibility of some farms being occupied and run by tenant farmers or residents. Some farms started out as smaller tracts owned by different people but then over time were consolidated into large tracts owned by a single farmer. And yet other parcels of land changed ownership numerous times within a short period – perhaps indicating investment speculator activity, occupations by a series of tenant farmers, or merely farming failures. Furthermore, some of the homesteads/residences (i.e., those places lacking contiguous farmstead complexes) may have been occupied by elderly or retired family members or simply 'non-farmers'.

As examples of the range of land ownership complexities, Tables 6 and 7 summarize the property transfer records for land parcels containing the Terrace Farmstead (33Pk206) and the Bamboo Farmstead (33Pk211). The history of the Terrace Farmstead property is very complicated and reflects a long chronicle of splitting and conjoining parcels starting as far back as 1843 and ending in 1952, when it was sold to the AEC as a 96-acre parcel containing a farmstead with two houses (Table 6). In 1843 Laugham Peters acquired a large tract of land (size unrecorded) from the AEC. After 1843, smaller parcels were transferred to various individuals. In 1864 Charles Dailey sold an 81-acre parcel to Josiah McCray for $1,500.00, or $18.51 per acre. In 1868 McCray lost this property and an additional 39 acres through a sheriff sale, totaling 120 acres, which were sold to Jane McClure for $1,520, or $12.67 per acre. Jane McClure sold 106 of those acres to her husband, William McClure for a profit of $1.67 per acre. Mr. McClure then sold a large parcel containing an additional 51 acres (totaling 151 ac.) to Henry Shy for $2,250.00, or $14.90 per acre.

The transfer to Henry Shy involved four parcels, two of which amount to 91-acres and make up the bulk of the Terrace Farmstead acreage. Fred and Charles Shy purchased and sold many smaller parcels ranging from one acre to 20 acres in size between 1896 and the 1920s. In 1908 Charles purchased the 91-acre property from his father, Henry Shy for $1,050.00, or $11.54 per acre. At some point, 165 acres, including the 91-acre Terrace Farmstead property, were transferred to Fred Shy. Fred sold this land to T. Whittaker in 1919 for $1,919.00, or $11.63 an acre. By 1943, Whittaker transferred a total of 185 acres to C & O Taylor for $1.00. A year later, the Taylors transferred 96 acres to J & E Todd for $1.00, and the Todd's sold the property to the AEC for $16,950.00, or $176.56 per acre.

Although the deed records seldom mention the presence of structures or buildings, the deed from the sheriff sale of the Terrace Farmstead property to Jane McClure in 1868 mentions that the sale includes the acreage and its tenements. This information suggests that a house was present on the Terrace Farmstead in 1868. This is one of the rare instances where a residence is mentioned in the deed records reviewed by Pecora and Burks (2012a) in the Phase II investigation of six farmsteads sites at PORTS.

Table 6. History of land ownership for the Terrace Farmstead (33Pk206) property (Pike County Auditor's Office).

Grantee	Date	Grantor	Acreage	$ Amount	Book-Page
U.S. Gov.	12-18-1952	J. & Ellen Todd	96 ac	$16,950	-
J. & E. Todd	9-24-1944	C & Ola Taylor	96 ac	$1.00	95-261
C & O Taylor	9-22-1943	Anna & Thms. Whittaker	185 ac	$1.00	95-45
T. Whittaker	12-13-1919	Fred Shy	165 ac	$1,919.00	68-509
Fred B. Shy	8-4-1921	Violet Parker	2 ac	$65.00	53-537
Fred Shy	8-10-1918	Rebecca Boldman	1-2 ac	$35.00	69-59
Fred Shy	6-20-1910	Charles Shy	11 ac	$400.00	59-220
Charles Shy	10-22-1908	Joseph McDaniel	10+ ac	$375.00	56-297
Charles L. Shy	2-18-1908	Henry Shy	~91 ac	$1,050.00	55-505
Fred B. Shy	2-12-1906	Gore McDaniel	10 ¼ ac	$300.00	53-528
Fred Shy	4-11-1905	S. P. Violet	11 ac	$300.00	51-590
Fred Shy	7-20-1896	Charles L Shy	20 ac	$300.00	42-261
Lavicca Miller	9-11-1895	H. Shy	1 ac	$25.00	43-310
John Violet	9-6-1886	Henry Shy	10 ac	$350.00	33-103
*Henry Shy	9-16-1871	W^{m} McClure	151 ac	$2,250.00	22-527
W^{m} McClure	3-10-1868	Jane McClure	106 ac	$1,520.00	20-163
Jane McClure	2-24-1868	Sheriff Sale (Josiah McCray)	120 ac	$1,520.00	20-139
Josiah McCray	10-6-1864	Charles Dailey & Wife	81 ac	$1,500.00	13-162
Charles Dailey	12-22-1851	Benjamin Violett	69+ ac	$700.00	12-43
Charles Dailey	9-27-1846	John W. James	40 ac	$320.00	10-164
John W. James	3-23-1844	Sam Cutlip	40 ac	$200.00	8-228
John Prye	12-12-1843	L. Peters	40 ac	$100.00	24-186
Laugham Peters	4-10-1843	US Gov.	Large Acreage		Gen. Land Office Washington DC

* Includes two parcels totaling 96 acres (61 & 30 ac) and two parcels totaling 50 ac (20 & 30 ac).

In contrast to the Terrace Farmstead property, which had a dynamic and complicated transfer history, the Bamboo Farmstead property history is less complex. This 105-acre property retained its size and shape from prior to 1825 until 1953 when it was sold to the AEC (Table 7). The earliest known landowner was Thomas Phillips and his wife. When the Phillipses purchased the land is not available in the deed records, but they sold the 105-acre parcel in 1825 to Woodford McDowell for $8.57 per acre. In 1832 McDowell transferred the property to William Wynn for $300.00, but apparently mortgaged an additional $250.00 from Mr. Wynn a day later. Somehow in this transaction, Wynn retained ownership and later resold the land to Daniel Ware in 1838 for $585.00. The deed records show a *Deed for Mortgage* from the same property from Ware to Wynn for $820.00 in 1843. This, again, resulted in Wynn retaining ownership. In 1867, William Wynn and his wife finally sold the 105-acre property to James Emmitt for $38.10 per acre. A year later, the Emmitts sold the property to George Head for $47.62 per acre. The Head family owned the property for 10 years before they sold it to Noah Boiler in 1878 for a loss, at a rate of $20.95 per acre. Twenty years later, Boiler sold the land to A.J. Vallery for only $200.00, or $1.90 per acre. Vallery sold the property to Ira Hawk in 1900 for $28.57. Ira Hawk owned the land for 45 years before he transferred the property to his son, Forest Hawk, in 1945. Forest Hawk sold the land to the AEC in 1953 for $207.14 per acre.

Table 7. History of land ownership for the Bamboo Farmstead (33Pk211) property (Pike County Auditor's Office).

Grantee	Date	Grantor	Acreage	$ Amount	Book-Page
US Gov.	1-7-1953	Forest M. Hawk	105 ac	$21,750.00	109-1
Forest M. Hawk	5-10-1945	Ira Hawk	105 ac	$1.00	92-543
Ira Hawk	5-25-1900	A.J. Vallery	105 ac	$3,000.00	47-123/124
A.J. Vallery	8-2-1898	Noah Boiler	105 ac	$200.00	35-386
Noah Boiler	1-15-1878	Geo & Wife Head	105 ac	$2,200.00	25-472
George Head	8-29-1868	James & Wife Emmitt	105 ac	$5,000.00	20-394
James Emmitt	4-9-1867	W^{m} & Wife Wynn	105 ac	$4,000.00	20-364
W^{m} Wynn	10-13-1843	Daniel Ware	105 ac	$820.00	8-117
Daniel Ware	10-13-1843	W^{m} Wynn	Deed of mortgage	$820.00	8-75
Daniel Ware	5-20-1838	W^{m} Wynn	105 ac	$585.00	5-418
Woodford J. McDowell	8-31-1832	W^{m} Wynn	105 ac	$250.00	C-603
W^{m} Wynn	8-30-1832	Woodford J. McDowell	105 ac mortgaged	$300.00	C-601
Woodford J. McDowell	7-7-1825	Thom & Wife Phillips	105 ac	$900.00	B-484
Thom & Wife Phillips	?	?	?	?	?

In summary, most of the historic-era archaeological farmstead and house sites examined within PORTS represent what is left of a local rural agricultural community that lasted for at least two generations prior to land purchase by the AEC in the 1950s (e.g., Pecora and Burks 2012a). Deed records indicate that the majority of land within PORTS was purchased early in the nineteenth century, yet it does not seem that many of the properties were developed until at least the mid-nineteenth century, if not the late nineteenth century. In many cases the property parcels were owned by different, unrelated families or persons for relatively short periods of time between the early nineteenth century and the mid-twentieth century. After the properties were purchased by the AEC they were abandoned and the buildings were razed. There is no doubt that the histories of these farmsteads (i.e., the kinds of crops or livestock raised on the farms, the sizes of the families, the tenures of the family occupations, etc.), culminating in their ultimate abandonment and demolition, affected the character and contents of their archaeological remains. In this section, it was demonstrated how select documentary and archaeological information can be used in combination to reconstruct how the buildings and structures within farmsteads were arranged at various times. This information has the potential to provide a foundation from which to develop an evolutionary history of how the farms in this Pike County farming community evolved over time. Additional archival data might be useful in understanding the evolution of these farms and tying them together into a community.

2. HISTORIC-ERA ARCHAEOLOGICAL SITE TYPES WITHIN PORTS

In this summary we use five general site types to refer to the historic-era archaeological sites documented at PORTS (Tables 8-12). Some of these site types have several sub-types, as defined by the authors of the various archaeological reports we have summarized, and in many cases our types differ somewhat from those used by others. However, our primary goal here is a simple presentation of all archaeological sites. The site types we use include: (1) residential sites (farmsteads, house sites, recreational cabin sites); (2) farmstead components; (3) refuse dumps, artifact scatters, and isolated finds; (4) bridges; and (5) schools, churches, and cemeteries. Most of these types and their definitions likely parallel the concepts held by the people who created them in the nineteenth and early twentieth centuries, with the exception of artifact scatters and isolated finds. Artifact scatters and isolated finds are simply archaeological constructs and most certainly were not part of the conceptual lexicon of most turn-of-the-century Ohioans.

The "archaeological site" concept is an academic construct defined by archaeologists to delineate the arrangement of physical things or groups of things in space. The archaeological site types used in this study are simply tools designed to facilitate discussion. Terms used in discussions regarding historic-era archaeological sites are not necessarily interchangeable with terms used when discussing historical documents, such as in the previous section. The discussion in the previous section used the terms "farm," "farmstead," "property or parcel," "building" and "structure" in reference to the pre-PORTS rural community and based on information available on historical maps and in aerial photographs. These terms are simply labels used to extract meaning from the historical documents. The archaeological field surveys conducted at PORTS identified and documented archaeological sites, 38 of which correspond with historically mapped building locations. A property parcel or group of property parcels owned by a family in 1905, for example, might be defined as a "farm" containing a farmstead or even several farmsteads. Each farmstead would have contained at least a house and a variety of outbuildings. Beyond the farmstead, the farm's property would have contained pastures, farm fields, wood lots, refuse dumps, and a number of other farm components and "activity areas" associated with farm life.

2.1. FARMSTEAD, HOUSE, AND RECREATIONAL CABIN SITES

Residential sites include farmsteads, house sites, and recreational cabins. Although PORTS was a rural community, not all residents were farmers or engaged in agriculture. Some individuals may have had other occupations, such as store owners, school teachers, clergy, laborers, and mechanics, to name a few. These residential site types are not meant to imply that those who occupied them were either farmers or non-farmers. And, it is entirely possible that families living at "house sites" engaged in small-scale agriculture for personal use and to supplement household incomes. Likewise, some of the large farmsteads may have contained non-farming industries. For example, one of the PORTS farmsteads, the North Shyville Farmstead (33Pk194), contained a commercial component consisting of an automotive garage and fuel station.

2.1.1. Farmstead Sites

As used in this discussion, the term "farmstead" defines a farm-associated building complex containing at least one house/residence, at least one large barn, and multiple outbuildings. Historical maps and aerials of the area often show at least three structures within farmsteads, and these tend to be located on relatively large tracts of land.

Twenty-two "farmstead sites" were identified at PORTS. Table 8, below, is a list of these adapted from Table 1. Many of the sites are in fairly good archaeological condition, meaning they contain foundation remains for houses, barns, outbuildings and other structures or facilities. Privies, wells, cisterns and other water-works related structures also remain intact at several of these farmstead sites. Those with foundation remains and other features also tend to contain fairly large quantities of artifacts. The Phase II and enhanced Phase I investigations within PORTS tended to focus on farmstead sites that are in fairly good archaeological condition. Because these sites underwent fairly intensive investigations, they are the primary sources of the archaeological information presented in this summary report.

Not all of the PORTS farmsteads are in good archaeological condition. Many (45%) have been severely damaged and no longer contain foundation remains or artifacts. For example, site 33Pk328 is represented by a single window pane glass fragment, but it is located where a farmstead containing at least five structures stood on a 125-acre property in 1938/39 (Trader 2011). Trader (2011) concluded that this entire farmstead had been removed from the landscape by the construction of Perimeter Road and the air strip after it was purchased by the AEC in the 1950s.

2.1.2. House Sites

House sites are similar to farmsteads, but are defined as places where one house stood in association with no more than two outbuildings (Table 8b). Seven house sites have been documented within PORTS. It is also possible that some of these locations were very small farmsteads or even former farmsteads at which the outbuildings had been removed. House sites within PORTS tend to be on small parcels of land. Others, like the Mechling House Site (33Pk317), represent house sites located on larger farm tracts but are not part of the farmstead complex. The Mechling House Site is possibly the home of a family member related to those living in the farmstead, such as Mechling adult children or retired parents, or the Mechling House Site is a rental house occupied by farm hands or tenant farmers. It is also possible that some of the PORTS house sites represent small farmsteads that supplemented non-farming incomes, or are simply the homes of non-farming community members.

Like the many PORTS farmstead sites, many of the PORTS house sites are in fair to good archaeological condition (43%) and contain large quantities of artifacts. Other house sites are in poor condition, lacking foundation remains and containing few artifacts. Table 8b lists eight sites interpreted to be house sites, rather than farmsteads.

2.1.3. Recreational Cabin

One recreational cabin was documented within PORTS (Table 8c). The Gibson Cabin (33Pk345) is a small, partially collapsed, hewn log cabin that was probably constructed in the 1920s or 1930s by the Gibson Family. The cabin is located on what was historically a small property parcel and the structure is not indicated on the earlier maps, as most other residential structures are. The cabin is, however, visible on the USDA 1938 and 1951 aerials. Based on historical documentation combined with archaeological data, the Gibson Cabin is interpreted to be recreational building. Unlike most of the residential sites, the Gibson Cabin site produced few artifacts and no domestic debris.

Table 8. PORTS residential sites (farmstead, house, and recreational cabin sites).

8a. PORTS Farmstead Sites			
OAI #	**Name**	**Type**	**Archaeological Condition**
33Pk184	Davis Farmstead	Farmstead	good
33Pk185	South Shyville Farmstead	Farmstead	good
33Pk187	-	Farmstead	poor
33Pk194	North Shyville Farmstead	Farmstead	good
33Pk195	Beaver Road Farmstead	Farmstead	good
33Pk203	Ruby Hollow Farmstead	Farmstead	good
33Pk206	Terrace Farmstead	Farmstead	good
33Pk211	Bamboo Farmstead	Farmstead	good
33Pk212	Railside Farmstead	Farmstead	poor
33Pk213	Log Pen Farmstead	Farmstead	poor
33Pk217	Stockdale Rd. Dairy	Farmstead	good
33Pk311	Brodess Farmstead	Farmstead	good
33Pk315	Map Location 19	Farmstead	poor
33Pk318	Mechling Farmstead	Farmstead	good
33Pk320	Map Location 2	Farmstead	poor
33Pk322	Map Location 4	House Site/Farmstead	poor
33Pk324	Map Location 50	Farmstead	good
33Pk325	Map Location 25	Farmstead	poor
33Pk326	Map Location 27	Farmstead	poor
33Pk328	Map Location 36	Farmstead	poor
33Pk329	Map Location 37	Farmstead	poor
33Pk349	Emma Farmer Farmstead	Farmstead	good
8b. PORTS House Sites			
OAI #	**Name**	**Type**	**Archaeological Condition**
33Pk218	Cornett Farmstead	House Site/Farmstead	fair
33Pk312	Condon Farmstead	House Site/Farmstead	fair
33Pk313	Map Location 16	House Site/Farmstead	poor
33Pk316	Map Location 20	House Site/Farmstead	poor
33Pk317	Mechling House Site	House Site/Farmstead	good
33Pk319	Map Location 43	House Site/Farmstead	poor
33Pk321	Map Location 3	House Site/Farmstead	poor
8c. PORTS Recreational Cabin			
OAI #	**Name**	**Type**	**Archaeological Condition**
33Pk345	Gibson Cabin-	Recreational Cabin Site	fair

2.2. FARMSTEAD COMPONENTS

Farmstead components are portions or ancillary parts of farmsteads. Some are isolated wells or barn locations positioned some distance from the main farmstead. Isolated wells were probably used as water sources for pastured livestock and isolated barns were likely used to house livestock, animal feed, or machinery. Isolated wells or barn foundations representing fragments or parts of farmsteads were found at several locations. Six of the PORTS historic-era archaeological sites are defined as "farmstead components" (Table 9).

Several of the sites originally recorded as farmsteads within earlier PORTS survey reports are defined here as "farmstead components" based on the results from more recent investigations. The Iron Wheel Farmstead (33Pk193), for example, was originally defined as a farmstead (Schweikart et al. 1997), but a Phase II archaeological investigation found that it is a water well associated with the South Shyville Farmstead (33Pk185) (Klinge and Mustain 2011). Similarly, site 33Pk360 is believed to be a small artifact scatter that is physically associated with the North Shyville Farmstead (33Pk194), and site 33Pk364 is a barn foundation associated with the Terrace Farmstead (33Pk206) (Pecora and Burks 2012a).

Table 9. PORTS farmstead components.

OAI #	Name	Type	Condition
33Pk193	Iron Wheel Farmstead	Farmstead Component (33Pk185 water well)	good
33Pk197	Dutch Run Road Farmstead	Farmstead Component (outbuilding foundation associated with Farmstead located outside PORTS)	good
33Pk331	Map Location 53	Farmstead Component (Isolated barn)	good
33Pk359	-	Farmstead Component (Isolated water well)	good
33Pk360	-	Farmstead Component (33Pk194 water well)	good
33Pk364	-	Farmstead Component (33Pk206 barn)	good

2.3. REFUSE DUMPS, ARTIFACT SCATTERS, AND ISOLATED FINDS

2.3.1. Refuse Dumps

Refuse dumps (n=5) within PORTS are defined as places, sometimes in gullies or at the heads of drainage draws, that contain large quantities of refuse (Table 10a). Such refuse most often consists of metal containers, glass jars and bottles, ceramics, and other types of household and farm refuse. Refuse dumps are sometimes directly associated with a particular farmstead, even though they are located some distance away. By plotting all of the historic-era archaeological sites on historic maps with property boundaries (see Figures 3-5), it should be possible to link the dump sites with known farmsteads located on the same "farm" or set of property parcels. In one case, at the Mechling Farmstead (33Pk318), a refuse dump was found in close proximity to the farmstead and was included with the farmstead as a site element rather than documented separately as a stand-alone archaeological site. Another refuse dump is reportedly located in a gully near the Iron Wheel Farmstead (33Pk193), which likely makes it a component of the South Shyville Farmstead (33Pk185) (Klinge and Mustain 2011). Furthermore, the Iron Wheel dump is located on the same property as the South Shyville Farmstead, supporting the likelihood that it was a dump for this farmstead.

2.3.2. Artifact Scatters

Artifact scatters (n=9) are defined as locations that contain historic artifacts but lack any architectural remains (Table 10b). It is possible that the artifact scatters represent small refuse dumps, or perhaps even farmstead sites. For example, the Emma Farmer Farmstead (33Pk349) is technically an artifact scatter with architectural and domestic debris, but because it is visible as a small farmstead on the c.1905 Oil & Gas Map and 1938/38 aerial photograph, it is classified as a farmstead (Pecora 2012)—and recent Phase II investigations have located buried architectural features. The historic aerial photos show that the farmstead site was razed and reclaimed for cultivation by the 1930s, though the site appears on the early historic maps. If no structures were visible on the historical maps and aerials, this site would be classified as simply an artifact scatter. So, there is a possibility that some artifact scatters not associated with known building locations represent farmsteads/houses that were razed and reclaimed as agricultural land prior to when the maps were made. Such artifact scatters could quite possibly correspond to very old historic farmsteads, conceivably representing the first wave of historic-era occupation. For example, site 33Pk340 produced a small assemblage of architectural and domestic debris, dating as far back as the early and mid-nineteenth century. The site also contains a patch of daffodils, which are a common component of historic-era residential sites. No buildings are visible in this area on the historical maps so this site remains defined as an artifact scatter. In contrast, site 33Pk209 is represented by two whiskey bottles found along a fence-line (Schweikart et al. 1997). This "artifact scatter" probably represents an episode or two of recreational alcohol consumption rather than a residential site.

2.3.3. Isolated Finds

Isolated finds (n=4) are defined as locations where a single artifact was recovered (Table 10c). There are numerous causes or sources of isolated finds, but they are sometimes merely an anomaly of survey methodology. For example, a discarded bottle may break into many pieces and become somewhat scattered over the ground surface. An archaeological survey might happen upon one shard, and define the site as an isolated find. In such a case, additional survey work would inevitably find additional shards and define the site as an "artifact scatter." For simplification, isolated finds are treated as isolated incidences of artifact deposition through various unknown processes.

Table 10. PORTS refuse dumps, artifact scatters, and isolated finds.

OAI #	Name	Type	Archaeological Condition
10a. PORTS refuse dumps			
33Pk191	-	Refuse Dump	poor
33Pk192	-	Refuse Dump	poor
33Pk215	-	Refuse Dump	poor
33Pk216	-	Refuse Dump	poor
33Pk375	-	Refuse Dump	poor
10b. PORTS artifact scatters			
33Pk200	-	Artifact Scatter	poor
33Pk202	-	Artifact Scatter	poor
33Pk209	-	Artifact Scatter	poor
33Pk340	-	Artifact Scatter	poor
33Pk344	-	Artifact Scatter	poor
33Pk353	-	Artifact Scatter	poor
33Pk362	-	Artifact Scatter	poor
33Pk369	-	Artifact Scatter	poor
33Pk374	-	Artifact Scatter	poor
10c. PORTS isolated finds			
33Pk199	-	Isolated Find	poor
33Pk201	-	Isolated Find	poor
33Pk355	-	Isolated Find	poor
33Pk356	-	Isolated Find	poor

2.4. BRIDGES

One bridge that pre-dates the 1950s (and therefore, the construction of PORTS) was documented within PORTS (Table 11). The bridge was constructed as a stream crossing on an unnamed tributary of Little Beaver Creek.

Table 11. Pre-PORTS bridges.

OAI #	Name	Type	Archaeological Condition
33Pk363	-	Bridge	fair

2.5. SCHOOLS, CHURCHES, AND CEMETERIES

Based on historic map sources, PORTS is known to have contained two cemeteries, three churches, and a school (Table 12). The PORTS surveys documented three church sites, two cemeteries (one also containing a church), and a school site. The Mount Gilead Cemetery grounds also housed a church (for a total of four churches), which is evidenced archaeologically by the presence of an arrangement of large stone block foundation support piers. Foundation remains were also documented at the locations of the other three churches and one school. Few artifacts and no domestic debris were recovered at any of these sites and this is not uncommon at church and school sites. In addition, the Holt Cemetery was subjected to a geophysical survey in an effort to locate unmarked graves and to better define its boundaries (Burks 2009). This survey also found that the cemetery is incorrectly plotted on the USGS topographic map and in

the Schweikart et al. (1997) survey report. Recent survey work within this portion of PORTS found no additional cemeteries (Pecora 2012).

Table 12. PORTS Schools, churches, and cemeteries.

OAI #	Name	Type	Archaeological Condition
33Pk189 (PIK-206-4)	Mount Gilead Church & Cemetery	Cemetery and Church	good
33Pk214 (PIK-207-12)	Holt Cemetery	Cemetery	good
33Pk314	Ferree Church	Church	fair
33Pk327	Map Location 28	Church	fair
33Pk330	Map Location 52	Church	poor
33Pk323	Moore School	School	poor

3. HISTORIC-ERA ARCHAEOLOGICAL SITE SUMMARIES

The following section provides summary descriptions for each historic-era archaeological site recorded at PORTS. These summaries are adapted from more detailed site descriptions provided in multiple survey reports prepared by Ohio Valley Archaeology, ASC Group, and Gray & Pape (Schweikart et al. 1997; Klinge 2010; Klinge and Mustain 2011; Burks 2011a; Pecora 2011; Mustain and Klinge 2011; 2012; Vehling et al. 2011; Mustain 2012; Mustain and Lamp 2012; Garrard and Burden 2012; Norr 2012; Trader 2011; Pecora 2012; Pecora and Burks 2012a, 2012b; Pecora and Burks 2013). Refer to Table 1 in Section 1.2 for a list of each historic-era archaeological site and its report reference.

Some site descriptions presented below are more detailed than others. This is largely a reflection of the level of work that has been conducted at each site to date. Fourteen of the PORTS historic-era sites, for example, were subjected to Phase II studies (Klinge 2010; Kling and Mustain 2011; Pecora and Burks 2012a; Pecora and Burks 2013). Phase II studies are far more intensive and inherently produce more information than Phase I surveys. Other sites, like the isolated finds and artifact scatters, or the farmsteads containing few archaeological remains, were investigated at a minimal level and their reporting contains little information.

3.1. FARMSTEADS AND HOUSE SITES

3.1.1. 33Pk184 - Davis Farmstead

The Davis Farmstead (33Pk184) is situated on a broad ridgetop immediately adjacent to the eastern PORTS boundary (Figures 1 and 2). The site was originally documented in a Phase I survey by Schweikart et al. (1997) and a Phase II investigation was later completed by Mustain and Klinge (2011). The Phase II investigation involved systematic shovel testing on a 5-meter grid within the core of the site. For the purposes of this study, the core of the site is defined as the area that once contained a residential house and associated outbuildings, based on the 1938 and 1951 aerial photographs. In addition to the shovel testing, the Phase II included limited hand excavation in the form of 1 meter by 1 meter (1x1 m) units. The hand excavations were designed to investigate the house and outbuilding foundations and two privy vaults. In total, the

Phase II investigation of the Davis Farmstead excavated 82.25 m^2 within the approximately 7,400 m^2 site area.

Prior to AEC purchase in 1952, the Davis Farmstead was situated on a 20-acre parcel. The history of property ownership can be traced back to 1807, when George Davies purchased the entire southeast quadrant (160 acres) of Section 19 in Scioto Township (Kochur 1995). By 1884 the same 160-acre property was owned by H. Hankins. Twenty years later, in about 1905, the original 160-acre parcel had been subdivided and the farmstead was part of a 20-acre parcel owned by Arthur Middleton. In 1921, Middleton sold the parcel to Henry Lowe for $2,500.00. Lowe held the property for just nine years before selling it to L.T. Davis. After 22 years, Davis sold the property to the AEC. Although the deed records do not mention the presence of buildings or a farmstead on the property, the unusually high property value in 1921 suggests that the farmstead was developed by this time. Since no structures/buildings are depicted at this location on the c.1905 Oil & Gas Map, it is likely that the farmstead was first developed after 1905.

The 1938/39 aerial photograph has very poor resolution in this area, but at least three structures are visible within the farmstead. The available 1951 aerial also is of poor quality, but at least one or two structures are visible. Compared to the 1938/39 aerial, the 1951 aerial shows what appears to be a smaller farmstead with fewer buildings and the surrounding land appears to be less well-kept than it was previously. It is possible that the Davis Farmstead was in decline by 1951.

The Phase II investigation documented the remains of five foundations, including a house, three outbuildings, and a large cistern (Figure 6). Additionally, two privy shafts and a concrete garage pad were also documented. One of the outbuildings (Outbuilding 3) is a root cellar located adjacent to the southwest corner of the house foundation. All of these foundations are made with concrete and/or cement block (cinder block).

The cistern, which is a poured concrete type, is associated with a poured concrete partitioned box-like foundation similar to those documented by Pecora and Burks (2012a) at several other PORTS farmsteads. Pecora and Burks define these as the remains of water pump houses, given that they are always associated with wells and/or cisterns. Mustain and Klinge (2011) offer a similar function but also suggest that it may be a filtering system that would have filtered water from downspouts prior to entering the cistern.

The Phase II fieldwork at Davis Farmstead produced 2,667 artifacts, the majority of which are architecture and kitchen debris. The ratio of architecture to kitchen group artifacts is approximately 1:3, with considerably higher frequencies of kitchen group artifacts.

Ceramics make up 29.3 percent of the kitchen group assemblage. Artifact density, measured from the shovel test data, is 3.0 artifacts per positive shovel test (0.25 m^2), which is very low when compared to the other farmsteads investigated at the Phase II level.

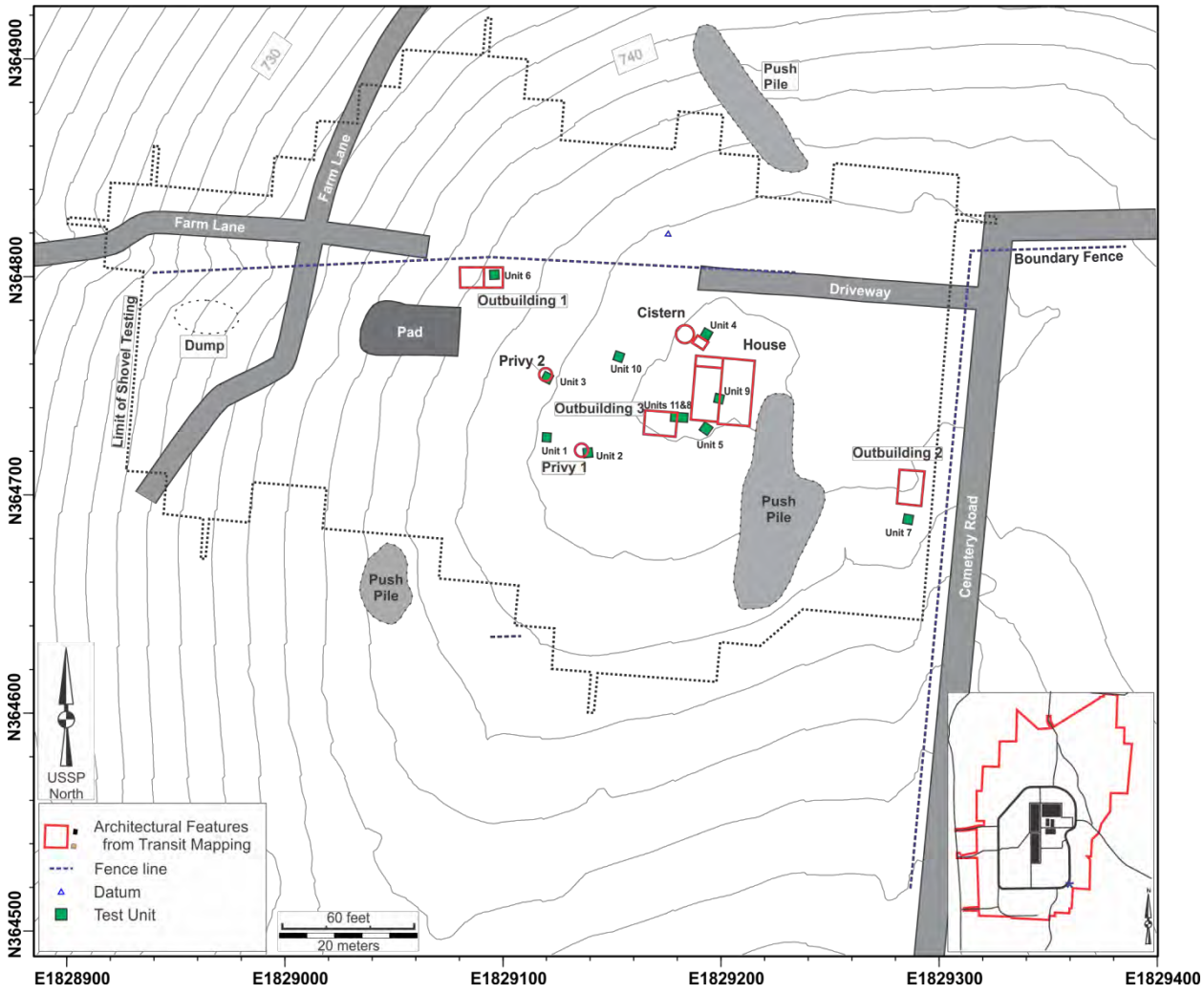

Figure 6. Illustration of the Davis Farmstead (33Pk184) (adapted from Klinge and Mustain 2011).

3.1.2. 33Pk185 - South Shyville Farmstead

The South Shyville Farmstead (33Pk185) is located on a broad ridgetop near the southeast corner of PORTS (Figures 1 and 2). The site was originally recorded during a Phase I survey by Schweikart et al. (1997) and was further investigated at the Phase II-level by Pecora and Burks (2012a). The Phase II investigation involved systematic shovel testing on a 5-meter grid within the core of the site and shovel testing a 10-meter interval around the perimeter of the core. For the purposes of this study, the core of the site is defined as the area that once contained a residential house and associated outbuildings based on the 1938 and 1951 aerial photographs. In addition to the shovel testing, the Phase II work included a ground-penetrating radar (GPR) survey and limited hand excavation in the form of 1x1 meter units. The GPR survey was conducted to locate subsurface features such as buried foundations, cellars, privy vaults, cisterns, filled-in wells, and paths in the vicinity of the house foundation. The hand excavation was designed to investigate the house and root cellar foundations and a GPR anomaly in the midst of the house foundation piers. In total, the Phase II investigation of the South Shyville Farmstead excavated 93.5 m^2 within the approximately 18,575 m^2 site area.

Prior to the AEC purchase, the South Shyville Farmstead was situated on a 79-acre property that straddles a fairly broad, sloping ridgetop (Figure 1). In 1858 the property consisted of approximately 80 acres and was owned by E. Hawk. At some point prior to 1871 the property was purchased by James Dillard who carved out a three-acre parcel located in the northwestern portion, leaving 76¼ acres to be bought and sold separately many times over the years. The two parcels were eventually re-conjoined to form the 79-acre property that was sold by Vernell Pyle to the AEC in 1952. The history of the property ownership prior to 1858 and between 1858 and 1871 could not be determined from the property deed records. After 1875, however, the property changed hands 12 times over a 77-year period. Over the course of these 77 years, the average duration of ownership was 6.4 years, but the longest tenure of ownership was 50 years when it was owned by the Cutlip family from at least 1877 to 1927. The property deed records show two confusing property transfers, for the same property, from the Dillard's and Abraham Hatfield to William Cutlip, all within a three month period of time in 1877-78. The Hatfield connection is unclear, but he may have been married to a Dillard daughter. Based on the deed records, these purchases cost William Cutlip a total of $800.00. Two years earlier, the property value was only $100.00, and this is reflected in a series of four transfers, three of which occurred on the same day, between Dillard family members and a Sara Ann Hatfield. Sara may have been a married member of the Dillard Family.

Although the deed records are confusing, it might be inferred that the Dillard family was the first to develop the property in the 1870s. The mean ceramic date for the South Shyville Farmstead ceramic assemblage is 1877.2, but when undecorated whiteware is excluded from the assemblage the mean ceramic date is 1864.8 (decorated ceramics tend to have much tighter age brackets than undecorated). Over 11 percent of the ceramic assemblage includes types that were manufactured prior to 1880, suggesting that a significant portion of this assemblage dates to the mid-nineteenth century.

By 1938/39, this farmstead contained at least nine structures, including a house, two barns, and six small outbuildings. The 1951 aerial, however, shows only the house, one of the barns, and two new outbuildings, including a possible garage. Over the 12 year period, between which these two aerial photographs were taken, the arrangement and types of buildings at South Shyville Farmstead changed considerably.

The Phase II investigation documented the remains of three foundations, including the house, a milking parlor, and a root cellar (Figure 7) (Pecora and Burks 2012a). Additionally a water system, composed of a stone-lined well or cistern and a poured concrete partitioned pump house foundation, and two stone-lined wells were also documented. Scattered on the surface of the site were several displaced building stones from other small outbuilding locations. A third well is located west of the roadway (Figure 7). Originally, this third well and several other site features were recorded as the Iron Wheel Farmstead (33Pk193) (Schweikart et al. 1997), but later work determined them to be a component of the South Shyville Farmstead (Klinge and Mustain 2011; Pecora and Burks 2012a). A third site, 33Pk356, was originally recorded as a historic-era isolated find by Garrard and Burden (2012), but its proximity to the site suggests that it is an artifact associated with South Shyville Farmstead.

The house foundation is represented by fieldstone support piers. No clear chimney foundation was identified. Just beyond the north side of the house is the water system. The GPR survey identified a large anomaly within the house foundation piers—what would have been under the house. Excavation of this anomaly found that it is a sub-floor pit cellar. Similar pit cellars were also documented at Bamboo Farmstead, and Cornett Farmstead.

The external root cellar foundation is located south of the house foundation and is made of sandstone fieldstone. Similar root cellars were found at the Cornett Farmstead, Mechling House Site, and Condon Farmstead. Unlike the others, the Cornett Farmstead root cellar has a poured concrete slab roof sitting on dressed sandstone block walls. The root cellars at Mechling House Site and Condon Farmstead are nearly completely "robbed" of their building stone (i.e., the stone was recycled for other uses).

The milking parlor (dairy barn) at South Shyville Farmstead is a poured concrete platform with two parallel sanitation gutters and would have accommodated six cows per milking session. Many of the PORTS farmsteads have similar milking parlors.

The earliest building foundations at South Shyville Farmstead are probably the house foundation and external root cellar. Both were probably built by the Dillard's around 1870. The milking parlor was probably added after the turn of the twentieth century when state-sanctioned sanitation standards were imposed by law.

South Shyville Farmstead produced a large quantity of artifacts, and, like most of the other farmstead assemblages, is dominated by architecture and kitchen debris. The ratio of architecture to kitchen group artifacts is nearly 1:1, with slightly more kitchen group items. Ceramics make up 34.8 percent of the kitchen group. Artifact density, measured from the shovel test data, is 11.3 artifacts per positive shovel test (0.25 m^2).

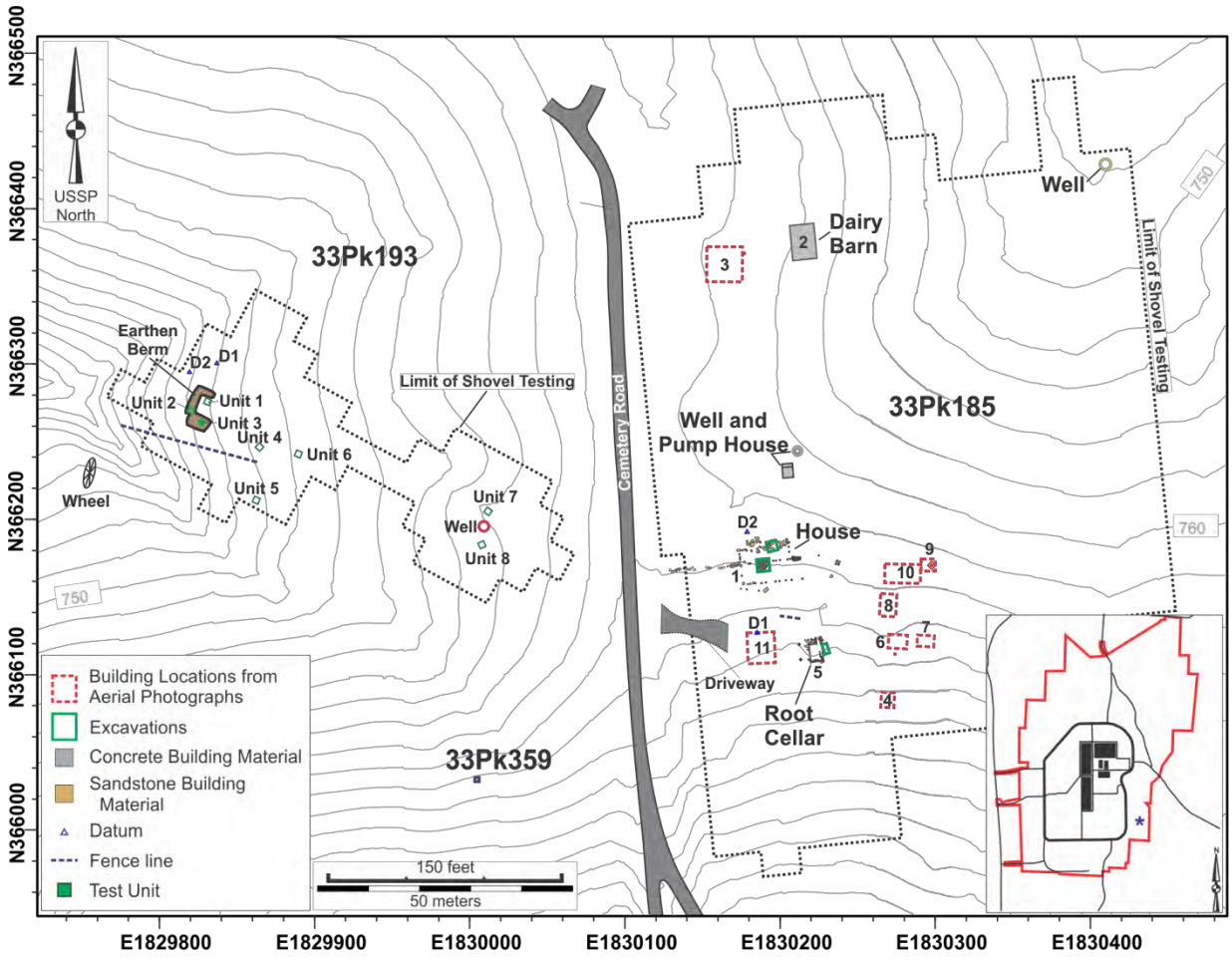

Figure 7. Illustration of the South Shyville Farmstead (33Pk185) (adapted from Pecora and Burks 2012a).

3.1.3. 33Pk187

The 33Pk187 farmstead was originally documented during the 1997 Phase I survey (Schweikart et al. 1997), no additional work was recommended for this site. It is located on a ridge near the western PORTS boundary (Figures 1 and 2). In 1952 it was located south of County Road No. 32 on a 144-acre property owned by Charles Noel. At that time the farm had been razed and no structures are indicated in this area on the 1952 AEC property map. The 1884 map shows this site's setting to be on a large-acreage property owned by B. Talbot and the later c. 1905 Oil & Gas Map it was on an 80-acre tract owned by William L. Talbot. The c.1905 map shows a house at the end of a long driveway near the center of this property. The 1938/39 aerial shows a fairly large farmstead with 5-6 buildings including a possible house in a copse of trees, three large barns, and two small outbuildings. The resolution on the 1951 aerial is poor, but the same building arrangement is visible. Why this farmstead is not illustrated on the 1952 AEC Property Map is not known, but it is possible that it was abandoned and razed by the time the AEC purchased the property.

The Phase I survey involved visual inspection of the ridgetop, which identified several architectural components including four circular fence posts, two square fence posts, one rail that was adjacent to a sheet metal/wood frame roof of a hog shed or chicken coop (Schweikart et al. 1997). The entire site area was found to be severely disturbed from cut-and-fill activities associated with the construction of PORTS (Schweikart et al. 1997). No attempt was made to recover artifacts from this location. Based on the map and aerial review, Schweikart et al. (1997) concluded that this site represents an early twentieth century farmstead (ca. 1915-1951). Unlike the other thirteen farmsteads documented by Schweikart et al. (1997), no further work was recommended for 33Pk187 due to excessive surface disturbance.

3.1.4. 33Pk194 - North Shyville Farmstead

The North Shyville Farmstead (33Pk194) is situated on a low ridgetop on the eastern PORTS boundary line (Figures 1 and 2). The site was originally documented during a Phase I survey by Schweikart et al. (1997) and was further investigated at the Phase II-level by Klinge and Mustain (2011). The Phase II investigation involved systematic shovel testing on a 5-meter grid within the core of the site. In addition to the shovel testing, the Phase II included limited hand excavation in the form of 1x1 meter units. The hand excavations were designed to investigate various features, including several building foundations and clusters of building material. In total, the Phase II work at the North Shyville Farmstead produced 170.25 m^2 of excavation within the approximately 36,075 m^2 site area.

Prior to the AEC purchase in 1952, the North Shyville Farmstead was situated on a 92.8-acre parcel owned by Matilda Condon, Odessa & Welty Vulgamore, and Pearl & John Lochbaum. In 1884 the farmstead area was part of a smaller 19-acre tract owned by T. C. Wyant, but by around 1905 it was part of a larger 70-acre tract owned by Fred Shy. The farmstead is clearly visible on the c.1905 Oil & Gas Map, which shows buildings on either side of Zimmerman Road. Klinge and Mustain (2011) conducted a deed search for this property but found that it is somewhat confusing and incomplete. Between 1900 and 1905, Fred Shy was involved in a number of transactions that assembled a 92.8-acre property, which includes the c.1905 tract shown on the Oil & Gas Map. In 1934, Fred Shy sold a small 1.8-acre tract northwest of the farmstead to his son Lester Shy (and wife Julia Barrett). At some point prior to 1943, Lester Shy came to own the entire 92.8-acre property, which he then sold to Matilda Condon et al. It is not clear when the farmstead and its buildings were developed, but the presence of buildings at this location on the c.1905 Oil & Gas Map demonstrates that this occurred prior to 1905. Klinge and Mustain (2011) note that it is not clear if Fred Shy built the farmstead but conclude that his son and daughter-in-law (Lester and Julia Shy) were probably responsible for some of the more recent construction episodes. The artifact assemblage represents an early-to-middle twentieth century occupation.

The farmstead is clearly visible on the 1938/39 aerial photograph, which shows at least four buildings on the west side of Zimmerman Road, including a possible house beneath a small grove of shade trees, a large barn-like structure, and two smaller outbuildings. On the east side of the road is a square-shaped structure near the road and a large barn-like structure farther to the east. The 1951 aerial shows several additional buildings, including five on the west side of the road and four structures on the east side of the road. All of the 1938/39 structures appear to be visible on the 1951 aerial, and there appears to be substantial landscaping improvements in addition to the new buildings.

The Phase II investigation documented the remains of five foundations (Figure 8). Three of these are located on the west side of the road and include a poured concrete pad interpreted to be part of a house foundation, a cut sandstone block barn foundation, and a stacked stone pier foundation that would have supported a small outbuilding. All three correspond to buildings indicated on the aerial photographs. Associated with the house foundation is a concrete septic tank/system; near the barn is a brick beehive cistern. The Phase II survey also found the remains of a continuous stone block foundation for a small outbuilding and a larger concrete block slab foundation adjacent to the roadway. The concrete slab has a concrete ramp that leads to the road and is associated with an underground oil (fuel?) tank and a concrete drain. This foundation is interpreted to be a commercial automotive repair garage.

Most of the North Shyville Farmstead foundations appear to date to the second quarter of the twentieth century (Klinge and Mustain 2011). A second site (33Pk360), consisting of a stone lined well and artifact scatter was recorded approximately 230 ft. (70 m) south of the North Shyville Farmstead. It is likely that 33Pk360 is a component of the larger farmstead site; it is discussed in greater detail later in this section.

The Phase II fieldwork at North Shyville Farmstead produced 1,902 artifacts, the majority of which are architecture and kitchen debris. The ratio of architecture to kitchen group artifacts is approximately 2.6:1 with considerably higher frequencies of architecture group artifacts. Ceramics make up 63.3 percent of the kitchen group assemblage. Artifact density, measured from the shovel test data, is 5.0 artifacts per positive shovel test (0.25 m^2).

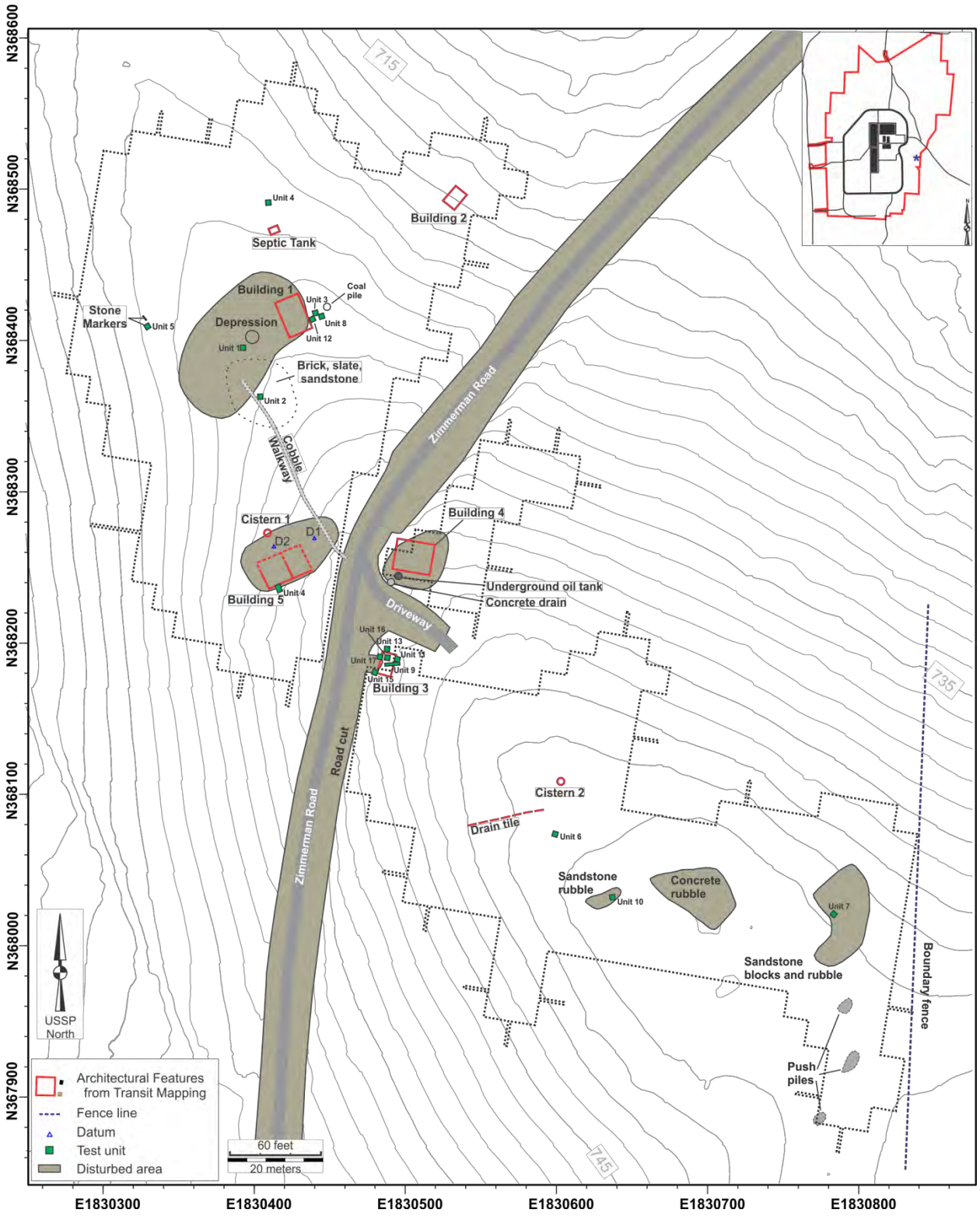

Figure 8. Illustration of the North Shyville Farmstead (33Pk194) (adapted from Klinge and Mustain 2011).

3.1.5. 33Pk195 - Beaver Road Farmstead

Beaver Road Farmstead (33Pk195) is located on a low ridgetop in the eastern part of PORTS and on the south side of Beaver Road (Figures 1 and 2). The site was originally documented during a Phase I survey by Schweikart et al. (1997) and was further investigated at the Phase II-level by Klinge and Mustain (2011). The Phase II investigation involved systematic shovel testing on a 5-meter grid within the core of the site. In addition to the shovel testing, the Phase II work included limited hand excavation in the form of 1x1 meter units. The hand excavations were designed to investigate various elements encountered at the site. In total, the Phase II investigation of the Beaver Road Farmstead excavated 45 m^2 within the approximately 4,000 m^2 site area.

Prior to the AEC's purchase of the site in 1952, the Beaver Road Farmstead was situated on a 79-acre parcel owned by Vernell Pyle. This same property contained the South Shyville Farmstead (33Pk185) and Iron Wheel Farmstead (33Pk193). According to the 1858 Plat Map, this parcel was originally an 80-acre property that was owned by E. Hawk. At some point after 1858, James Dillard owned the property and sold a 3-acre parcel (containing Beaver Road Farmstead) to Abraham Hatfield in 1871 for $90.00. The nature of this transaction is unclear because in 1873 Hatfield, along with members of the Dillard Family, sold the 3-acre parcel to William Cutlip for $200.00. The rapid increase in property value (~122%) in such a short period of time may reflect property improvements, possibly marking the time when buildings at Beaver Road Farmstead were first developed. However, Cutlip turned around the property relatively quickly as well, selling it to Legrand Boldman for $175.00 in 1877. Boldman then sold the property to Henry and Lester Shy for $150.00 in 1883. According to the c.1905 Oil & Gas Map, the 3-acre parcel was reincorporated into 79 acres of the original 80-acre tract and was owned by William Cutlip. The 79-acre property remained in the Cutlip family until 1927, when it was sold to Vernell Pyle. Historical documentation of when this farmstead was developed is unavailable and no structures are indicated at this location on the c.1905, 1906, or 1952 maps and aerials.

The farmstead, however, is clearly visible on the 1938/39 aerial photograph, which depicts two barn-like buildings and a possible house on the south side of Beaver Road. The resolution on the 1951 aerial is poor, but 2-3 structures are somewhat visible.

The Phase II investigation documented the drive (which is visible on both aerial photographs), a coal pile, and a concrete box/basin (Structure 1) of an unknown function (Figure 9) (Klinge and Mustain 2011). The concrete box is 4.3 feet (1.3-m) square but is not partitioned like similar features interpreted to be pump house foundations or water filtering systems at several other PORTS farmsteads.

The Phase II fieldwork at Beaver Road Farmstead produced 435 artifacts. Forty-one of 144 shovel tests produced 232 of these items, which averages to 5.6 artifacts per positive shovel test (0.25 m^2). The remaining 293 artifacts are from nine 1x1 meter units excavated in various places across the site area. The majority of artifacts from Beaver Road Farmstead (81%) are architecture and kitchen debris. The ratio of architecture to kitchen group artifacts is approximately 1:2 with twice as many kitchen group artifacts.

Only 9.7 percent of the kitchen group assemblage is ceramics. The balance is mostly kitchen glass. Klinge and Mustain (2011) conclude that the Beaver Road Farmstead assemblage is relatively modern and dates to the second quarter of the twentieth century. They further conclude that this site is not a stand-alone farmstead, but instead is an ancillary portion of the South Shyville Farmstead. This interpretation is debatable because the 1938 aerial clearly shows

what appears to be a residence with outbuildings. Historically, the house and outbuildings was located at this location on a 3-acre parcel that was subdivided from a larger tract prior to 1871. It is likely that Beaver Run is a small non-farming residence.

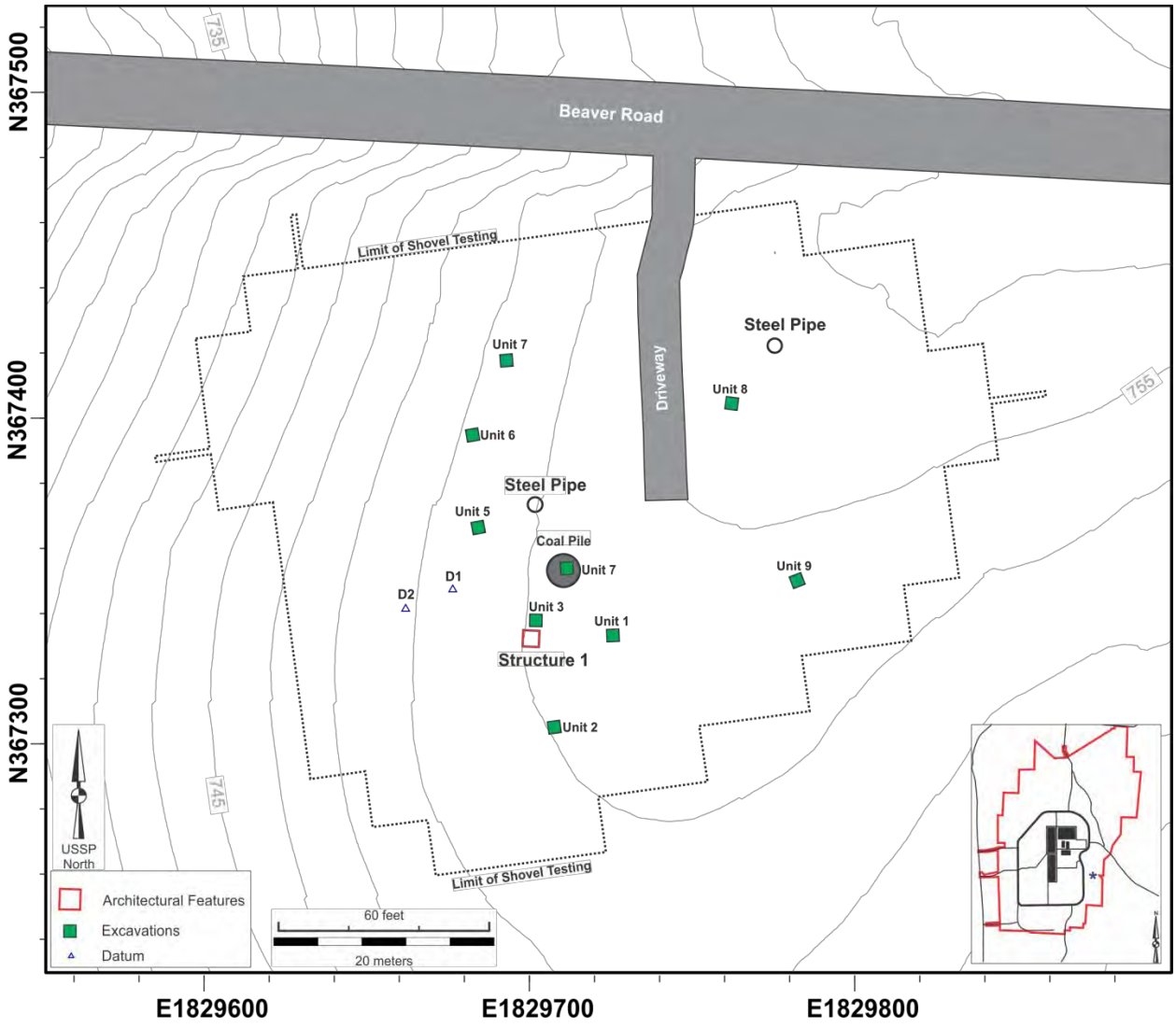

Figure 9. Illustration of the Beaver Road Farmstead (33Pk195) (adapted from Klinge and Mustain 2011).

3.1.6. 33Pk203 - Ruby Hollow Farmstead

The Ruby Hollow Farmstead is situated on a narrow, but heavily dissected terrace along Little Beaver Creek in the northwestern corner of PORTS (Figures 1 and 2). The site was originally recorded by Schweikart et al. in 1997 and was further investigated at a Phase II level by Pecora and Burks (2012a). The Phase II investigation involved systematic shovel testing on a 5-meter grid within the core of the site, as well as shovel tests at a 10-meter interval around the perimeter of the core. In addition to the shovel testing, the Phase II work included a ground-penetrating radar (GPR) survey and limited hand excavation in the form of 1x1 meter units. The GPR survey was conducted to locate subsurface features such as buried foundations, cellars, privy vaults, cisterns, paths, and filled-in wells in the general area of the house foundation. The hand excavations were designed to investigate the house foundation, two privy vaults, and two GPR anomalies in the house yard area. The Phase II investigation of the Ruby Hollow Farmstead resulted in the excavation of 97 m^2 of the approximately 10,000 m^2 site area

Prior to being purchased by the AEC, this farmstead was located on a terrace/bench along Little Beaver Creek near the center of an 89-acre property. Although the terrace on which this site is located is relatively flat, most of the property's acreage consists of relatively steep side slope. The site's ownership history is incomplete, but the 1884 plat map indicates that it was then owned by Benjamin Talbot. Jacob Scherer, Sr. sold the property to his son (Jacob Jr.) in 1908 and it might be surmised that Jacob Sr. purchased the land from Talbot. Unfortunately, the deed records showing the land transactions prior to 1908 were not found. After 1908, the property remained in the Scherer family until 1943, when it was sold to the Brown family. The property was then sold to the AEC in 1953 by Bronson Farmer.

When the Ruby Hollow Farmstead was first occupied is not known, but the house is indicated in this area on the c.1905 Oil & Gas Map. So the house likely was constructed prior to 1905. The mean ceramic date from the recovered Phase II artifacts is 1851, excluding undecorated whiteware. Including the undecorated whiteware, the mean ceramic date is 1870.3. Of the sites examined in this study, Ruby Hollow Farmstead produced one of the oldest mean ceramic dates. Nearly 28 percent of the ceramic assemblage includes types that have terminal production dates prior to 1880. If the mean ceramic dates correlate directly with the time of occupation, then the Ruby Hollow Farmstead was one of the first farmsteads at PORTS to be occupied, based on the archaeological work and limited archival searches carried out to date.

The 1938/39 and 1951 aerials show a house and seven outbuildings within the Ruby Hollow Farmstead. The Phase II investigation located the remains of nine structure foundations, including four structure locations not indicated on the aerials (Figure 10). These include the house, a barn, a concrete milking parlor, a garage, two outbuildings, and two privy shafts. Additionally a water system composed of a partitioned concrete pump house and modern well were also recorded adjacent to the house foundation.

The Ruby Hollow Farmstead house was a stone pier and continuous stone wall supported structure with an interior dressed sandstone block cellar. The cellar has a concrete floor that was poured in 1947, probably as a home improvement made by the Scherer family.

With the exception of the poured concrete garage foundation and milking parlor, all of the outbuildings have stone pier and/or continuous wall foundations. The milking parlor floor was poured in 1937 (evidenced by an inscription in the concrete) and it has two parallel sanitation gutters, which together could have accommodated six cows per milking session.

Two privy shafts were also identified at Ruby Hollow Farmstead (Figure 10). Although vandalized, the Ruby Hollow Farmstead privies both have retained remnant privy vaults and evidence of original "night soil." A small sample of the night soil from one vault was analyzed and the night soil status was confirmed by the presence of thousands of small berry seeds per liter of soil, which is common in human fecal matter from the nineteenth and early twentieth century. Very few artifacts were recovered from the privy features, so it is likely that they were either cleaned regularly or did not serve as receptacles for daily household debris.

The oldest foundation remains at Ruby Hollow Farmstead are probably the house and the two outbuildings not indicated on the aerials. The milking parlor and concrete garage are the most recent additions to the farm, made by the Scherer family. The milking parlor was poured in 1937 and meets early twentieth century sanitation standards.

Ruby Hollow Farmstead produced the second largest artifact assemblage from a PORTS farmstead, and, like the other assemblages, it is dominated by architecture and kitchen debris. The ratio of architecture to kitchen group artifacts is nearly 2:1 and ceramics make up nearly 50 percent of the kitchen group assemblage. Artifact density, measured from the shovel test data, is 7.0 artifacts per positive shovel test (0.25 m^2).

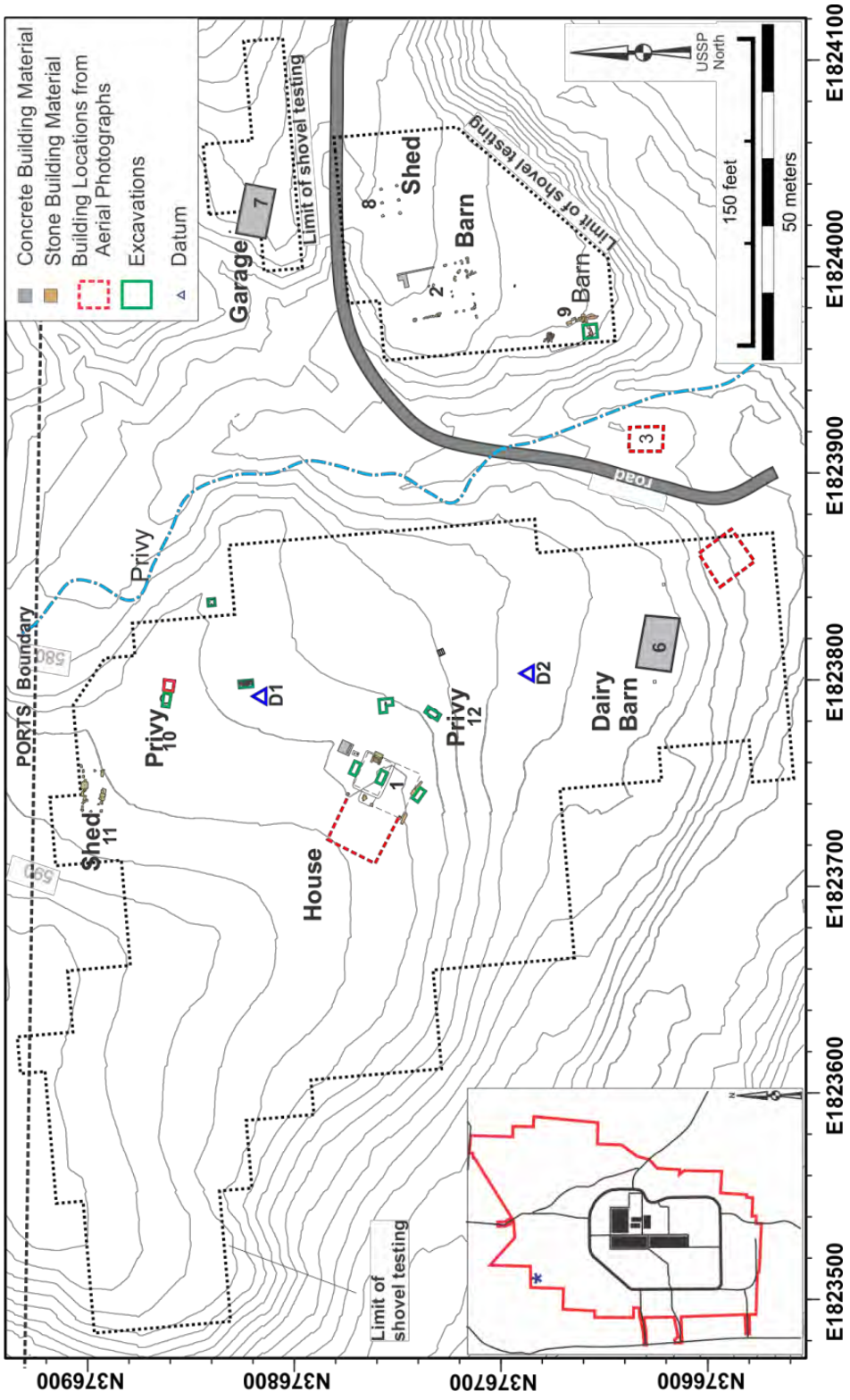

Figure 10. Illustration of the Ruby Hollow Farmstead (33Pk203) (adapted from Pecora and Burks 2012a).

3.1.7. 33Pk206 - Terrace Farmstead

Terrace Farmstead (33Pk206) is located in the eastern part of PORTS and was originally recorded during the Phase I survey by Schweikart et al. (1997) (Figures 1 and 2). A Phase II investigation was recently completed by Pecora and Burks (2012a). The Phase II investigation involved systematic shovel testing on a 5-meter grid within the core of the site and shovel tests at a 10-meter interval around the perimeter of the core. In addition to the shovel testing, the Phase II investigation included a ground-penetrating radar (GPR) survey and limited hand excavations in the form of 1x1 meter units. The GPR work was conducted to locate sub-surface features such as buried foundations, cellars, privy vaults, cisterns, paths, and filled-in wells in the area of the house foundation. The hand excavations were designed to investigate the site's two house foundations and two GPR anomalies found in the yard area. The Phase II investigation of Terrace Farmstead resulted in 91.5 m^2 of excavations across the approximately 14,000 m^2 site area.

This farmstead was located within what was part of a 96-acre property when it was sold to the AEC by the Todd family in 1952. The farmstead's buildings are situated on a broad terrace overlooking the Little Beaver Creek floodplain to the west, but the property extends east and north into the rolling uplands. The history of ownership and changes in the farm's acreage size are very complex. The farm is part of a large tract of land that was acquired from the AEC by Laugham Peters in 1843. Over the course of time, the farm property was cobbled together from several smaller parcels and by 1868 it consisted of 120 acres when it was purchased by Jane McClure. It is evident that the property contained buildings in 1868 because the deed record for this date mentions the acreage and its tenements. Moreover, acreage value nearly doubled between 1851 and 1864, so it is possible that this reflects a major property improvement involving the construction of buildings. It appears that the Shy family held the main parcel for the longest period of time, beginning in 1871 when Henry Shy purchased a 151-acre parcel from the McClures and ending in 1919 when Fred Shy sold 165 acres to T. Whitacker.

Excluding the undecorated whiteware, the mean ceramic date for the Terrace Farmstead assemblage is 1863.5. Including the undecorated whiteware, the mean ceramic date is 1874.2. Over 13 percent of the ceramic assemblage is composed of types that have terminal production dates at or predating 1880. Combined, the ceramic data, property values, and deed information suggest that the farmstead was developed in the mid-nineteenth century.

At least eleven structures are visible within the Terrace Farmstead on the 1938/39 and 1951 aerial photographs. The Phase II investigation (Pecora and Burks 2012a) located the remains of six structure foundations, including two houses, a dairy barn, and three outbuildings (Figure 11). No older, stone-lined well was found—it had likely been filled in prior to the AEC purchase of the farm. The later water system consisted of a partitioned concrete pump house, and a modern well was also identified. Like Bamboo Farmstead and Stockdale Road Dairy, Terrace Farmstead contained two houses. The oldest house foundation within Terrace Farmstead (House 1) is represented by a stone block cellar and stone pier supports. The second house (House 2), which was constructed after 1939, is represented by a poured concrete cellar foundation. The poured concrete water system is located in close proximity to House 2.

All of the outbuildings identified in the Phase II work had stone support pier foundations, but the dairy barn is represented by a poured concrete milking parlor and a portion of a stone foundation wall. The milking platform, which has only one sanitation gutter, is large enough to have accommodated six cows per milking session, but the barn foundations are poorly preserved

and the aerial photos show that it was a fairly large barn. The stone foundation wall is probably a remnant of the larger and older barn foundation. The barn foundation was inadvertently recorded as a separate site (33Pk364) during a recent prehistoric settlement survey by Norr (2012) and will be discussed in more detail as a Farmstead Component later in the section.

The oldest foundation remains at Terrace Farmstead are probably from House 1 (with the stone cellar) and the three outbuildings (with cut stone piers). These structures were probably inhabited or used by the McCray, McClure, and Shy families. The milking parlor is a twentieth century improvement to an older barn, and the concrete house cellar (House 2) and water system are recent additions that were probably constructed by the Whittakers, Taylors, and/or Todds.

Terrace Farmstead produced a large artifact assemblage and, like many of the other Phase II assemblages, it is dominated by architecture and kitchen debris. The ratio of architecture to kitchen group artifacts is nearly 1:1, with a slightly higher proportion of architectural debris. Ceramics make up only 29 percent of the kitchen group assemblage. Artifact density, measured from the shovel test data, is 14.4 artifacts per positive shovel test (0.25 m^2), which is the second highest artifact density documented at PORTS. There is no distributional distinction between the two major artifact groups (architecture and kitchen), and most other artifacts were found to be distributed in the same way (Pecora and Burks 2012a). The majority of all artifacts were found adjacent to the southwest side of the oldest house (House 1). When different kinds of refuse, such as architectural debris and kitchen waste, are mixed together into one higher density artifact cluster, this suggests that the refuse concentration is a secondary or tertiary deposit of artifacts moved to this location from elsewhere. Such a deposit could even be a formal refuse dump. The deposit at Terrace Farmstead could have accumulated through time or in discrete refuse moving events, especially during times when the old house or other buildings were undergoing construction, significant remodeling, or demolition—since these are the times architectural debris accumulates in large quantities. There does appear to be at least one major change to the old house in the early-mid twentieth century, which is visible on the aerial photos. This could mark one of those episodes where architectural debris would have been generated in large amounts.

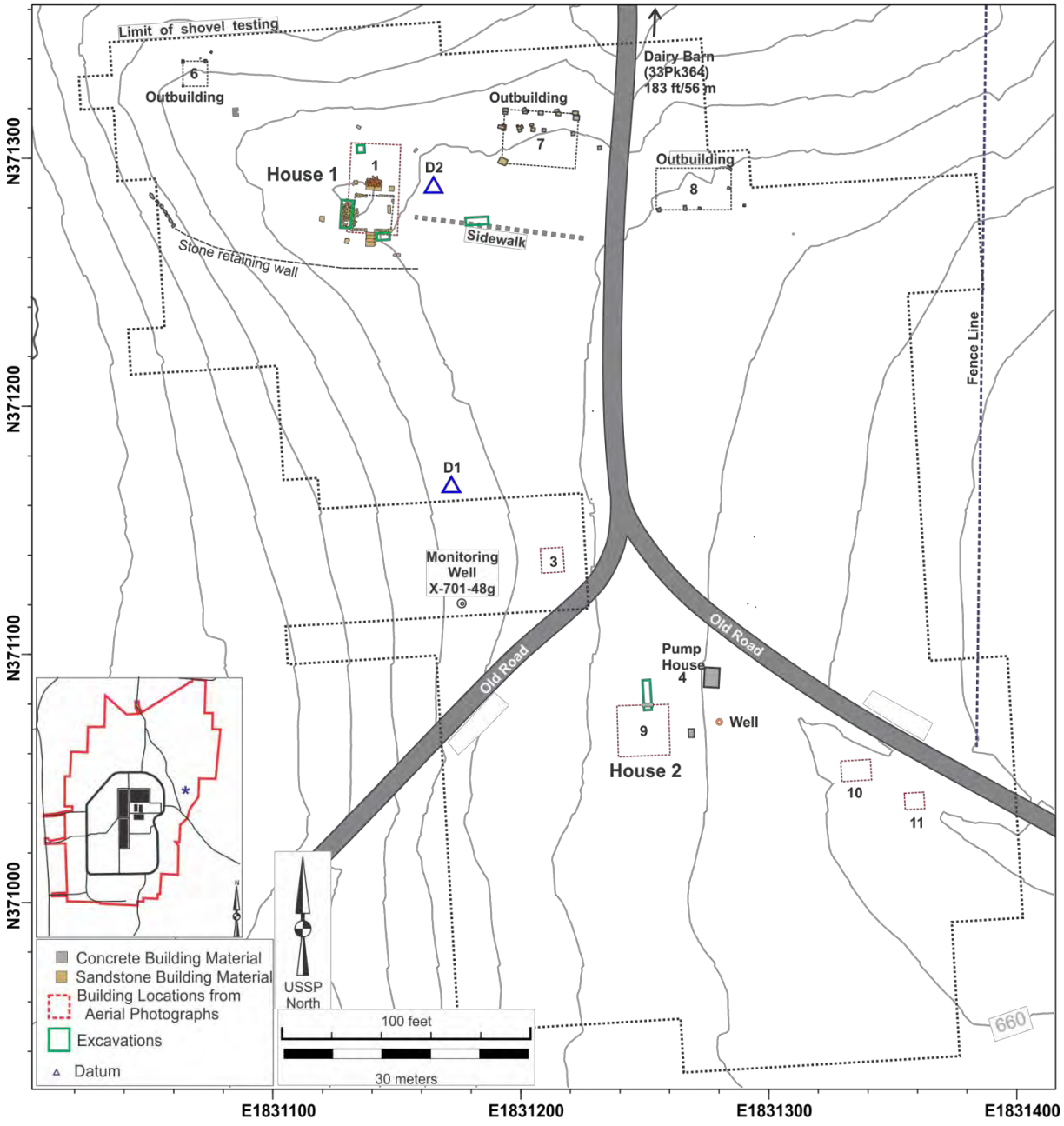

Figure 11. Illustration of the Terrace Farmstead (33Pk206) (adapted from Pecora and Burks 2012a).

3.1.8. 33Pk211- Bamboo Farmstead

Bamboo Farmstead is located on a broad ridge near the northwestern portion of PORTS, where it overlooks a small tributary of Little Beaver Creek located some 30-40 ft. below the farmstead (Figures 1 and 2). This site was originally recorded during a Phase I survey by Schweikart et al. (1997) and a Phase II investigation was recently completed by Pecora and Burks (2012a). The Phase II investigation involved systematic shovel testing on a 5-meter grid within the core of the site and shovel tests at a 10-meter interval around the perimeter of the core. In addition to the shovel testing, the Phase II included limited hand excavations in the form of 1x1 meter units. Unlike the five other farmstead Phase II investigations conducted by Pecora and Burks (2012a), a GPR survey was not completed at Bamboo Farmstead due to obstructive vegetation. As a substitute, systematic coring with an Oakfield soil probe was used in an effort to locate subsurface features (e.g., pit cellars) within the house foundation. The hand excavations were designed to investigate elements of the house foundation, a privy depression, and a sub-floor pit cellar identified by the soil probing. In total, the Phase II investigation of the Bamboo Farmstead opened up and screened 110.5 m^2 of the approximately 18,000 m^2 site area.

Prior to being purchased by the AEC, Bamboo Farmstead was located on a 105-acre property that can be characterized as relatively flat to rolling, with some sloping areas in the western half of the property. One interesting aspect about Bamboo Farmstead is that the property parcel's configuration and acreage has remained the same since prior to 1825, when it was owned by Thomas Phillips and his wife, through 1953 when Forest M. Hawk sold the farm to the AEC. Though the parcel configuration remained unchanged, the same cannot be said for ownership. When, and from whom, the Phillips' purchased the property is not known, but the property deed records demonstrate that the property transferred ownership twelve times through the course of a 128-year period. The average duration of ownership was 10.7 years, but the longest tenure of ownership was 45 years when it was owned by Ira Hawk from 1900 to 1945. The second longest ownership duration was 24 years, when it was owned by William Wynn and his wife from 1843 to 1867. There was also a 20-year ownership by Noah Boiler between 1878 and 1898. Together, these likely represent three distinct generations of families that grew up on the farm.

This property increased in value by nearly 500 percent between 1843 and 1867, during the time it was owned by the Wynns. With such an increase, coupled with the long ownership duration, it is likely that the Wynns were the first to develop the farmstead, with the construction of the house and some outbuildings. The mean ceramic date for this assemblage, when undecorated whiteware is excluded from the calculations, is 1871.4, but nearly 9 percent of the datable assemblage includes types that would have been made prior to 1869.

Bamboo Farmstead is somewhat unique when compared to the other farmsteads examined in this study. Where the others tend to have buildings spread out over large areas, usually to accommodate the local topography, the Bamboo Farmstead buildings are all arranged with the same orientation and are confined to a relatively small amount of space. The 1938/39 and 1951 aerials show at least seven structures within the site, and there appear to be little or no changes in the arrangement or number of buildings between these dates. The structures identified in the aerial photographs include at least one house, a possible summer kitchen, a large barn, a second smaller barn, and three other outbuildings.

The Phase II survey identified the foundation remains of seven structures, including one house, a possible second house, a probable summer kitchen, a large dairy barn with milking

parlor, a barn, a shed/outbuilding, a garage, and a privy (Figure 12). The house(s) and summer kitchen foundations are located in close proximity to one another. The large house (House 1) is probably the first or earliest house, and it is visible on the aerials. It has a continuous stone wall and stone support pier foundation with opposing chimney foundations on either end. The chimney foundations are made of stone and are overlaid with a course of brick. A small sub-floor pit cellar was found within the house foundation (i.e., underneath the house). Although the foundation is made with rough-cut sandstone (indicating that it is nineteenth century), a portion of one wall was repaired with a plug of poured concrete beneath a foundation stone, suggesting that it was a modern repair and that the house was occupied and cared for into the twentieth century.

A second possible house, House 2 in Figure 12, is represented by a well-made dressed stone block cellar with a stairwell and a chimney base. The stone in this foundation is a hard grey material, and is possibly McDermott Sandstone, which comes from a quarry located approximately 15 miles to the southwest. This stone appears very different from all of the other building stone documented at the other PORTS farmsteads, with the possible exception of Ruby Hollow Farmstead. House 2 might also be part of a large addition on House 1.

The aerials show a structure, perhaps a summer kitchen, adjacent to the west end of House 1 and along the south side of House 2. The foundation for this structure is no longer intact, but several displaced sandstone block piers were documented in this area. Adjacent to the north side of House 1 and east of the sandstone cellar are a concrete cistern and concrete septic tank.

The Bamboo Farmstead dairy barn is represented by a stone block support pier foundation. This foundation was modified or improved with the incorporation of a poured concrete milking platform and sanitation gutters within the older stone pier foundation. This platform could have serviced 9-11 cows per milking session. Northeast of the dairy barn is a water system composed of a poured concrete cistern, a partitioned concrete pump house foundation, and a poured concrete box or trough. The milking platform and water system represent modern sanitation measures required by law in the early twentieth century.

The three other building foundations include a second barn with stone block pier and stone wall foundations, a shed with a stone block support pier foundation, and a poured concrete garage floor. Attached to the poured concrete garage floor, on the north side, was an addition with stone support pier foundation, though the stones have been displaced.

The seventh structure location at Bamboo Farmstead is a vandalized privy. This structure was identified by the presence of a large pit/crater that appears to have been created by a successful effort by amateur artifact collectors to excavate into the privy. The Phase II excavation of this feature identified the bottom remnant of a privy vault, from which a soil sample was taken for analysis. The sample produced thousands of berry seeds and, as discussed for the Ruby Hollow Farmstead (33Pk203) Farmstead, these findings are typical of night soil deposits in privies.

The Bamboo Farmstead was probably a fairly stable farm that underwent a series of improvements or additions through the duration of its occupation. House 1 and the adjacent summer kitchen were probably the first or earliest structures that were constructed by the Wynn family between 1843 and 1867. The barns and shed/outbuilding were probably constructed around the same time, though it cannot be ruled out that some early outbuildings could have been replaced or completely removed from the farmstead. House 2 appears to be of a later construction and, oddly, it is not visible on the historic aerials—it could be part of a large

addition to the main house (i.e., House 1). This implies that it may have been razed prior to 1938. The concrete milking platform, concrete garage foundation, concrete water systems, and septic tank are certainly modern additions to the farmstead.

Bamboo Farmstead produced a large quantity of artifacts, which like many of the other PORTS farmstead assemblages is dominated by architecture and kitchen debris. The ratio of architecture to kitchen group artifacts is 5:1, a much higher ration than all but three other assemblages. This is partly due to the excavation of 1x1 m units along the house foundation wall adjacent to a chimney foundation, where an abundance of brick was encountered, elevating the architecture group assemblage counts. Excluding the brick, the ratio is reduced to 2:1, which is more in line with the other assemblages.

Ceramics make up 46.7 percent of the kitchen group assemblage from Bamboo Farmstead. Artifact density, measured from the shovel test data, is 8.4 artifacts per positive shovel test (0.25 m^2). This figure represents a relatively high frequency of artifacts compared to the other assemblages; only four other sites produced higher frequencies per shovel test.

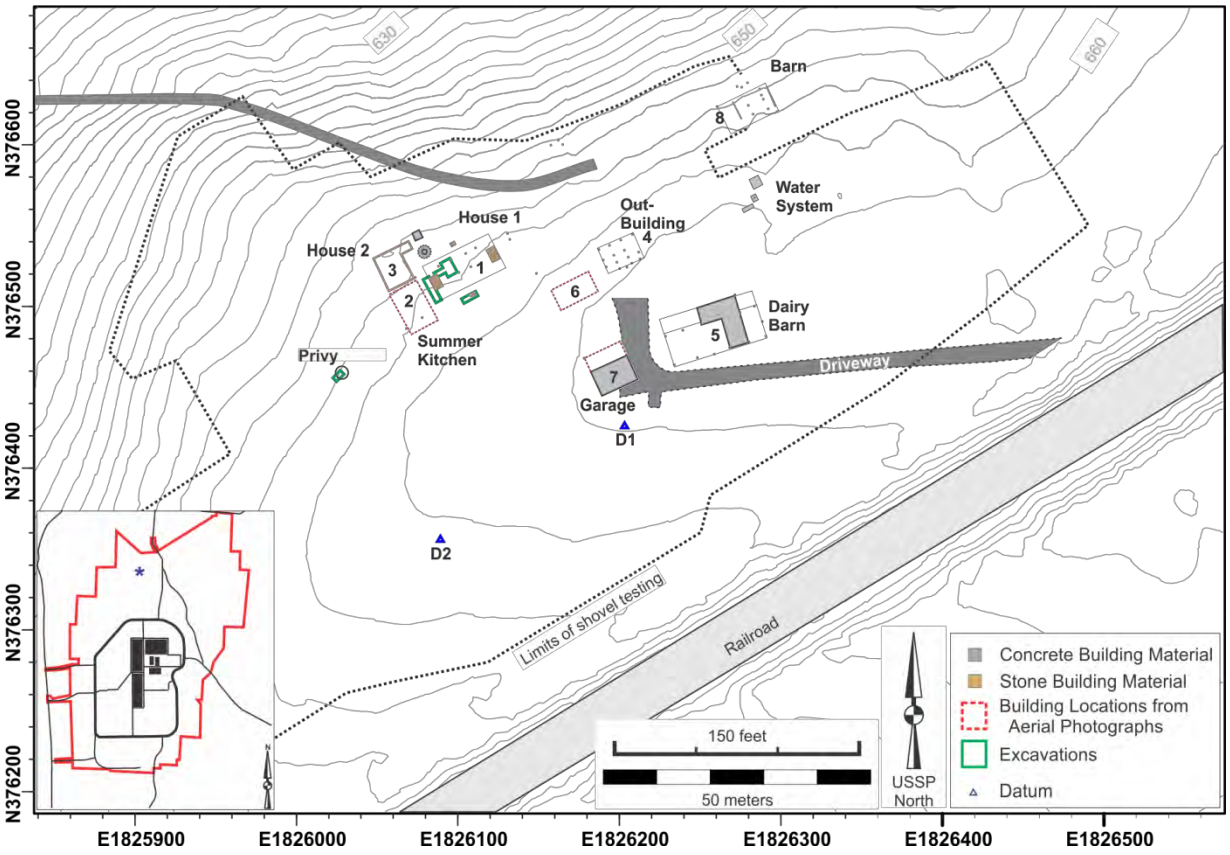

Figure 12. Illustration of the Bamboo Farmstead (33Pk211) (adapted from Pecora and Burks 2012a).

3.1.9. 33Pk212 - Railside Farmstead

The Railside Farmstead (33Pk212) is situated near the end of a broad toe-ridge in the northeastern corner of PORTS (Figures 1 and 2). The site was originally documented during a Phase I survey by Schweikart et al. (1997) and a Phase II survey was recently completed by Klinge (2010). The Phase II investigation involved systematic shovel testing on a 7.5-meter grid within the core of the site and limited 1x1 meter unit excavations designed to investigate various features, including several building foundations within the site area. In total, the Phase II investigation of the Railside Farmstead excavated 22.25 m^2 within the approximately 3,200 m^2 site area.

Prior to the AEC's purchase of the site in the early 1950s, the Railside Farmstead was situated on a 21-acre parcel owned by William E. and Dorothy Tackett. In 1884 the farmstead area was part of a larger 80-acre tract owned by William Holt. This same property covers the area containing the Holt Cemetery (33Pk214) and the Log Pen Farmstead (33Pk213), discussed later in the section. By around 1905, the Railside Farmstead was part of a smaller 21-acre tract owned by Brough Moore. The farmstead is clearly visible on the c.1905 Oil & Gas Map, which shows a structure on the Moore property, south of County Road No. 301. According to the deed records, the 21-acre parcel was originally part of a 160-acre tract that was procured by William Wright from the United States Land Office in 1815. In 1894 it was part of an 83-acre tract when it was sold by Elizabeth Holt to James Carson et al. At some point prior to 1912, the 21 acres was partitioned off from the 83-acre tract and in 1912 Brough Moore acquired the land from the County Auditor (W. A. Woodell). After Mr. Moore passed away, his daughter, Annie Moore Dawson transferred the 21-acre parcel in a quick claim deed to Daniel Farmer in 1920. The Farmer family held the land for thirteen years and in 1933 sold the property to the Tacketts. When the farmstead and its buildings were first developed is not known, but it likely occurred after 1894 when the 21-acre parcel was partitioned off from the much larger tract.

The farmstead is visible on the 1938/39 aerial photograph, which shows three or four buildings on the south side of the road, including a possible house and barn-like structures. The land surrounding this building complex appears to be pasture and small groves of trees. The resolution on the 1951 aerial photograph is poor, but two or three structures are present at this time. It appears that in 1951 the house is in the same location as it was on the 1938/39 aerial, but the two possible outbuildings appear to be positioned differently. Some of the pasture area visible on the 1938/39 aerial appears to be cultivated by 1952.

The Phase II investigation documented the remains of two foundations, a poured concrete cistern and a stone-lined well (Figure 13). The two foundation remnants include (1) a house cellar made with poured concrete and cinder block and (2) the remains of a poured concrete milking parlor. Adjacent to the north side of the house cellar is a pile of brick and building stone. This material is interpreted by Klinge (2010) to be displaced building material from the house. The milking parlor is a poured concrete slab with a sanitation gutter measuring approximately 24.5 feet (7.5 m) by 37.8 feet (11.5 m). Like many of the milking platforms documented at PORTS, this platform could have accommodated 7-8 stanchions for as many cows.

The Phase II fieldwork at Railside Farmstead produced 1,086 artifacts, the majority of which are kitchen debris. The ratio of architecture to kitchen group artifacts is nearly 1:9, with considerably higher frequencies of kitchen group artifacts. Artifact density, measured from the shovel test data, is 5.2 artifacts per positive shovel test (0.25 m^2). Ceramics make up 5 percent of

the kitchen group assemblage; the rest is mostly container glass. Klinge (2010) concludes that the artifacts in this assemblage date from between 1920 and 1952 and also posits that the Tackett family was the first to occupy the site sometime between 1933 and 1952. The presence of a house at this location on the c.1905 Oil & Gas Map and the 1908 USGS 15' topographic quadrangle map, however, indicates that the farmstead had been developed well before 1920, and perhaps when the property was owned by Brough Moore.

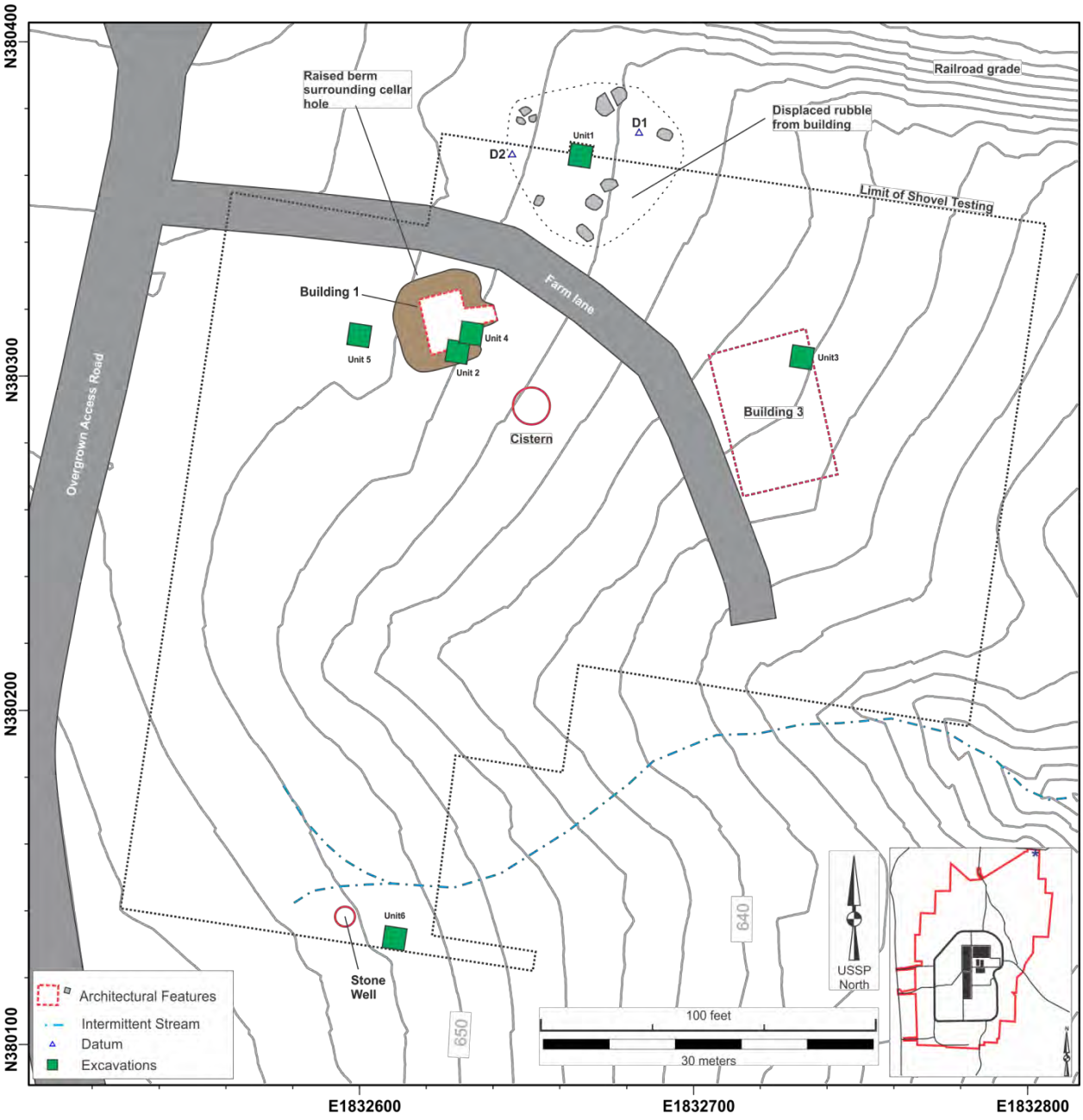

Figure 13. Illustration of the Railside Farmstead (33Pk212) (adapted from Klinge 2010).

3.1.10. 33Pk213 - Log Pen Farmstead

The Log Pen Farmstead (33Pk213) is situated on a low toe-ridge near the northeastern corner of PORTS (Figures 1 and 2). The site was originally documented during a Phase I survey by Schweikart et al. (1997) and a Phase II survey was recently completed by Klinge (2010). The Phase II investigation involved systematic shovel testing on a 7.5-meter grid within the core of the site and limited 1x1 meter unit excavations designed to investigate various features, including several building foundations. In total, the Phase II investigation of the Log Pen Farmstead excavated 19.0 m^2 of the approximately 2,100 m^2 site area.

Prior to the AEC purchase of the property in 1952, the Log Pen Farmstead was situated on a 68-acre parcel owned by D. H. Farmer. In 1884 the farmstead area was part of a larger 80-acre tract owned by William Holt. This same 80-acre property covers the area containing the Holt Cemetery (33Pk214) and the Railside Farmstead (33Pk212), discussed in this section. By around 1905, the farmstead was part of a smaller 41-acre tract owned by George Hunt. A structure, probably a house, is indicated at this location on the c.1905 Oil & Gas Map.

According to the deed records, the property parcel was originally part of a 160-acre tract that was procured by William Wright from the United States Land Office in 1815. In 1894 it was part of an 83-acre tract when it was sold by Elizabeth Holt to James Carson et al. Carson sold 41 acres to D. H. Farmer in 1914; D. H. Farmer purchased an additional 27 acres from Arthur Famer in 1923 to form the 68 acre property that was eventually sold to the AEC.

The 1938/39 aerial photograph shows three buildings at this location, including what is probably the house and two outbuildings to the northeast and east. The area surrounding the farmstead on this aerial appears to be open pasture surrounded by a large wood lot to the east and south. The resolution on the 1951 aerial is poor, but the buildings present on the 1938/39 aerial appear to be razed by 1951.

The Phase II investigation documented the remains of a house and a barn foundation (Figure 14). Unlike the other houses within PORTS, which were razed and removed, the Log Pen Farmstead house appears to have collapsed in-place leaving behind milled beams and "modern" dimensional lumber held together by modern wire nails. The roof of this structure was probably clad with steel standing-seam roofing, several pieces of which were recovered near the foundation (Klinge 2010). The foundation for this structure is a set of stone block support piers. Although wire nails and standing-seam metal roofing were widely available around 1890, the dimensional lumber indicates that the house was constructed in the twentieth century. The Log Pen Farmstead barn foundation is represented by a set of stone block piers located northeast of the house remains.

The Phase II fieldwork at Log Pen Farmstead produced 1,961 artifacts, the majority of which consists of kitchen and architecture debris. The ratio of architecture to kitchen group artifacts is nearly 1:2. Artifact density, measured from the shovel test data, is 8.0 artifacts per positive shovel test (0.25 m^2). Ceramics make up 6 percent of the kitchen group assemblage; the balance is mostly container glass. Klinge (2010) concludes that the artifacts in this assemblage from Log Pen Farmstead date to as early as the nineteenth century but suggests, based on the architectural remains, that the farmstead was developed after 1919 when Daniel Farmer acquired the property. However, the presence of a structure at this location on the c.1905 Oil & Gas Map, and this map shows houses but not barns, demonstrates the farmstead was developed at least 15 years earlier.

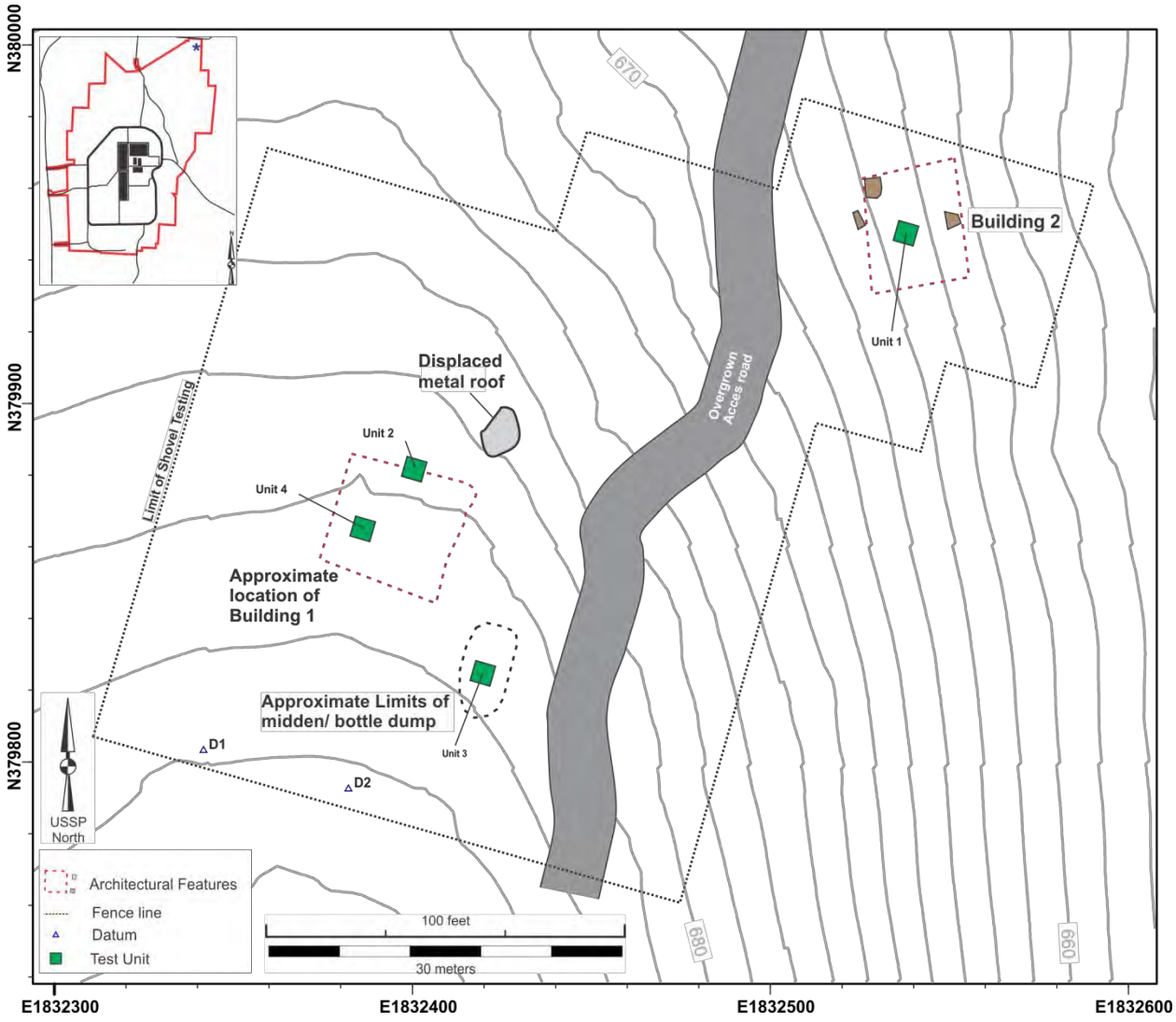

Figure 14. Illustration of the Log Pen Farmstead (33Pk213) (adapted from Klinge 2010).

3.1.11. 33Pk217 - Stockdale Road Dairy

Stockdale Road Dairy (33Pk217) is a large farmstead located in the north-central part of PORTS (Figures 1 and 2). The site was originally documented during a Phase I survey by Schweikart et al. (1997), and it was further investigated at the Phase II level by Pecora and Burks (2012a). The Phase II investigation involved systematic shovel testing on a 5-meter grid within the core of the site and shovel tests at a 10-meter interval around the perimeter of the core. In addition to the shovel testing, the Phase II included a ground-penetrating radar (GPR) survey and limited hand excavations in the form of 1x1 meter units. The GPR was conducted to locate subsurface features such as buried foundations, cellars, privy vaults, cisterns, paths, and filled-in wells near the house foundation. The hand excavation units were laid out to investigate the house foundation, a chimney base at a second house foundation, and two GPR anomalies within the yard area. In total, the Phase II investigation of the Stockdale Road Dairy excavated 114 m^2 of the approximately 16,000 m^2 site area.

The farmstead is situated on a broad flat area overlooking Little Beaver Creek—the southeast edge of the farmstead is marked by a bedrock bluff, with the creek below at its base. At the time the farm was sold to the AEC, it was located on a 120-acre property. Originally the farm acreage was part of a large tract of land acquired by William Clark from the United States Land Office in 1819. In 1836, an 80-acre tract was sold to William Clark, and this tract became the core of the Stockdale Road Dairy. Prior to 1882, additional acreage was added to make a 159-acre property and by 1932 the acreage was settled at 120 acres and was eventually sold by Lester M. Shy to the AEC in 1952. Over its 116-year history, from 1836 to 1952, the property's ownership changed seven times and the average ownership duration was 16.6 years, but the Clark family owned the land for 44 years and Fred Shy owned the property for 49 years. During all but 23 years, only two families owned the land that makes up the Stockdale Road Dairy farmstead.

The 1938/39 aerial photograph shows at least six buildings within the Stockdale Road Dairy farm complex. Five of these, in addition to three newer structures are visible on the 1951 aerial. The main structures, including two houses and a large dairy barn are visible on both aerials. Changes between these two aerials reflect the removal and addition of smaller outbuildings.

It is not clear when the first buildings were erected at this farmstead, but it might be inferred that the Clark family developed the property between 1838 and 1882. This is supported by the observation that the Clark family owned the land for 44 years and during the course of this ownership, the property increased in value by over 350 percent. Given the long ownership, coupled with the drastic property value increase, improvements obviously were made to the property and likely in the form of a house and some outbuildings. The mean ceramic date for the Stockdale Road Dairy ceramic assemblage is 1866, when undecorated whiteware is excluded from the calculations. When undecorated whiteware is included, the mean ceramic date is 1876. These dates, though skewed towards a later period of occupation, correspond with the 1838-1882 temporal bracket for the establishment of the farmstead complex (the house and outbuildings), based on ownership tenure and land sale values.

The Phase II investigation identified the remains of six structures, including two house foundations, a large dairy barn, and two garage pads (Figure 15). The remains of two additional buildings indicated on the 1938/39 and 1951 aerials were not found, but both appear to be small

shed-like structures that were probably supported with a stone pier foundation. Displaced sandstone pier-like blocks were documented near these structure locations.

Stockdale Road Dairy contains the remains of two house foundations. What is interpreted to be the oldest, or first house (House 1), is located in the middle of the building complex and is represented by the remains of a stone pier foundation with a chimney foundation located on the east end of the building.

The second, or more recent, house (House 2) is located close to the road and is represented by a stone pier foundation with a small interior stone cellar under the back part of the house. The cellar stairs come up out of the cellar at the back of the house, opposite the side of the house facing the road. Near the center of the front part of the house (i.e., the part not covering the cellar) is a small foundation pad for a chimney or a stove. Just west of the house foundation is a stone-lined well and an associated poured concrete foundation for a small pump house. The pump house foundation resembles a partitioned box and is nearly identical to pump house foundations found at the other farmsteads, with the exception of Cornett Farmstead.

The farmstead's dairy barn is represented by a large poured concrete foundation and a sizeable poured concrete milking parlor. With the exception of Cornett Farmstead, all of the farmsteads have milking parlors. Nevertheless, the milking parlor at Stockdale Road Dairy is very large and could have accommodated as many 16 cows per milking session. Most of the milking parlors at the other sites were sized for only 6-8 cows.

Adjacent to the dairy barn foundation is a large concrete cistern, a rectangular-shaped concrete and block box or trough, and a vertical concrete box. The three combined represent a water system for the dairy operation. The milking parlor design and associated water system are present because of legislated sanitation standards enacted in the early twentieth century.

The stone foundation remains at Stockdale Road Dairy probably represent earlier structures, while the concrete structures, including the two poured concrete garage pads and the dairy facility, represent twentieth century additions to the farm. It is also very likely that House 1 was the first house constructed on the farm, perhaps built by the Clark family. House 2 is a house that was probably constructed later in time, and might represent an improvement over the earlier domicile.

Despite the relatively large size of the Stockdale Road Dairy site, as well as the apparent long duration of occupation, it produced a relatively small artifact assemblage. Like many of the other farmstead assemblages, Stockdale's is dominated by architecture and kitchen group artifacts. The ratio of architecture to kitchen group artifacts is 3:1. Ceramics make up nearly 44 percent of the kitchen group assemblage. Artifact density is relatively low at Stockdale, with an average of 5.3 artifacts per positive shovel test (0.25 m^2). This average is fairly low when compared to many of the other farmsteads examined in this study.

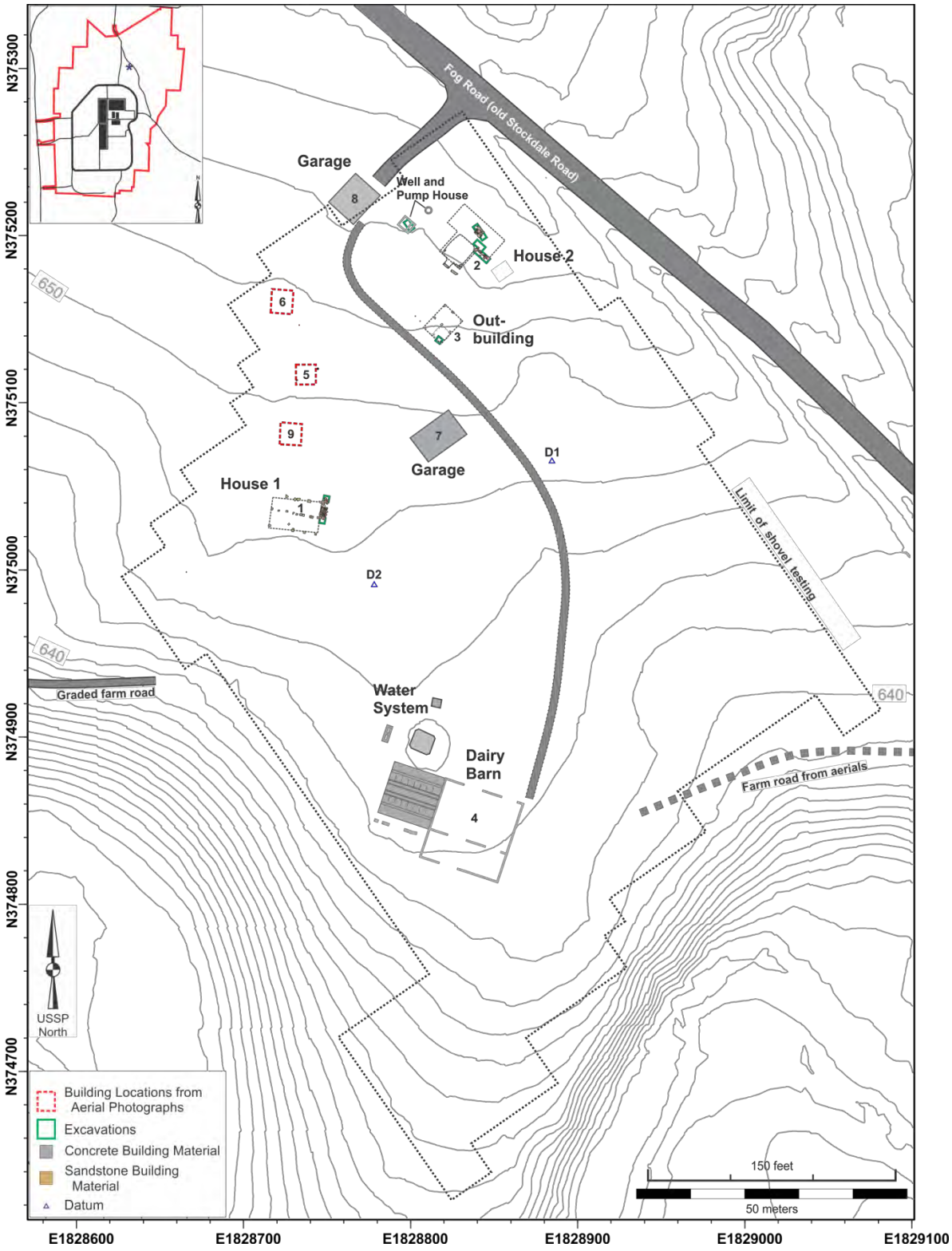

Figure 15. Illustration of the Stockdale Road Dairy (33Pk217) (adapted from Pecora and Burks 2012a).

3.1.12. 33Pk218 - Cornett Farmstead

The Cornett Farmstead (33Pk218) is situated on a small dissected toe-ridge near the northeastern edge of PORTS (Figures 1 and 2). The site is one of fourteen farmstead sites documented during a Phase I survey by Schweikart et al. (1997) and was further investigated at a Phase II level by Pecora and Burks (2012a). The Phase II investigation involved systematic shovel testing on a 5-meter grid within the core of the site and on a 10-meter grid around the perimeter of the core. In addition to the shovel testing, the Phase II included a ground penetrating radar (GPR) survey and limited hand excavations in the form of 1x1 meter units. The GPR was conducted for the purposes of locating sub-surface features such as buried foundations, cellars, privy vaults, cisterns, and filled-in wells in the vicinity of the house. The hand excavations were designed to investigate the house foundation, a privy vault, and three GPR anomalies within and around the house foundation. In total, the Phase II investigation of the Stockdale Road Dairy excavated 110.5 m^2 within the approximately 14,000 m^2 site area.

Cornett Farmstead might be better described as a small house site located on a 24 acre property. The property was originally part of a larger 40-acre tract that was divided to form four parcels sometime between 1859 and 1894. In 1945 a 4-acre and a 20-acre parcel were combined to form the 24-acre property, which was owned by the Cornett Family prior to its sale to the AEC in 1956. Prior to the Cornett Family ownership, which began in 1953, the property(s) passed through at least fifteen different ownerships. The average ownership tenure was 6.3 years over its 94 year history, but the Zimmerman family owned it for 26 years, between 1919 and 1945. When the homestead was erected is not clear, but a portion of the property value increased significantly between 1894 and 1919, so it might be inferred that this reflects property improvement via the construction of a house and other buildings. Since a house is indicated in this area on the ca. 1905 Oil & Gas Map, it was clearly constructed prior to 1905.

Cornett Farmstead appears to be one of the most recent house sites within PORTS. The mean ceramic date calculated from a meager ceramic assemblage is 1895.4 for the entire datable assemblage and 1900.7 when undecorated whiteware is excluded from the calculations. This date range corresponds well with the property value shifts and historical map information.

The Phase II investigation identified the remains of three structures, including the remnants of a house foundation, a stand-alone root cellar, a wood framed shed roof, and a privy (Figure 16). Several displaced sandstone piers or building stones, probably associated with small outbuildings, were documented within the site. Additionally, a sub-floor pit cellar within the house foundation, a well, and a retaining wall were also documented.

Nearly all of the building material, including that of the house, root cellar, privy, well, retaining wall, and other buildings with displaced support piers, is sandstone. The house foundation and piers are either rough-cut blocks of various sizes or irregular fieldstone. The well, retaining wall, and privy are all constructed with rough field stone. Although the root cellar is made of dressed sandstone block, it has a poured concrete slab roof. The well, which is also made of stone, has a poured concrete well-box that sits directly on the surface. The site area is littered with concrete fragments and brick. Most of this material was observed in concentrations on the north and west sides of the house foundation. The presence of poured concrete at Cornett Farmstead reflects modern improvements to older stone foundations.

Cornett Farmstead produced a small artifact assemblage with only 462 artifacts from 70 positive shovel tests. The assemblage is dominated by architecture and kitchen group artifacts and the ratio of architecture to kitchen group artifacts is slightly more than 3:1. Ceramics make

up only 3.3 percent of Cornett Farmstead's kitchen group assemblage; the balance, 94.7 percent, is container glass and a few other items, most of which are associated with canning jars. Artifact density at Cornett Farmstead can be inferred by an average of 6.6 artifacts per positive shovel test (0.25 m^2), which is similar to many of the other PORTS historic-era sites.

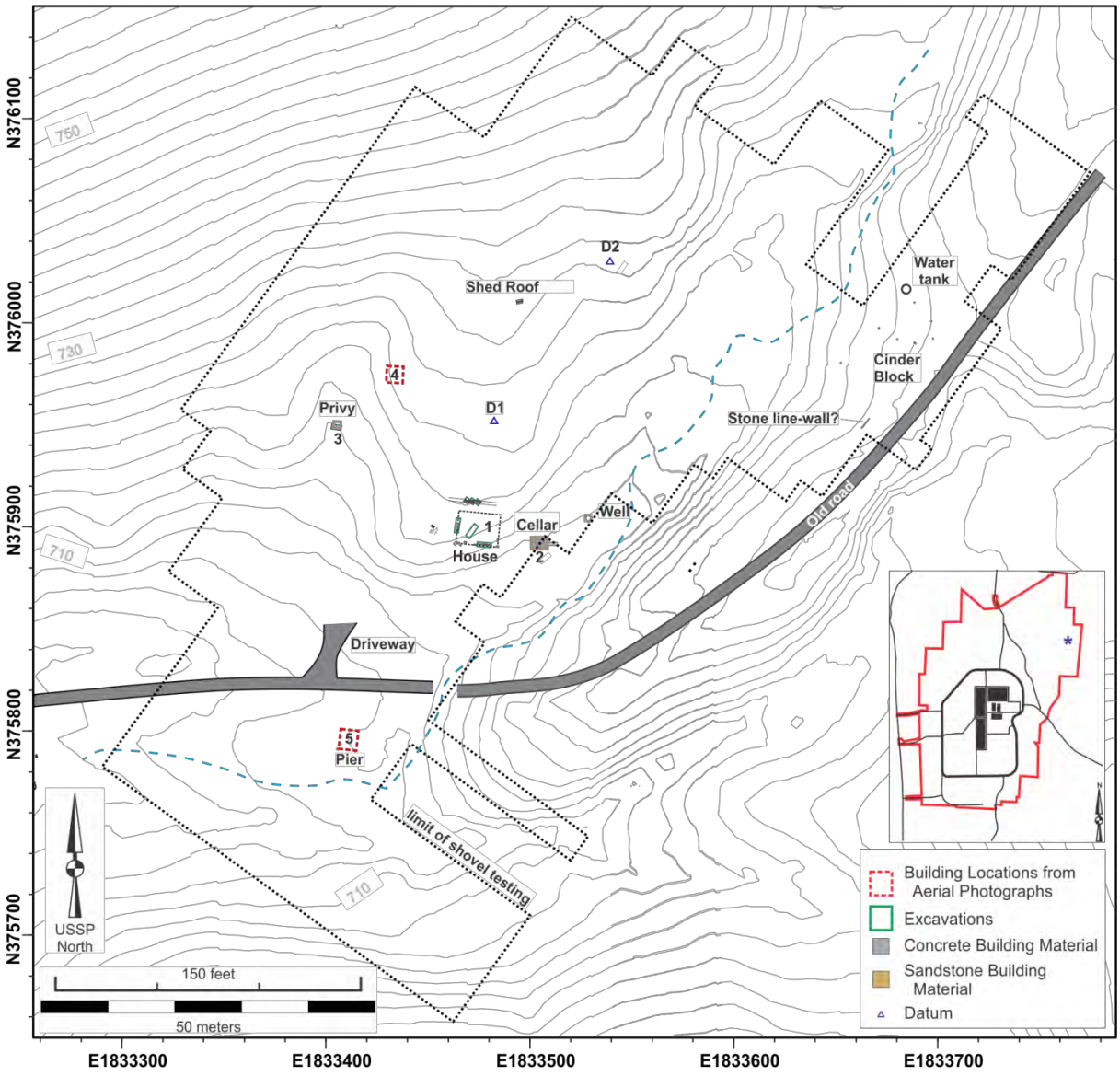

Figure 16. Illustration of the Cornett Farmstead (33Pk218) (adapted from Pecora and Burks 2012a).

3.1.13. 33Pk311
Brodess Farmstead

The Brodess Farmstead (33Pk311) is one of 68 historic-era building locations identified from historical map resources at PORTS by Burks (2011a). The site was first documented in the field during an archaeological reconnaissance survey (Pecora 2011). The reconnaissance survey was followed with an enhanced Phase I-level documentation effort (Pecora and Burks 2012b) that was designed to quickly collect information about artifacts and architectural remains in a way comparable to data collected in more intensive Phase II investigations at six other PORTS farmsteads (Pecora and Burks 2012a). The Phase I effort involved the excavation of shovel tests on a 5-meter grid over the core of the site area and on a 10-meter grid around the perimeter of the site. The Phase I survey effort resulted in the excavation of 35.5 m^2 within the approximately 11,000 m^2 site area.

The Brodess Farmstead is located on a sloping toe-ridge in the northwestern part of PORTS (Figures 1 and 2). When purchased by the AEC in 1956, this farmstead was located on a 61.65-acre property owned by John M. Brodess. Historical map resources show that the farm was located on a 17-acre parcel owned by John Zimmerman in 1884. By around 1905, the parcel size, still owned by John Zimmerman, increased to 19 acres.

The deed records reveal a somewhat complex history of property ownership and parcel size. John Brodess assembled the acreage from two parcels between 1918 and 1922. Each of these two parcels was made up of a total of seven tracts of land ranging from two to twenty acres in size. Between 1876 and 1912, John and Louise Zimmerman assembled the 45-acre parcel from five tracts of land plus the 20-acre parcel that was originally assembled from two tracts between 1882 and 1883 by Elizabeth Perry and her husband. The earliest known land owners for the various tracts that make up the Brodess Farmstead are Benjamin Violet prior to 1869, Ralf Daily prior to 1872, Eleanor Pry prior to 1873, Henry Shy prior to 1879, and Henry Pry prior to 1873. As with other tracts of land in the PORTS area, the time just after the Civil War saw a lot of land transactions, making it difficult to track the parcels.

It is not evident in the property records when the buildings at the Brodess Farmstead were first developed. A house, however, was standing by around 1905, according to the c.1905 Oil & Gas Map. The property values early on in the farm's history average about $8-$11 per acre. In 1879, however, John B. Houser sold 16 acres for $31.25 per acre and not more than 10 days after he purchased the land for just $10.00 per acre. It is doubtful that Mr. Houser improved the property through the construction of buildings in just 10 days, but clearly the purchasers (John & Louise Zimmerman) recognized a significantly higher property value. Since the Zimmerman's were the first to assemble the various parcels into one property, it might be inferred that they were the first to develop the farmstead, as we know it, in the 1870s.

The 1938/39 aerial photograph shows a farm complex composed of three buildings, including the house and two large outbuildings. Adjacent to the north side of the farmstead is a large planted tree grove or possible orchard. The land to the south, east, and west appears to be open pasture. The 1951 aerial shows a much larger farmstead with at least eight structures, including those visible on the 1938/39 aerial. The surrounding land is in much the same condition as it was in 1938/39. A large cultivated field, however, is located some distance to the northwest.

The Phase I survey documented foundations for a large house, a garage, and a barn (Figure 17). Additionally a well, two cisterns, a double-chambered septic system, a privy

depression, and two large landscape/retaining walls were also found. The house foundation has an interior cellar made of rough-stone masonry but on the southern and eastern sides, it is made of poured concrete. The house plan is irregular and the southern side has a chamfer or beveled wall that resembles the front façade of a Victorian-style home. Adjacent to the south edge of the house foundation is a stone-lined well. A large poured concrete cistern is located on the west side, and the stone septic system is located adjacent to the northwest corner. A square-shaped privy depression is located at the end of a flagstone sidewalk that extends northward for 60 feet (18.3 m) from the north side of the house foundation.

The garage foundation is a poured concrete slab that sits on a rough-stone masonry footer. It is possible that the poured concrete represents an improvement to an older structure. The barn, which is clearly visible on the 1938/39 aerial, has a poured concrete wall, pier, and slab foundation. Although no sanitation gutter was observed within the barn foundation, the concrete pad is a possible milking platform. On the north side of the barn is a large poured concrete cistern.

Shovel testing at Brodess Farmstead produced 372 artifacts, with an artifact density of 7.3 artifacts per positive shovel test (0.25 m^2). Most of the assemblage is kitchen and architecture debris. The ratio of architecture to kitchen group artifacts is nearly 2:1. Ceramics make up 40.5 percent of the kitchen group assemblage; the balance is mostly container glass. The mean ceramic date for the Brodess Farmstead assemblage is 1873 (excluding undecorated whiteware) and 1882 when all ceramics are included. These dates correspond with the inferences about house construction dates made from the deed records, which suggest that the initial period of the farm's occupation was in the 1870s.

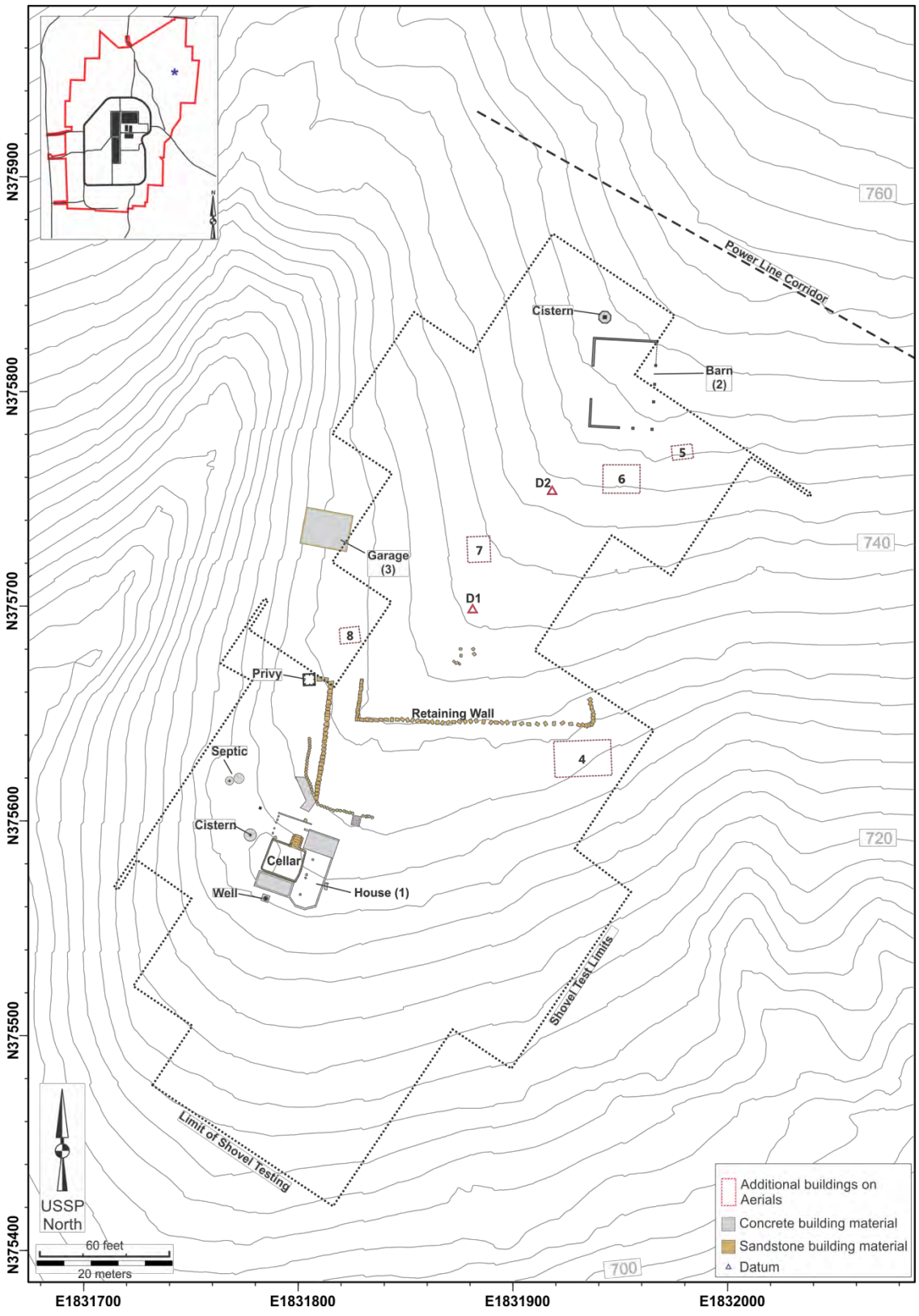

Figure 17. Illustration of the Brodess Farmstead (33Pk311) (adapted from Pecora 2011).

3.1.14. 33Pk312
Condon Farmstead

Condon Farmstead (33Pk312) is one of 68 building locations identified from historical map resources (Burks 2011a). The site was first documented in the field during an archaeological reconnaissance survey (Pecora 2011) and was further investigated with an enhanced Phase I-level documentation effort (Pecora and Burks 2012b) that was designed to quickly collect information about artifacts and architectural remains in a way comparable to data collected in more intensive Phase II investigations at six other PORTS farmsteads (Pecora and Burks 2012a). The Phase I effort involved the excavation of shovel tests on a 5-meter grid over the core of the site area and on a 10-meter grid around the perimeter of the site. The Phase I survey effort resulted in the excavation of 28.75 m^2 within the approximately 4,459 m^2 of site area.

Condon Farmstead is located at the head of a small draw on a sloping toe-ridge in the northwestern portion of PORTS (Figures 1 and 2). When purchased by the AEC in 1952, this farmstead was located on a 65-acre property owned by Matilda Condon et al. The 1884 Pike County plat map shows that the farm is located on what was then a 34-acre parcel owned by R. Clarke. By 1905, the same property parcel was owned by Frederic Shy.

According to the deed records, the acreage surrounding this farmstead included 79 acres that were acquired by Amelia & Emma Clark from Andrew Kilgore et al. in 1867. The Clarks owned the property for 15 years before it was purchased by Robert Kidd in 1882. Kidd sold the property to Frederick B. Shy in 1883 and it stayed in the Shy family until 1943 when it was transferred to Matilda Condon et al.

It is not evident in the property records when the Condon Farmstead was first developed. A house, however, was standing by around 1905, according to the Oil & Gas Map. The property sold for a considerable amount ($37.97 per acre) in 1882, and it is possible that this value reflects property improvements.

The 1938/39 aerial photograph shows a single structure, possibly a house within or near the location of the Condon Farmstead. At this time the house is surrounded by a copse of trees but there is no differentiation between the yard and the probable pasture that surrounds it, and furthermore there is little indication (such as a distinctive driveway) that the house was regularly used at this time. No structures are indicated in this area on the later 1951 aerial photo, suggesting that the house was razed between these two dates. The copse of trees was still standing in 1951. The aerial information indicates that the Condon Farmstead was in decline or even abandoned by 1938.

The Phase I survey documented the remains of a partial stone pier house foundation and an exterior root cellar (Figure 18). Between the house foundation and the root cellar is a stone-lined well and adjacent to the northwest corner of the house foundation is a push-pile containing sandstone foundation material. There is not enough *in situ* foundation left on site to measure foundation size, but it appears that the foundation was square in shape.

Shovel testing at Condon Farmstead produced 517 artifacts, revealing an artifact density of 7.3 artifacts per positive shovel test (0.25 m^2). Most of the assemblage is kitchen and architecture debris. The ratio of architecture to kitchen group artifacts is nearly 1:1.5, with higher frequencies of kitchen group artifacts. Ceramics make up 51.5 percent of the kitchen group assemblage; the balance is mostly container glass. The mean ceramic date for the Condon Farmstead assemblage is 1870.6 when undecorated whiteware is excluded from the calculation,

and it is 1879 when all ceramics are included. These dates correspond to inferences made from the deed records, which suggest that the initial period of occupation was sometime between 1867 and 1882. If accurate, Condon Farmstead would be one of the older of the PORTS farmsteads.

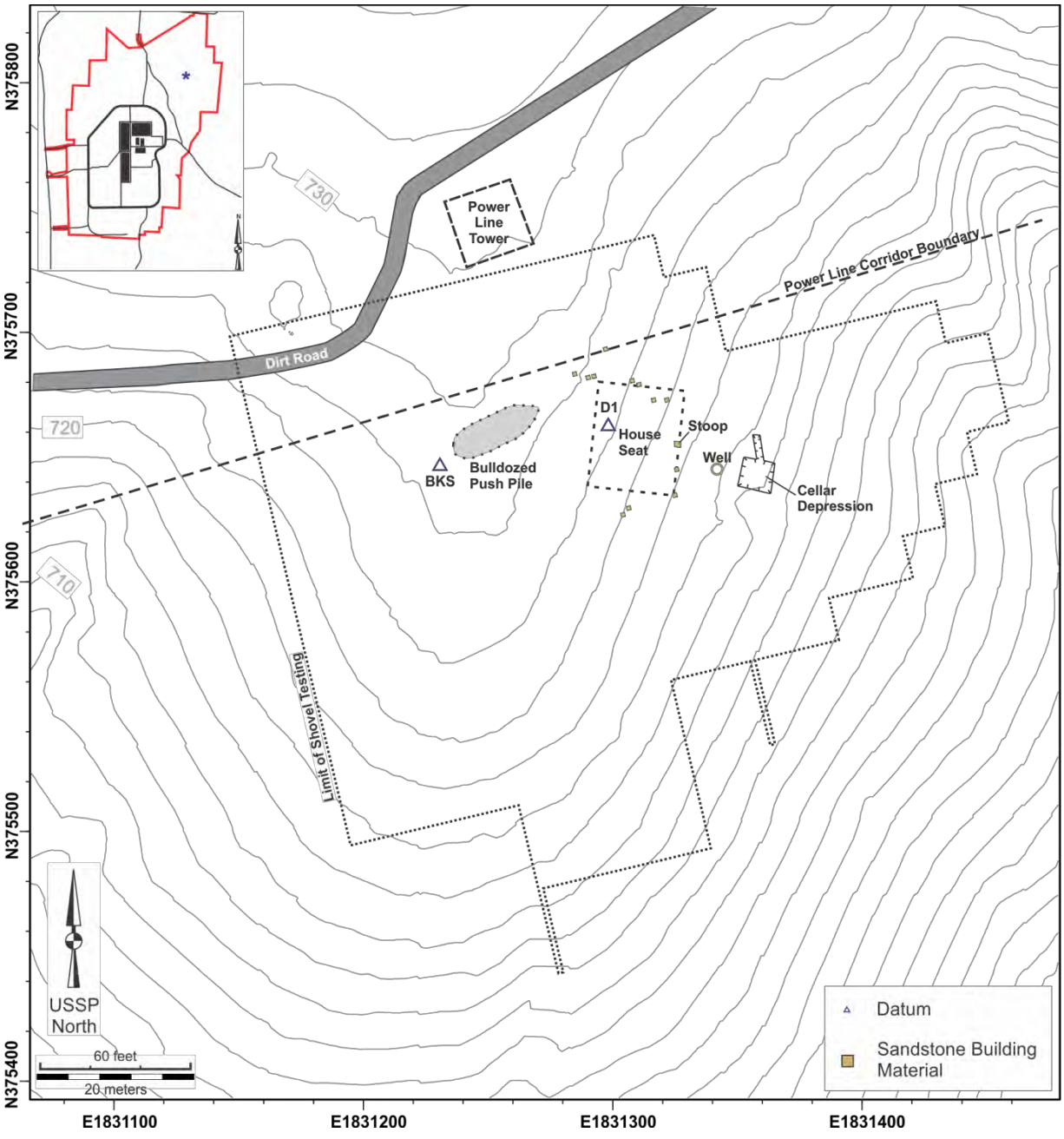

Figure 18. Illustration of the Condon Farmstead (33Pk312) (adapted from Pecora and Burks 2012b).

3.1.15. 33Pk313
House Site/Farmstead

The 33Pk313 house site is one of 68 map locations (#16) identified from historical map resources (Burks 2011a). This house site was documented during an archaeological reconnaissance survey (Pecora 2011) but it was not recommended for additional survey work because it was determined to be heavily damaged and thus lacks archaeological integrity.

The 33Pk313 farmstead is situated in a side-hollow in what is now the south shore of the Sludge Lagoon (X-611B) in the northeastern part of PORTS (Figures 1 and 2). In 1952, this farmstead was located within a 59.5-acre property owned by Thomas O. Zimmerman. The 1884 Pike County plat map shows that the farmstead is located on what was then a 41-acre property owned by I. Varney and in 1905 the same property was delineated as a 15-acre parcel owned by William Zimmerman. The c.1905 Oil & Gas Map does not indicate any buildings in this area, but a house is indicated on a small 0.5-acre parcel owned by Emma Dowers to the south. No property deed research was conducted for this property.

The 1938/39 aerial photograph shows two possible buildings at this location and the 1951 aerial shows one building. It is not clear if the two aerials show the same structures because the two on the 1938/39 aerial are side-by-side and rectangular in shape, whereas the building on the 1951 aerial appears to be a large square-shaped structure. Both aerials show the area on the east side of the building location to be wooded; the area to the west and south is open pasture on the 1938/39 aerial and cultivated land on the 1951 aerial.

The reconnaissance survey at 33Pk313 involved a visual inspection and limited shovel testing of the area in an attempt to locate above-ground architectural remains (Figure 19). This survey resulted in the discovery of a 7 meter wide and 30 meter long bank-cut that runs parallel to the slope. Near this bank cut is a single yucca plant—a non-native plant type commonly associated with historic-era house sites in Ohio. A considerable distance north of the bank-cut is a rock pile, which may have been created here during attempts to clear stone out of nearby agricultural fields. It is conceivable that the cut-bank indicates where a structure once stood. No building stone or evidence of a foundation, however, was found associated with the bank cut.

It does not appear that the cut-bank feature represents the house location on the aerial photographs. The house seems to be located down slope and closer to the bottom of the ravine, an area that is now currently within the lagoon. The rock pile is also near, or on the same elevation as the cut-bank feature, and it is composed of fieldstone of various shapes and sizes, therefore it is ruled out as building stone.

Five shovel tests were excavated on the east and west sides of the cut-bank feature. These revealed very rocky, mottled silt and clay with no A-horizon. No artifacts were recovered.

Although the cut-bank feature, rock pile, and yucca plant represent some component of a historic-era archaeological site, it appears that the core of the farmstead has been covered by the lagoon.

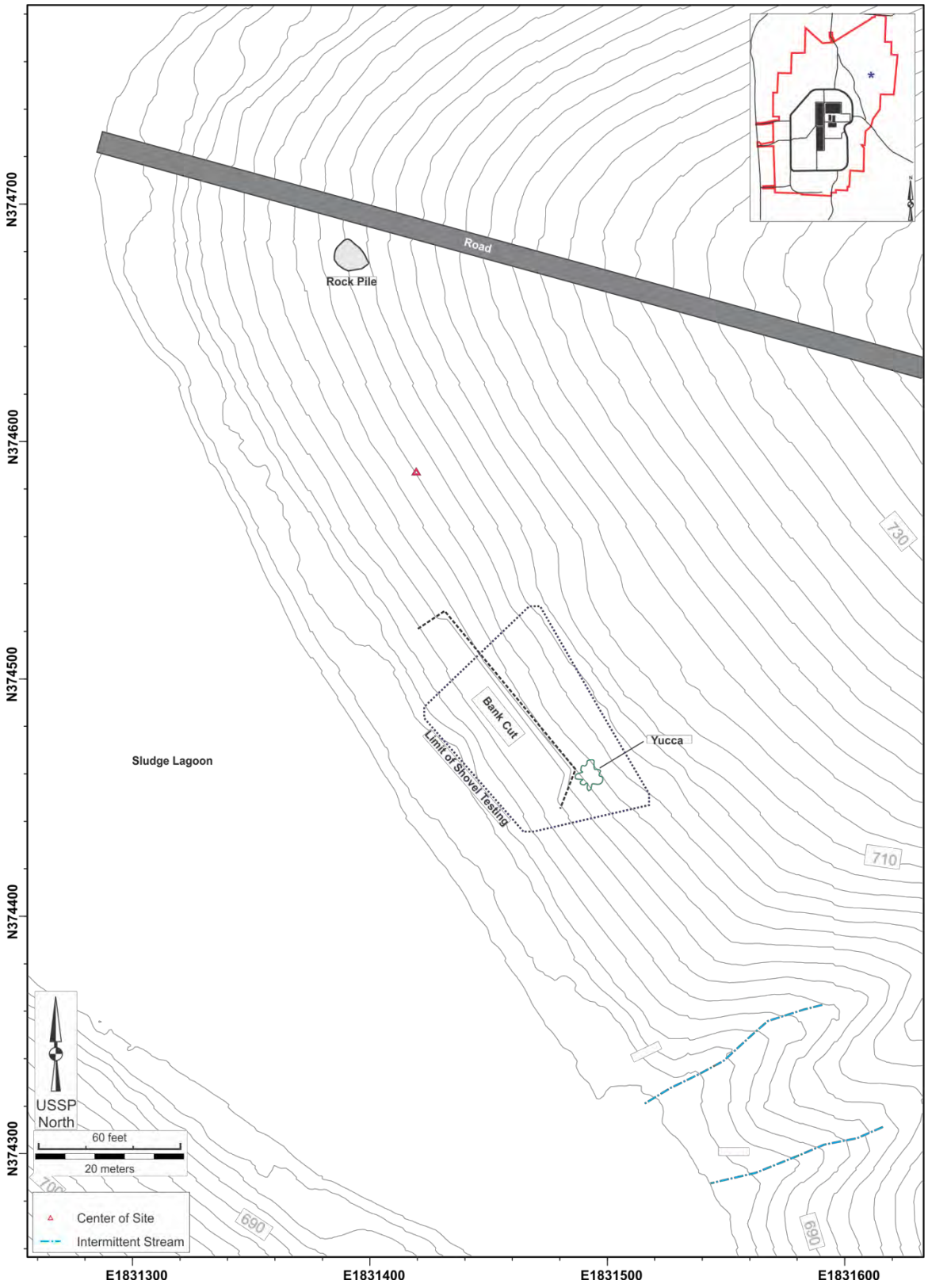

Figure 19. Illustration of the house site 33Pk313 (adapted from Pecora 2011).

3.1.16. 33Pk315
Farmstead

The 33Pk315 farmstead is one of 68 building locations (#19) identified from historical map resources (Burks 2011a). This farmstead site was documented during an archaeological reconnaissance survey (Pecora 2011) but was not recommended for additional survey work because it was determined to be heavily damaged and lacking in archaeological integrity.

The 33Pk315 farmstead is situated on a broad toe-ridge in the north-central part of PORTS (Figures 1 and 2). In 1952, this farmstead was located within a 90-acre property owned by Benjamin & Bertha Farmer. The 1884 Pike County plat map shows that the farmstead was then located on an 80-acre property owned by R. Morgan. In c.1905 the same 80-acre property was owned by J. Daniels. The c.1905 Oil & Gas Map indicates a single structure near the north-central portion of the property parcel. No property deed research was conducted for this property.

The 1938/39 aerial photograph shows a large farmstead complex with at least five buildings, including a possible house within a copse of trees, three large barn-like buildings, and a smaller outbuilding. The 1951 aerial shows seven buildings, including those visible on the earlier aerial. It appears that one of the earlier barns north of the house contains an addition or was replaced by a larger structure by 1951. The surrounding landscape on both aerials appears to be open pasture and cultivated field.

The reconnaissance survey at 33Pk315 involved a visual inspection and shovel testing of the area in an attempt to locate above-ground architectural remains (Figure 20). The visual inspection found that the landscape containing the farmstead location has been heavily modified by massive earth moving activities, including the construction of roadways and associated ditch systems on either side of the ridge-like landform. Several ditches and manholes were documented within the site area between the roadways, indicating that at least some of this area too has been severely disturbed.

Two lines of shovel tests spaced at 10-meter intervals found that much of the current landform consists of heavily mottled clay fill. Two shovel tests, however, discovered a small remnant of intact artifact-bearing surface-soil. These produced 48 historic-era artifacts, most of which are architecture and kitchen group items. The ratio of architecture to kitchen group items is nearly 1:6 but the kitchen group items are exclusively container glass. No ceramic artifacts were found at this location.

Though once a large farmstead, site 33Pk315 is now represented by a small remnant of intact artifact-bearing ground covering an area approximately 464 m^2. The remainder of the farmstead has been destroyed by road construction and other earth moving activities.

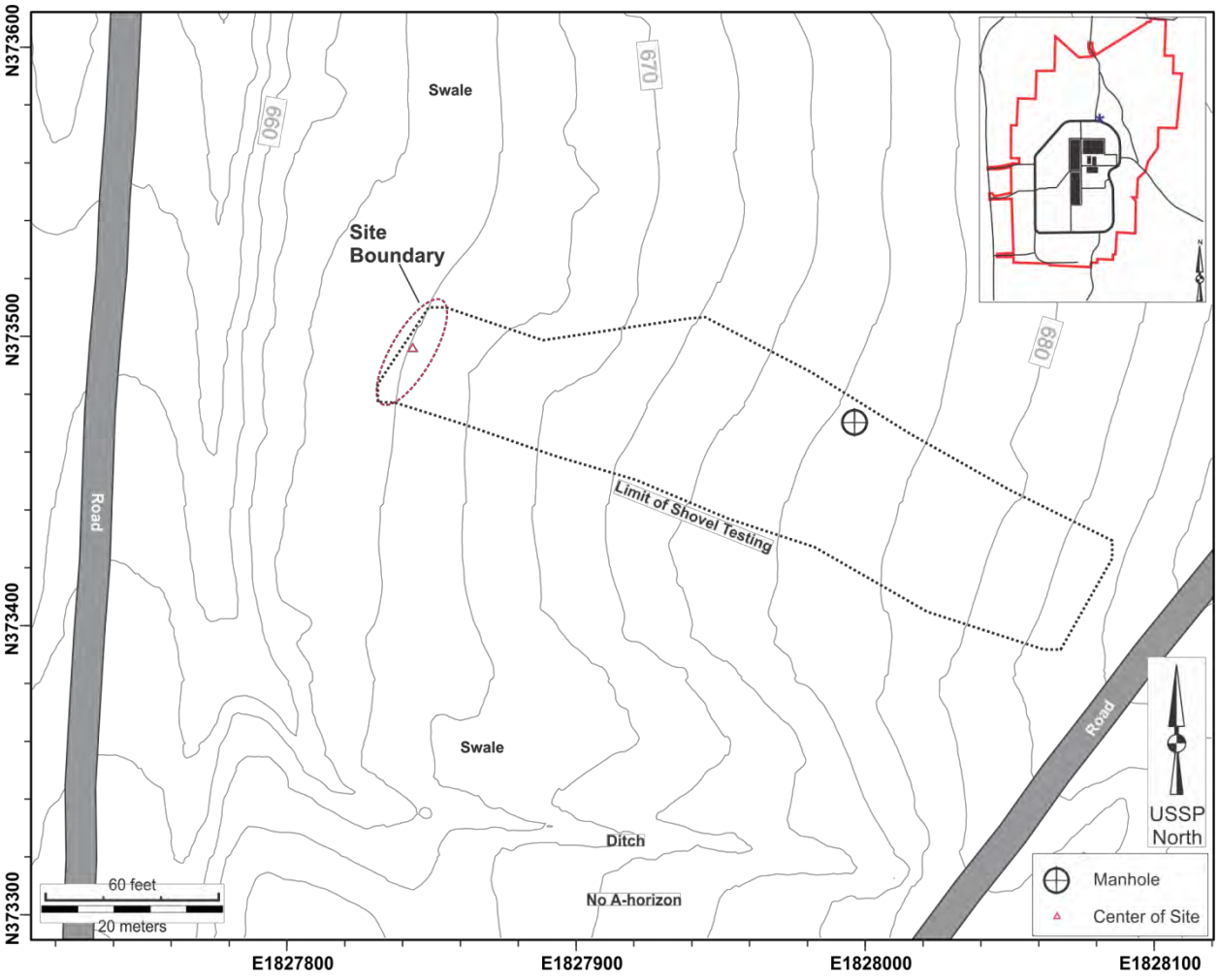

Figure 20. Illustration of the farmstead site 33Pk315 (adapted from Pecora 2011).

3.1.17. 33Pk316
House Site/Farmstead

The 33Pk316 house site is one of 68 building locations (#20) identified by Burks (2011a) from historical map resources. This farmstead site was documented in the field during an archaeological reconnaissance survey (Pecora 2011) but it was not recommended for additional survey work because it was determined to be heavily damaged and lacking in archaeological integrity.

The 33Pk316 farmstead is situated near the end of a broad ridge overlooking a tributary of Little Beaver Creek in the northeastern portion of PORTS (Figures 1 and 2). In 1952, this farmstead was located within a 120-acre property owned by Lester M. Shy. The 1884 Pike County plat map shows that the farmstead is located on what was then a 38-to-40-acre parcel that was owned by J. Moore and in c.1905 the same 38-acre property was owned by Fred. B. Shy. Fred Shy also owned an 80-acre parcel adjacent to the north side. Combined, these two parcels form the 120-acre property that was sold to the AEC in the early 1950s. The c.1905 Oil & Gas Map indicates a single structure at this house location. No property deed research was conducted for this property.

No buildings are visible in this area on the 1938/39 and 1951 aerial photographs, but it is possible that any buildings in this area in 1951 are obscured by vegetation. Both aerials also show County Road 30 (now Fog Road) to be a straight, north to south oriented, roadway in this area. The current Fog Road, however, was recently realigned to the west and encroaches into the location of this farmstead.

The reconnaissance survey at 33Pk316 involved a visual inspection and shovel testing of the area in an attempt to locate above-ground architectural remains (Figure 21). The entire area is heavily dissected with small streams and rivulets and contains narrow ridges and hummocks. A large pile of quarried sandstone blocks was found, but this material is very large and is interpreted to be discarded building material from a nearby bridge replacement associated with the Fog Road realignment. Five shovel tests excavated in this area failed to produce artifacts that might be indicative of a farmstead site.

The reconnaissance survey concluded that the 33Pk316 farmstead has been completely erased from the landscape by earth removal activities associated with the Fog Road realignment. The building stone at this location is assumed to be from an old bridge that was replaced during the realignment project.

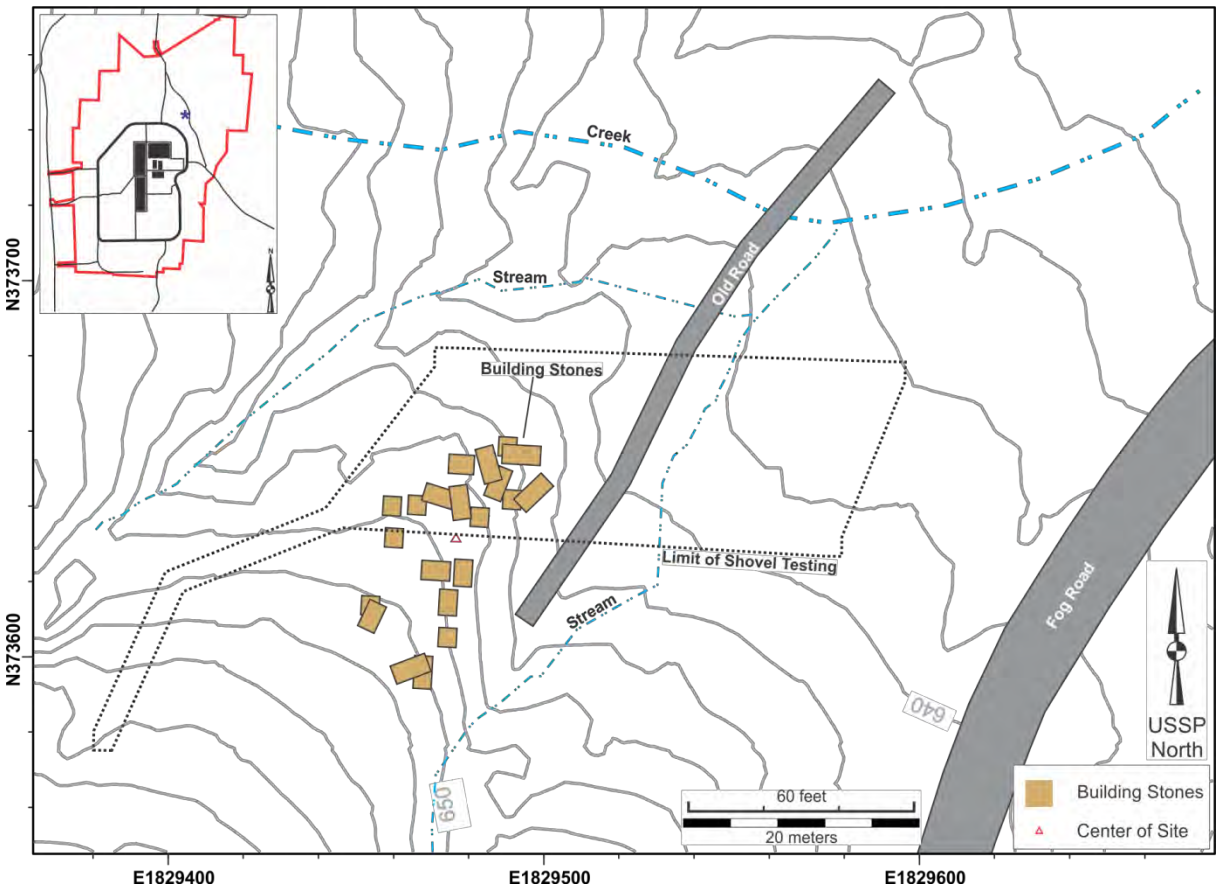

Figure 21. Illustration of the house site 33Pk316 (adapted from Pecora 2011).

3.1.18. 33Pk317
Mechling House Site

Mechling House Site (33Pk317) is one of 68 building locations at PORTS identified from historical map resources (Burks 2011a). The site was first documented in the field during an archaeological reconnaissance survey (Pecora 2011) and was further investigated with an enhanced Phase I-level documentation effort (Pecora and Burks 2012b) that was designed to collect information about artifacts and architectural remains that is comparable to that collected in the Phase II investigations of six other PORTS farmsteads (Pecora and Burks 2012a). The Phase I effort involved the excavation of shovel tests on a 5-meter grid over the core of the site area and additional shovel tests excavated at a 10-meter interval around the perimeter of the site. The Phase I survey effort resulted in the excavation of 37.25 m^2 of the approximately 2,600 m^2 site area.

The Mechling House Site is located on a broad ridgetop near the head of a ravine on the northeastern edge of PORTS (Figures 1 and 2). When purchased by the AEC in 1956, this house site was located on an 89.25-acre property that was owned by Torrence and Ruth Mechling. The 1884 Pike County plat map shows that the site is located on what was then a 41-acre parcel owned by H. Hatfield. By around 1905, the same property parcel was owned by Sarah McDaniel.

The deed records for this property are incomplete. In 1886 H. B. Robinson sold an 80-acre parcel to William A. Farmer. John Farmer sold 40 acres of this property to Joseph McDaniel and C. M Ault in 1915. In 1925, this same parcel was delineated as a 41.25-acre tract that was transferred from Clyde McDaniel et al. to Joseph McDaniel. Joseph McDaniel was involved in a confusing series of transactions for a second 48-acre tract between 1919 and 1925, but eventually obtained this property from I. J. and Florence Legrand to form the 89.25 acre farm.

It is not evident in the property records when the Mechling House Site was first developed. A house, however, was standing at this location by around 1905 and it was on the 40-acre parcel owned by Sarah McDaniel, according to the Oil & Gas Map. In 1915, this property sold for $600.00, which was a sizeable amount at that time and may reflect the presence of a house and other improvements on the property.

The 1938/39 aerial photograph, however, does not show any structures in the vicinity of the Mechling House Site. The 1951 aerial shows a house and a driveway or roadway that passes by the building from east to west towards the Mechling Farmstead (33Pk318), which is a large farmstead complex located farther to the west.

The Phase I survey documented the remains of a house foundation, an external root cellar, a possible privy depression, and a poured concrete cistern cap (Figure 22). The house foundation is represented by a roughly square-shaped scatter of displaced sandstone building stone. No clear arrangement of support piers or foundation wall is visible on the surface. Adjacent to the northeast corner of the house foundation is the depression of the external root cellar constructed with rough stone masonry. The privy is represented by a 4 foot (1.2 m) by 5 foot (1.5 m) depression located south of the house foundation.

Shovel testing at the Mechling House Site produced 1,603 artifacts, resulting in an artifact density of 15.4 artifacts per positive shovel test (0.25 m^2). This represents the highest density recorded of all the PORTS farmstead and house sites, most of which produced between three and eight artifacts per positive shovel test. Like the other assemblages, the Mechling

House Site assemblage is dominated by kitchen and architecture group artifacts. The ratio of architecture to kitchen group artifacts is nearly 1:2, with higher frequencies of kitchen group artifacts. Ceramics make up 51.5 percent of the kitchen group assemblage; the balance is mostly container glass. The mean ceramic date for the Mechling House Site assemblage is 1878. The deed and historical map resources demonstrate that a house stood at this location prior to 1905, so it is not inconceivable that people were living at this location as early as 1878. An alternative explanation for the early ceramic dates is that the site occupants were using or storing some older ceramics, perhaps handed down from earlier generations of the family.

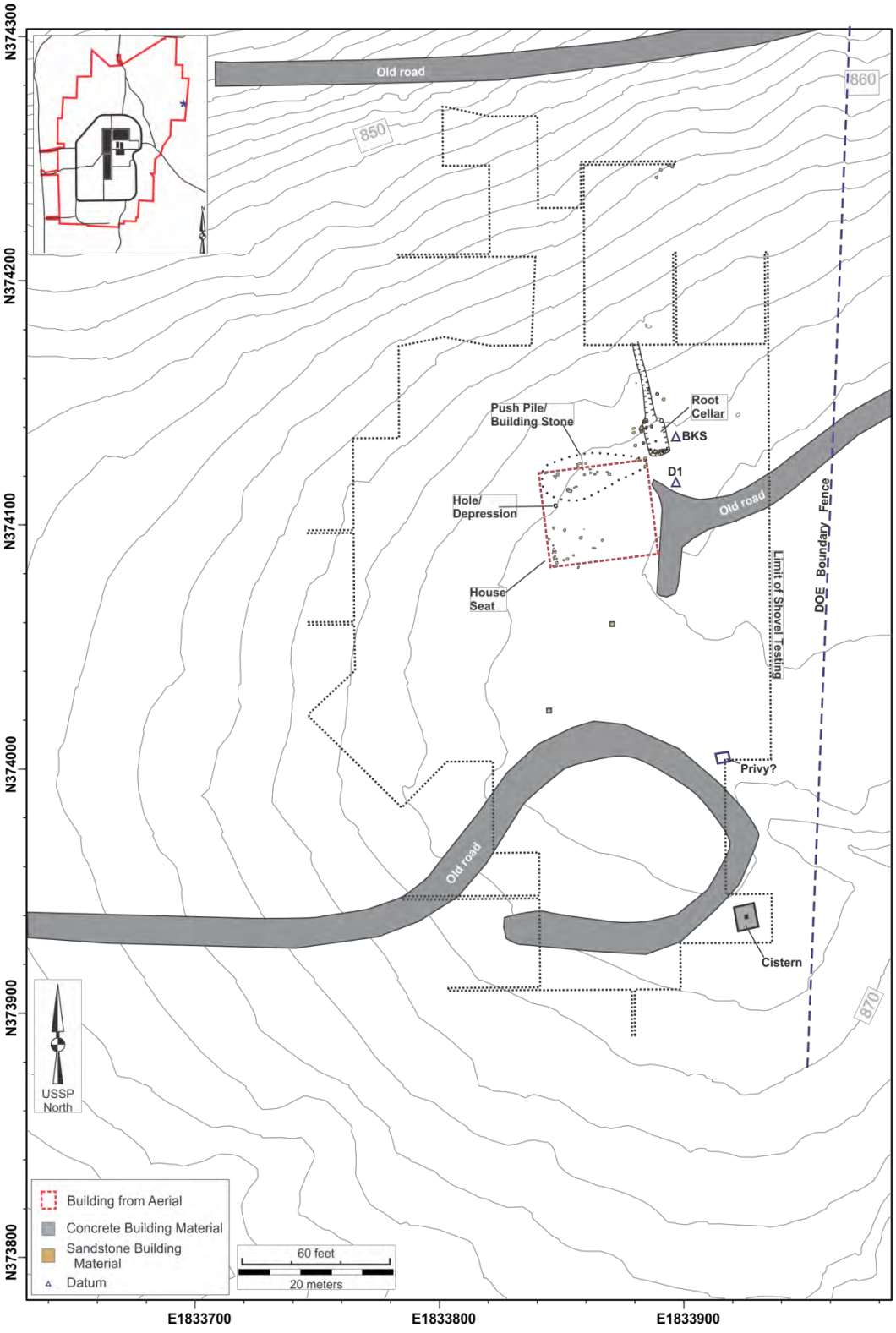

Figure 22. Illustration of the Mechling House Site (33Pk317) (adapted from Pecora and Burks 2012b).

3.1.19. 33Pk318
Mechling Farmstead

Mechling Farmstead (33Pk318) is one of 68 building locations identified at PORTS from historical map resources (Burks 2011a). The site was first documented in the field during an archaeological reconnaissance survey (Pecora 2011) and was further investigated with an enhanced Phase I-level documentation effort (Pecora and Burks 2012b) designed to collect information about artifacts and architectural remains that is comparable to what was collected in the Phase II investigations of six other PORTS farmsteads (Pecora and Burks 2012a). The Phase I effort involved the excavation of shovel tests on a 5-meter grid over the core of the site area and additional shovel tests excavated at a 10-meter interval around the perimeter of the site. The Phase I survey effort resulted in the excavation of 45.25 m^2 of the approximately 5,016 m^2 site area.

The Mechling Farmstead is located on a broad ridgetop near the head of a ravine near the northeastern edge of PORTS (Figures 1 and 2). When purchased by the AEC in 1956, the Mechling Farmstead was located on on an 89.25-acre property that was owned by Torrence and Ruth Mechling. The 1884 Pike County plat map shows that the farmstead is located on what was then a 41-acre parcel owned by W. Lankford. By 1905, the property was delineated as a 41.75-acre parcel owned by Frank Vance.

The deed records for this property are incomplete. In 1886 H. B. Robinson sold an 80-acre parcel to William A. Farmer. Frank Vance sold 40 acres of this property to Joseph McDaniel and C. M Ault in 1915. Vance obtained an additional 8-acre parcel in 1905 from Emily Vandegriff and sold the same parcel to Joseph McDaniel and C. M Ault in 1918. This series of transactions formed a 48-acre property that was eventually sold to Daisy Daily by Joseph McDaniel in 1919. After a series of transactions between 1922 and 1925, McDaniel re-obtained the 48-acre property. Along with an adjacent 41.25-acre tract, the McDaniel property totaled 89.25 acres, which was sold in 1929 by Joseph McDaniel et al. to Helen and Samuel Ross.

It is not evident in the property records when the Mechling Farmstead and its buildings were first developed. A house, however, was standing at this location on the 41.75-acre parcel owned by Frank Vance by around 1905. Most of the property sales were $1.00 transactions, implying that the purchasers were family members and there are no clear instances where property value might reflect property improvement.

The 1938/39 aerial photograph shows a large farmstead complex containing at least five structures including a house, large barn, and three outbuildings. The 1951 aerial shows nine buildings, including those visible on the 1938/39 aerial.

The Phase I survey documented the remains of a house foundation, an external root cellar, three possible privy depressions, an outbuilding foundation, and a cistern (Figure 23). The house foundation is represented by a rectangular arrangement of stone support piers and continuous foundation walls. A poured concrete and cinder block cellar is located on the east end of the foundation and a brick chimney fall was documented near the northwest corner. The southern half of this foundation is no longer extant. Adjacent to the southwest corner of the house is a poured concrete root cellar and a stone lined well was found off the northeast corner. Three possible privy depressions, one of which is lined with a wood plank box, are located southwest of the house foundation. The cistern is a large, poured concrete box structure with a slab roof containing a portal and vent. This structure is located a considerable distance west of

the house, near a large barn that is visible on the aerial photographs. Although no barn foundation remains were found, it is possible that it was a dairy barn that was served by the cistern. The outbuilding is represented by three sides of a rough stone wall foundation with intermittent cinder blocks located southeast of the house foundation.

Shovel testing at the Mechling Farmstead produced 1,180 artifacts, with an artifact density of 10.0 artifacts per positive shovel test (0.25 m^2). Only four other PORTS farmsteads reported higher figures. Most of the others produced between three and eight artifacts per positive shovel test. Like the other assemblages, the Mechling Farmstead assemblage is dominated by kitchen and architecture group artifacts. The ratio of architecture to kitchen group artifacts is nearly 1:1, with a slightly higher frequency of kitchen group artifacts. Ceramics make up 30.4 percent of the kitchen group assemblage; the balance is mostly container glass. The mean ceramic date for the Brodess Farmstead assemblage is 1870 when undecorated whiteware is excluded from the calculation and 1880 when all ceramics are included. The deed and historical map resources demonstrate that a house stood at this location prior to 1905, so it is possible that people were living at this site as early as 1870.

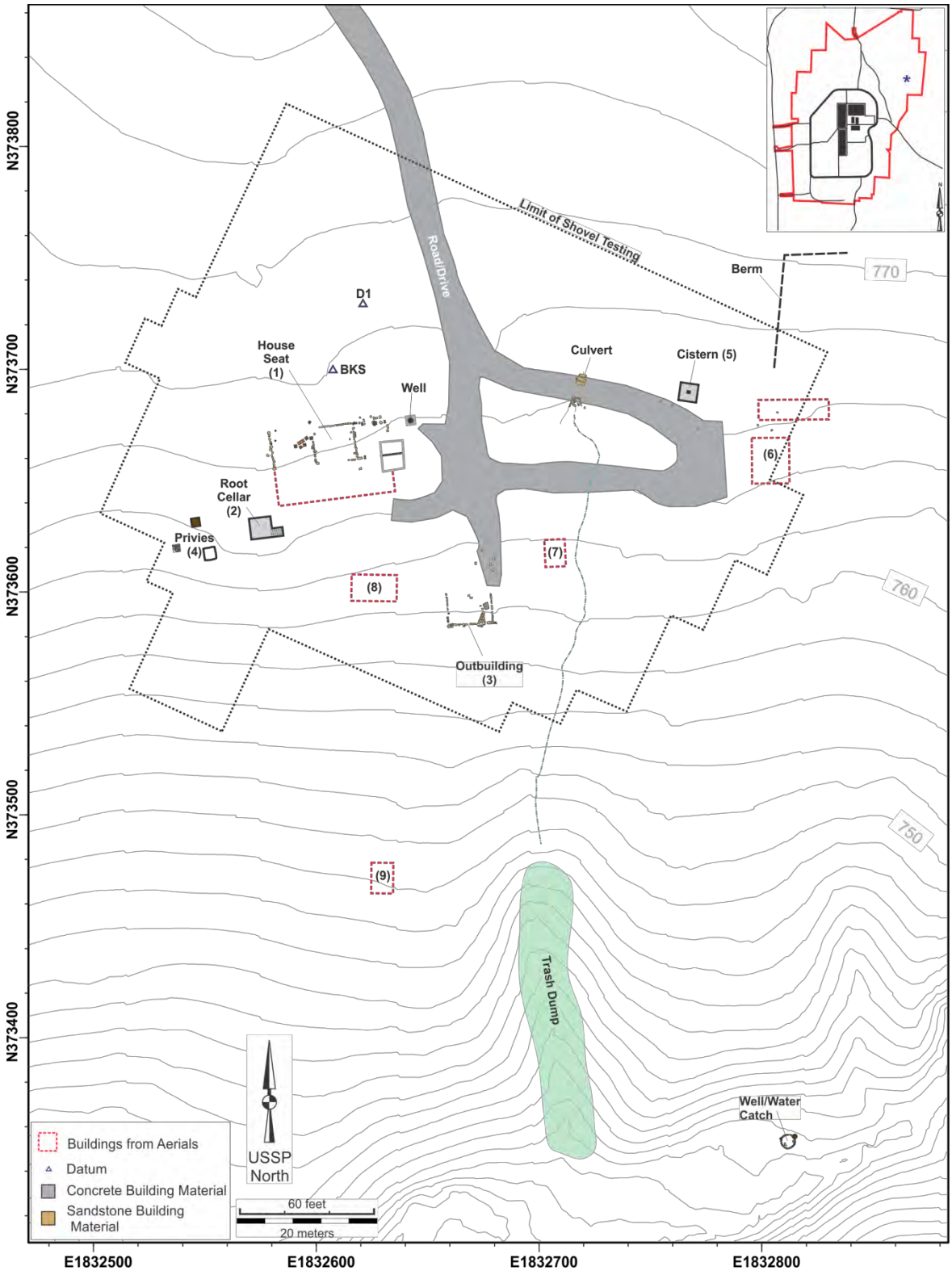

Figure 23. Illustration of the Mechling Farmstead (33Pk318) (adapted from Pecora and Burks 2012b).

3.1.20. 33Pk319
House Site/Farmstead

The 33Pk319 farmstead is one of 68 building locations (#43) identified at PORTS in historical map resources (Burks 2011a). This farmstead site was documented during an archaeological reconnaissance survey (Pecora 2011) but it was not recommended for additional survey work because it was found to be heavily damaged and lacking in archaeological integrity.

The 33Pk319 farmstead is situated on the end of a ridge overlooking a tributary of Little Beaver Creek in the northeastern portion of PORTS (Figures 1 and 2). Historically, the farmstead was located in a fork where County Road 30 merged with an unnamed roadway, but due to poor map resolution it is difficult to see if a building or buildings are depicted in this area. On the 1952 AEC property map there is an ink smudge that may depict a building. If so, the farmstead was in what was then a 13.25-acre parcel owned by Arthur Farmer. The 1884 Pike County plat map shows that the farmstead is located on what was then a 290-acre tract that was owned by Henry Shy and in 1905 the site was located on a 10-acre parcel owned by Fred. B. Shy. No building is depicted in this area on the c.1905 Oil & Gas Map.

The 1938/39 aerial photograph depicts a single building in this location and the 1951 aerial photograph shows two buildings. Both aerials also show County Road 30 (now Fog Road) diverting to the east between the two buildings shown on the 1951 aerial. An unnamed roadway continued southward on the west side of the farmstead.

The reconnaissance survey at 33Pk319 involved a visual inspection and limited shovel testing of the area in an attempt to locate above-ground architectural remains (Figure 24). The entire area appears to have been modified by the Fog Road realignment and by a large PORTS-related sludge lagoon (X-611A) on the east side of the roadway. What remains of the site today is what might be portions of the west side of the farmstead, which is situated on a piece of nearly level toe ridge. Several road cuts and a push pile also are located on the toe ridge.

Five shovel tests were excavated on a 15-meter grid within the farmstead's remnant. All but one revealed rocky subsoil, revealing the effects of earth moving activities that were probably associated with the road realignment project. A single shovel test found what might be an intact artifact-bearing surface soil. This shovel test produced four whiteware sherds, two container glass sherds, and two pieces of window glass. Most of the whiteware is undecorated, but one sherd has a red transfer print design, which has a production date of ca. 1818-1880 (Samford 1997). The reconnaissance concluded that 33Pk319 has been nearly destroyed.

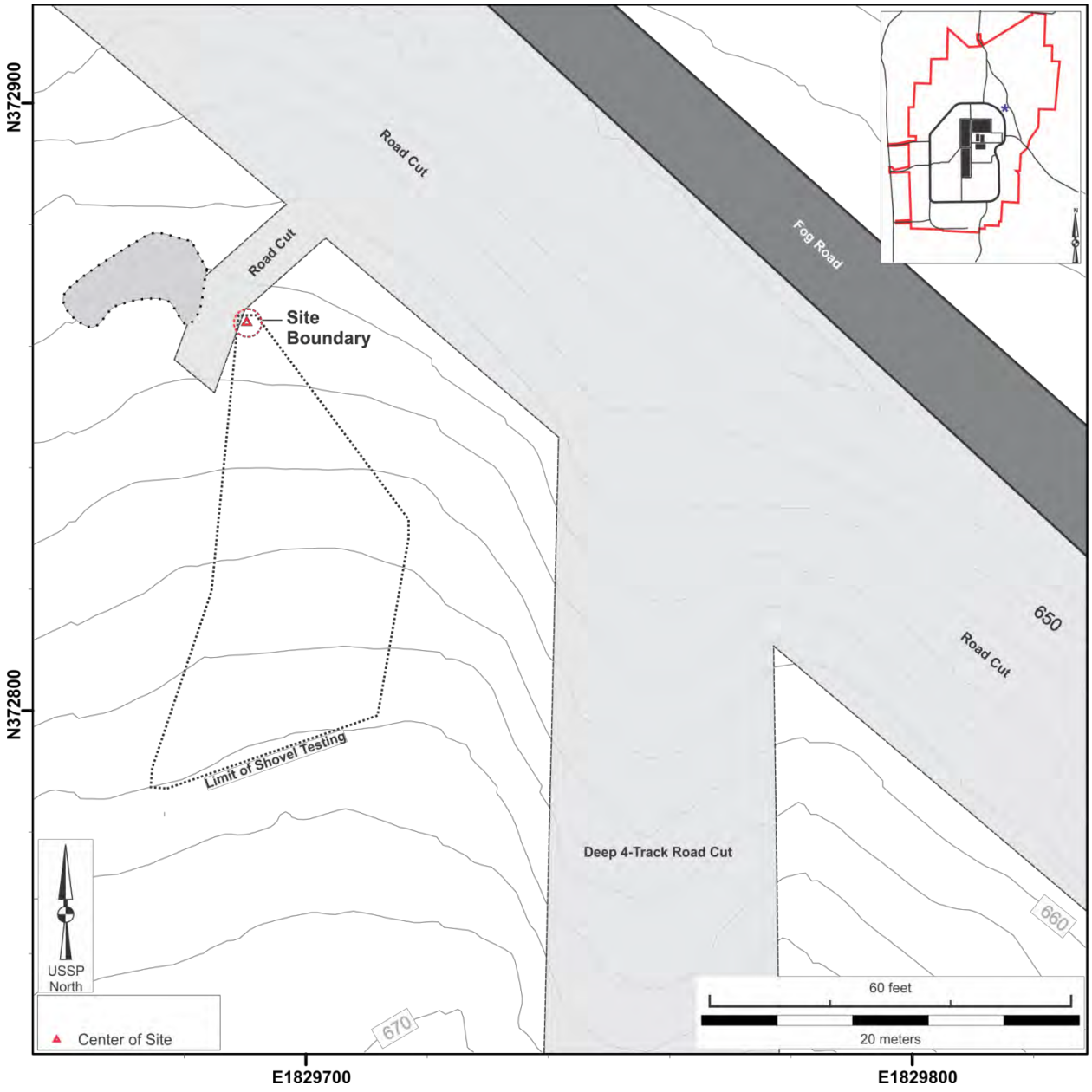

Figure 24. Illustration of the house site 33Pk319 (adapted from Pecora 2011).

3.1.21. 33Pk320
Farmstead

The 33Pk320 farmstead is one of 68 building locations (#2) identified at PORTS in historical map resources (Burks 2011a). This farmstead site was documented in the field during an archaeological reconnaissance survey (Mustain and Klinge 2011) but was not recommended for additional survey work because it was found to be heavily damaged and lacking in archaeological integrity.

The 33Pk320 farmstead is located on a toe ridge at the northeastern edge of the PORTS property (Figures 1 and 2). In 1952 it was located on what was then a 13.25-acre parcel owned by Arthur Farmer. The 1884 Pike County plat map shows that the farmstead is located on what was then a 118-acre tract owned by Ralph Daily, and in 1905 this land was a 119-acre parcel owned by John Fishburn. A house is indicated near this area on the c.1905 Oil & Gas Map.

The 1938/39 aerial photograph depicts a large farmstead complex containing what appears to be 7-8 buildings, including a house, two large barns, and several smaller outbuildings. The same building arrangement is visible on the 1951 aerial with the possible addition of several outbuildings. Both aerials show the farmstead to be north of County Road 301, outside the PORTS boundary fence.

The reconnaissance survey at 33Pk320 involved a visual inspection and limited shovel testing of the area in an attempt to locate-above ground architectural remains within the PORTS boundary (Figure 25). This resulted in the identification of two rubble piles containing large pieces of concrete foundations and brick, including a portion of a set of concrete steps. The survey also documented a railroad south of the PORTS boundary and on the south side of the site. The railroad is not visible on the 1951 aerial but was installed shortly afterwards, and it no doubt affected the southern part of the farmstead. The main part of the farmstead, north and outside of the PORTS boundary, is currently an open agricultural field.

Mustain and Klinge (2011) excavated three shovel tests in the vicinity of the rubble piles that define this site. All three revealed disturbed subsoil at the surface. No artifact-bearing deposits were found. Based on the reconnaissance survey results, it was concluded that 33Pk320 is a secondary archaeological deposit created from the demolition of the farmstead that once stood in this area.

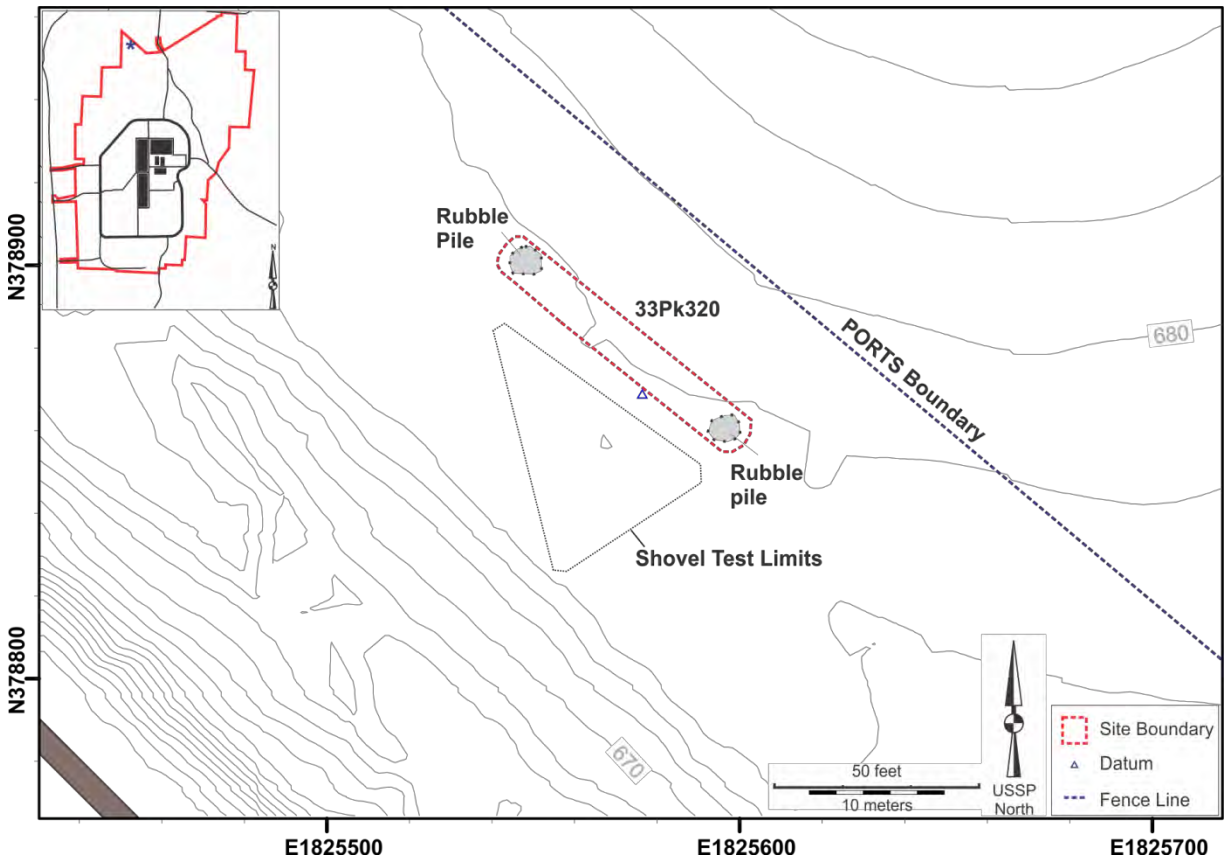

Figure 25. Illustration of the farmstead site 33Pk320 (adapted from Mustain and Klinge 2011).

3.1.22. 33Pk321
House Site/Farmstead

The 33Pk321 house site is one (#3) of 68 building locations identified by Burks (2011a) in historical map resources. This house site was documented during an archaeological reconnaissance survey (Mustain and Klinge 2011) but was not recommended for additional survey work because it was found to be heavily damaged and lacking in archaeological integrity.

The 33Pk321 house is located in a ravine near the northern edge of the PORTS property (Figures 1 and 2). In 1952 the house is situated in a triangular tract of land of unknown ownership to the south of County Road 301 and a railroad. The 1884 Pike County plat map shows that this area was on land that was part of a 79-acre tract owned by Ralph Daily. In 1905 this land was an 83-acre property that was also owned by Ralph Daily. A house is indicated in this area on the c.1905 Oil & Gas Map.

The 1938/39 aerial photograph depicts what appears to be a house within a small copse of trees, and there are no associated outbuildings. The same building is also visible on the 1951 aerial. Both aerials show the house to be south of County Road 301 and directly across the road from 33Pk321.

The reconnaissance survey at 33Pk321 involved a visual inspection and limited shovel testing of the area in an attempt to locate above-ground architectural remains (Figure 26). This resulted in the identification of a partially filled-in well or cistern (Mustain and Klinge 2011). The construction material for this feature was not reported. Mustain and Klinge (2011) excavated three shovel test units (at 15-m intervals) that define this site: one was at the well/cistern and the other two flanked it. The shovel test adjacent to the well/cistern revealed an intact A-horizon but produced no artifacts. The second shovel test unit was southwest of the well/cistern, within the easement of an overhead power line, and although the surface was heavily disturbed, it produced two ceramic sherds (whiteware) and two pieces of coal. The third shovel test unit, northeast of the well/cistern, revealed an intact A-horizon and produced 18 artifacts including three container glass sherds, two window glass fragments, six sponge-stamped whiteware sherds, two cut nails, and five brick fragments. The cut nails and sponge-stamped whiteware indicate the site could date to the nineteenth century.

Based on their reconnaissance survey results, Mustain and Klinge (2011) conclude that 33Pk321 has been nearly destroyed, and that further efforts would likely confirm this rather than lead to interesting and useful research.

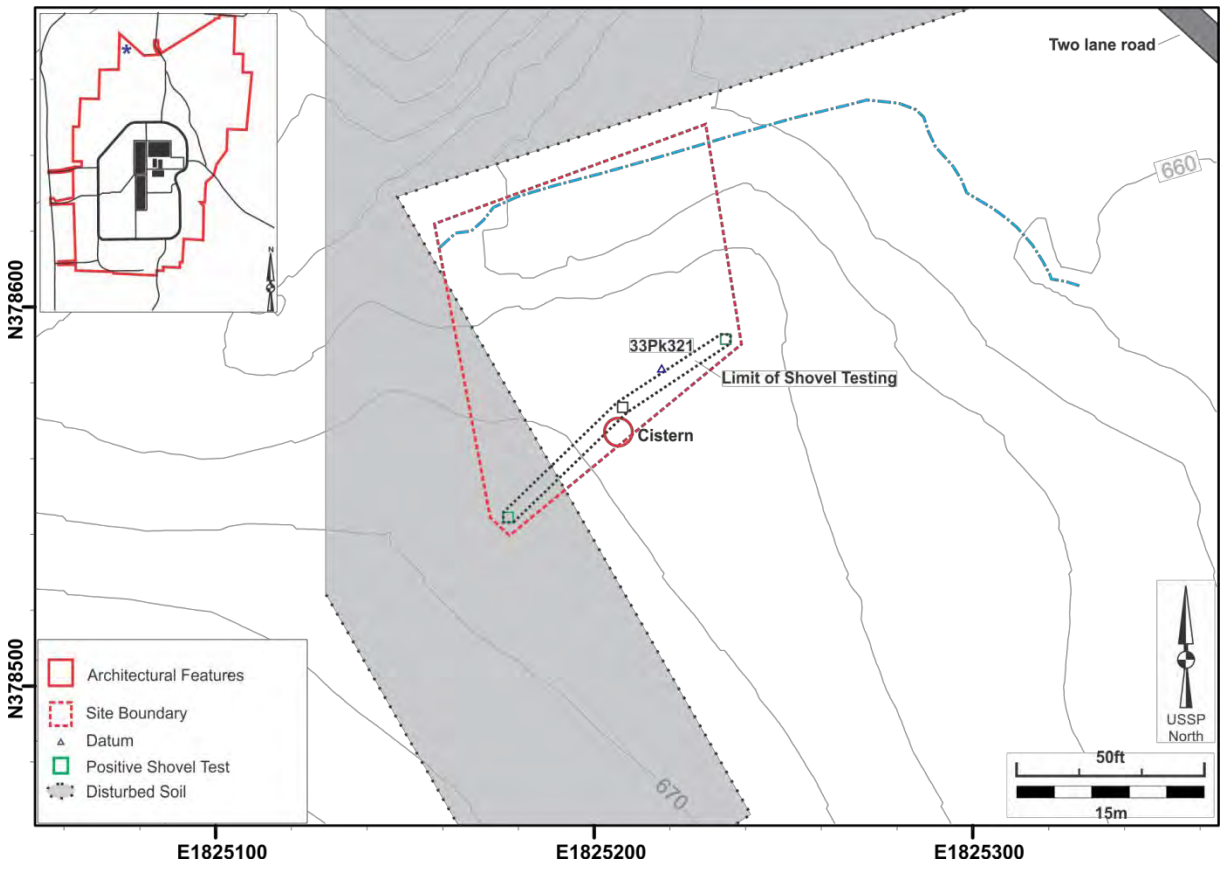

Figure 26. Illustration of the house site 33Pk321 (adapted from Mustain and Klinge 2011).

3.1.23. 33Pk322
Farmstead

The 33Pk322 farmstead is one of 68 building locations (#4) identified at PORTS in historical map resources (Burks 2011a). This farmstead site was first documented in the field during an archaeological reconnaissance survey (Mustain and Klinge 2011) and was further investigated with a Phase I level effort (Mustain and Klinge 2012). The Phase I survey involved the excavation of shovel tests on a 5-meter grid over the core of the site area and additional shovel tests at a 10-meter interval around the site's perimeter. The Phase I survey work resulted in the excavation of 26.25 m^2 spread across the approximately 3,120 m^2 site area.

The 33Pk322 farmstead is located on a toe-ridge in a large ravine near the northern PORTS boundary fence (Figures 1 and 2). When purchased by the AEC in the early 1950s, this farmstead was situated on a 21.17-acre property that was owned by Mary & Harry Zimmerman. The 1884 Pike County plat map shows that the farmstead was then located on a 79-acre property owned by Ralph Daily. By 1905, the property was delineated as an 83-acre parcel owned by Raymond Daily. There has been no attempt at conducting more thorough deed research for this property (Mustain and Klinge 2012). It is not known when this farmstead was first developed, but its presence on the c.1905 Oil & Gas Map indicates that it was standing prior to this date.

The 1938/39 aerial photograph shows two buildings at this location on the north side of County Road 301. One large building is present and surrounded by a copse of trees; it is probably a house. Behind the house to the north is what appears to be a large barn-like structure. The 1951 aerial shows a much larger farm complex with as many as 12 buildings, including those visible on the 1938/39 aerial. A large addition appears on the western side of the house.

The Phase I survey documented four foundations, including the house foundation and the remains of three outbuildings (Figure 27) (Mustain and Klinge 2012). A subsequent addendum survey reported what is interpreted to be a barn foundation on the north side of the railroad tracks (Klinge 2012). The arrangement of these foundations roughly matches what is visible in the southern part of the farmstead on the 1951 aerial. The northern part of the farmstead, containing a several outbuildings now lies beneath a railroad and outside the PORTS boundary. The house foundation is represented by an arrangement of stone support piers on the west edge and continuous stone foundation walls on the east edge. Outside the northern edge of the house foundation is a concrete pad atop a limestone foundation. This pad is interpreted to be a stove support (Mustain and Klinge 2012). Two of the outbuildings are made of concrete and the third has a sandstone footer foundation. The barn foundation has a poured concrete floor and sill with a concrete support pier lean-too or shed addition on the east side. While the house was certainly constructed prior to 1905, the concrete foundations were probably added after ca. 1920. The aerial photographs indicate that the outbuildings documented at 33Pk322 were constructed between 1938/39 and 1951.

Shovel testing at the 33Pk322 farmstead produced 334 artifacts, with a density of five artifacts per positive shovel test (0.25 m^2). Like the other PORTS farmstead assemblages, the 33Pk322 assemblage is dominated by kitchen and architecture group artifacts. The ratio of architecture to kitchen group artifacts is nearly 2:1, with a higher frequency of architecture group artifacts. Ceramics make up 43 percent of the kitchen group assemblage. The balance is mostly container glass. The mean ceramic date for this assemblage is 1884. The historical map resources demonstrate that a house stood at this location prior to 1905, but it is possible that people were living at this location as early as 1884.

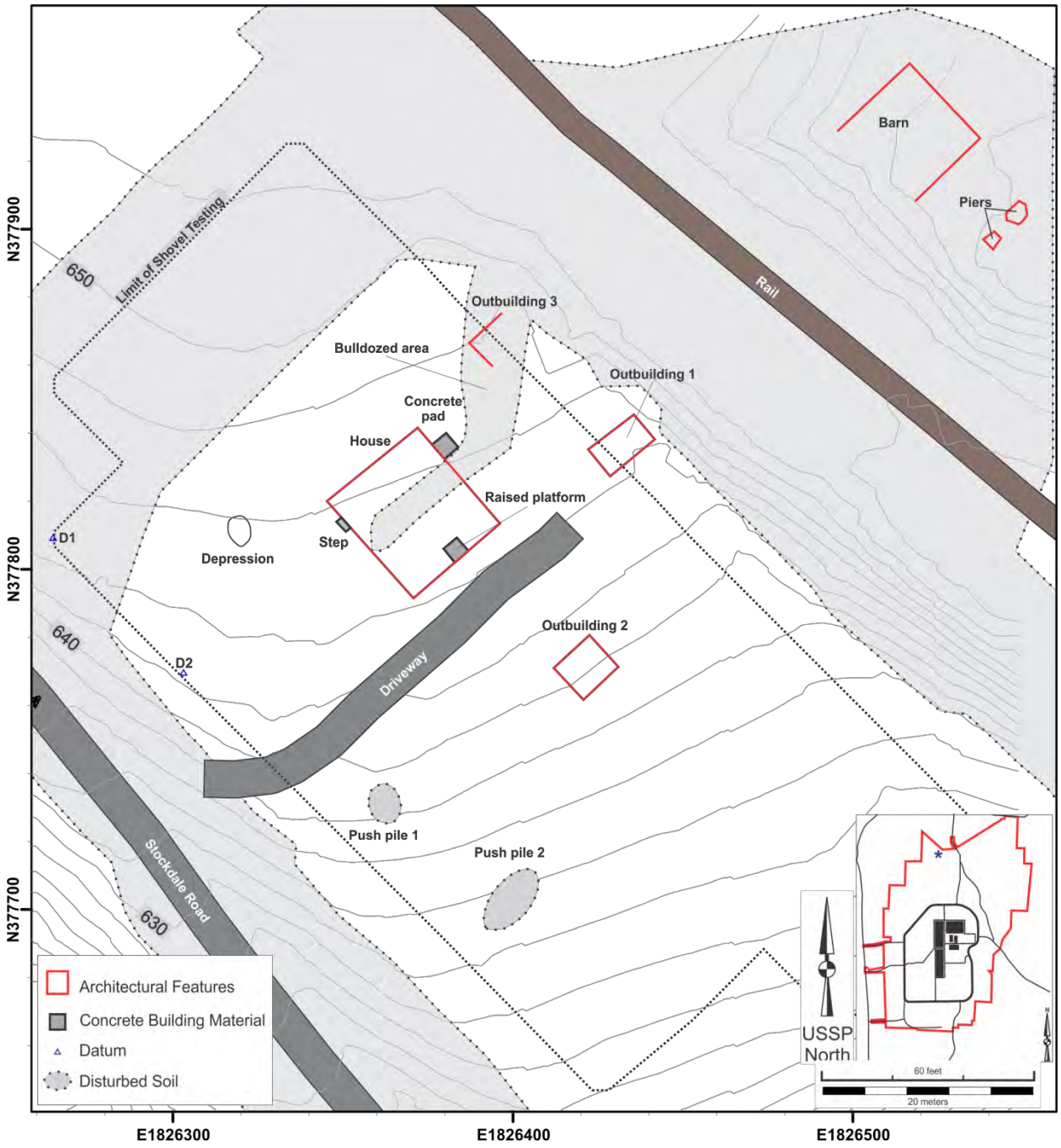

Figure 27. Illustration of the farmstead site 33Pk322 (adapted from Mustain and Klinge 2012; Klinge 2012).

3.1.24. 33Pk324
Farmstead

The 33Pk324 farmstead is one of 68 building locations (#50) identified from historical map resources (Burks 2011a). This farmstead site was first documented in the field during an archaeological reconnaissance survey (Mustain and Klinge 2011) and was further investigated with a Phase I level effort (Mustain and Klinge 2012). The Phase I survey included the excavation of shovel tests on a 5-meter grid over the core of the site area and shovel tests excavated at a 10-meter interval around the perimeter of the site. The Phase I survey work resulted in the excavation of 63 m^2 within the approximately 12,000 m^2 site area.

The 33Pk324 farmstead is located on a broad ridge near the bluff overlooking the Scioto River floodplain on the western edge of PORTS (Figures 1 and 2). In 1952, this farmstead was located within a 150-acre property owned by E. F. Rittenour. The AEC purchased 92.6 acres of this farm shortly after 1951. In c.1905 the property was delineated as a 150-acre parcel owned by Henry Rittenour and on the 1884 Pike County plat map the farmstead is located on what was then a large property owned by T. W. Sargent (heirs). There has been no attempt to conduct detailed deed research for this property. It is not known when this farmstead was first developed, but its presence on the c.1905 Oil & Gas Map indicates that it was standing prior to this date.

The 1938/39 aerial photograph shows approximately six buildings at this location, including a house and a large barn. A nearly identical arrangement of buildings is visible on the 1951 aerial, though the resolution is poor. Nevertheless, both aerials show a fairly large farmstead complex.

The Phase I survey documented five building foundations, including a possible house foundation, three large barn foundations, and a possible milking parlor with a sanitation gutter (Figure 28) (Mustain and Klinge 2012). Additionally, a silo foundation, a developed spring with two cisterns, and a large paved area around a barn foundation were also documented. All are made of poured concrete, 3-hole concrete block, or a combination of both. Mustain and Klinge (2012) conclude that these building materials, coupled with historical map information, reflect a circa 1910-1952 period of occupation for this farmstead.

Shovel testing at the 33Pk324 farmstead produced 109 artifacts, yielding an artifact density of 3.4 artifacts per positive shovel test (0.25 m^2). Like the other PORTS farmstead assemblages, the 33Pk324 assemblage is dominated by kitchen and architecture group artifacts. The ratio of architecture to kitchen group artifacts is nearly 1:1 with a slightly higher frequency of kitchen group artifacts. Ceramics make up only 11 percent of the kitchen group assemblage; the balance is mostly container glass. The mean ceramic date for this assemblage is 1842, excluding undecorated whiteware. This is an extremely early date caused, in part, by a very small ceramic assemblage couple with the presence of a piece of English delftware-like ceramic, which was popular in the seventeenth and eighteenth centuries (Miller et al. 2000). This artifact probably represents an heirloom introduced to a more recent farmstead. Mustain and Klinge (2012) conclude that the farmstead was occupied from around 1910 to 1952, but its presence on the c.1905 Oil & Gas Map suggests that it is slightly older.

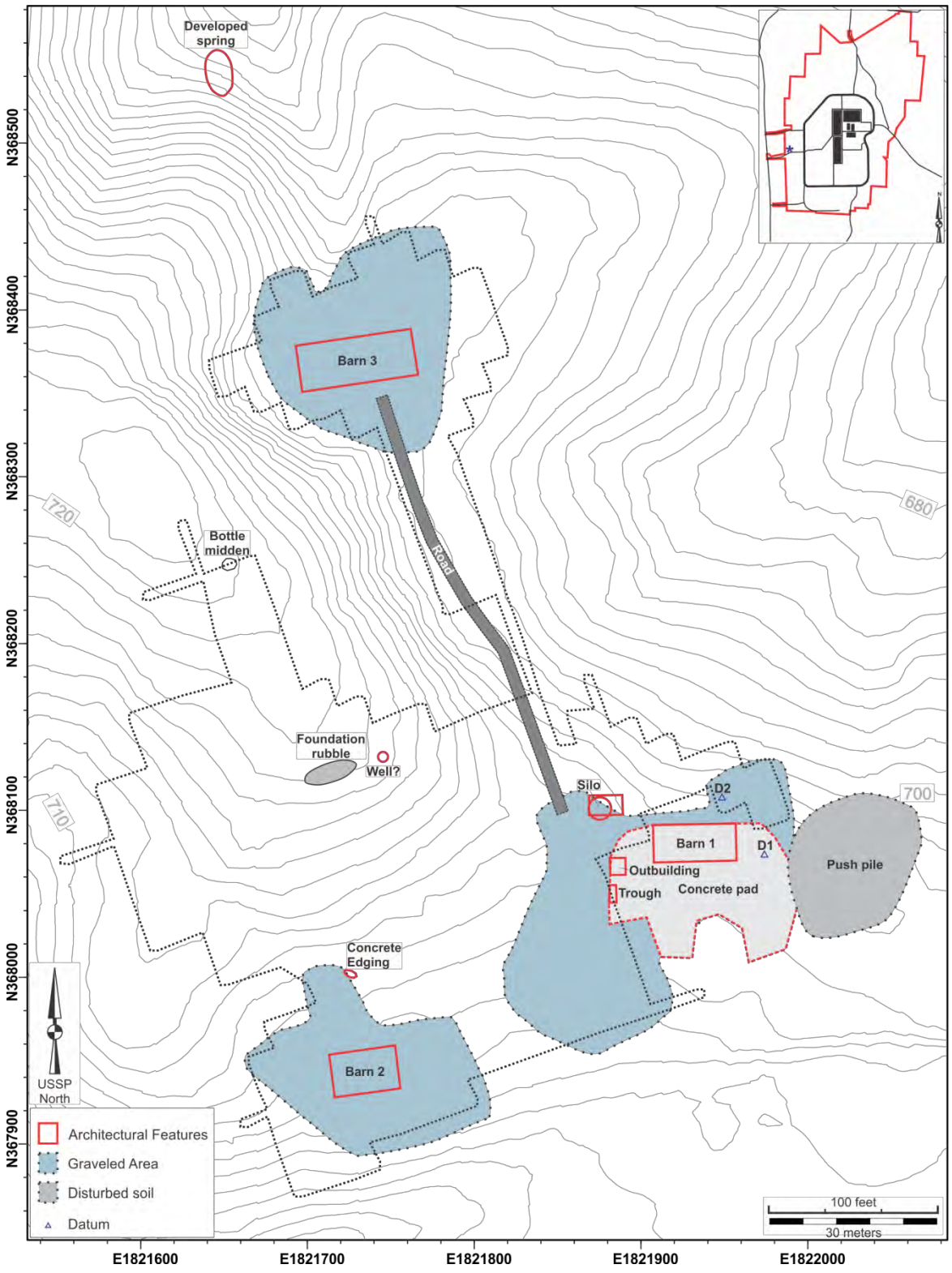

Figure 28. Illustration of the farmstead site 33Pk324 (adapted from Mustain and Klinge 2012).

3.1.25. 33Pk325
Farmstead

The 33Pk325 farmstead is one of 68 building locations (#25) identified from historical map resources (Burks 2011). This farmstead site was documented in the field during an archaeological reconnaissance survey (Trader 2011) but was not recommended for additional survey work because it was determined to be heavily damaged and lacking in archaeological integrity.

The 33Pk325 farmstead is located in the northeastern area of PORTS, and it is west of an abandoned road bed to the east of Perimeter Road (Figures 1 and 2). In 1952 the farmstead location was located on a 43-acre tract owned by Elizabeth Freeland et al., west of County Road 30. The 1884 Pike County plat map shows this to be a 40-acre parcel owned by G. M. Morgan. According to the c.1905 Oil & Gas Map, Morgan owned this same parcel through at least c.1905. No other deed research has been conducted for this site.

The 1938/39 aerial photograph depicts at this site what appears to be three or four buildings including a possible house in a copse of trees, two barn-like structures and at least one small outbuilding. The same buildings are visible on the 1951 aerial.

The reconnaissance survey at 33Pk325 involved a visual inspection of the area to identifying above-ground architectural remains; it also included limited shovel testing to identify artifact deposits (Figure 29). Trader (2011) found no evidence of architectural remains. Limited shovel testing found only three nail fragments. This survey concluded that the farmstead site was nearly erased from the landscape when it was razed, after being purchased by the AEC, to clear the way for the construction of Perimeter Road.

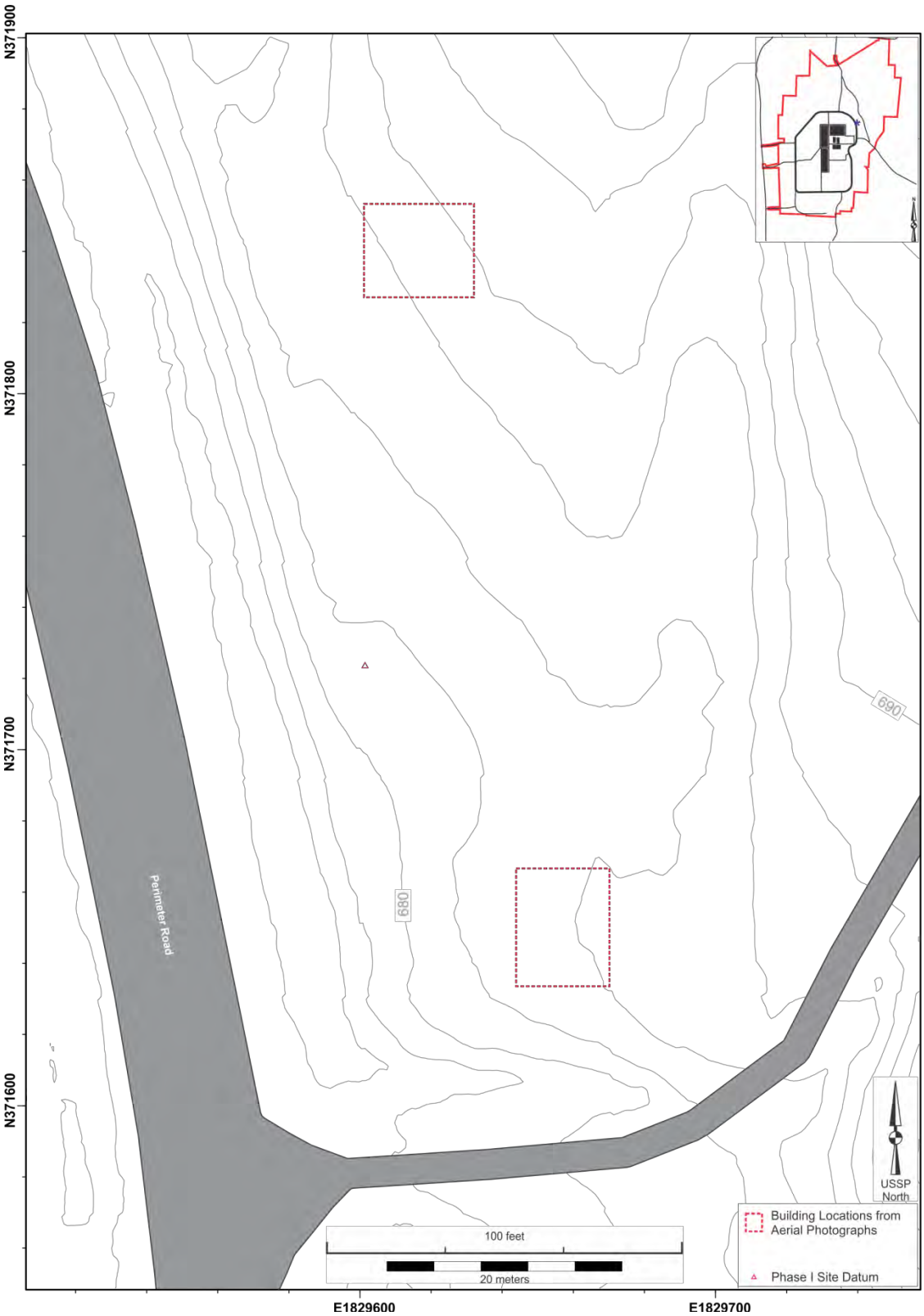

Figure 29. Illustration of the farmstead site 33Pk325 (adapted from Trader 2011).

3.1.26. 33Pk326
Farmstead

The 33Pk326 farmstead is one of 68 building locations (#27) identified from historical map resources (Burks 2011a). This farmstead site was first documented in the field during an archaeological reconnaissance survey (Trader 2011) and was further investigated with a Phase I level effort (Vehling et al. 2012). The Phase I survey work involved the excavation of shovel tests on a 15-meter grid across the site area. This effort resulted in the excavation of 15.25 m^2 within the approximately 16,000 m^2 site area.

The 33Pk326 farmstead is located on a broad ridge in the east-central part of PORTS (Figures 1 and 2). In 1952, this farmstead was located within a 39-acre property owned by Paul and Mary Adams. In c.1905 the property was part of a 46-acre parcel owned by Rebecca T. Boldman, and the 1884 Pike County plat map shows it located on what was then a 43-acre property owned by R. Boldman. More extensive deed research found a chain of land titles extending as far back as 1825, when John M. Violet sold a parcel of land in this area to Phillip Boldman. Boldman acquired a second parcel from Violet in 1832. In 1878 Rebecca T. Boldman purchased 27+ acres for $1,333.00, which was a sizeable sum at the time and indicates that the farmstead buildings likely were standing as well. When Rebecca Boldman died in 1923, she willed her 38.75 acre property to her sister, Minnie V. Yeager. The land was acquired by A.C. Douglas in 1925 and Paul Adams in 1933. Adams sold the property to The Ohio Power Company in 1945.

The 1938/39 aerial photograph shows five buildings, including a house, barn, a circular structure (possible silo or grain bin), and two smaller outbuildings. The 1951 aerial shows eight buildings, including the five that are visible on the 1938/39 aerial.

No intact foundation remains were identified during the Phase I survey effort at 33Pk326 (Figure 30). The only archaeological remains found at this location is a concentration of concrete and stone rubble associated with a dismantled well pad (Vehling et al. 2012). Shovel tests failed to produce artifacts of any kind and revealed that the entire landscape had been modified from comprehensive grading and earth removal.

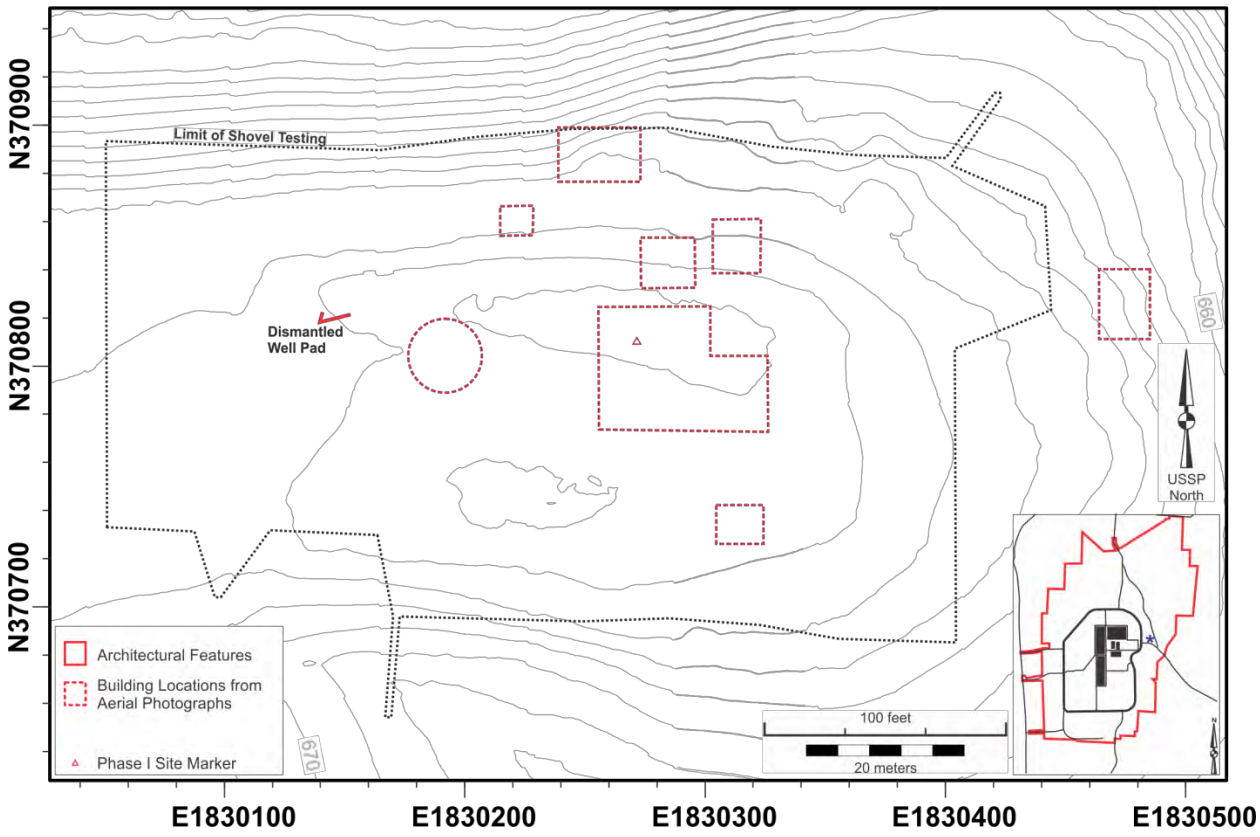

Figure 30. Illustration of the farmstead site 33Pk326 (adapted from Trader 2011).

3.1.27. 33Pk328
Farmstead

Site 33Pk328 is one of 68 building locations (#36) recently identified by Burks (2011a) in historical map resources (Burks 2011a). This site is located on an upland flat, adjacent to a narrow, elevated ridgetop and near the east-central portion of PORTS (Figures 1 and 2). A reconnaissance survey involving a pedestrian survey and limited shovel testing resulted in the recovery of a single piece of window glass (Trader 2011). No foundation remains or other features indicative of a farmstead site were identified.

The 1884 Pike County plat map shows this location to be within a 160-acre property owned by J. M. Vulgamore. In about 1905, this same property was owned by William Brigner. The c.1905 Oil & Gas Map shows a single building, probably a house, on this property. By 1952 the property had become a 125.2 acre tract that was owned by Della Vickers, and a large farmstead complex showing four buildings is indicated on 1952 AEC Property map. At least five and possibly eight buildings are visible on the 1938/39 and 1951 aerial photographs (Figure 31).

Trader (2011) concluded that this entire farmstead had been removed from the landscape by the construction of Perimeter Road and the air strip. With the exception of the single window glass fragment, this farmstead location no longer contains archaeological remains.

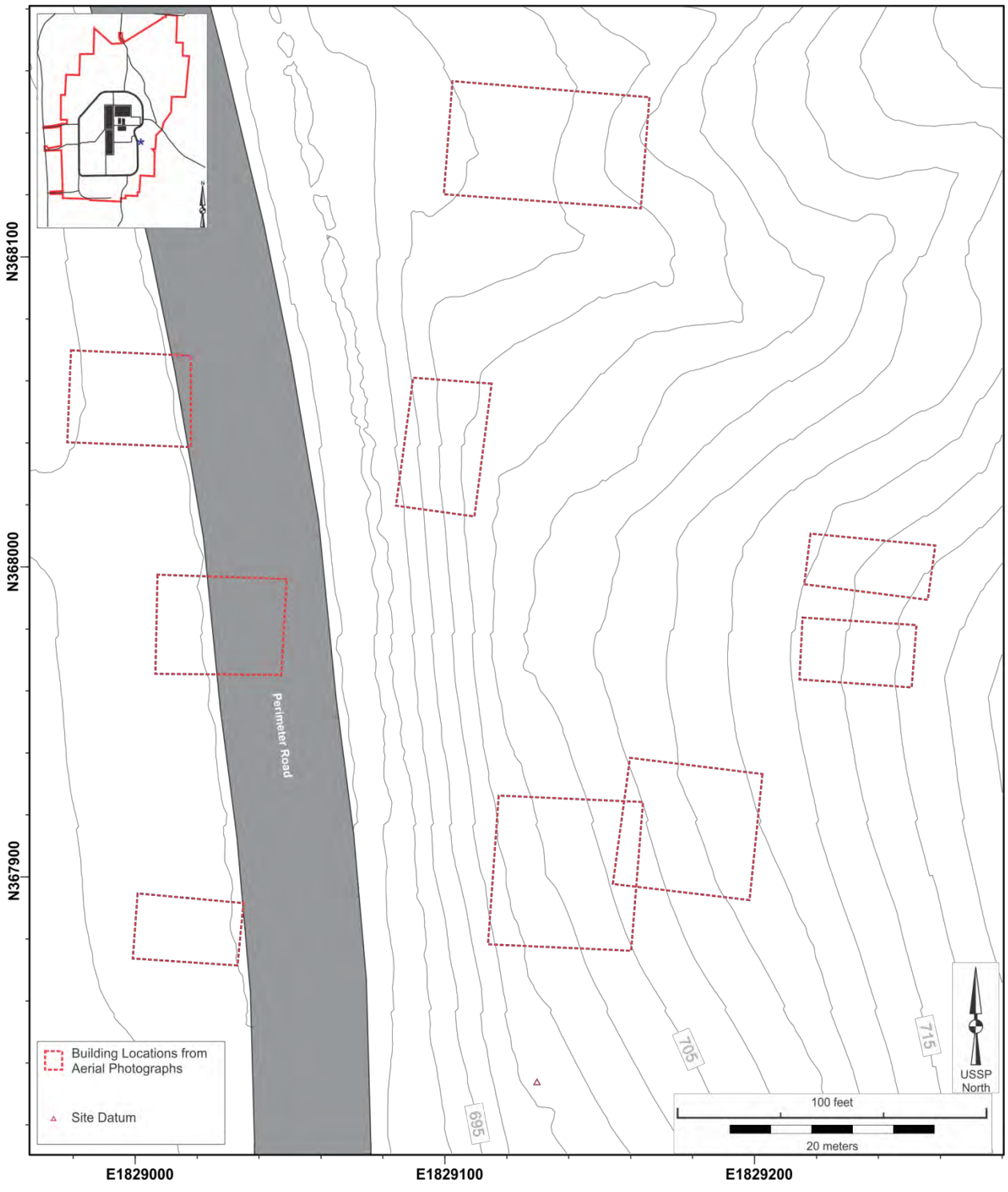

Figure 31. Illustration of the farmstead site 33Pk328 (adapted from Trader 2011).

3.1.28. 33Pk329
Farmstead

The 33Pk329 farmstead is one of 68 building locations (#37) identified in historical map resources covering the PORTS area (Burks 2011a). This farmstead site was documented in the field during an archaeological reconnaissance survey (Trader 2011) but was not recommended for additional survey work because it was found to be heavily damaged and lacking in archaeological integrity.

The farmstead is located along in the east-central portion of the PORTS, west of Perimeter Road and in an area impacted by an abandoned airplane landing strip (Figures 1 and 2). The 1884 Pike County plat map shows this area to be within an 80-acre tract owned by T.C. Wyatt. In c.1905 it is part of a 40-acre property owned by C.K. Patterson, who also owned the adjacent 40-acre parcel to the north. A house is indicated in this area on the c.1905 Oil & Gas Map. By 1952, the farmstead was part of a 125.2-acre tract owned by Della Vickers. The 1938/39 aerial photograph depicts what appear to be two buildings in this area. The 1951 aerial covering this portion of PORTS was not available at the Pike County Soil and Water Conservation office, where the other historic aerial photos were scanned.

The historic-era building reconnaissance survey at the 33Pk329 farmstead involved a visual inspection of the area to identify above-ground architectural remains; limited shovel testing to identify artifact deposits was also performed. Trader (2011) found no evidence of architectural remains other than a square depression with sandstone blocks (Figure 32). He interpreted the depression to be a filled-in well. No artifacts were recovered from shovel tests excavated within the site area. The reconnaissance survey concluded that this farmstead was almost erased from the landscape when it was razed after being purchased by the AEC and during land grading work related to construction of Perimeter Road and the landing strip.

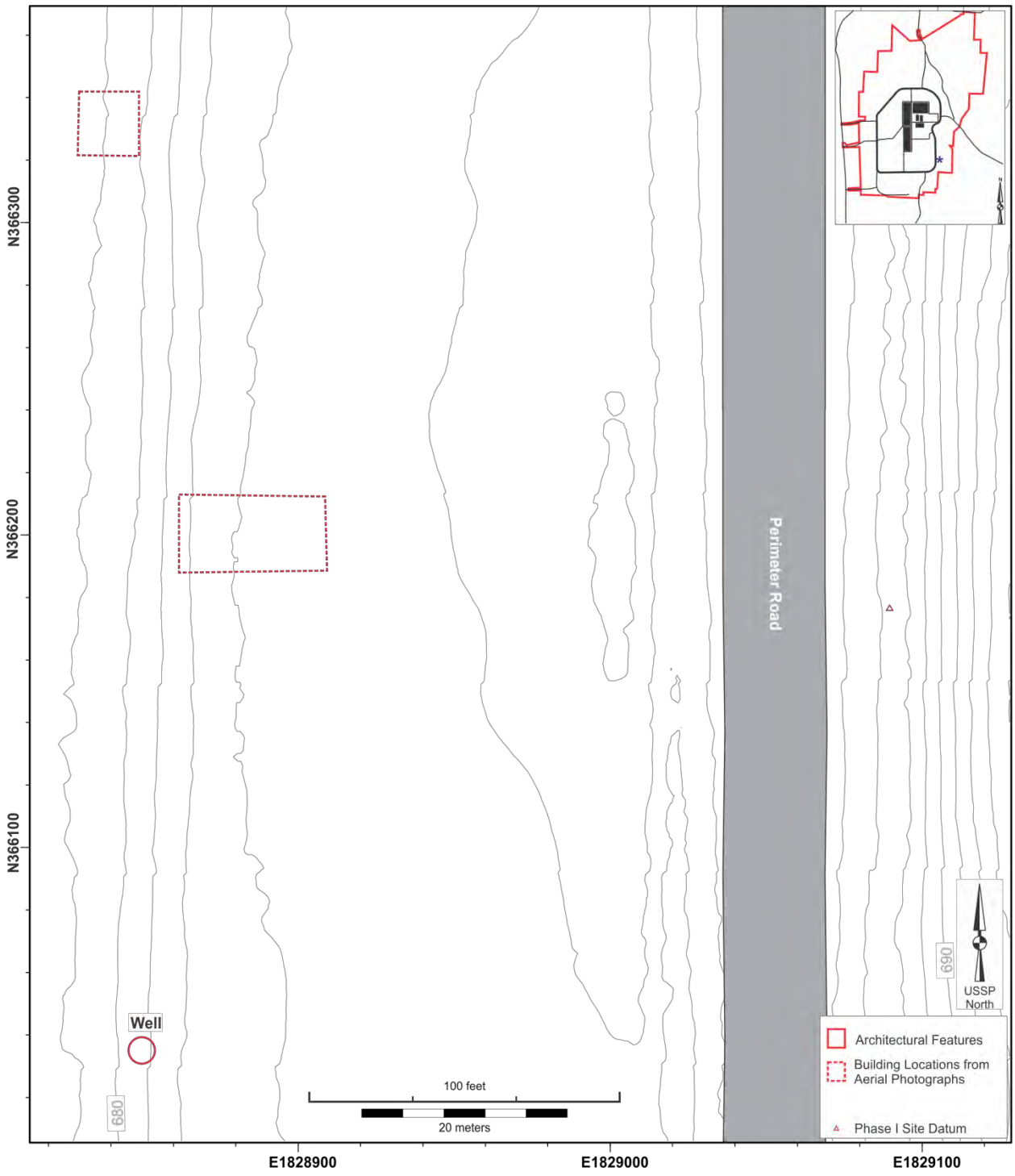

Figure 32. Illustration of the farmstead site 33Pk329 (adapted from Trader 2011).

3.1.29. 33Pk349
Emma Farmer Farmstead

The Emma Farmer Farmstead (33Pk349) is one of the building locations (#10) identified by Burks (2011a) from historical map resources. An attempt was made to locate this farmstead during a reconnaissance survey (Mustain and Klinge 2011), however it was discovered in the field during a Phase I prehistoric settlement survey of the potential On-site Disposal Cell (OSDC) Study Area (Pecora 2012). The OSDC survey was conducted by excavating shovel tests on a 15-meter grid in all areas with moderate to high archaeological potential. When the Emma Farmer Farmstead was discovered by the presence of historic-era artifacts in shovel test fill, a 10-meter shovel test grid was established over the landform containing the site. Unlike many of the other PORTS farmsteads, no above-ground foundation remains were found at the Emma Farmer Farmstead. Because this farmstead was abandoned in the 1920s, based on aerial photographs and deed records, the Phase I survey report concluded that it has the potential to contain an archaeological assemblage that would be different from other PORTS farmsteads that were abandoned in the 1950s. Based on this potential and other considerations, a Phase II NRHP eligibility assessment was recommended (Pecora 2012). The Phase II field work involved systematic shovel testing on a 5-meter grid within the site area (Pecora and Burks 2013). In addition to the shovel testing, the Phase II included ground penetrating radar and magnetometer surveys and limited hand excavations in the form of 1x1 meter units. The geophysical surveys were conducted for the purposes of locating sub-surface features such as buried foundations, cellars, privy vaults, cisterns, and filled-in wells. The hand excavations were designed to investigate several of the detected geophysical anomalies. This effort resulted in the identification of what were determined to be two large cisterns or wells and a set of unusual, subsurface furnace-like features. In total, the Phase II investigation of the Emma Farmer Farmstead excavated 60.5 m^2 within the approximately 4,900 m^2 site area.

The Emma Farmer Farmstead is located on a broad ridge in the northeastern corner of PORTS (Figures 1 and 2). In 1952, the acreage containing this site was a 65-acre property parcel owned by John M. Brodess. The Brodess Farmstead (33Pk311) is located to the southwest. The 1884 Pike County map shows that the farmstead is located on what was then a 72-acre property that was owned by W. Smith and by c.1905 the same property was delineated as a 40-acre parcel owned by Emma Farmer. The c.1905 Oil & Gas Map also shows a house near this farmstead site. The property deeds reveal that John Brodess purchased 20 acres from Emma Farmer in 1922 to form the 65-acre tract that was sold to the AEC in 1956. Emma Farmer obtained the land from Hugh Farmer in 1906 and the deed records reveal that Elizabeth Perry (and husband) purchased the land from Wilson Smith in 1882. How and when Hugh Farmer obtained the property prior to 1906 is not recorded. No farmstead is visible in this area on the 1938/39 and 1951 aerials. Both aerials show this area to be cultivated land. Apparently, Brodess razed the farmstead buildings and other facilities and reclaimed the land for agriculture between 1922 and 1938. Exactly when the farmstead originally was established is not known, but the 1882 purchase price was $200.00, which was a substantial sum for a 20-acre parcel at this time. It may be that the farmstead was established sometime prior to 1882.

No intact above-ground foundation remains were identified during the Phase I and II survey effort at the Emma Farmer Farmstead (Figure 33). It is likely that, when the site was converted to agricultural use, Brodess cleared the site area of all surface remains and filled in any wells, cisterns, and other types of shaft features. The Phase II geophysical surveys, however

identified two cisterns or large wells within the site area. Excavations revealed that both are constructed with rough sandstone fieldstone. The geophysical survey and subsequent hand excavation also identified an unusual subsurface furnace-like feature that consists of two heavily burned, rectangular-shaped pits with flat bottoms. The length of these pits is unknown, but one is approximately 100 cm (3.3 ft.) wide. The other, located approximately 26 cm (10 in) to the west was only partially exposed during the excavation. In profile, these features are nearly parallel-sided and extend down to 42-44 cm (17 in) below surface and have been truncated by plowing. A full profile of one of these features shows a very symmetrical flat-bottomed feature with slightly outward slanting walls. A very regular and well-defined 10 cm (4 in) thick band of burnt earth lines the walls and floor of the feature, but the upper 18 cm (7 in) is truncated by the plowzone. The bottom of the feature, above the band of burnt earth, is a thin layer of ash and charcoal, and the interior core of the feature is filled with unburned soil, large burned rock, burnt earth, and charcoal. A small portion of the second feature to the west is visible in the same excavation unit profile and it looks to be nearly identical in structure and composition, but it is slightly deeper. The function of these features is unknown, but they clearly contained hot and controlled fires—perhaps for a heat intensive activity such as a maple sugar production.

The Phase II excavation effort produced 1,744 historic-era artifacts, of which 785 are from shovel tests and yield an artifact density of 6.4 artifacts per positive shovel test (0.25 m^2). The remaining 959 artifacts are from 15 1x1 m units and three features. Like the other assemblages, the Emma Farmer Farmstead assemblage is dominated by kitchen and architecture group artifacts (83%). The ratio of architecture (n=943) to kitchen (n=504) group artifacts is nearly 2:1. Ceramics make up 70 percent of the kitchen group assemblage; the balance is mostly container glass. The mean ceramic date for the Emma Farmer Farmstead assemblage is 1872 when undecorated whiteware is excluded from the calculation and 1883 when all ceramics are included. The deed and historical map resources demonstrate that a house stood at this location prior to 1882, so it is possible that people were living at this farmstead in the middle-to-late nineteenth century.

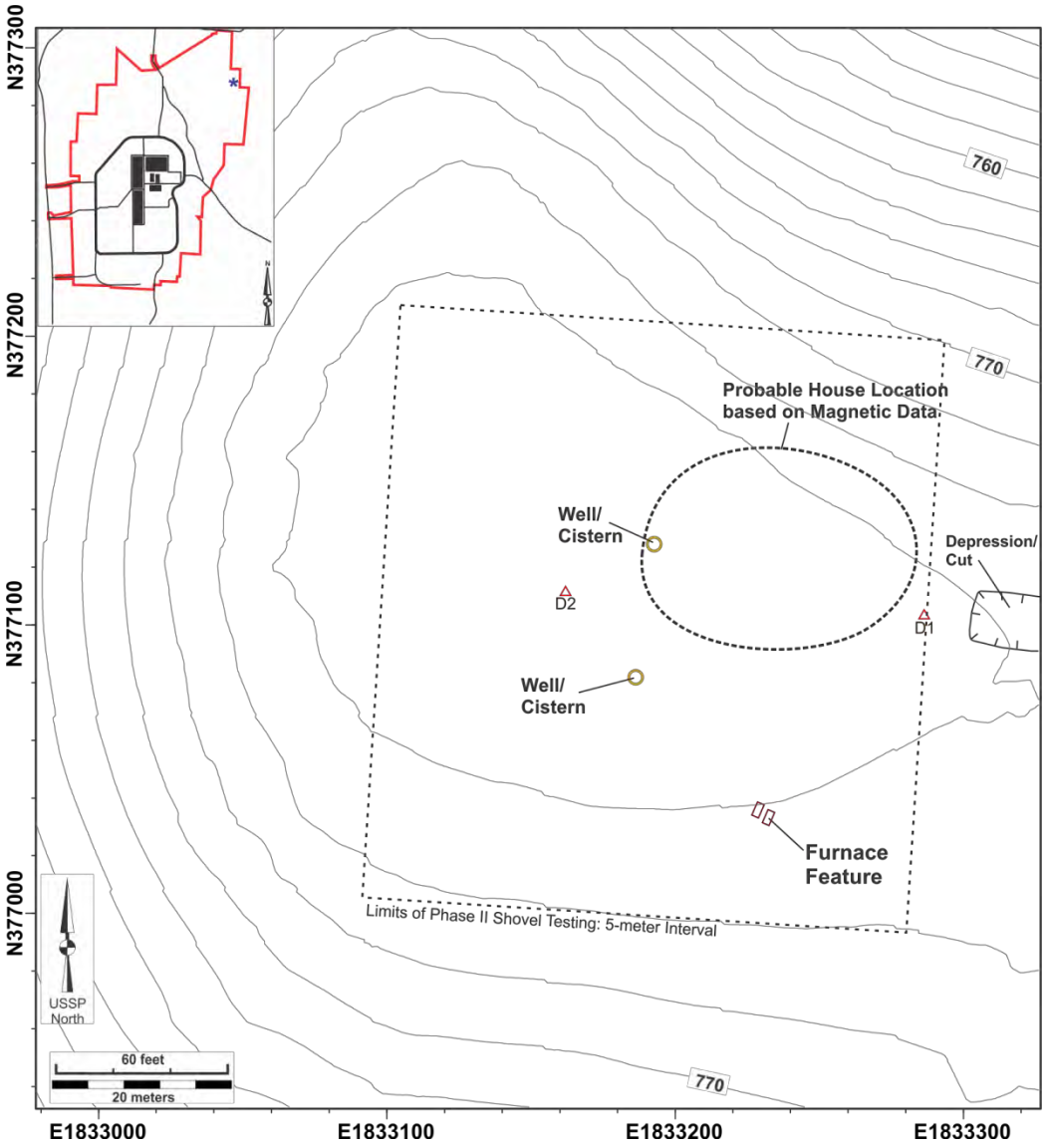

Figure 33. Illustration of the Emma Farmer Farmstead (33Pk349) (adapted from Pecora 2012).

3.2. FARMSTEAD COMPONENTS

3.2.1. 33Pk193 - Iron Wheel Farmstead

The Iron Wheel Farmstead (33Pk193) is situated on a bench at the head of a ravine along the west side of a ridge in the eastern part of PORTS (Figures 1 and 2). The site was originally documented in a Phase I survey by Schweikart et al. (1997), and a Phase II investigation was recently completed by Mustain and Klinge (2011). This site is represented by a stone-lined well, an earthen berm, a wagon wheel, and a trash dump. The Phase II investigation involved systematic shovel testing on a 5-meter grid within the core of the site and limited hand excavations in 1x1 meter excavation units. The hand excavations were designed to investigate the earthen berm, the well, and areas between the well and berm. During the Phase II investigation of the Iron Wheel Farmstead, 32.5 m^2 of the 1600 m^2 site were excavated.

No structures are indicated near the location of this site on the c.1905 Oil & Gas Map, the 1908 USGS topographic quadrangle, the 1938/39 and 1951 aerials photographs, or the 1951 AEC Property Acquisition Map. These historical map resources, however, do show nearby structures now known to be associated with the South Shyville Farmstead (33Pk185), which is located approximately 154 ft. (47 m) to the east and across what was historically known as Cemetery Road (see Figure 7). Property records and historical maps also show that the Iron Wheel Farmstead is situated on the same 79-acre property as the South Shyville Farmstead. Archaeological investigation, in conjunction with information provided from historical documents, suggests that this site is a component (primarily a well) of the South Shyville Farmstead.

The Phase II artifact assemblage consists of 49 historic artifacts from the excavation. These include 35 wire nails, thought to be from fencing that passes through the site, four container glass fragments, and 10 iron hardware fragments. The size and composition of this assemblage is inconsistent with what would be produced from the same amount of excavation at a typical “standalone” farmstead site. This is good evidence in support of the likelihood that this site was a small part of one of the nearby farmsteads, and it is a non-domestic area within the site.

3.2.2. 33Pk197 - Dutch Run Road Farmstead
Farmstead Component

Dutch Run Road Farmstead (33Pk197) is located on a low ridgetop, south of Dutch Run Road near the eastern edge of PORTS (Figures 1 and 2). The site was originally documented in the Phase I survey by Schweikart et al. (1997), and a Phase II investigation was recently completed by Mustain and Klinge (2011). The Phase II investigation involved systematic shovel testing on a 5-meter grid within the core of the site. In addition to the shovel testing, the Phase II included limited hand excavations in 1x1 meter units. In total, the Phase II investigation of the Dutch Run Road Farmstead included the excavation of 33.5 m^2 within the approximately 2,000 m^2 site area.

Prior to its AEC purchase in 1952, the Dutch Run Road Farmstead was situated on a 14.5-acre parcel owned by William L. Armintrout et al. This small parcel was originally part of a 160-acre tract that was purchased by Elisa Peters in 1837 (Kochur 1995). By 1884 the entire property was held by Ira Stewart and remained in the Stewart family until 1918. In 1904, George Stewart sold 80 acres to Mahala Stewart and in 1918 George sold the remaining acreage to William Armintrout, who had purchased the other 80-acre tract earlier. Only 14.5 acres in the northwest corner of the original 160-acre tract lies within PORTS. When this farmstead and its buildings were developed is not known, but a structure is indicated near the archaeologically defined site on the c.1905 Oil & Gas Map; however, it is east of the road and outside the PORTS boundary. A house structure is indicated in this same location on the 1908 15" USGS topographic map and the 1952 AEC Property map shows structures on both sides of the road and near the site. It is evident that a structure was present at this location prior to about 1905, but it is not known if any associated outbuildings stood within the archaeologically defined site boundaries (within PORTS) at this time.

A large farmstead, however, is clearly visible on the 1938/39 aerial photograph, which depicts at least 10 buildings, seven of which (including a house) are located on the east side of the road, outside PORTS. Three buildings, which appear to include two barns and a small outbuilding, are located on the west side of the road within PORTS and it is these buildings that define the Dutch Run Road Farmstead site. The 1951 aerial photo shows the same building arrangement present on the 1938/39 aerial.

The Phase II investigation of the site identified a large concrete barn foundation, a driveway, and a concrete well box (Figure 34) (Mustain and Klinge 2011). It is clear, based in part on these finds and in combination with information gleaned from the historical aerials, that the Dutch Run Road Farmstead site is a fragment of a much larger farmstead that extends across Dutch Run Road and beyond the PORTS boundary fence. The house and at least six outbuildings present by at least 1938/39 stood beyond what today is the PORTS boundary line. Mustain and Klinge (2011) accurately interpret the Dutch Run Road Farmstead to be a component of a much larger farmstead.

The Phase II fieldwork at Dutch Run Road Farmstead produced 293 artifacts. Only 16 of 102 shovel tests excavated at this site were positive and they produced 72 of the artifacts. There is an average of 4.5 artifacts per positive shovel test (0.25 m^2). The remaining 221 artifacts are from six of eight 1x1 meter units excavated at various places across the site area. The majority of the artifacts from Dutch Run Road Farmstead (96%) are architecture debris. Only four percent can be classified as kitchen group artifacts. The kitchen group artifacts include a stoneware sherd, a whiteware sherd, and a container glass fragment. An assemblage sparse in

kitchen group artifacts is expected since domestic kitchen items are rare near outbuildings at all of the other PORTS farmsteads.

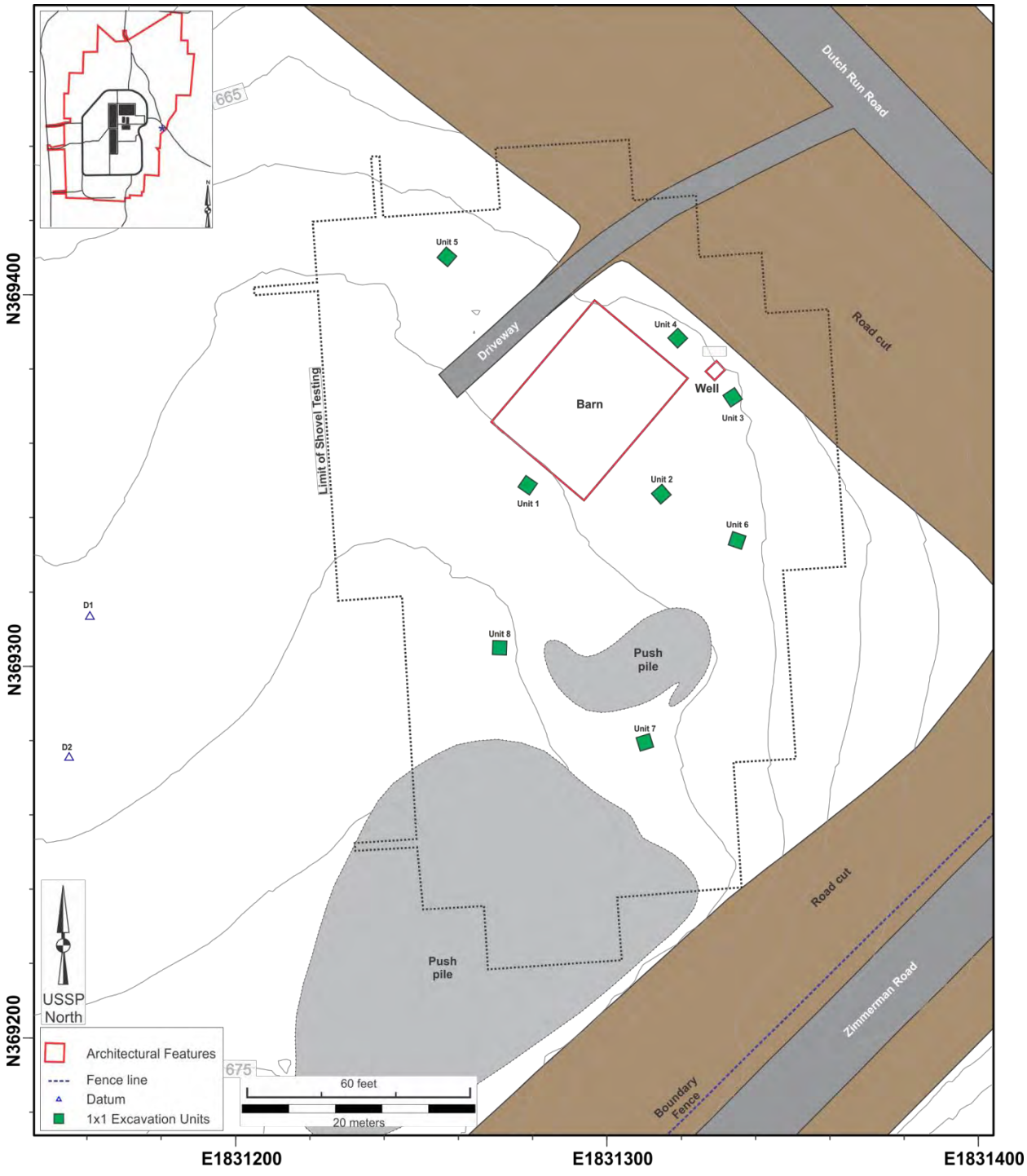

Figure 34. Illustration of the Dutch Run Farmstead (33Pk197) (adapted from Klinge and Mustain 2011).

3.2.3. 33Pk331
Farmstead Component

Site 33Pk331 is one of 68 building locations (#53) identified in historical map resources (Burks 2011a). This barn site was documented in the field during an archaeological reconnaissance survey (Trader 2011). However, it was not recommended for additional survey work because it was found to be heavily damaged and lacking in archaeological integrity.

The 33Pk331 barn site is located on the southern edge of PORTS, adjacent to the PORTS boundary fence (Figures 1 and 2). In 1952 the farmstead component location was situated on a 108-acre tract owned by S. L. & Ethel Wooldridge. The 1884 Pike County plat map shows this parcel to be a 146-acre tract owned by M. Porter. In c.1905 the location of the structure is within a 146-acre parcel owned by R. E. Stavens. A house is indicated in this area on the c.1905 Oil & Gas Map. No houses are indicated near this site on the 1938/39 aerial photograph, but a barn-like structure is clearly visible nearby and adjacent to a stream. The absence of a house on the 1938/39 aerial but the presence of one on the c.1905 map implies that the earlier structure was razed and replaced at a later time.

The reconnaissance survey at 33Pk331 involved a visual inspection of the area to identify above-ground architectural remains; limited shovel testing was used to identify artifact deposits. Trader (2011) found foundation remnants consisting of poured concrete and concrete blocks (Figure 35). A single shovel test resulted in the recovery of two wire nails and a single piece of clear glass. An old road bed was noted south of the foundation stones leading to a nearby drainage. Trader concluded that this site consists of the remnants of a relatively recent (late 1940s to early 1950s) remote barn rather than a farmstead.

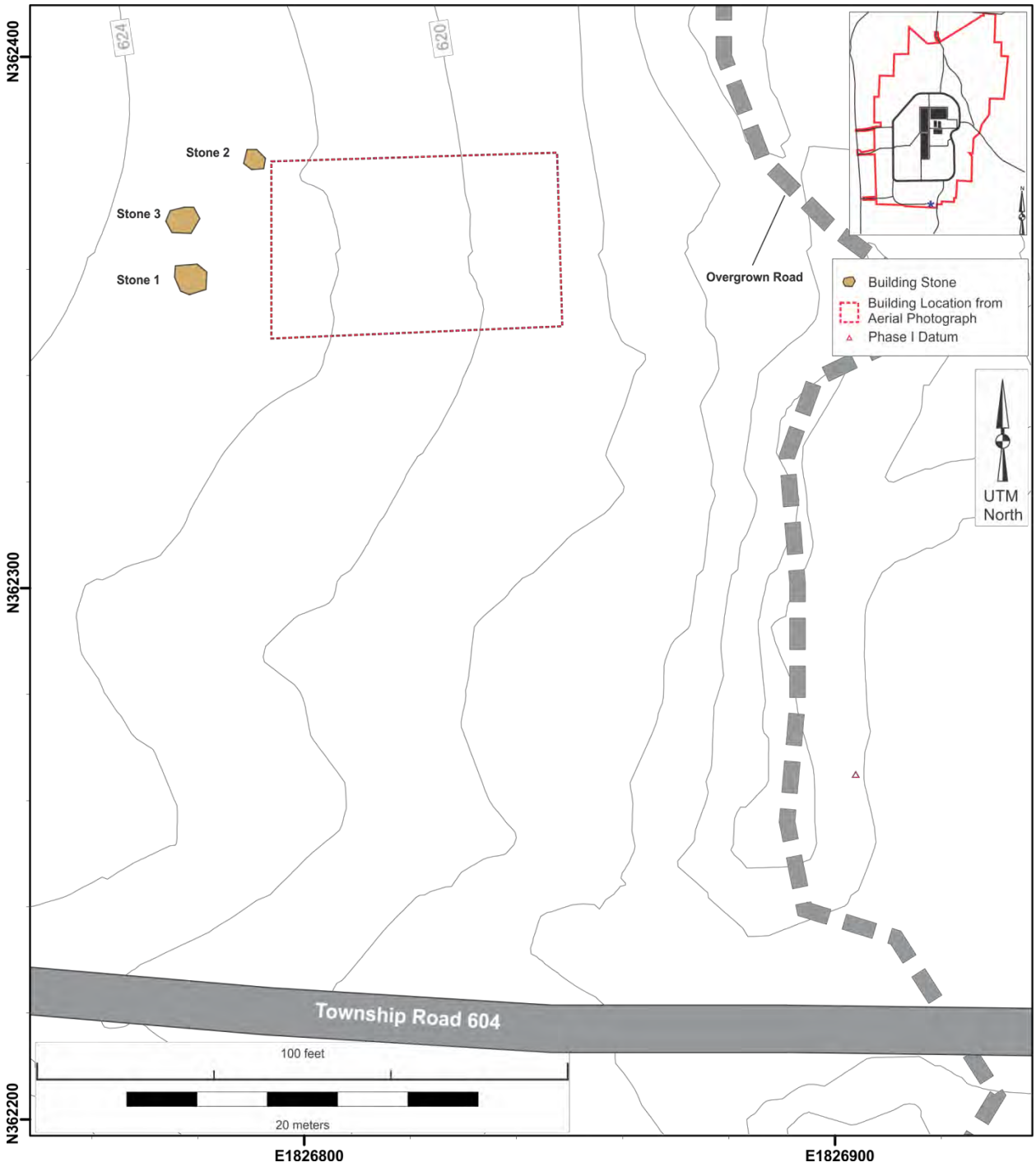

Figure 35. Illustration of site 33Pk331 (adapted from Trader 2011).

3.2.4. 33Pk359
Farmstead Component

Site 33Pk359 is a historic-era artifact scatter with an associated stone-lined well located on a broad ridge in the southeastern part of PORTS (Figures 1 and 2). This site was documented in the field during the prehistoric settlement survey of Area 3 (Garrard and Burden 2012). No structures are indicated in the vicinity of this location on the historical map resources examined for this study (Burks 2011a). The historical maps do, however, show this archaeological site location to be on the western edge of a 40-acre property parcel that contained a farmstead on its eastern edge by 1952. Looking back to 1884, this property was owned by W. Appleton. By 1905, it had switched hands to William Brigner. The 1952 AEC Property Map shows 33Pk359 to be within a 38-acre parcel that was owned by Curtis and Jessie Rader. Prior to the 1884 Appleton ownership, this property was owned, along with an adjacent 40-acre parcel, by Joseph and Janus Carlin according to the 1859 Record of Appraisal map (Record of Appraisal 1859). The earliest landowner is Loyd Howard, who was issued a land grant from the United States General Land Office for "the east half of the North East quarter, of Section nineteen in Township four, of Range twenty one…containing eighty acres" (U.S. General Land Office Records 1837-1840). The Howards and Carlins were local farmers in this area, but it is not clear if they occupied the property containing 33Pk359.

Despite several surveys in this area, the only farmstead that was situated on this parcel in 1952, which was located a considerable distance from 33Pk359, has never been identified archaeologically (Schweikart et al. 1997; Garrard and Burden 2012). Schweikart et al. (1997), however, documented a historic artifact scatter (33Pk192) near the farmstead that does appear on the historical map resources. It is likely that both 33Pk192 and 33Pk359 are associated with a farmstead that may have been located on this property parcel.

The Phase I survey at 33Pk359 involved a visual examination of the land surface and the excavation of shovel tests at 7.5-meter intervals. Garrard and Burden (2012) identified a stone-lined well at the site and recovered 121 historic-era artifacts. Aside from the well, no other architectural remains were identified (Figure 36).

The 121 historic-era artifacts were found during shovel tests and yield an artifact density of 5.8 artifacts per positive shovel test (0.25 m^2). This assemblage is dominated by kitchen and architecture group artifacts, but it also includes a few personal and activity group items. The ratio of architecture to kitchen group artifacts is nearly 2:1. Ceramics make up 81 percent of the kitchen group assemblage; the balance is container glass. The mean ceramic date for this assemblage is 1863, excluding undecorated whiteware, and 1870 when all ceramics are included in the calculation.

Garrard and Burden (2012) concluded that this site was not residential, but instead the archaeological remains are an artifact scatter associated with a well that was used to provide water for livestock. How or why the artifact assemblage accumulated around this well location is not clear, but Garrard and Burden suggest that it occurred in the second half of the nineteenth century and early part of the twentieth century. In all likelihood there are additional buried architectural remains located not far from the well and they could be associated with a fairly early farmstead.


Figure 36. Photograph of the isolated stone-lined well at site 33Pk359.

3.2.5. 33Pk360
Farmstead Component

Site 33Pk360 is a small historic-era artifact scatter with an associated stone-lined well. It is located in a low-lying area in the southeastern part of PORTS (Figures 1 and 2). This site was documented in the field during the Phase I prehistoric settlement survey of Area 3 (Garrard and Burden 2012). No structures are indicated at this location on the historical map resources examined by Burks (2011a). However, the well-documented North Shyville Farmstead (33Pk194) is located nearby, to the north, and is evident on the c.1905 Oil & Gas Map, the 1938/39 and 1951 aerial photographs, and on the 1952 AEC Property Map. The North Shyville Farmstead was originally documented during a Phase I survey by Schweikart et al. (1997) and was investigated at a Phase II level by Klinge and Mustain (2011). It is highly probable that the artifact scatter and well at 33Pk360 are part of the North Shyville Farmstead.

The Phase I survey at 33Pk360 involved a visual examination of the land surface and the excavation of shovel tests at 7.5-meter intervals. Garrard and Burden (2012) identified the stone lined-well during this work and recovered eight historic-era artifacts. No other above-ground architectural remains were identified.

The eight historic-era artifacts found in shovel tests produced an artifact density of 2.7 artifacts per positive shovel test (0.25 m^2). This assemblage consists of kitchen and architecture group artifacts, with a ratio of about 2.5:1, architecture over kitchen group artifacts. The entire kitchen group assemblage is composed of ceramics, including whiteware, stoneware, and yellowware.

Garrard and Burden (2012) concluded that 33Pk360 is a late nineteenth and early twentieth century artifact scatter and well associated with the North Shyville Farmstead (33Pk194) (see Figure 8).

3.2.6. 33Pk364
Farmstead Component

Site 33Pk364 was recorded by Norr (2012) during the prehistoric settlement survey of Area 4 in the eastern part of PORTS (Figures 1 and 2). Norr (2012) reported a small historic-era artifact scatter and a concrete and stone foundation remnant at this location and suggested that it may be a peripheral component of the Terrace Farmstead (33Pk206), which is located approximately 50 to 60 m (164 to 182 ft.) to the south. The Phase II investigation of the Terrace Farmstead confirmed that 33Pk364 is, indeed, an associated dairy barn foundation (Pecora and Burks 2012a) (see Figure 11).

A barn is clearly visible at this location on the 1938/39 and 1951 aerial photographs, along with numerous other structures that made up the Terrace Farmstead. All that remains today of the barn is a 14.5 ft. by 23 ft. (4.4 m by 7 m) concrete pad and a 20 ft. (6.2 m) long portion of a stone rubble foundation wall approximately 8 ft. (2.4 m) west of the concrete pad (Pecora and Burks 2012a) (Figure 37; see Figure 11). The concrete pad is a flat-type, parallel milking parlor with a sanitation gutter. Assuming that the milking stalls were 4 ft. wide, as they are in other PORTS farmstead milking parlors, the milking platform could have accommodated six cows at a time. The concrete pad is large enough to accommodate a double-six milking parlor, meaning two parallel rows of milking stalls with a service alley between two sanitation gutters. However, a second sanitation gutter was not observed. A more thorough discussion of Terrace Farmstead is presented earlier in this report.

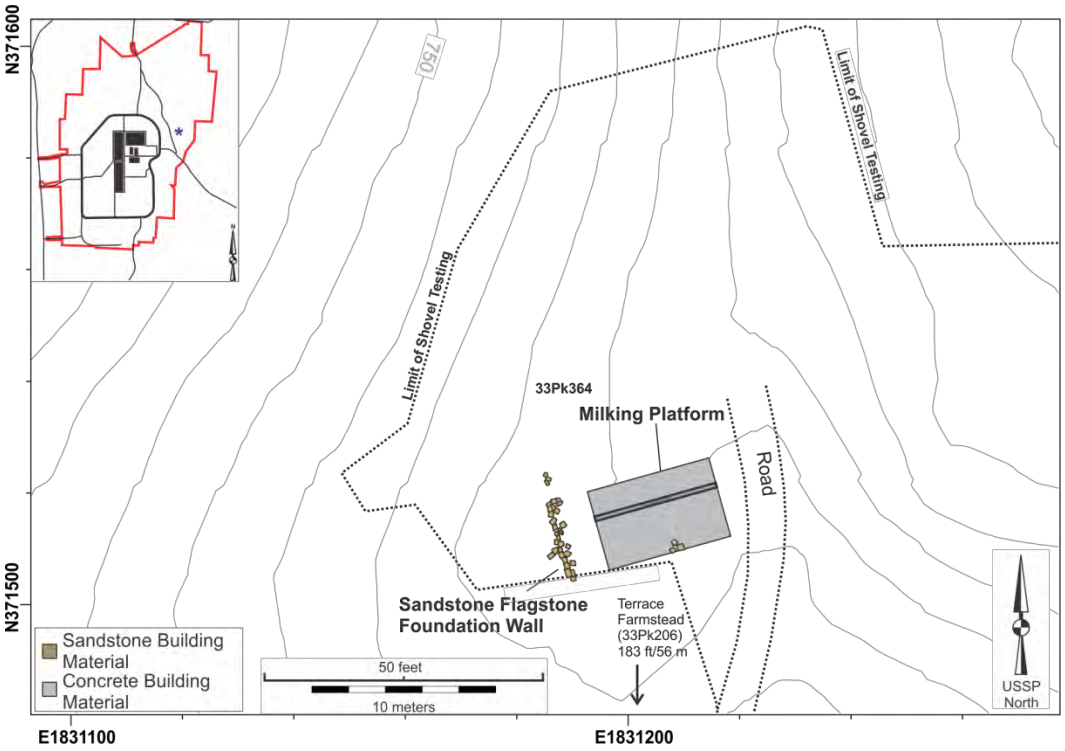

Figure 37. Illustration of site 33Pk364 (33Pk206 barn foundation) (adapted from Pecora and Burks 2012a).

3.3. RECREATIONAL CABIN

3.3.1. 33Pk345- Gibson Cabin

Site 33Pk345 is a historic-era recreational cabin site located in the narrow valley of an unnamed tributary of Big Beaver Creek. It is in the northeastern portion of PORTS, north of the Sludge Lagoon (X-611B) (Figures 1 and 2). This site was recorded by Pecora (2012) during a Phase I archaeological survey of Area 2. No buildings are indicated in this area on the historical maps consulted for this study. However, the 1938/39 aerial shows the cabin and what may be two other small buildings. A single building is visible on the 1951 aerial.

The Gibson Cabin, named after the last private landowner, is situated on what has historically been an 8-acre parcel of land that dates to at least 1878 when it was sold to Eliza Prye by Wilson Smith. Prior to this date the property was part of a larger 79.49-acre tract that was originally acquired by B.C. Dunham and B. Ward in 1837. In 1893 the 8-acre parcel was combined with two other parcels to form an L-shaped 27-acre parcel that was sold by Ella Farmer to Arthur Farmer in 1923. A.J. and Kate Gibson then purchased the 8-acre parcel in 1923 and the Gibson Family held the property until 1960 when it was sold to the AEC.

Today, the Gibson Cabin site is represented by a partially collapsed hewn log cabin in a narrow stream bottom surrounded by fairly steep side slopes (Figure 38). The single pen cabin measures approximately 14 feet by 16 feet and sits on stacked sandstone piers at two of the four corners; only two piers remain intact. The cabin had a standing seam metal roof and was sided with vertical board-and-baton. The log structure was connected at the corners with a simple v-notch on each of the hewn logs. The logs were hewn on only two sides, but the tops and bottoms were unmodified and many still retain tree bark. Chinking between the logs is a combination of mud/clay and wood shims of various sizes and shapes. Wire nails were used to fasten the chinking shims, siding and roofing. No square nails were observed. The cabin also lacks evidence of a heating system, such as a fire place, stove, or chimney.

Adjacent to the southeast side of the cabin is what appears to be a shallow well or improved spring lined with locally available stone. The well is approximately four feet in diameter and is situated approximately 23 ft. (7 m) southeast of the cabin.

The Phase I investigation of this site involved the excavation of shovel tests on a 5-meter grid. These produced only six artifacts consisting of flat glass (clear) fragments, wire nails, a brass mechanism component and what appears to be a metal engine valve.

The relative paucity of historic-era artifacts, especially domestic household debris such as ceramics and appreciable quantities of container glass, suggests that the Gibson Cabin is not a residential house site. This assertion is also supported by the lack of evidence for a heating facility within the cabin structure. Furthermore, the cabin is also a somewhat crude structure and does not exhibit the craftsmanship of typical nineteenth century residential cabins. Instead, it is likely that this structure was built in the 1920s or 1930s by the Gibson family and used as a recreational cabin.

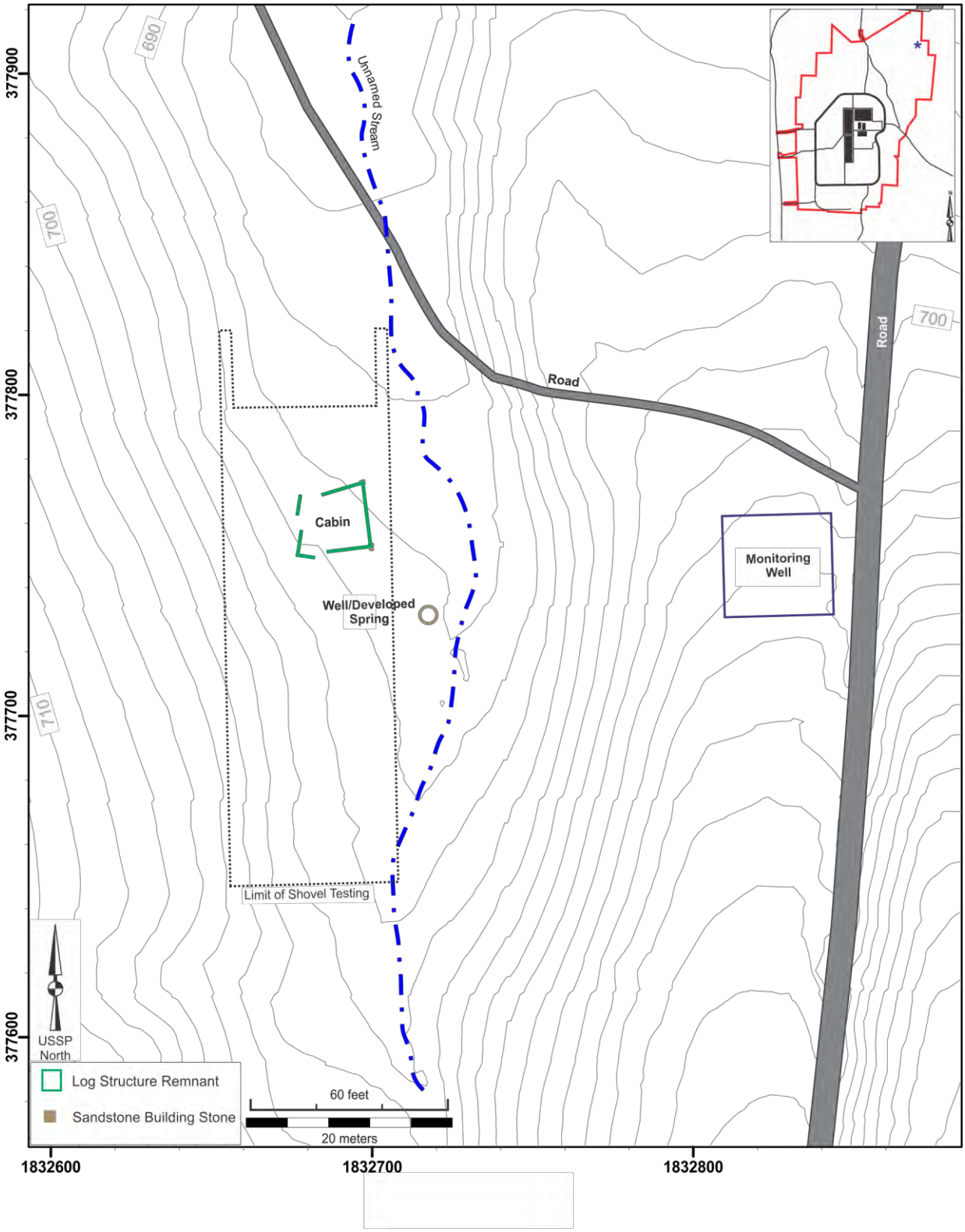

Figure 38. Illustration of the Gibson Cabin Site (33Pk345) (adapted from Pecora 2012).

3.4 REFUSE DUMPS

3.4.1. 33Pk191

Site 33Pk191 is a historic-era refuse dump located within an ephemeral streambed in the southeastern corner of PORTS (Figures 1 and 2). This site was originally documented by Schweikart et al. (1997) during a Phase I survey of PORTS and they reported it as being located in a ravine near the head of the stream. This site is not associated with any historically mapped building location (Burks 2011a), but it is located on the same property parcel as the Davis Farmstead (33Pk184). It can be surmised that 33Pk191 is a refuse dump that was used by the Davis Farmstead occupants.

The Phase I survey involved visual inspection and surface collection of the streambed, which produced 15 historic-era artifacts within a 6 m (20 ft.) by 30 m (98 ft.) area (180 m^2 [1,960 ft^2]) (Figure 39). The assemblage is composed mostly of kitchen group artifacts (i.e., container glass and ceramics). Schweikart et al. (1997) concluded that most of the artifacts, including a plain yellowware sherd, from this location date to the early-to-mid twentieth century. No further work was recommended for this site.

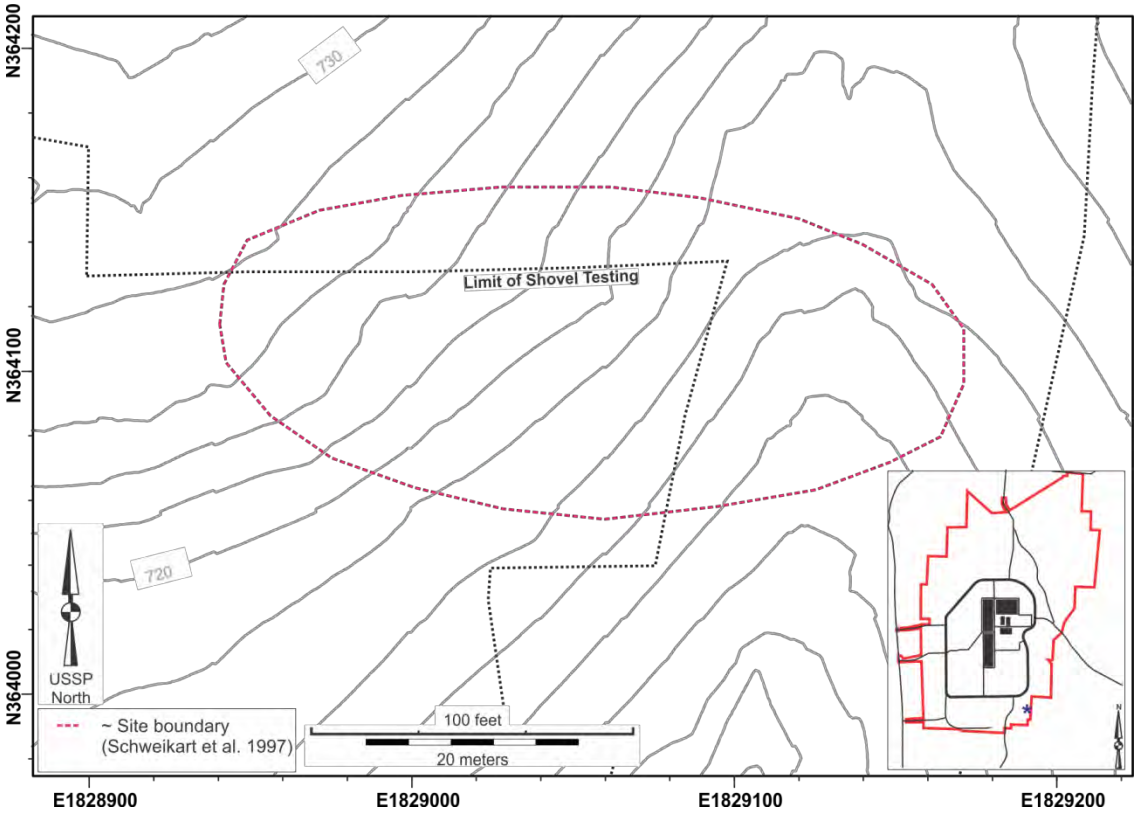

Figure 39. Illustration of refuse dump site 33Pk191 (adapted from Schweikart et al. 1997).

3.4.2. 33Pk192

Site 33Pk192 is a historic-era refuse dump located along the western edge of a ridgetop near the southeastern corner of PORTS (Figures 1 and 2). This site was originally documented by Schweikart et al. (1997) during a Phase I survey of PORTS, but it was not found to be associated with any building locations identified by Burks (2011) on historic map resources. In 1884, the property including the site was part of a 40-acre parcel owned by W. Appleton. In c.1905, this same parcel was owned by William Brigner. No structures are indicated in this area on the c.1905 Oil & Gas Map. In 1952, this parcel contained a farmstead with at least two structures, though not located right at the 33Pk192 refuse dump, and it was owned by Curtis and Jessie Rader.

The Phase I survey involved visual inspection and surface collection of the ridgetop, which produced 13 historic-era artifacts that were found within a small trash pile; other features found include four earthen push-piles, a row of four cinder blocks, and an old fence row (Schweikart et al. 1997). These cultural remains were identified within a 43 m (141 ft.) by 53 m (174 ft.) area (2,279 m^2 [24,534 ft^2]) (Figure 40). The assemblage is composed mostly of kitchen group artifacts (i.e., container glass and metal beverage cans). A glass jar in this assemblage has a production date range of 1938-1969. The remaining artifacts date from the early through late twentieth century, but Schweikart et al. (1997) suggest that they post-date the establishment of PORTS.

Schweikart et al. (1997) concluded that 33Pk192 is a refuse dump that was associated with the Bailey Chapel and Cemetery property, which is located just outside of the PORTS boundary to the southeast of the site. It is equally plausible, however, that it is a remnant (i.e., a refuse dump) of the Rader farmstead, which is visible on the 1952 AEC property acquisition map. No further work was recommended for this site.

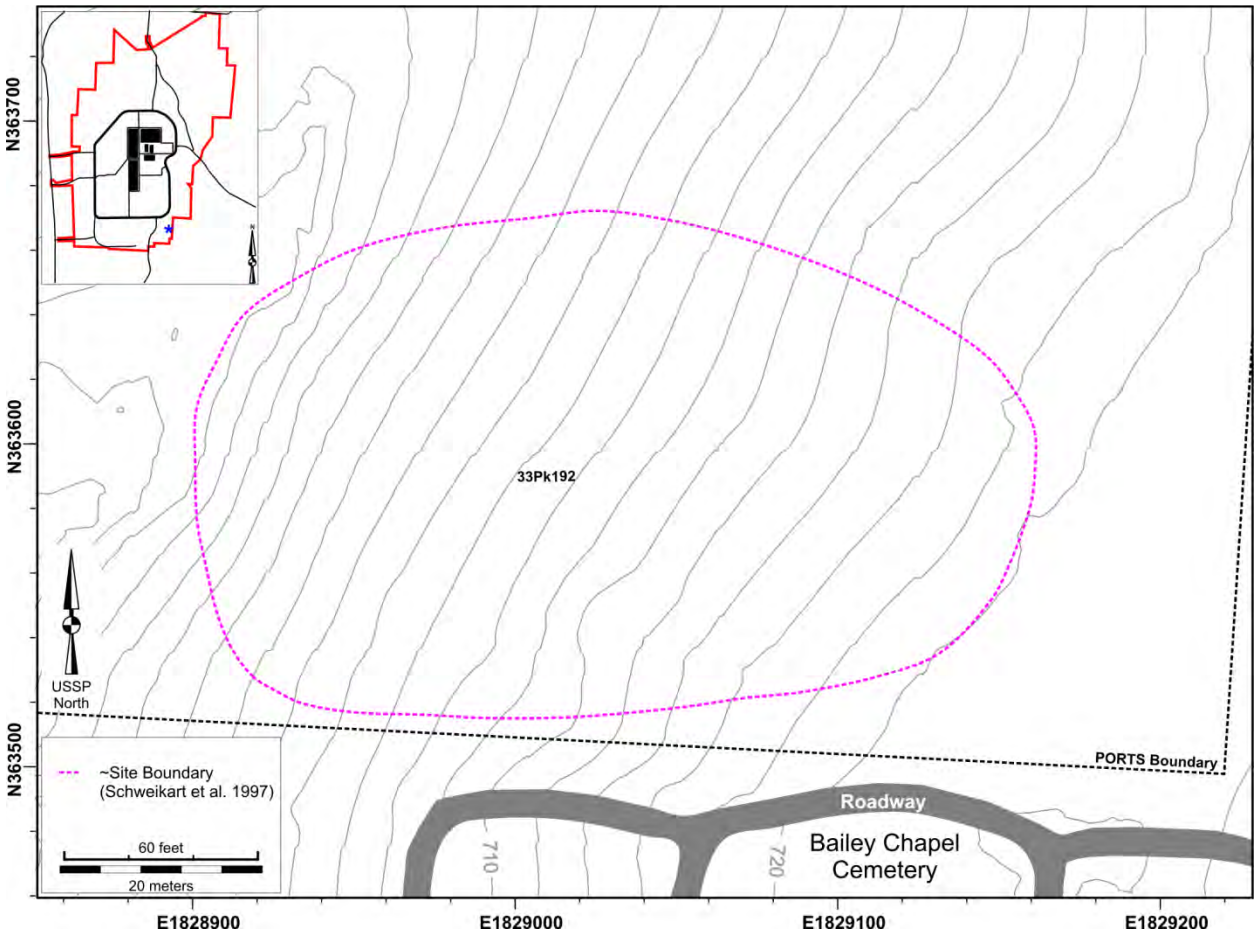

Figure 40. Illustration of refuse dump site 33Pk192 (adapted from Schweikart et al. 1997).

3.4.3. 33Pk215

Site 33Pk215 is a historic-era refuse dump located on a hill/ridgetop saddle adjacent to an old road near the northeastern corner of PORTS (Figures 1 and 2). This site was originally documented in the field by Schweikart et al. (1997) during a Phase I survey of portions of PORTS. It was re-located by Pecora (2012) during a Phase I survey of Area 2. This site is not part of one of the 68 building locations identified by Burks (2011a), but it is on the same pre-PORTS property parcel containing the Railside Farmstead (33Pk212). Therefore, it is plausible that this refuse dump is associated with the Railside Farmstead.

The Phase I survey visual inspection and surface collection of the ridgetop identified automobile tires, numerous enamelware bowls, and container glass jars and bottles that were not collected. Twenty-five other historic-era artifacts were collected (Schweikart et al. 1997) (Figure 41). These cultural remains were identified within a 12 m (39 ft.) by 6 m (19 ft.) area (72 m^2 [741 ft^2]). A recent field visit to the site found that the tires and enamelware bowls identified in the 1997 survey are now gone (Pecora 2012). The 1997 artifact assemblage that was collected is composed mostly of kitchen group artifacts (i.e., container glass and ceramics). Schweikart et al. (1997) suggest that the production dates for items in this assemblage range from 1820 to the present; but they also noted that most were manufactured from 1935 to 1955. Schweikart et al. (1997) recommended no further work for this site.

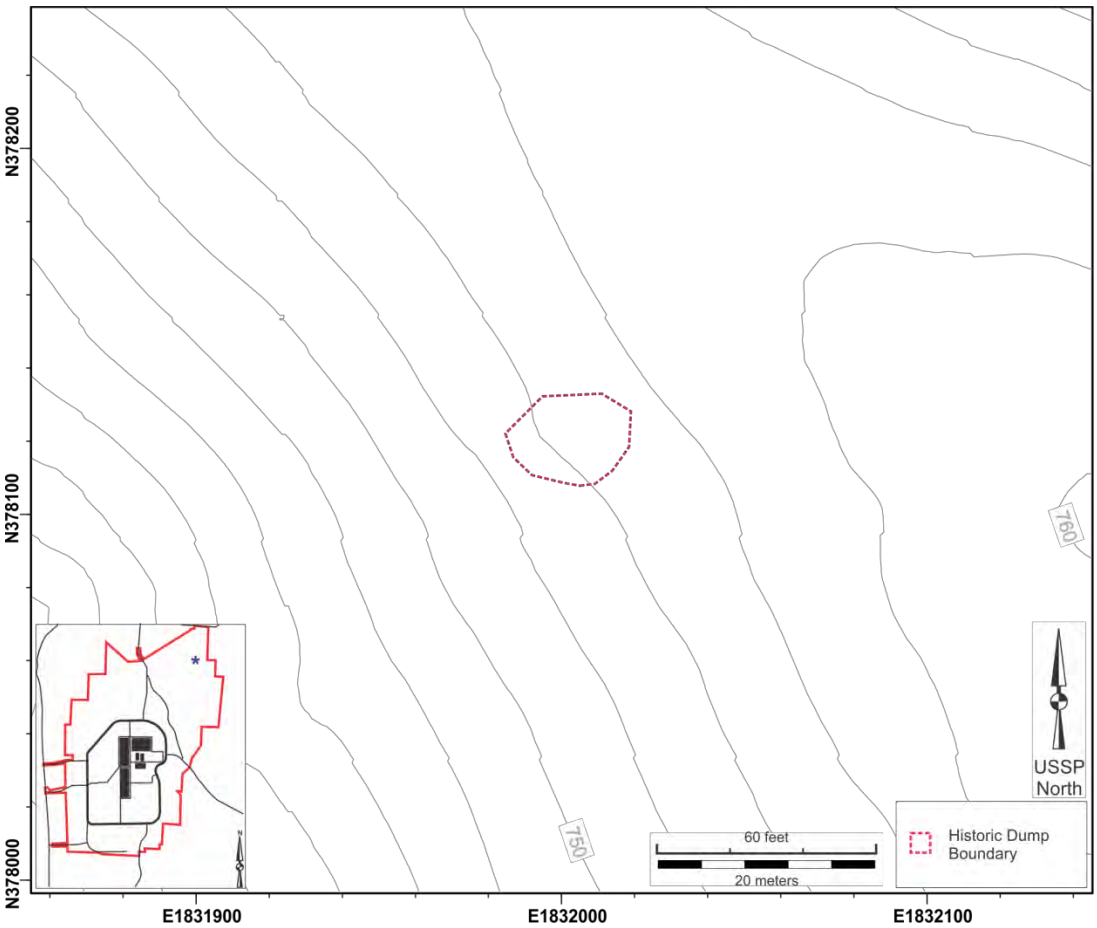

Figure 41. Illustration of refuse dump site 33Pk215 (adapted from Pecora 2012).

3.4.4. 33Pk216

Site 33Pk216 is a historic-era refuse dump located on a hill/toe ridge adjacent to an old road in the northeastern corner of PORTS (Figures 1 and 2). This site was originally documented by Schweikart et al. (1997) during a Phase I survey of the PORTS facility and was located recently by Pecora (2012) during a Phase I survey of Area 2 within PORTS. This site is not within a historically mapped building location identified by Burks (2011a), but is on the same historical property parcel as the Log Pen Farmstead (33Pk213). It is plausible to assume that this refuse dump is associated with the Log Pen Farmstead.

The Phase I survey involved visual inspection and surface collection on the toe ridge. The survey located steel buckets and container glass (not collected) and collected a sample of eight historic-era artifacts (Schweikart et al. 1997) (Figure 42). These materials were identified within a 5 m (16 ft.) by 6 m (20 ft.) area (30 m^2 [320 ft^2]). The collected assemblage is composed mostly of kitchen group artifacts (i.e., container glass). Schweikart et al. (1997) suggest that the production dates for items in this assemblage range from 1879 to present, though most of the dates appear to cluster between 1930 and 1950. Schweikart et al. (1997) recommended no further work for this site.

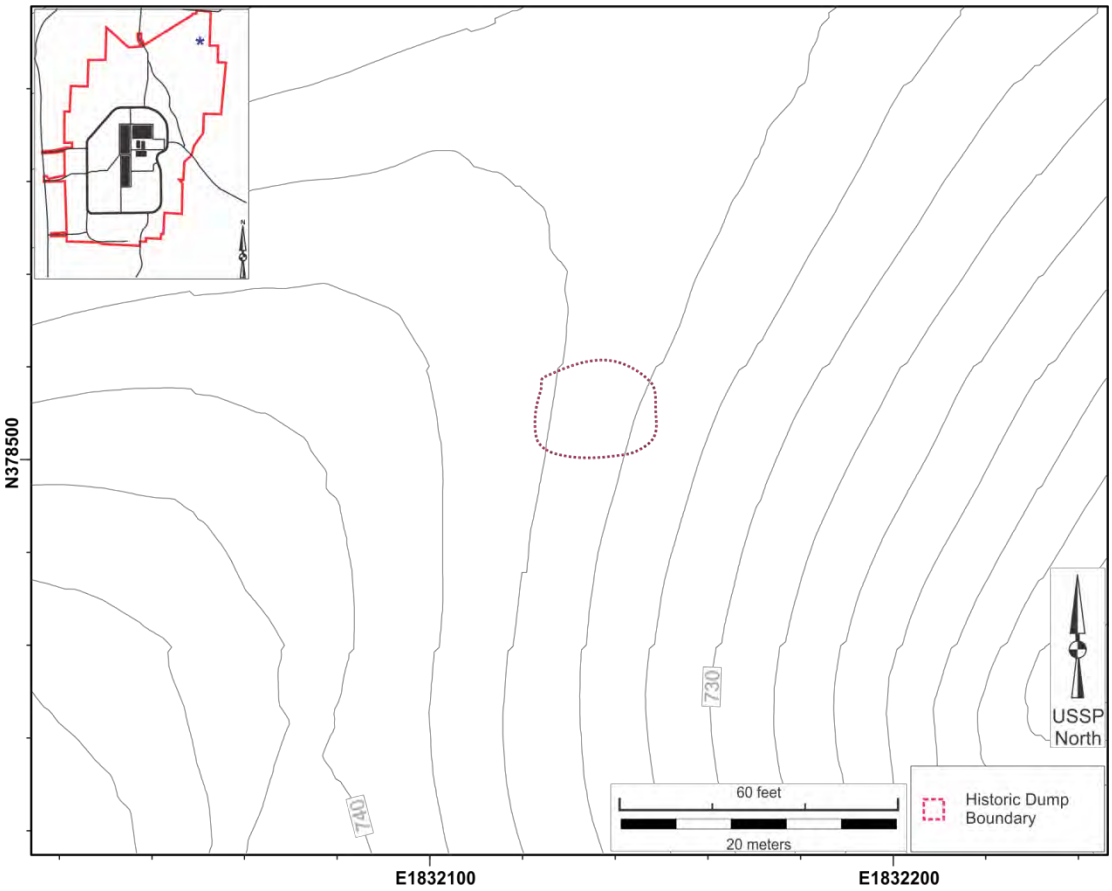

Figure 42. Illustration of refuse dump site 33Pk216 (adapted from Pecora 2012).

3.4.5. 33Pk375

Site 33Pk375 is a historic-era refuse dump located in a swale on the side of a hill above an unnamed tributary of Little Beaver Creek, in the northwestern corner of PORTS (Figures 1 and 2). This site was first documented during a Phase I survey of PORTS Area 5B (Mustain and Lamp 2012), but it is not directly associated with any of the historically mapped building locations identified by Burks (2011a). However, the site is located on the same pre-PORTS property parcel as the Bamboo Farmstead (33Pk211), thus it is probable that the refuse dump was created by members of the Bamboo Farmstead.

The Phase I survey of the area included visual inspection and surface collection, but it was too steep to shovel test (Figure 43). The surface collection resulted in the identification of 50 historic-era artifacts within a 15 m (49 ft.) by 50 m (164 ft.) area (750 m^2 [8,036 ft^2]). No structural components (e.g., building foundations) were identified at the site. The artifact assemblage is composed mostly of kitchen group artifacts (i.e., container glass and ceramics) (Mustain and Lamp 2012). The assemblage includes items that were manufactured from 1820 to the present, though most of the artifacts post-date the latter part of the nineteenth century. Mustain and Lamp (2012) recommended no further work for this site.

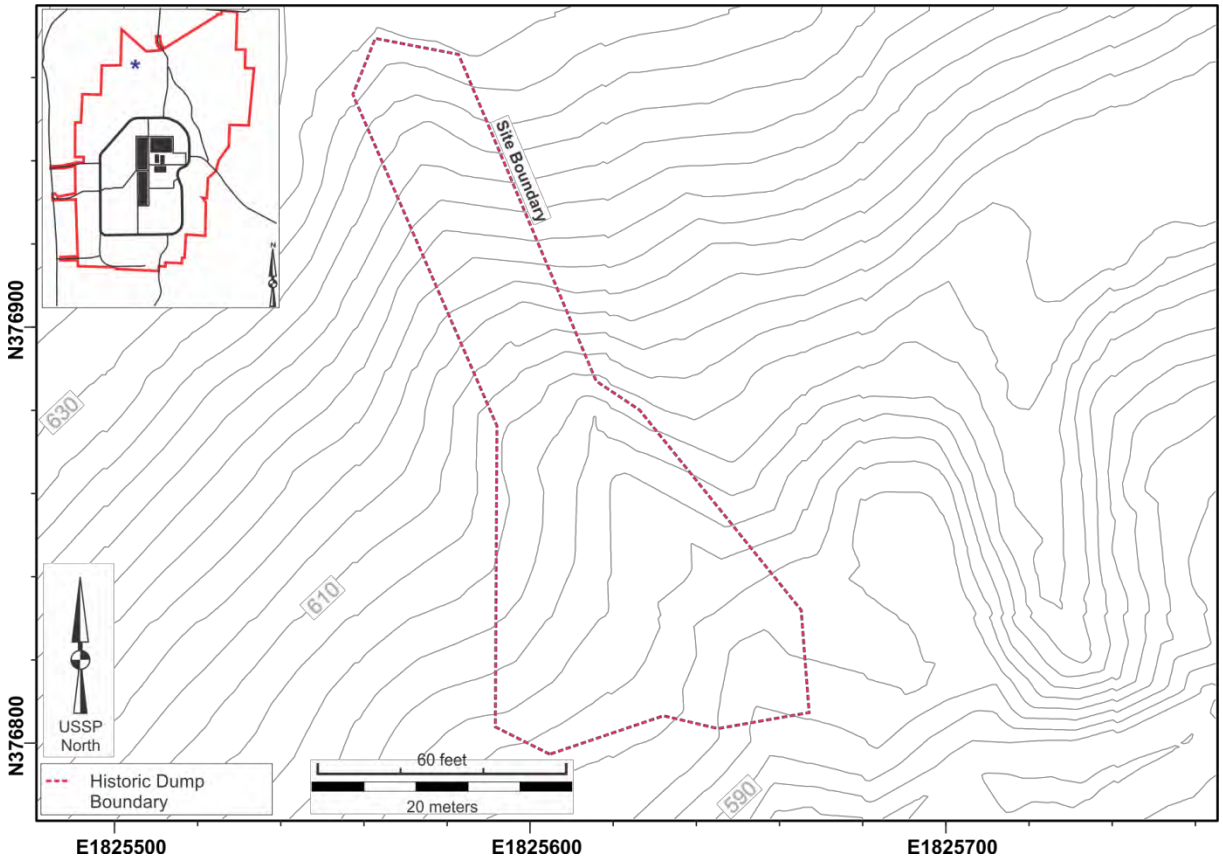

Figure 43. Illustration of refuse dump site 33Pk375 (adapted from Mustain and Lamp 2012).

3.5. ARTIFACT SCATTERS

3.5.1. 33Pk200

Site 33Pk200 is a small group of historic-era artifacts scattered along a terrace of Little Beaver Creek near the north-central portion of PORTS (Figures 1 and 2). This site was documented by Schweikart et al. (1997) during a Phase I survey of the PORTS facility and it was not recommended for further work. No buildings are indicated in this area on any of the historical maps and aerials consulted by Burks (2011a) during his study of PORTS, but the site is on the same pre-PORTS property tract containing the Bamboo Farmstead (33Pk211), site 33Pk199, and site 33Pk201, the latter two of which are historic-era isolated finds. It is possible that 33Pk200 represents a single refuse disposal episode created by the later occupants of Bamboo Farmstead.

The Phase I survey found four historic-era artifacts, including a burnt whiteware sherd, two clear glazed redware fragments, and one flat glass fragment, all of which were recovered from a single shovel test (Schweikart et al. 1997). Schweikart et al. (1997) suggest that these artifacts could date from about 1820 to the present.

3.5.2. 33Pk202

Site 33Pk202 is a historic-era artifact scatter located on a terrace of Little Beaver Creek near the north-central portion of PORTS (Figures 1 and 2). This site was documented by Schweikart et al. (1997) during a Phase I survey and it was not recommended for further work. No structures are indicated near this site on any of the historical map resources examined by Burks (2011a) during his study of such resources covering PORTS. In 1884, the property parcel containing 33Pk202 was a 50-acre tract owned by R. Welty, and in 1905 the same acreage along with a 50-acre parcel to the west was owned by Priscilla Dean. By 1952, the parcel had become a 100-acre property owned by Asa C. and Josephine Davis. At this time, the property contained a farmstead (Map Location 41) near the west central portion of the property, and a considerable distance from 33Pk202.

The Phase I survey involved a visual inspection to search for building remains, a surface collection of artifacts, and limited shovel testing. During this work, Schweikart et al. (1997) documented two glass artifacts, an old road, a cluster of ornamental plants (yucca), and a low pile of rocks/gravel. One of the glass artifacts, a Coca-Cola bottle, had an embossed date of 1949, and the second glass artifact has an applied paint label, which typically dates from 1934 to the present (Schweikart et al. 1997). These cultural remains were identified in a 15 m (50 ft.) by 15 m (50 ft.) area (225 m^2 [2,500 ft^2]). Schweikart et al. (1997) suggested that this site might represent a ford or bridge crossing over Little Beaver Creek.

3.5.3. 33Pk209

Site 33Pk209 is a historic-era artifact scatter located on a ridgetop near the southeastern corner of PORTS (Figures 1 and 2). This site was documented by Schweikart et al. (1997) during a Phase I survey at PORTS and it was not recommended for further work. No structures

are indicated near this site on any of the historical map resources examined by Burks (2011a). The site is, however, located on the same 79-acre parcel as the South Shyville Farmstead (33Pk185) and the Beaver Road Farmstead (33Pk195), suggesting that it could be related to one of these farmsteads.

The Phase I survey involved a surface collection and limited shovel testing, which resulted in the recovery of five amber-tint whiskey bottles that were found adjacent to an old road and fence line (Schweikart et al. 1997) (Figure 44). Two of the five identical bottles were collected. Markings on the bottles indicate that they were manufactured between 1933 and 1964 (Schweikart et al. 1997). No artifacts were found in the shovel test units. The bottles were clustered together in a very small area, just 1 m^2 (11 ft^2) in size. Schweikart et al. (1997) concluded that this site consists of isolated field trash associated with the consumption of alcohol.

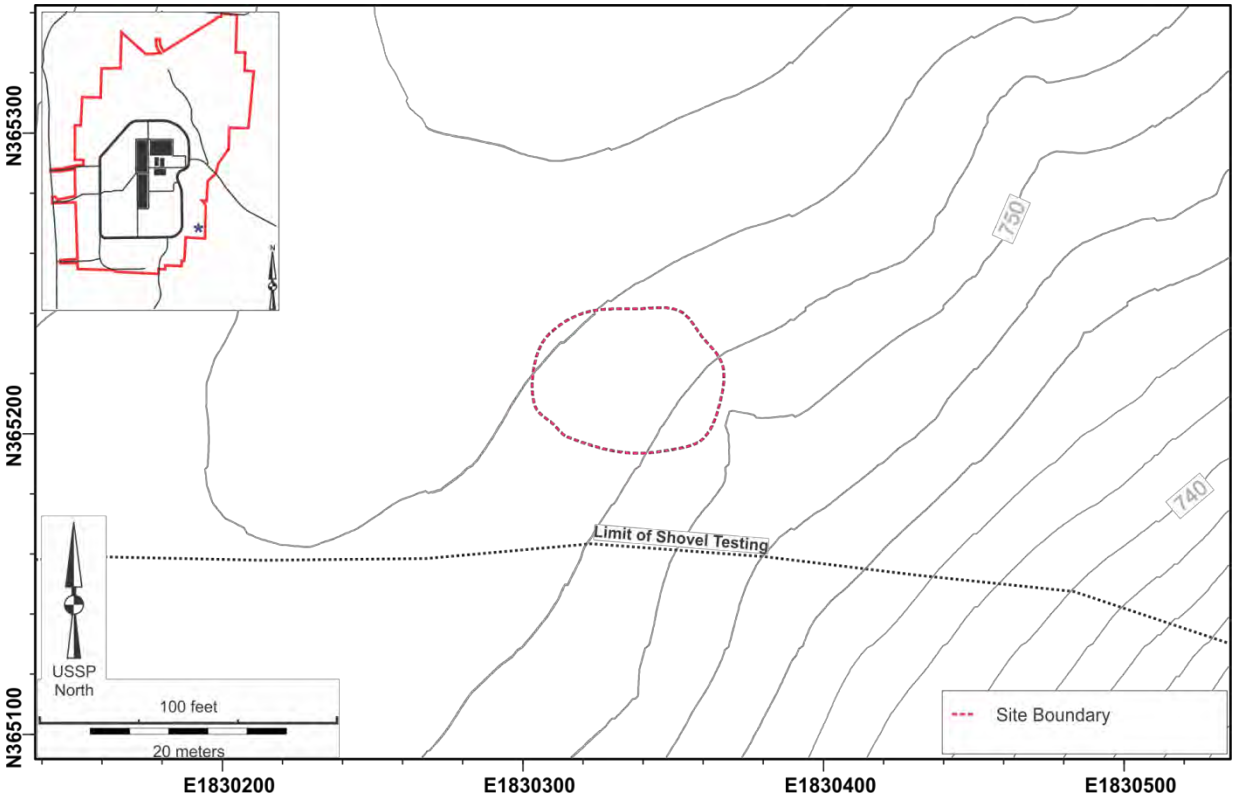

Figure 44. Illustration of site 33Pk209 (adapted from Schweikart et al. 1997).

3.5.4. 33Pk340

Site 33Pk340 is a historic-era artifact scatter located on a stream terrace in the Little Beaver Creek valley and in the north-central part of PORTS (Figures 1 and 2). This site was documented by Mustain (2012) during a Phase I survey of Area 1 and it was not recommended for further work. No structures are indicated near the site on any of the historical map resources

examined by Burks (2011a). The site is, however, located on the same pre-PORTS property parcel as Stockdale Road Dairy (33Pk217).

The Phase I survey included the excavation of shovel test units, which recovered nine historic-era artifacts; small patches of daffodils were also noted in the area (Mustain 2012) (Figure 45). The artifact assemblage consists of kitchen and architectural group artifacts (i.e., ceramics, container glass, nails, and window glass). Three pieces of whiteware conjoin and have flow blue decoration, which dates from 1845-present (Miller 2000). The cut nails in this assemblage could date to any time from 1790 to the 1890s (Mustain 2012). These artifacts and the daffodil patches were identified within a 15 m (50 ft.) by 20 m (66 ft.) area (300 m^2 [3,300 ft^2]). Daffodils are common around historic-period residential sites, but the Phase I survey did not locate any architectural remains (i.e., foundations, well, etc.). Since no farmstead is indicated in this area on the historical map resources, it is possible that this site represents a very early house site that was razed prior to the twentieth century.

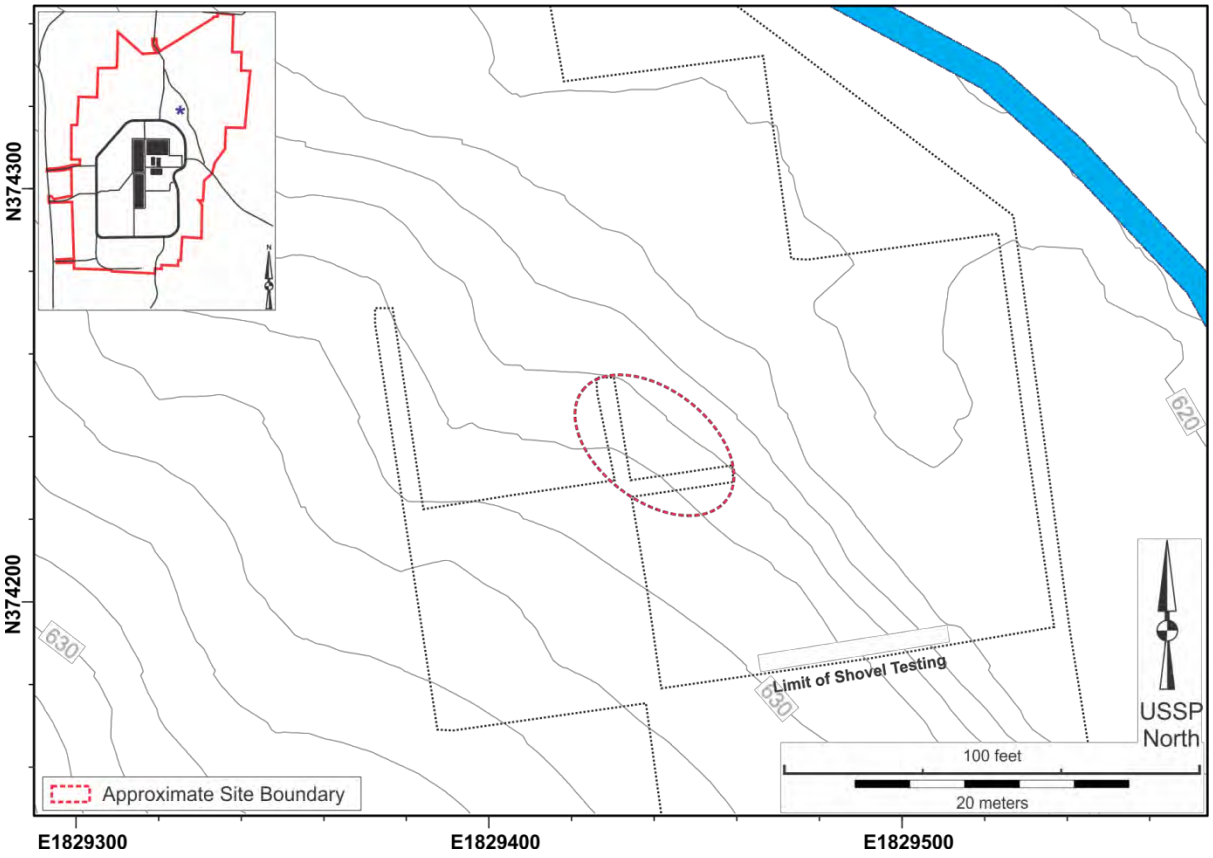

Figure 45. Illustration of site 33Pk340 (adapted from Mustain 2012).

3.5.5. 33Pk344

Site 33Pk344 is a historic-era artifact scatter located on a broad, sloping toe ridge at the head of an unnamed tributary of Little Beaver Creek, near the northeastern corner of PORTS (Figures 1 and 2). This site was documented by Pecora (2012) during a Phase I survey of Area 2 and it was not recommended for further work. No structures are indicated near this site on any

of the historical map resources examined by Burks (2011a). The site is, however, located on the same property parcel as Stockdale Road Dairy (33Pk217). The c.1905 Oil & Gas Map indicates that 33Pk344 is located on what was the southern end of the Hunt property, which was a narrow 21-acre parcel located between the George Hunt property to the east side and the Isaac S. Woodell property to the west side. A house is indicated near the north end of the Hunt property, south of Shuster Road and approximately 700 meters north of 33Pk344. Today, the Hunt house location (Map Location 9) is within a large soil borrow area.

The Phase I survey involved the excavation of shovel test units at 15-meter intervals. These recovered 18 historic-era artifacts within a 2,000 m^2 (21,529 ft^2) area (Pecora 2012) (Figure 46). The assemblage is composed mostly of kitchen and architectural group artifacts (i.e., ceramics, container and window glass, and nails) with no diagnostic artifacts. Pecora (2012) concluded that site 33Pk344 is a small household refuse dump with artifacts that date as far back as the mid-nineteenth century. Given the small assemblage size, it is improbable that it represents a residential site that was razed prior to the making of the early twentieth century maps.

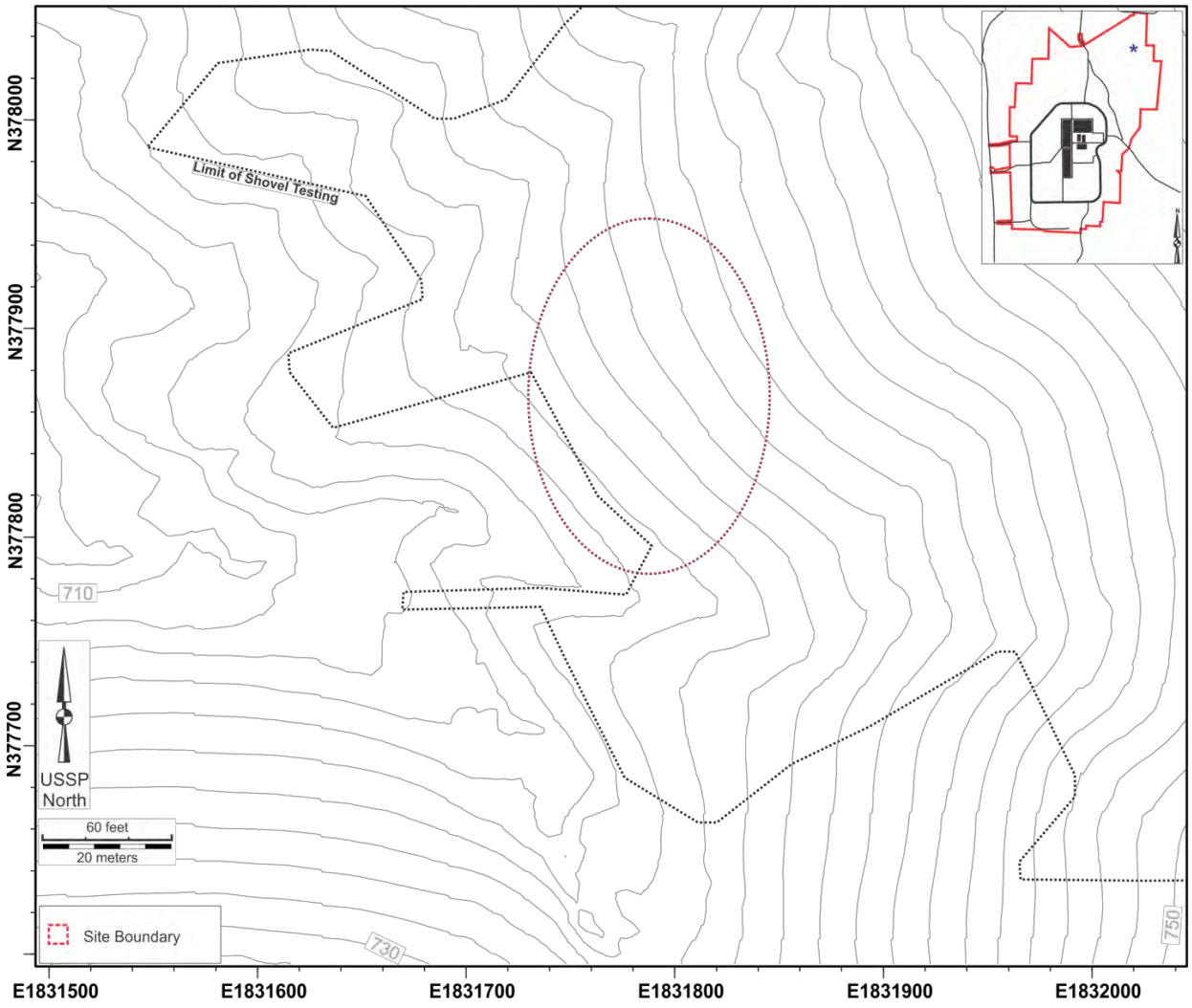

Figure 46. Illustration of site 33Pk344 (adapted from Pecora 2012).

3.5.6. 33Pk353

Site 33Pk353 is a small historic artifact scatter located in a stream bottom at the head of an unnamed intermittent stream of Little Beaver Creek, near the northeastern corner of PORTS (Figures 1 and 2) (Pecora 2012). No structures are indicated near the site on any of the historical map resources examined by Burks (2011a). The site, however, is located near the same property containing the Cornett Farmstead (33Pk218), which is approximately 50 m (165 ft) upstream. The 1884 map of Pike County shows this location to be on a property owned by T. Varney. The 1905 map shows this site to be within a property owned by John Zimmerman and by 1952 the same property was owned by George and Wilma Cornett.

This site was identified as the result of a Phase I survey that involved the excavation of shovel tests on a 15-meter grid. The recovered artifacts include two pieces of clear container glass and a single stoneware sherd from two positive shovel tests. The sparse historic artifact scatter is not consistent with what is expected for a residential site. Instead, these artifacts might represent an isolated incident of refuse disposal, and is possibly related to the Cornett Farmstead. Pecora (2012) concluded that 33Pk353 is not a significant archaeological site.

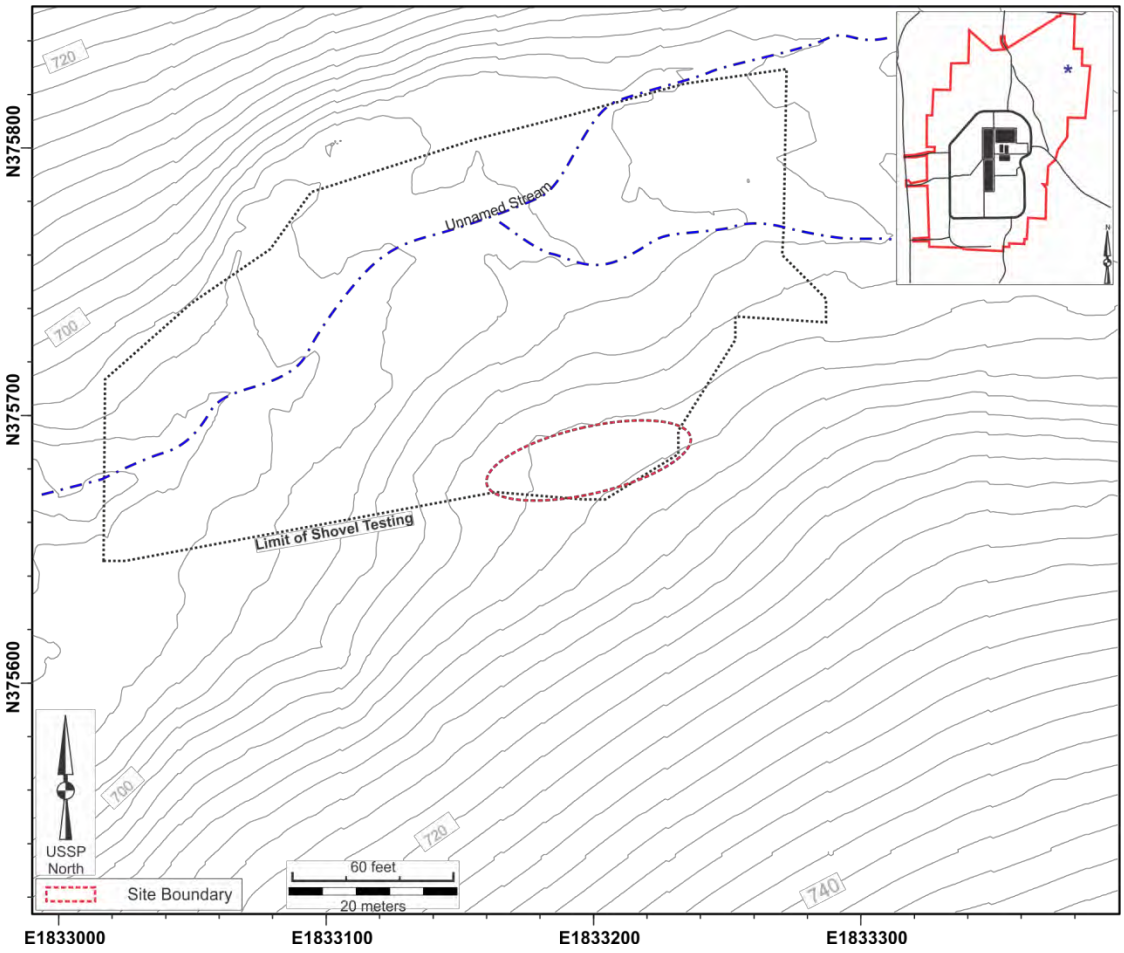

Figure 47. Illustration of site 33Pk353 (adapted from Pecora 2012).

3.5.7. 33Pk369

Site 33Pk369 is a historic-era artifact scatter located along the southern edge of a narrow east-west trending toe ridge and west of McCorkle Road at the east edge of PORTS (Figures 1 and 2). This site was documented in the field by Norr (2012) during a Phase I survey of PORTS Area 4B. No buildings are indicated in this area on any of the historical maps and aerials consulted for this study (Burks 2011a; Norr 2012). The site is, however, located on the same historical property parcel containing the Mechling Farmstead, which in 1884 was a 41-acre parcel owned by W. Lankford. In c.1905, this same parcel was owned by Frank Vance.

The Phase I survey involved the excavation of eight shovel tests, resulting in the recovery of 20 historic-era artifacts (Norr 2012) (Figure 48). The assemblage consists mostly of kitchen group artifacts. Datable artifacts include two annular whiteware ceramic fragments that were manufactured between 1820 and 1850 and a single blue edgeware fragment, a ceramic type manufactured between 1865 and 1895 (Norr 2012). Including the more recent artifacts also found, this artifact assemblage appears to date to the late nineteenth to early twentieth century (Norr 2012). Norr (2012) concluded that 33Pk369 may represent a single episode of refuse disposal.

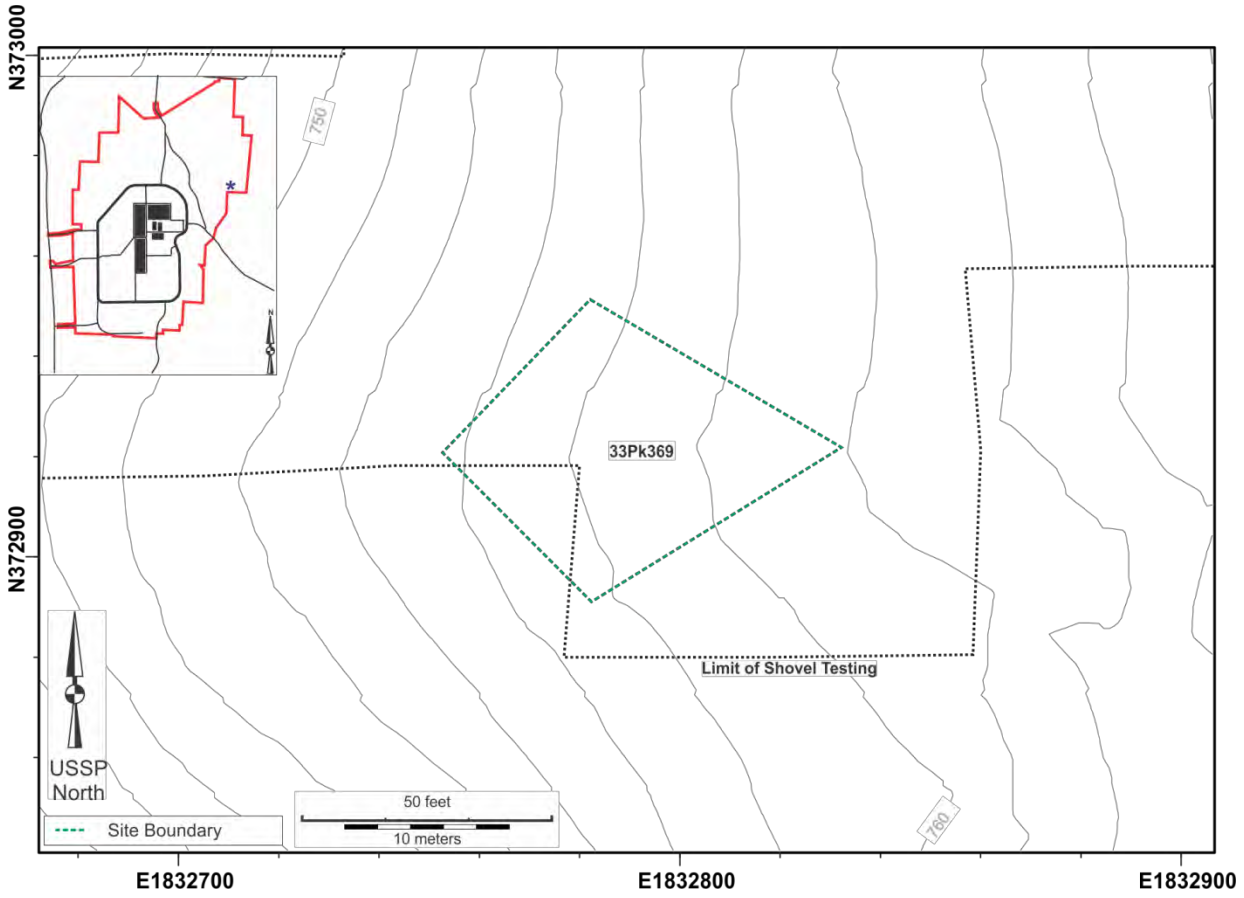

Figure 48. Illustration of site 33Pk369 (adapted from Norr 2012).

3.5.8. 33Pk374

Site 33Pk374 is a historic-era artifact scatter located on a stream bottom and above a large swale in the northwestern quadrant of PORTS (Figures 1 and 2). This site was documented in the field by Mustain and Lamp (2012) during a Phase I survey of PORTS Area 5B. No buildings are indicated at this location on any of the historical maps and aerials of PORTS (Burks 2011a). In 1884 this site was part of a 40-acre parcel owned by B. Talbott, and in c.1905 the same parcel was owned by Jacob Scherer. At this time, Scherer also owned the adjacent 41-acre parcel to the north, which contained the Ruby Hollow Farmstead.

The Phase I survey recovered 35 historic-era artifacts during shovel testing within a 22.5 m (74 ft.) by 30 m (98 ft.) area (675 m^2 [7,252 ft^2]) (Figure 49). The 33Pk374 artifact assemblage is composed mostly of kitchen group artifacts. Mustain and Lamp (2012) infer that the assemblage contains artifacts that were produced from 1820 through the twentieth century. This site may be the result of a single episode of refuse disposal associated with the nearby Ruby Hollow or Bamboo farmsteads.

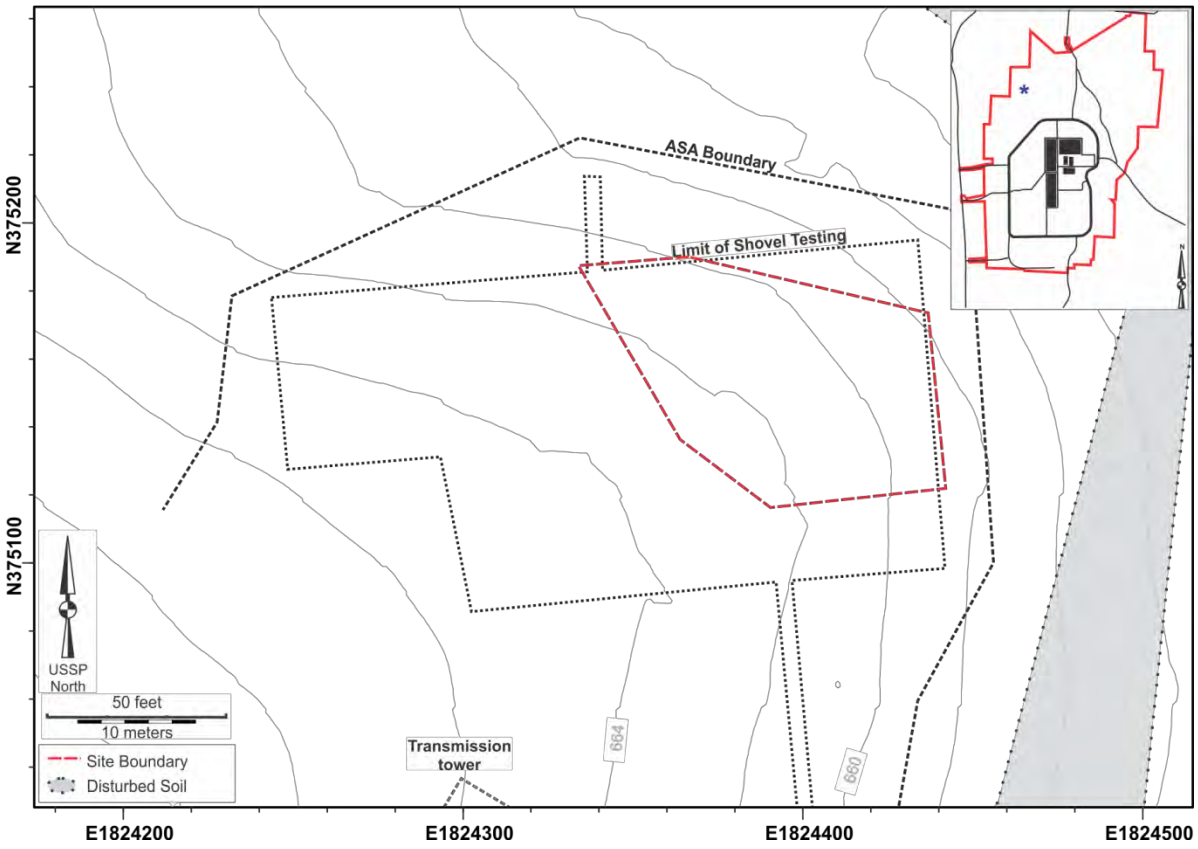

Figure 49. Illustration of site 33Pk374 (adapted from Mustain and Lamp 2012).

3.5.9. 33Pk362

Site 33Pk362 is a historic-era artifact scatter located on a low-lying terrace of Little Beaver Creek to the east of Fog Road and in the east-central portion of PORTS (Figures 1 and 2). This site was originally documented by Garrard and Burden (2012) during a Phase I survey of PORTS Area 3. No buildings are indicated in this area on any of the historical maps and aerial photos of the PORTS area (Burks 2011a; Garrard and Burden 2012). The site is, however, located on the same pre-PORTS property parcel as the Terrace Farmstead (33Pk206). The 1884 map shows that this site is located on what was then a 290-acre property owned by Henry Shy. By about 1905, this property parcel was reduced to 61 acres and was owned by Charles Shy.

The Phase I survey involved surface collection and the excavation of shovel test units. Although no artifacts were recovered from the shovel tests, 33 artifacts, the remains of a bridge abutment, and a railroad tie were identified on the surface (Garrard and Burden 2012) (Figure 50). The artifact assemblage consists mostly of kitchen and architecture group artifacts (i.e., container glass, brick, and window glass). Two maker's marks were identified on three of the glass container (jar) fragments. These marks were identified as the Anchor Hocking mark (1938 to present) and the Hazel-Atlas mark (1920 to 1964) (Garrard and Burden 2012). These artifacts were identified within a 12.5 m^2 (134 ft^2) area. Overall, the artifacts in this assemblage date to the mid-twentieth century, though Garrard and Burden (2012) suggest that a few of the artifacts may date to the nineteenth century. Based on the placement of the artifacts within a tight cluster adjacent to the road and bridge abutment, this site is likely an opportunistic refuse dump. Alternatively, it could also be a small dump associated with the Terrace Farmstead.

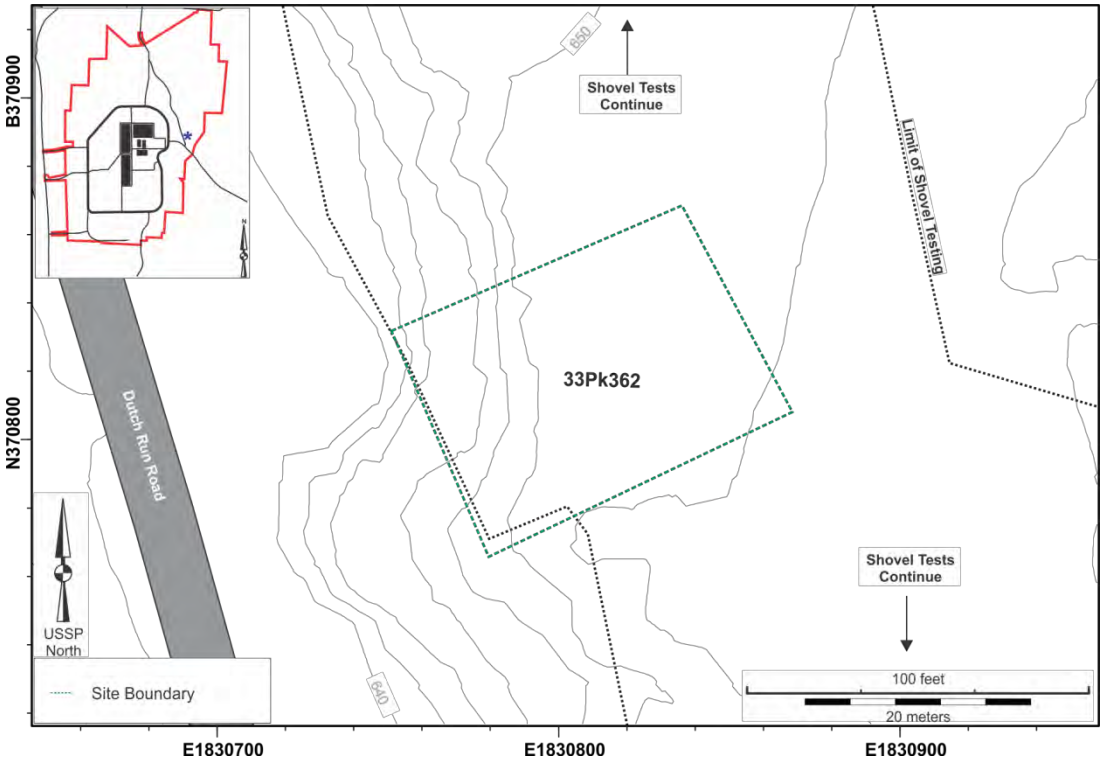

Figure 50. Illustration of site 33Pk362 (adapted from Garrard and Burden 2012).

3.6. ISOLATED FINDS

3.6.1. 33Pk199

Site 33Pk199 is a historic-era isolated find located on a broad, upland flat in the north-central portion of PORTS (Figures 1 and 2). This site was documented by Schweikart et al. (1997) during a Phase I survey of PORTS. No buildings are indicated in this area on any of the historical maps and aerial photos of the PORTS area (Burks 2011a), but the isolated find is on the same pre-PORTS property tract containing the Bamboo Farmstead (33Pk211), site 33Pk200 (a historic artifact scatter), and site 33Pk201, another historic-era isolated find.

The Phase I survey consisted of shovel testing and resulted in the recovery of a single whiteware ceramic sherd (Schweikart et al. 1997). Schweikart et al. (1997) concluded that this site represents field trash that made its way into a once operating agricultural field, perhaps through the use of manure spreaders in the nineteenth or early twentieth century.

3.6.2. 33Pk201

Site 33Pk201 is a historic-era isolated find located on a broad, upland flat in the north-central portion of PORTS (Figures 1 and 2). This site was located by Schweikart et al. (1997) during a Phase I survey of PORTS. No buildings are indicated in this area on any of the historic maps and aerials consulted for this study (Burks 2011a), but the site is on the same property tract containing the Bamboo Farmstead (33Pk211) and two other isolated historic-era finds (33Pk199, 33Pk200).

The Phase I survey involved the excavation of shovel test units, which located the single scalloped-edge, molded design whiteware ceramic sherd with polychrome transfer print (Schweikart et al. 1997). Schweikart et al. (1997) concluded that this site represents field trash that made its way into a once operating agricultural field, perhaps through the use of manure spreaders in the nineteenth or early twentieth century.

3.6.3. 33Pk355

Site 33Pk355 is a historic-era isolated find located on the western sloping edge of a ridgetop near the southeastern portion of PORTS (Figures 1 and 2). This site was documented by Garrard and Burden (2012) during a Phase I survey of PORTS Area 3. No buildings are indicated in this area on any of the historical maps and aerial photographs consulted for this study (Burks 2011a), but the site is on the same property tract containing a farmstead location (33Pk329) that had been heavily compromised by the construction of Perimeter Road and the landing strip.

The Phase I survey of 33Pk355 involved the excavation of shovel test units on a 15 m (49.2 ft.) grid (Figure 51). A single, undecorated ironstone ceramic sherd fragment was recovered from one of the shovel test units (Garrard and Burden 2012). No additional artifacts or foundation remains were identified at the site.

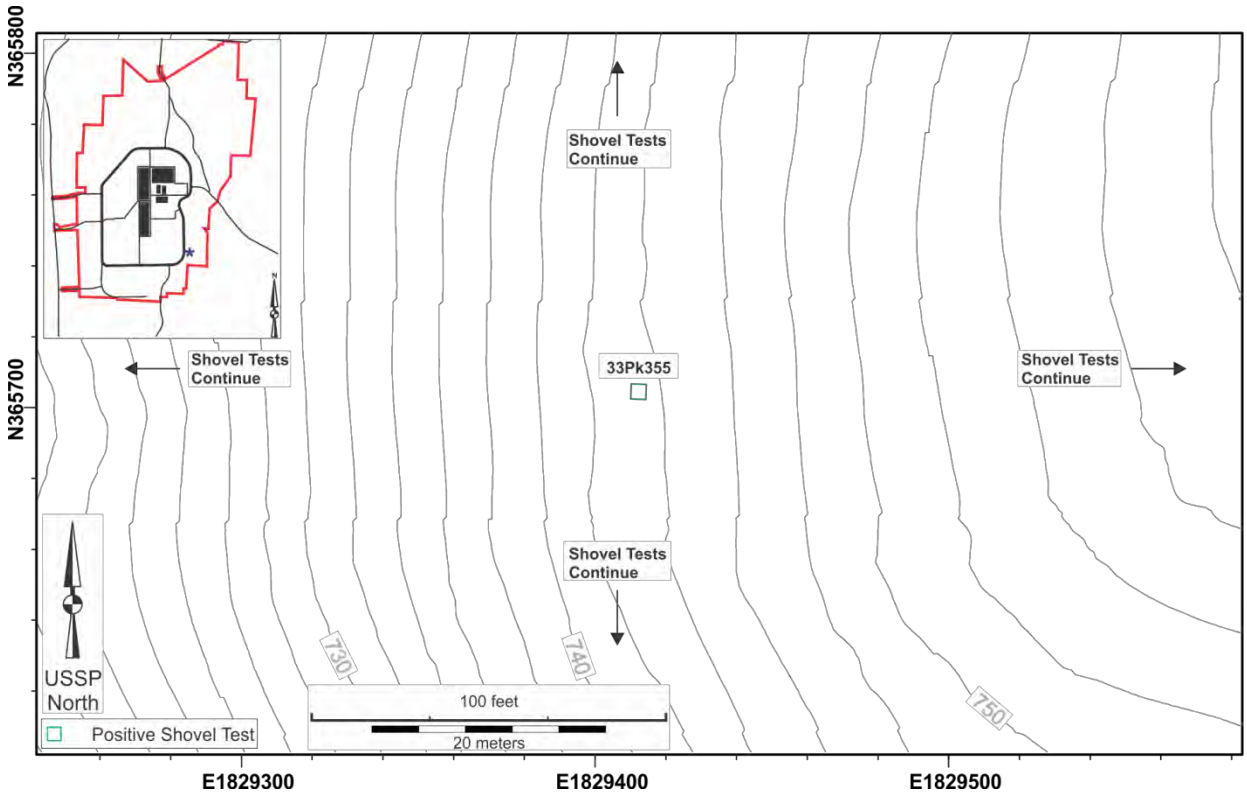

Figure 51. Illustration of site 33Pk355 (adapted from Garrard and Burden 2012).

3.6.4. 33Pk356

Site 33Pk356 is a historic-era isolated find located near the western sloping edge of a ridgetop in the southeastern portion of PORTS (Figures 1 and 2). This site was documented by Garrard and Burden (2012) during a Phase I survey of PORTS Area 3. This site is located adjacent to the western edge of South Shyville Farmstead (33Pk185) and the southern edge of the Iron Wheel Farmstead (33Pk193), a component of the South Shyville Farmstead. It is reasonable to assume that 33Pk356 is also a component of the South Shyville Farmstead (see Figure 7).

The Phase I survey of 33Pk356 involved the excavation of shovel test units on a 15 m (49.2 ft.) grid. A single, undecorated ironstone ceramic sherd was found in one of the shovel test units (Garrard and Burden 2012).

3.7. BRIDGE ABUTMENT

3.7.1. 33Pk363

Site 33Pk363 is a late nineteenth to early twentieth century bridge abutment and retaining wall in the southeastern part of PORTS (Figures 1 and 2). This site was recorded by Garrard and Burden (2012) during a Phase I archaeological survey of Area 3. Historically, this structure served as a bridge that spanned an unnamed tributary of Little Beaver Creek along Zimmerman Road.

The bridge abutment is constructed of dry-laid rough-cut sandstone on its east side and poured concrete on the west side (Figures 52 and 53). According to Garrard and Burden (2012), the bridge was rather short and measured approximately 2 m (6.5 ft.) in length. The sandstone portion of the bridge, which is interpreted to be from an original bridge, measures approximately 3 m (9.8 ft.) wide by 1.5 m (4.9 ft.) high. The sandstone blocks are roughly shaped to facilitate coursing. The thickness of the blocks is fairly consistent at about 30 cm (11.8 in.), but the lengths vary from 1 to 2 m (3.2 to 6.5 ft.). The bridge also has sandstone rubble retaining walls on the east side of the creek. The concrete portion of the bridge is likely an early twentieth-century repair or addition and measures approximately 5 m (16.4 ft.) wide by 1.5 m (4.9 ft.) tall. Garrard and Burden (2012) suggest that the addition was part of an effort to widen the road. No evidence of the bridge stringers or deck remains.

Figure 52. Photograph of the 33Pk363 bridge abutment (from Garrard and Burden 2012).

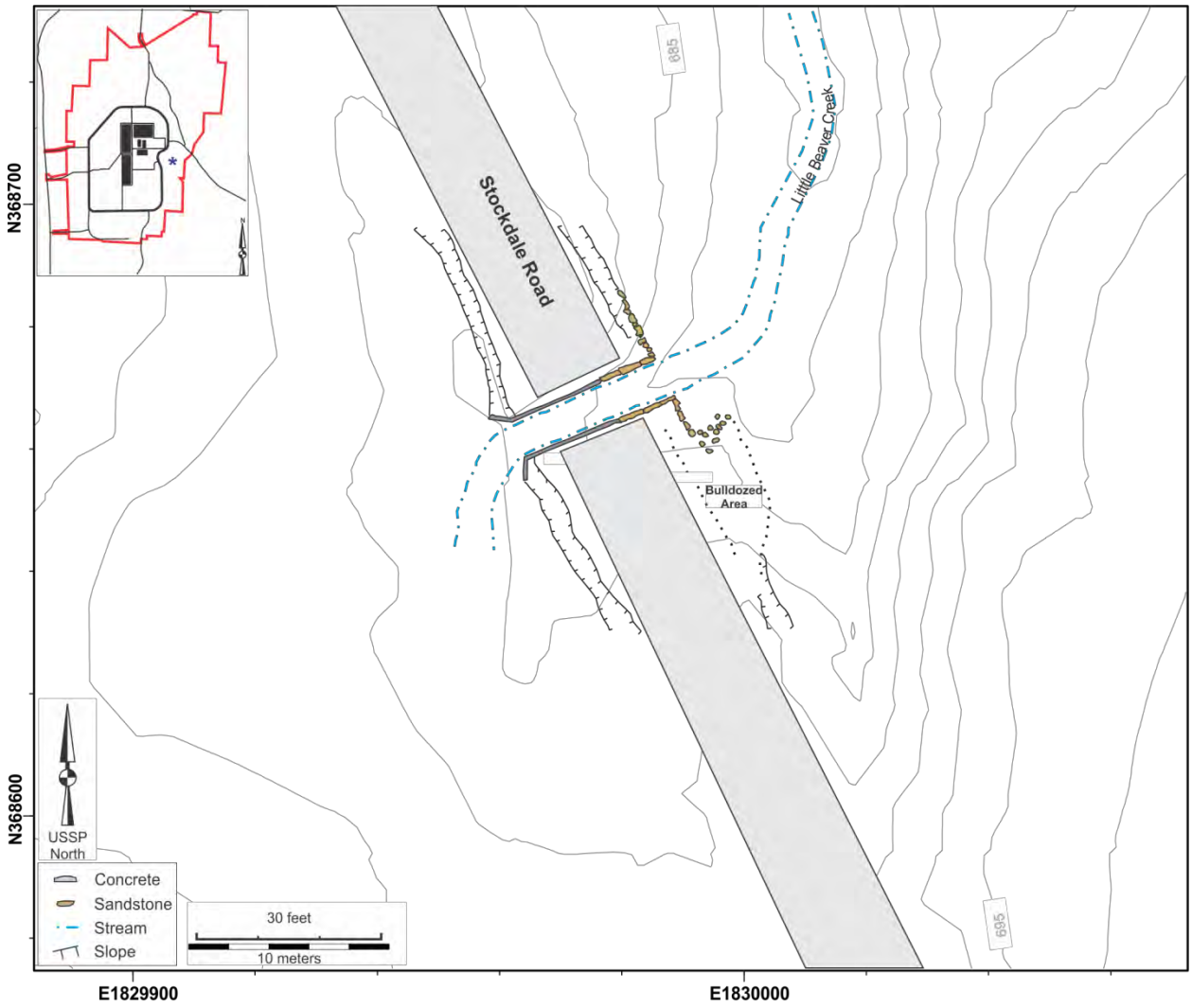

Figure 53. Illustration of the 33Pk363 bridge (adapted from Garrard and Burden 2012).

3.8. CEMETERIES

3.8.1. 33Pk189 (PIK-206-4)
Mount Gilead Church & Cemetery

Site 33Pk189/PIK-206-04 is one of two cemeteries documented within PORTS. The cemetery is located on a prominent ridgetop in the east-central portion of PORTS (Figures 1 and 2). This site was first documented by Schweikart et al. (1997) during a Phase I survey of PORTS. Later, the site was re-examined during a reconnaissance survey conducted by Pecora (2011) (Figure 54). In addition to approximately 70 headstones, footstones, and other grave-related monuments, a church foundation was also documented within the approximately 1,997 m^2 (21,500 ft^2) cemetery area (Pecora 2011). The church foundation is represented by a rectangular grid of sandstone block piers and an entry-stoop on the west end.

3.8.2. 33Pk214 (PIK-207-12)
Holt Cemetery

Site 33Pk214/PIK-206-04 is one of two historic cemeteries documented within PORTS. The cemetery is located on top of a hill/ridge in the northeastern portion of PORTS (Figures 1 and 2). This site was first documented by Schweikart et al. (1997) during a Phase I survey of PORTS and was more recently re-examined with a geophysical survey conducted by Burks (2009). According to the Pike County Genealogical Society, 15 individuals are known to be interred within the cemetery though few above ground headstone markers are present (Burks 2009).

During the Phase I survey, a visual inspection identified only three extant headstones and five possible footstones along with a Styrofoam cross and plastic flowers, which were situated on top of a yard waste pile near the southwest side of the cemetery (Schweikart et al. 1997). The death dates indicated on the headstones range from 1877 to 1908. No artifacts were recovered from the original survey.

The recent Burks (2009) survey utilized a magnetometer and ground-penetrating radar (GPR) to survey a 929 m^2 (10,000 ft^2) area covering the known extent of the cemetery (Figure 55). The goal of the geophysical survey was to identify all possible graves within the cemetery. The results indicate the presence of four probable (using GPR) and six possible (using magnetometer) unmarked graves along with 14 grave-size depressions on the surface. No ground-truthing (i.e., probing) was conducted at the cemetery (Burks 2009).

As noted by Burks (2009), this cemetery is incorrectly plotted on the modern 1961 (PR. 1974; PI 1979) Piketon, Ohio 7.5' USGS topographic map (Figure 1). The map error has been verified by the lack of visible evidence for a second cemetery within the USGS mapped location (Pecora 2012). In fact, the USGS mapped location for Holt Cemetery contains a farmstead site (33Pk213) which was recorded by Schweikart et al. 1997 and was investigated at a Phase II-level by Klinge 2010. Neither of these surveys detected a cemetery within the vicinity of 33Pk213.

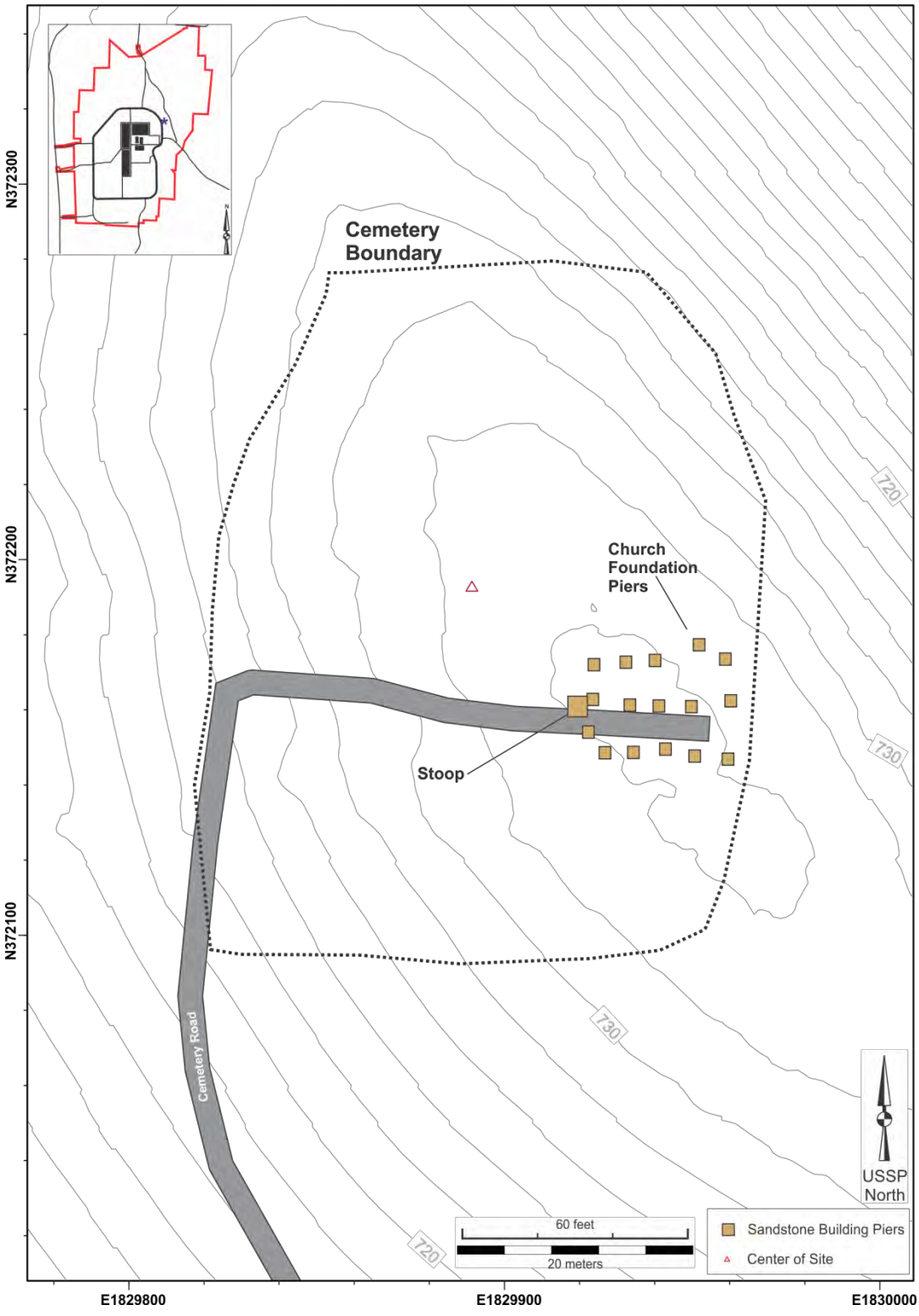

Figure 54. Illustration of Mount Gilead Church and Cemetery (33Pk189/PIK-206-4) (adapted from Pecora 2011).

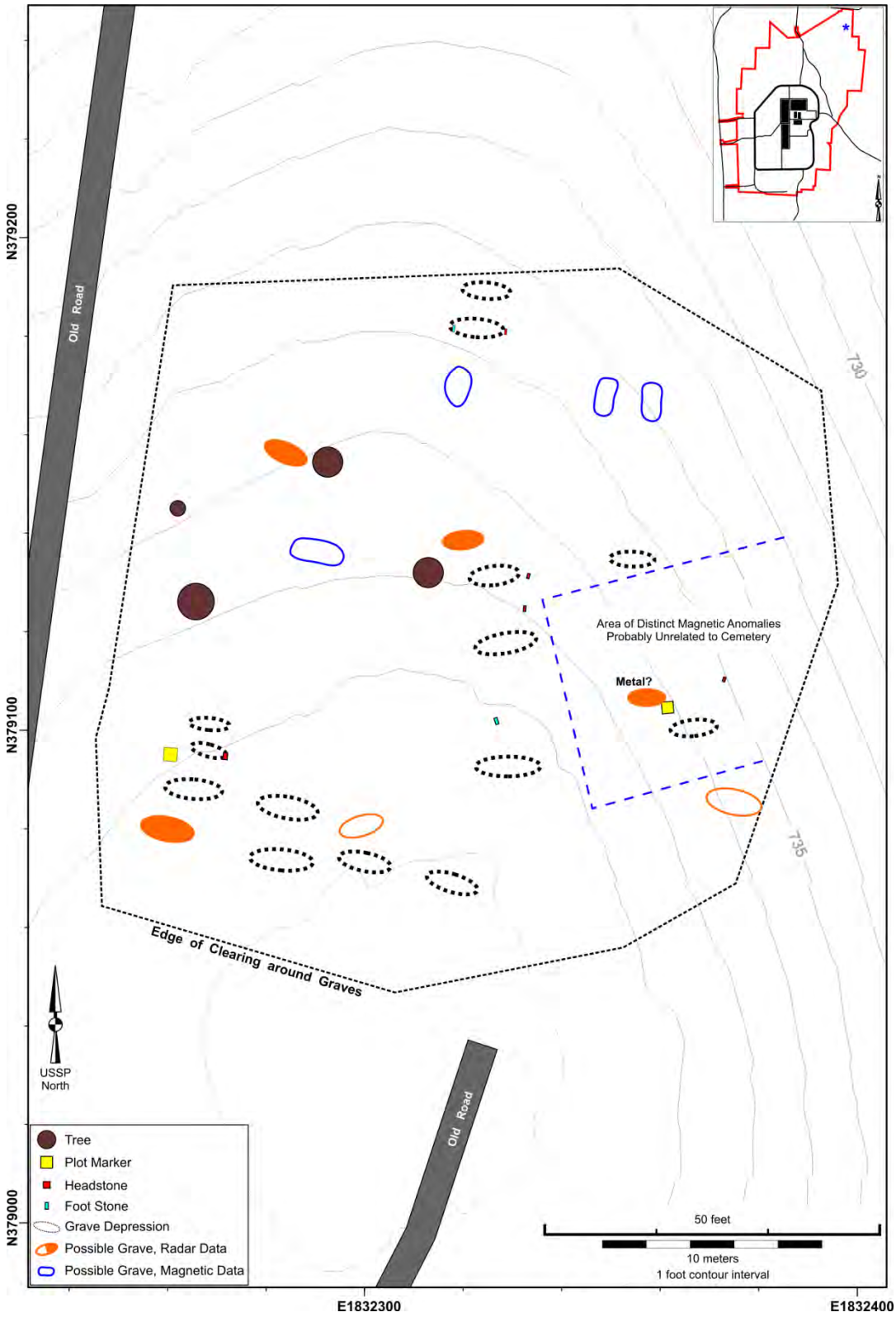

Figure 55. Illustration of Holt Cemetery (33Pk214/PIK-207-12) (adapted from Burks 2009).

3.9. CHURCHES AND SCHOOLS

3.9.1. 33Pk189 (PIK-206-4)
Mount Gilead Church & Cemetery

See Section 3.8 for a presentation and discussion of the Mount Gilead Church and cemetery.

3.9.2. 33Pk314
Ferree Church

Ferree Church (33Pk314) is one of 68 building locations Burks (2011a) identified using historical map sources covering the PORTS area. The site is located on the west side of Fog Road in the northeastern part of PORTS and just below the Sludge Lagoon (X-611B) dam (Figures 1 and 2) This site was documented in the field during a reconnaissance survey designed to determine if the building sites identified by Burks (2011a) are now associated with archaeological remains (Pecora 2011). Although archaeological remains were identified at this location, the reconnaissance survey recommended no additional work.

The church building is indicated at this location on a small parcel of land on the c.1905 Oil & Gas Map, and it also is indicated on all subsequent maps and the 1938/39 and 1951 aerials. The Oil & Gas Map depicts a church symbol labeled "Ferree Church."

The reconnaissance survey effort at the site involved a pedestrian survey and limited shovel testing. Currently this site contains a large cinder block foundation with a poured concrete stoop and steps on the west end (Figure 56). South of the foundation is a scatter of displaced sandstone building blocks. The dressed sandstone blocks are fairly large and are tentatively interpreted to represent the remains of an older church foundation that may have been replaced by the current cinder block foundation. Alternatively, the sandstone blocks may also be the remains of a nearby replaced bridge on Fog Road.

Three of the four shovel tests excavated at the church site produced 29 artifacts. This assemblage consists of 25 architecture group artifacts and four kitchen group artifacts. The architecture group artifacts include 18 window glass fragments and eleven cut square nails. The kitchen group artifacts are all container glass fragments.

The reconnaissance survey concluded that the Ferree Church site is in fairly good archaeological condition, though there is evidence that it has been somewhat impacted by the Fog Road realignment (Pecora 2011). The current foundation probably dates to the early part of the twentieth century since there appears to be no significant structural changes between the 1939 and 1951 aerial photographs.

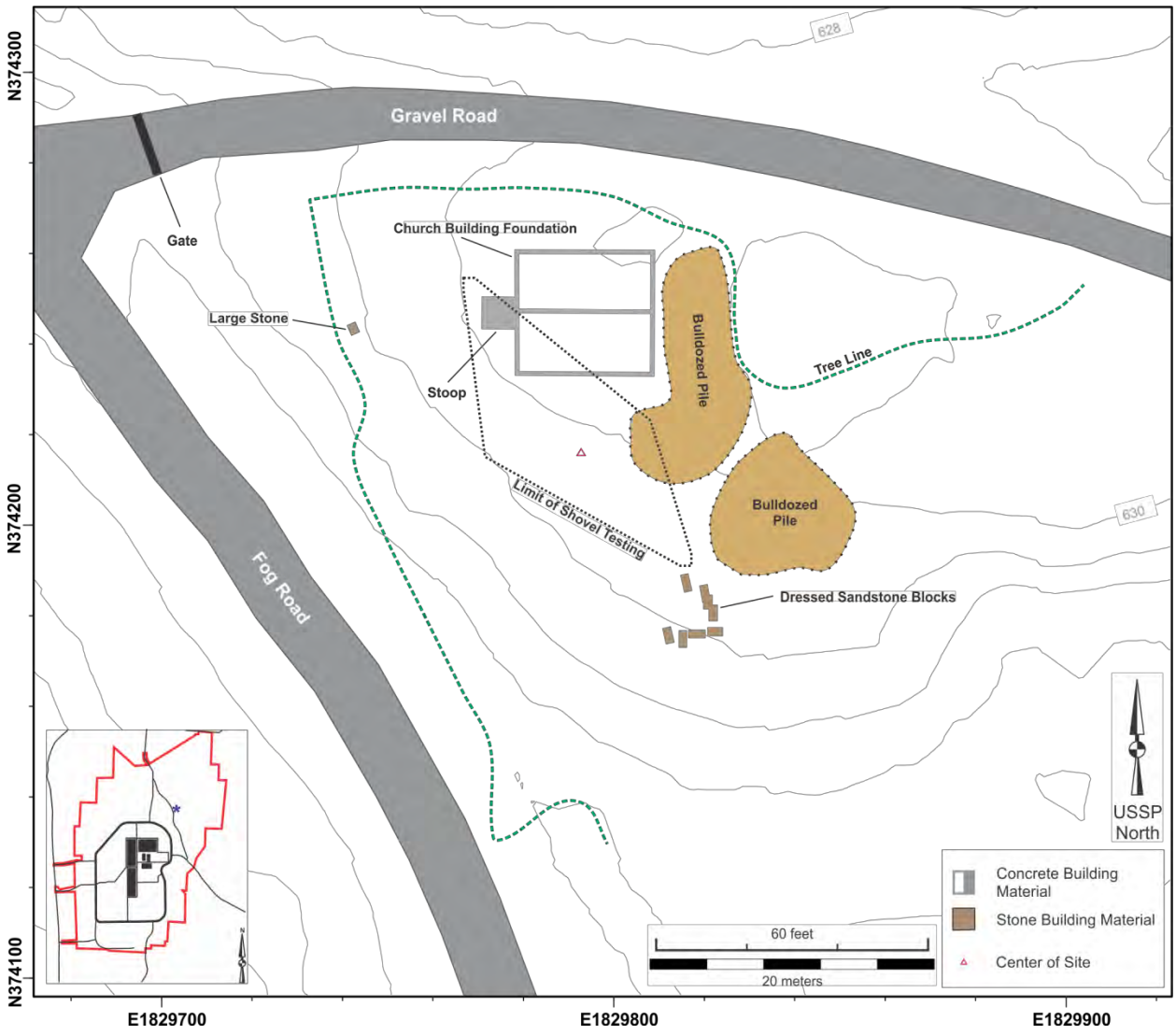

Figure 56. Illustration of the Ferree Church site (33Pk314) (adapted from Pecora 2011).

3.9.3. 33Pk323
Moore School

The Moore School Site (33Pk323) is one of 68 building locations identified within PORTS using historical maps and aerial photographs (Burks 2011a). The site is located in a ravine in the northern part of PORTS on the west side of a roadway (Figures 1 and 2). The site was documented by Mustain and Klinge (2012) during a reconnaissance survey designed to identify archaeological remains at mapped building locations (Burks 2011a). A rectangular structure is visible at this location on the 1938/39 aerial photo but is either not present or is obscured by vegetation on the 1951 aerial. Although the 1884 Piketon plat map does not show building locations, it does depict a small rectangular property parcel at this location on the east side of the 79-acre parcel owned by R. Daily. It is likely that the small 1884 parcel represents the school lot. Although the lot is not delineated on the c.1905 Oil & Gas Map, a school symbol labeled "Moore School" is shown at this location on the west side of an 83-acre parcel owned by R. Daily. The same school is also labeled on portions of the 1917 Piketon and 1908 Waverly, Ohio 15" USGS topographic maps (see Figure 4 in Mustain and Klinge 2012).

Mustain and Klinge (2012) found no intact foundation remains at 33Pk323, on the surface or in shovel tests (Figure 57). Three of the shovel tests did, however, produce coal, concrete, brick, and glass fragments. The same shovel tests demonstrated that this area is heavily disturbed or eroded. It seems likely that the structural objects found in the shovel testing are the demolished remains of the Moore School. Though disturbed and eroded, more archaeological features related to the school could be present.

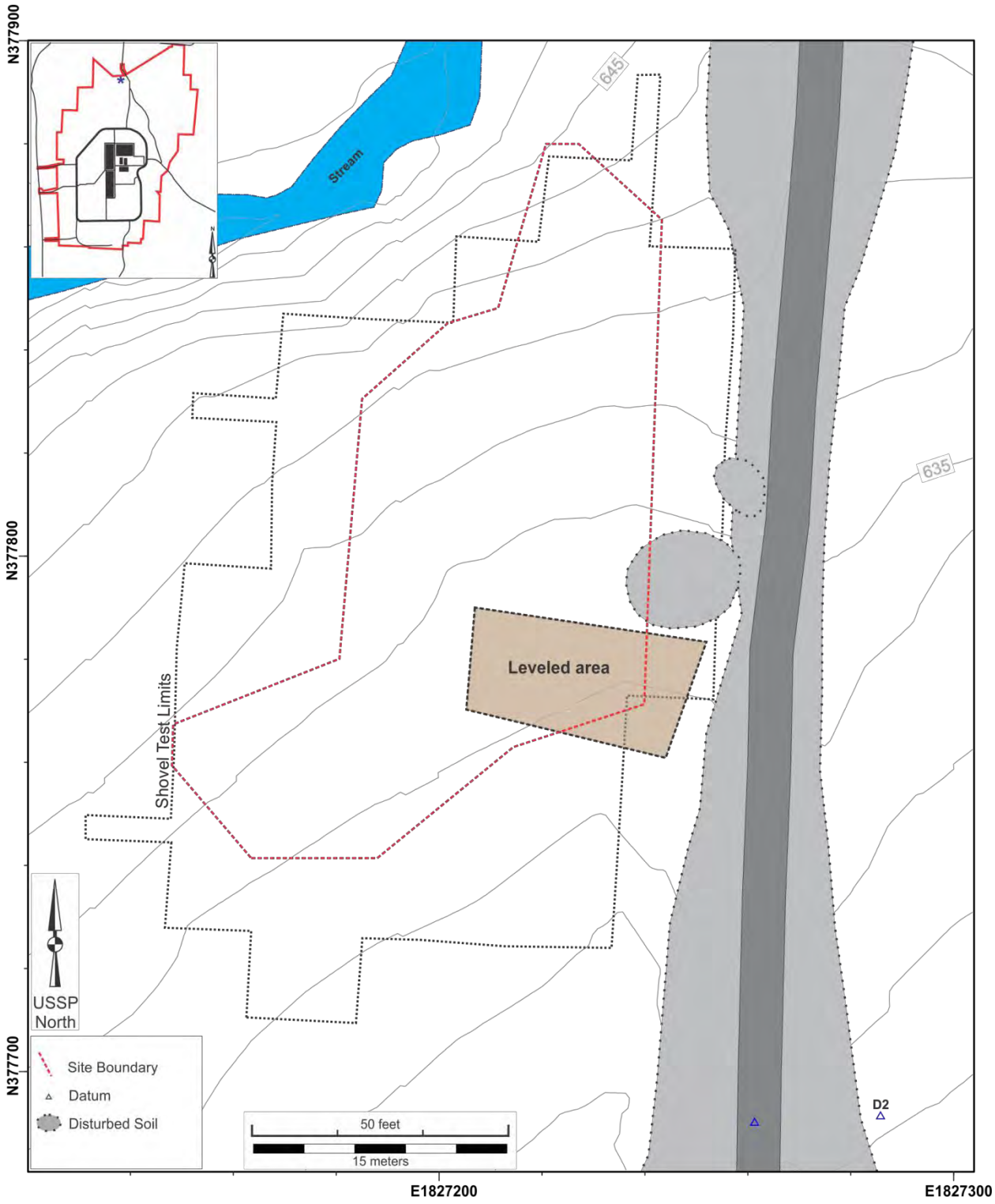

Figure 57. Illustration of the Moore School site (33Pk323) (adapted from Mustain and Klinge 2012).

3.9.4. 33Pk327
Unnamed Church

Site 33Pk327, an unnamed church site, is one of 68 building locations identified by Burks (2011a) within PORTS using historical maps and aerial photos. The site is located on a slightly elevated terrace at the eastern edge of PORTS and along the west side of McCorkle Road (Figures 1 and 2). Site 33Pk327 was first documented in the field by Trader (2011) during a reconnaissance survey designed to identify archaeological remains associated with mapped building locations (Burks 2011a). It was further investigated by Vehling et al. (2011) during an enhanced Phase I survey effort.

The church first appears on the c. 1905 Oil & Gas Map and is indicated with a typical church symbol (just as the Ferree Church is depicted). Although the 1884 map does not depict building locations, it does show a small rectangular parcel at this location on the south side of a 290-acre parcel owned by Henry Shy. It is likely that the 1884 parcel represents the church lot. The church is also depicted on portions of the 1917 Piketon and 1908 Waverly, Ohio USGS topographic maps. However, no buildings are visible at this location on the 1938/39 and 1951 aerial photographs. This suggests that the church building was demolished or moved prior to 1938/39.

The Vehling et al. (2011) survey involved a pedestrian survey and the excavation of shovel tests on a 5-meter and 15-meter grid. This effort resulted in the identification of a partial foundation consisting of an arrangement of sandstone block support piers (Figure 58). The foundation stone arrangement measures 7 m (23 ft.) north to south by 10 m (33ft.) east to west and a possible stoop is located at its east end. Of the thirty-eight shovel tests excavated at this site, only six produced artifacts. Of the 56 artifacts recovered, most are architectural debris composed predominantly of window glass, with additional cut nails and brick. Other artifacts include metal fragments, ironstone and undecorated whiteware ceramic sherds, and plastic clothing buttons. Vehling et al. (2011) interpret this assemblage to date prior to the 1950s and conclude that it is typical of nineteenth and twentieth century farmstead/homestead assemblages. No artifacts considered to be unique to a church were recovered. It is important to note that while the church building was likely gone by the late 1930s, the site was not plowed thereafter since the foundation piers are still present. In other words, this site is an unplowed version of a rural, small-congregation church.

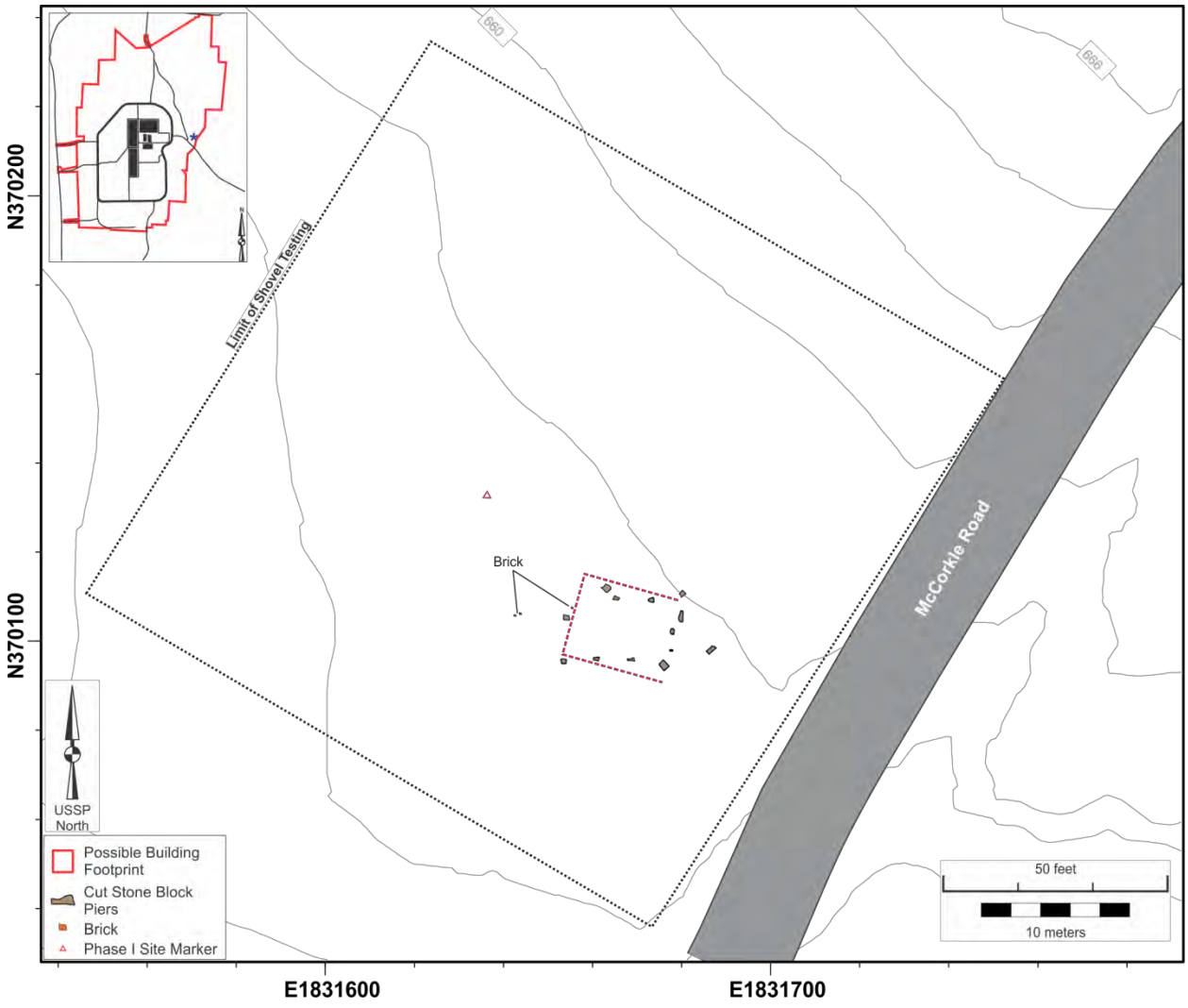

Figure 58. Illustration of church site 33Pk327 (adapted from Vehling et al. 2011).

3.9.5. 33Pk330
Unnamed Church

Site 33Pk330, a church site, is one of 68 building locations identified within PORTS using historical maps and aerial photos (Burks 2011a). The site is located on a terrace at the far western edge of PORTS, along a site access road that is no longer used (Figures 1 and 2). Site 33Pk330 was first documented in the field by Trader (2011) during a reconnaissance survey designed to identify archaeological remains at mapped building locations (Burks 2011a). It was further investigated by Vehling et al. (2011) during an enhanced Phase I survey effort.

A single building is visible within a small lot at this location on the 1938/39 and 1951 aerial photographs. The 1884 map, however, does not depict buildings and does not show a small parcel on the large acreage tract that was then owned by Henry Sargent. A church symbol is indicated at this location on the c.1905 Oil & Gas Map. A church is also depicted at this location on the 1917 Piketon, Ohio 15" USGS topographic map. Thus, the historic map and aerial resources indicate that the church was built sometime between 1884 and c.1905. Research conducted by Vehling et al. (2011) found that this church was probably the former Trinity Methodist Episcopal Church of Scioto Township. Henry Sargent sold a small piece of his larger holding to the trustees of the church in 1891 for the construction of a Methodist Episcopal church. Upon Sargent's death in 1893, his land passed to George C. Rittenour, but the church land remained in the hands of the church trustees. Trinity Methodist Episcopal Church of Scioto Township is described as a small, el-shaped, Gothic Revival building, and it appears to have remained active until its demolition for the construction of PORTS.

The Vehling et al. (2011) survey involved a pedestrian survey and the excavation of shovel tests on a 5-meter and 15-meter grid. No foundation remains were observed on the surface within the site area (Figure 59). Of the 27 shovel tests excavated at this site, only three produced artifacts (n=8), including fragments of molded glass, clear glass, whiteware ceramics, wire nails, and a ceramic tile fragment. Vehling et al. (2011) interpret this assemblage to date prior to the 1950s and conclude that it is typical of nineteenth and twentieth century farmstead/homestead assemblages. No artifacts considered to be unique to a church were recovered.

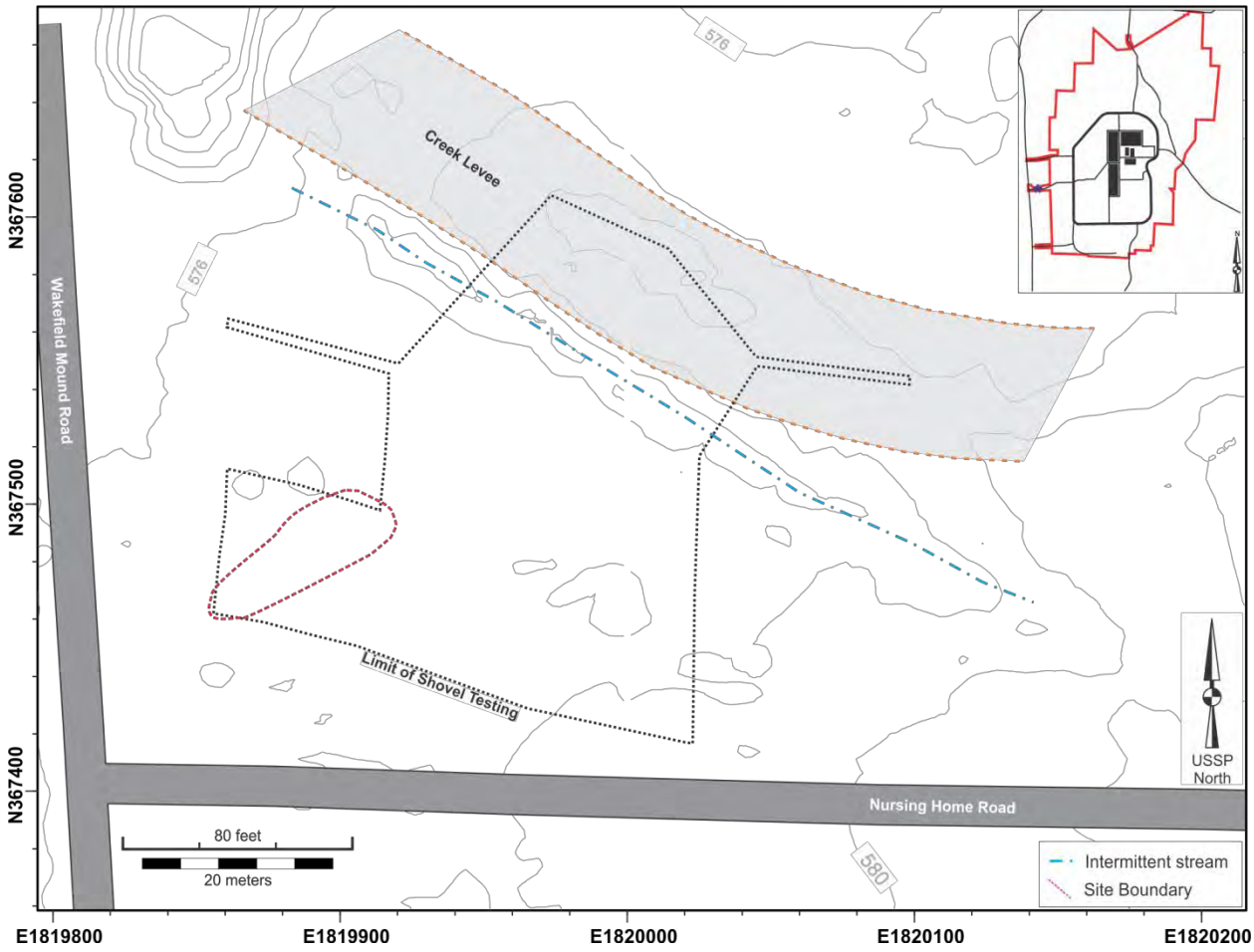

Figure 59. Illustration of church site 33Pk330 (adapted from Vehling et al. 2012).

4. FARMSTEAD SETTING AND LAYOUT

4.1. GEOGRAPHICAL SETTING

Not all farms are laid out in the same way and these differences can tell us something about the primary functions of the farm and perhaps even the economic status of the families living there. The topographic setting of farmsteads and house sites is an important variable to consider as it tends to be a limiting factor in the placement of buildings. It may also reflect personal preference and family economic conditions. Regardless of social variables, topographic constraints, such as steep side slopes and limited level ground clearly will constrain where buildings can be erected on properties with lots of sloped ground. In contrast, property parcels with broad, expansive landforms allow more leeway in terms of how buildings were arranged. In terms of personal preference, some people may prefer setting with broad and expansive vistas afforded by ridgetop settings, while others may prefer the privacy and seclusion of narrow hollow bottoms. Still others may prefer landforms protected by prevailing winds, etc. Land value and associated family economics may also dictate where houses and outbuildings are constructed on a given land parcel. For instance, a small-acreage farm may dictate the house and outbuildings be constructed on the most marginal, non-tillable land.

Table 13 summarizes the topographic setting for each of the historic-era archaeological sites within PORTS and Figure 60 provides examples of what the four main geographic settings look like as a digital elevation model. Fifty percent of the sites defined as farmsteads (n=11) are located on ridgetops and saddles, whereas only 27 percent (n=6) are on lower terraces or benches, and 23 percent (n=5) are located on lower toe-ridges. None of the farmsteads are located in stream bottoms. In contrast, house sites are located in slightly different settings. Only 29 percent of the house sites are located on ridges (n=2), 43 percent are on lower toe-ridges (n=3), and 29 percent are located in stream bottoms (n=2). The single recreational cabin site is located in a narrow stream bottom.

Refuse dumps often stand out in their geographic setting. They are frequently found in swales, hillside slopes, or narrow ravines. Within PORTS, however, 60 percent of those sites defined as refuse dumps are located on ridgetops (n=3), whereas only one is located on a hillside and one is located in a stream bottom. The ridgetop setting of the refuse dumps is perplexing, as such landforms are better suited for other purposes. It is possible that these three sites represent late-period refuse dumps created as the farmsteads were being abandoned after the AEC land purchase. Most of the artifact scatters (n=4) and isolated finds (n=2) are located on lower terrace settings, but one scatter and two isolated finds are located on ridgetops. A sixth artifact scatter is located in a stream bottom.

Both cemetery sites are located on ridgetops, and all church and school sites, excluding the church site associated with the Mt. Gilead Cemetery, are located in lower terrace settings. It is possible that these settings afforded easy access along major roadways.

Table 13. Summary of PORTS farmstead/house site topographic setting.

OAI	Name	Site Type	Geographical Setting
13a. Farmsteads			
33Pk184	Davis Farmstead	farmstead	ridgetop
33Pk185/193	South Shyville Farmstead	farmstead	ridgetop
33Pk187	-	farmstead	ridgetop
33Pk194	North Shyville Farmstead	farmstead	ridgetop/saddle
33Pk195	Beaver Road Farmstead	farmstead	ridgetop/saddle
33Pk203	Ruby Hollow Farmstead	farmstead	terrace/bench
33Pk206/364	Terrace Farmstead	farmstead	broad, elevated terrace
33Pk211	Bamboo Farmstead	Farmstead	ridgetop
33Pk212	Railside Farmstead	farmstead	terrace
33Pk213	Log Pen Farmstead	farmstead	toe ridge
33Pk217	Stockdale Rd. Dairy	farmstead	terrace/bench
33Pk311	Brodess Farmstead	farmstead	toe ridge
33Pk315	Map Location 19	farmstead	toe ridge
33Pk318	Mechling Farmstead	farmstead	ridge/saddle
33Pk320	Map Location 2	farmstead	toe ridge
33Pk322	Map Location 4	house site/farmstead	small toe ridge
33Pk324	Map Location 50	farmstead	ridgetop
33Pk325	Map Location 25	farmstead	terrace bench
33Pk326	Map Location 27	farmstead	ridgetop
33Pk328	Map Location 36	farmstead	sloping toe ridge
33Pk349	Map Location 37	farmstead	ridgetop
33Pk349	Emma Farmer Farmstead	farmstead	ridgetop
13b. House Sites			
33Pk218	Cornett Farmstead	house site/farmstead	narrow toe ridge
33Pk312	Condon Farmstead	house site/farmstead	toe ridge
33Pk313	Map Location 16	house site/farmstead	slope/stream bottom
33Pk316	Map Location 20	house site/farmstead	ridgetop
33Pk317	Mechling House Site	house site/farmstead	ridgetop
33Pk319	Map Location 43	house site/farmstead	toe ridge
33Pk321	Map Location 3	house site/farmstead	stream bottom
13c. Recreational Cabin			
33Pk345	Gibson Cabin	recreational cabin	stream bottom
13d. Farmstead Components			
33Pk197	Dutch Run Road Farmstead	farmstead component	ridgetop
33Pk331	Map Location 53	farmstead component	ridgetop
33Pk359	-	farmstead component	broad ridge
33Pk360	-	farmstead component	low-lying area
33Pk364	-	farmstead component	bench
13e. Refuse Dumps			
33Pk191	-	refuse dump	intermittent streambed
33Pk192	-	refuse dump	ridgetop
33Pk215	-	refuse dump	ridgetop
33Pk216	-	refuse dump	ridgetop
33Pk375	-	refuse dump	hillside swale
13f. Artifact Scatters			
33Pk200	-	artifact scatter	terrace
33Pk202	-	artifact scatter	terrace/bench
33Pk209	-	artifact scatter	ridgetop
33Pk340	-	artifact scatter	terrace
33Pk344	-	artifact scatter	sloping toe ridge
33Pk353	-	artifact scatter	stream bottom
33Pk362	-	artifact scatter	low terrace
33Pk369	-	artifact scatter	narrow toe ridge
33Pk374	-	artifact scatter	terrace

OAI	Name	Site Type	Geographical Setting
13g. Isolated Finds			
33Pk199	-	isolated find	terrace
33Pk201	-	isolated find	terrace
33Pk355	-	isolated find	ridgetop slope
33Pk356	-	isolated find	ridgetop slope
13h. Bridge			
33Pk363	-	bridge	creek bed/bottom
13i. Churches, Schools, and Cemeteries			
33Pk189)PIK-206-4)	Mount Gilead Church & Cemetery	church and cemetery	ridgetop
33Pk214 (PIK-207-12)	Holt Cemetery	cemetery	ridgetop
33Pk314	Ferree Church	church	terrace
33Pk327	Map Location 28	church	terrace
33Pk330	Map Location 52	church	terrace
33Pk323	Moore School	school	terrace

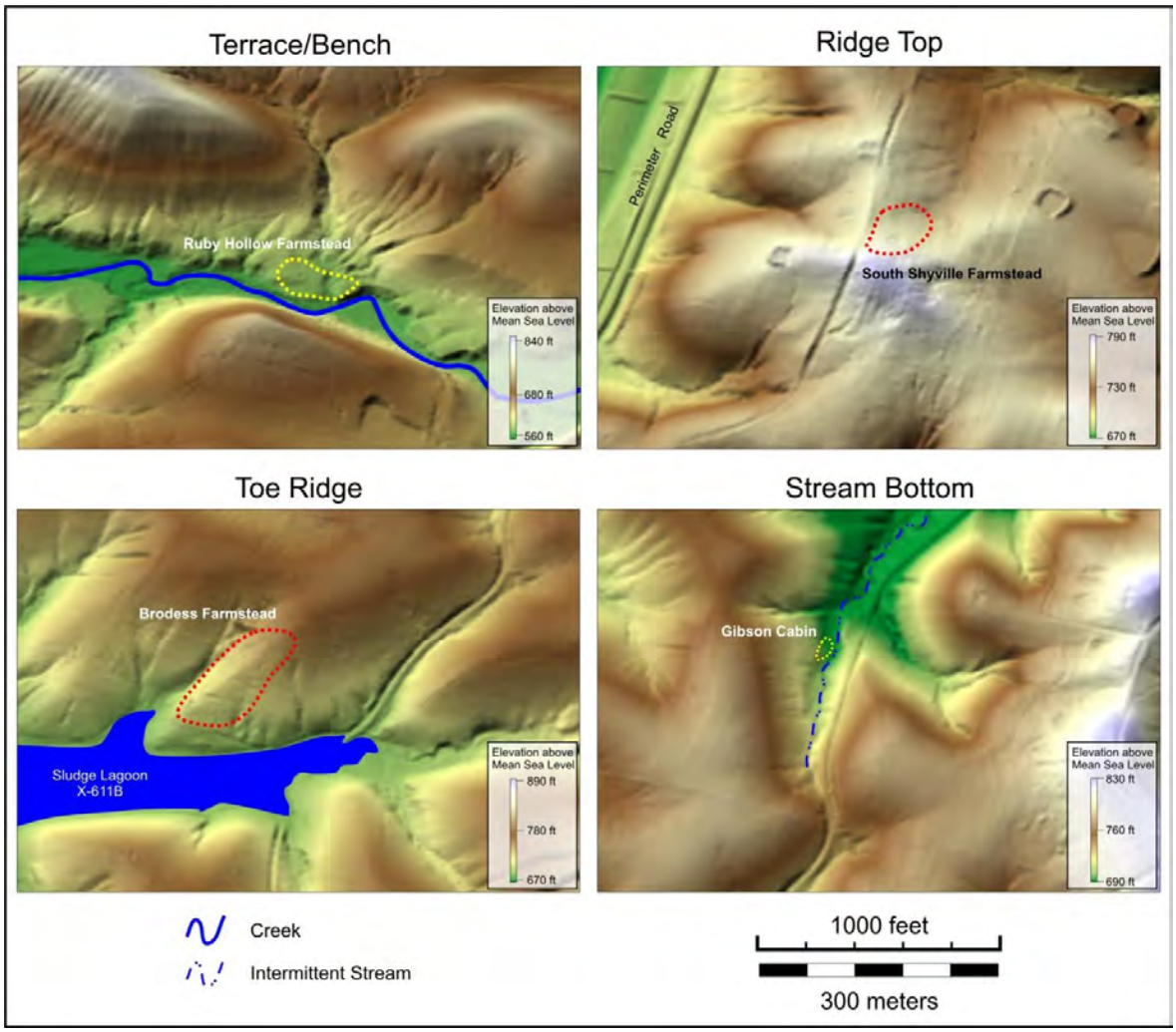

Figure 60. Example digital elevation models of major types of geographical settings.

4.2. FARMSTEAD LAYOUT

Ohio farmsteads come in many shapes and sizes, and the size, shape, and layout of their buildings, yards, and workspaces can provide information about the people who established and occupied them. Early farmsteads frequently contained many outbuildings, each with a specific function (e.g., large threshing barn, chicken coop, hog barn, wood shed, work-shop, milk house, corn crib, etc.). Modern farms tend to consolidate specific functions into larger, multifunction outbuildings and thus contain fewer "different" outbuildings. At PORTS, it is evident from the 1938/39 and 1951 aerial photographs, for example, that many of the farmsteads changed drastically during the World War II era. The South Shyville Farmstead, for example, contained at least nine buildings in 1938/39, including a house, two large barns, and six small outbuildings. By 1951, this farmstead contained the same house, one of the 1938/39 barns, and two new outbuildings including what is interpreted to be a garage. All of the small outbuildings visible on the earlier aerial were removed prior to 1951 and a larger building took their place. These changes could indicate the effects of "modernization" processes where older-functioning outbuildings were no longer needed to operate the farm—very much like when outhouses were abandoned when indoor plumbing and septic tank systems became common.

As discussed above, landform constraints also played an important role in dictating how farmsteads were arranged. The challenge for the current study is in understanding how the PORTS farmsteads were arranged prior to when the aerial photos were taken, as most of the current foundation remains reflect the last "modern" iteration of the farmsteads as they looked when they were purchased by the AEC. Earlier building arrangements are difficult to discern at the PORTS farmsteads since many of the older outbuildings were demolished and dismantled prior to the 1930s. These intentionally removed buildings tend to be harder to locate because they often were more thoroughly removed than the buildings demolished after acquisition by the AEC. However, in some cases archaeological work has detected the foundations and other remains related to some of the sites' earlier outbuildings.

Considerable variability with regards to the layout and arrangement of building locations within the PORTS farmstead and house sites is evident in the sites presented in this summary. In *Section 3* of this report (Figures 6-33), illustrations were presented to show the archaeological layout of 28 sites defined as farmstead and house sites within PORTS. These site maps include buildings identified on the ground during various archaeological projects, as well as buildings evident on maps and/or aerial photographs. It is unlikely that these maps present a complete record of all buildings at each of the sites, but in nearly all cases the larger buildings and many of the small outbuildings were identified. In this section of the report the content and layout for five of the larger farmstead sites located on a representative sample of landform types is compared within PORTS: Ruby Hollow; Terrace; Bamboo; Stockdale Road Dairy; and Mechling farmsteads. A short summary of each is first presented. Figure 61 compiles and simplifies the farmstead layouts for these sites.

Ruby Hollow Farmstead (33Pk203) is located in a very narrow valley and on a highly dissected bench/terrace approximately 3-5 ft. (1-1-5 m) above Little Beaver Creek (see Figure 10). Though in a topographically confined setting, Ruby Hollow Farmstead is perhaps the closest of the farmsteads to the Scioto River floodplain and the main north-south transportation routes that follow it. The farmstead arrangement appears to reflect an attempt to make good use of available level ground. While the house is situated on the property's only large level area, many of the outbuildings were placed in topographically constrained settings, leaving a large

area west of the house for pasture and/or cultivation. Because of a lack of space and the use of the flat area around the house for cultivation, this farmstead extended a considerable distance to the east, where the 1938/39 and 1951 aerial photographs show additional outbuildings.

Terrace Farmstead (33Pk206) is located on the western edge of a relatively broad and elevated terrace above Little Beaver Creek (see Figure 11). Most of the outbuildings and the older house (House 1) are located on the northern end of the terrace on a rise overlooking the floodplain to the west. The dairying operation is separated from the house by a small intermittent stream. South and east of the older house, the landform becomes broad and relatively flat and this area was reserved for cultivation and pasture. A newer house (House 2) and several outbuildings were constructed south of the original house and across the road after 1938. The addition of these structures could represent a recentering of the farmstead and a shift of the entire family to a new house, or, alternatively, may represent the addition of a second family to the farmstead—likely a son or daughter and their family taking up residence on their parents' property.

Bamboo Farmstead (33Pk211) is located at the edge of a broad hill/ridge top overlooking a small tributary of Little Beaver Creek. The site is relatively unique when compared with the other PORTS farmsteads in that its many buildings are confined to a small area, even though there is plenty of flat ground around the site into which the buildings could have expanded (see Figure 12). In this sense, Bamboo Farmstead is very "compact," but like many of the other farmsteads, the house is located on the very edge of the landform. Bamboo Farmstead is one of only a few PORTS farmsteads with two different types of house foundations. House 1, which is interpreted to be the older structure, is represented by the remains of a support-pier foundation with a chimney on either end of the house—as in the classic I-House design. House 2, which is not clear on the 1938 and 1951 aerial photographs, has a well-made cellar foundation of cut sandstone block. The aerials show another structure adjacent to both house foundations. Since the aerial photos do not have enough detail to show smaller features of the sites, it is unclear if House 2 and the structure next to House 1 are separate structures or additions of House 1—making House 1 an el-shaped building. The latter seems most likely. All of the outbuildings are located south and east of the house, and the farmstead has two access points from nearby roads.

Stockdale Road Dairy (33Pk217) is located on a broad expanse of upland or high terrace overlooking Little Beaver Creek (see Figure 15). In fact, one edge of the site is a bedrock bluff overlooking the creek. This farmstead stands out from the others because it has a very large poured concrete barn foundation with an attached milking platform that would have accommodated more cows than any other similar facility at a PORTS farmstead. Like a few of the other farmsteads, it also contains more than one house foundation. House 1, interpreted to be the oldest at the site, has a support pier foundation with a single end-chimney. It is not aligned to any of the other structures at the site. The second house, located along what was then Stockdale Road Dairy, has a stone-pier foundation and a filled-in stone block cellar. Six outbuildings were located between the houses, though the remains of only three of these are currently visible at the surface. Two are represented by poured concrete garage pads and the third is a stone support pier foundation. The depression on the southeastern corner of this foundation is tentatively interpreted to be a privy vault. If true, this structure may have been a mud-room or outdoor utility room with an outhouse that would have served the farmstead residents and workers. The large barn is clearly set well back from the rest of the farmstead, providing ample space for the large dairying operation.

The Mechling Farmstead (33Pk318) is located on a broad ridge-top saddle, but its main buildings are contained within a relatively small area. Several ancillary structures and features, including a small outbuilding, a large refuse dump in a ravine, and a developed spring or water catch, are located a considerable distance from the main building complex (see Figure 23). Many of the other PORTS farmsteads also likely contained similar features, but these went undetected or simply were not detectable during the surveys. Foundation remains for a portion of the house, an external poured concrete root cellar, a cistern, and a small outbuilding were identified at the Mechling Farmstead. No surface remains for at least three other structures visible on the 1938/39 and 1951 aerial photos were identified, including the large barn. Mechling Farmstead also contains three possible privy vaults off the southwest corner of the house foundation.

Farmstead structure or arrangement and topographic setting vary considerably within PORTS. In many cases, building layout conforms to available space and it is evident that many families placed their houses and other structure in places less suitable for cultivation. Ruby Hollow, Bamboo, and Terrace farmsteads (the majority of those examined here) are good examples of houses that were placed on or near bluff edges, whereas the large barns (many of which have a dairy component) were placed on flatter ground.

Figure 61 shows the layout of the major buildings at a sample of ten PORTS farmsteads. Building locations are based on archaeological data and aerial photographs. Historically, Cornett Farmstead (33Pk218), Condon Farmstead (33Pk312), and Mechling House Site (33Pk317) were small building complexes containing a house and one or two outbuildings. In all three locations, the archaeological remains of external root cellars were documented, showing that these houses were built prior to the extensive use of electric refrigerators. These three sites are more aptly defined as house sites, rather than farmsteads, as they lack large barns and, excluding Mechling House Site, are located on small property parcels. The Mechling House Site is located on the same large tract of land as the Mechling Farmstead (33Pk318). The small house sites on PORTS are possibly the residences of retired parents, farming or non-farming adult children, tenant farmer or farm employees, or they may simply be rental properties owned by larger farms.

The six remaining farmsteads depicted in Figure 61 are true farmsteads, each containing at least one house, a large barn, and an assortment of other outbuildings of various size and shape. Large farmstead size does not appear to correlate with affluence, as Ruby Hollow Farmstead is the largest (i.e., most spread out) of the six true farmsteads, yet it is located on what might be construed as a marginal landform surrounded by steep rugged terrain. In contrast, Brodess Farmstead (33Pk311), Bamboo Farmstead (33Pk211), Stockdale Road (33Pk217), and Mechling Farmstead (33Pk318) are spatially concentrated (smaller area) but are located on better quality, open land. They also contain relatively modern improvements such as high quality concrete barn and house foundations.

Terrace Farmstead (33Pk206) is also located on good quality, open land, but its buildings were spread out over a large area at a scale similar to Ruby Hollow Farmstead (33Pk203). Unlike Ruby Hollow Farmstead, however, Terrace Farmstead also contains a second house and several small outbuildings that were constructed in the southern part of the site after 1938. The development of this new component expanded the farmstead complex beyond its original boundaries.

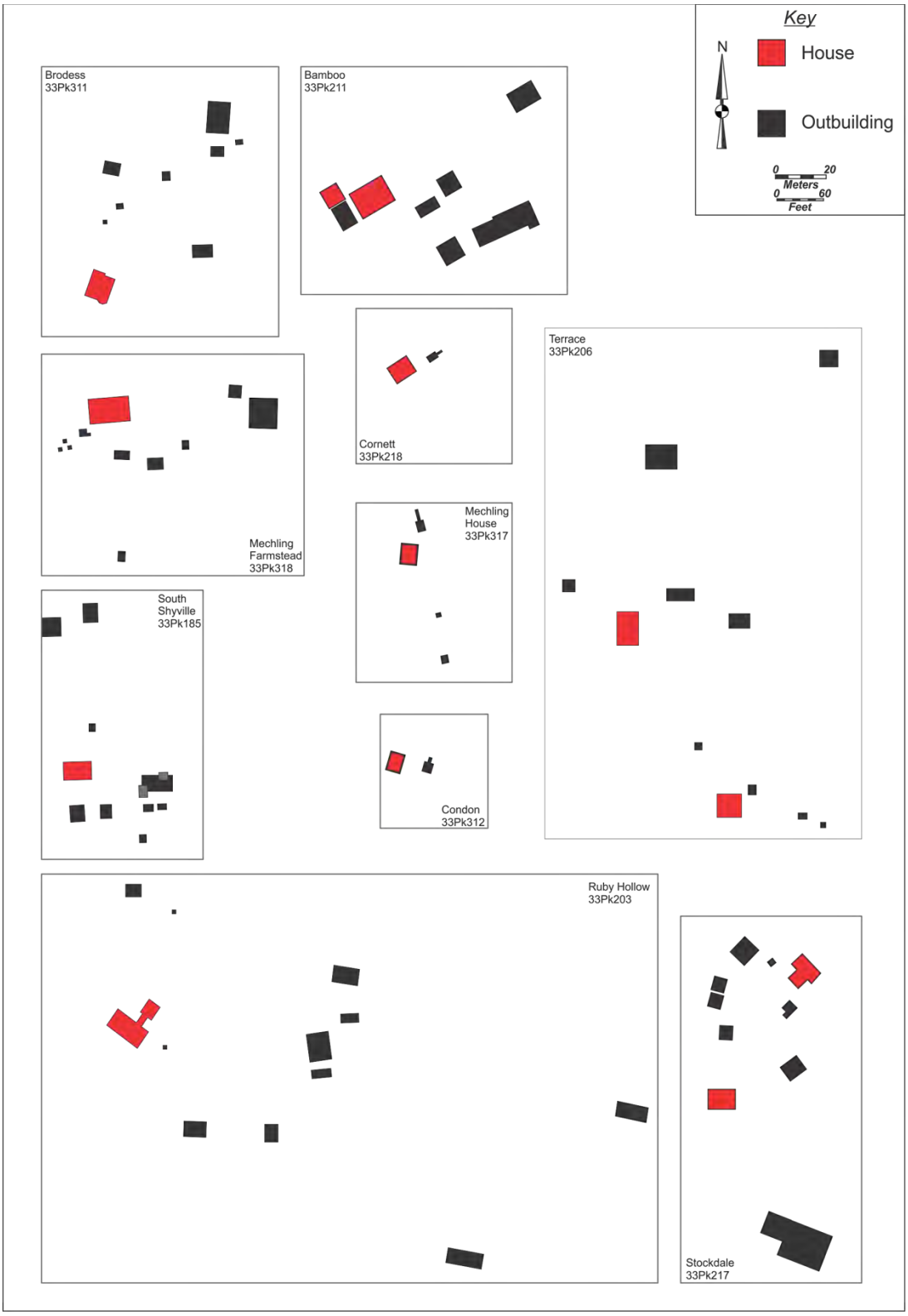

Figure 61. A sample of PORTS farmstead and house sites showing building arrangement variability based on aerial photographs.

5. STRUCTURE/BUILDING FOUNDATIONS

Foundation remains are important archaeological features because they are frequently all that is left of the structures that once stood on historic-era sites. They also provide information building floor plans (i.e., numbers and layouts of rooms), building size, construction techniques and materials, and the configuration and layout of multiple buildings within the site. The size, configuration, and stoutness of a foundation may also be indicative of the function of the building that once was located upon it. Archaeologically, it is usually fairly easy to distinguish house and barn foundations from the various outbuildings that contribute to farmstead sites. And in turn, house foundations are often configured differently than large barn foundations, but typically *both* large barns and house foundations are more durable than those of smaller barns and outbuildings. Houses also frequently have cellars, chimney bases or foundations, and a variety of landscaping. Large barns have foundation systems that accommodate large, open, interior bays, but outbuildings may have pier arrangement that elevate floored structures above ground. Additionally, of all of the buildings at a farmstead, houses tend to be the most expensive and occupied/used for the longest.

After the lands that now make up PORTS were purchased by the AEC in the 1950s, all standing structures were razed, leaving behind the remains of the more durable foundations and much rubble. Many of the lighter/smaller support-pier foundations were completely destroyed or severely displaced during the demolition process. Some farmsteads, like the Emma Farmer Farmstead (33Pk349), were abandoned much earlier and were reclaimed for agriculture. The reclamation process resulted in the removal of nearly all structural remains at the surface, especially if the sites then went into agricultural cultivation. However, even these sites still have archaeological remains beneath the plowed layer, but they require a different kind of archaeological approach if one is to find them. A very thorough archaeological investigation would likely find evidence for all of the structures that once existed at the PORTS farmsteads. To date, the archaeological work at many of the PORTS farmsteads has used extensive sampling, which has led to the documentation of many of the building and structure foundations associated with farmstead and house sites.

Archaeological investigations of the PORTS historic-era sites not only documented the location, size, shape, material type, and construction methods used for extant foundations, but also attempted to infer "function" in terms of the types of structures that the foundations once supported. Table 14 summarizes building types (based on foundation remains) identified at all of the PORTS sites; only those sites that produced archaeological evidence of building foundations (n=26) are listed. These data reveal that 19 house foundations were identified, archaeologically, from investigations at 61 historic-era sites. Additionally, there were 22 barns, with 7 dairy/milking parlors, and 42 outbuildings used for various purposes, from workshops to equipment storage to livestock housing. Of note, there were remains identified for 44 structures that were used for some type of waterworks—for both the people inhabiting the farms and for their animals. Larger farmsteads all contained evidence of at least one house, a large barn, a barn with a milking parlor or standalone milking parlor, several outbuildings of various sizes and shapes, and, in some cases, garages. Several farmsteads and home-sites were also found to contain external root cellars, privies, and septic systems. Water works facilities often contain what have been interpreted to be a pump house foundation (or water filtering system), an associated well or cistern, and an above-ground rectangular trough-like structure likely used to water livestock.

Table 14. General building foundation "function" types documented within PORTS*.

OAI #	Site Name	House	Cabin	Church	Summer Kitchen	Internal House Cellar	Internal Pit Cellar	External Root Cellar	Barn	Dairy Parlor	Shed/ out-building	Silo	Garage	Water Works	Privy/ Septic Tank	Un-known	Total
33Pk184	Davis Farmstead	1	-	-	-	-	-	1	1	-	-	-	-	2	2	-	**7**
33Pk185	South Shyville Farmstead	1	-	-	-	-	1	1	2	1	6	-	1	4	-	-	**17**
33Pk194	North Shyville Farmstead	1	-	-	-	-	-	-	1	-	1	-	1	2	1	1	**8**
33Pk195	Beaver Road Farmstead	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	**1**
33Pk197	Dutch Run Rd. Farmstead	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	**2**
33Pk203	Ruby Hollow Farmstead	1	-	-	-	1	-	-	3	1	5	-	1	2	2	-	**16**
33Pk206	Terrace Farmstead	2	-	-	-	2	-	-	1	1	8	-	-	2	-	-	**16**
33Pk211	Bamboo Farmstead	2	-	-	1	1	1	-	2	1	2	-	1	5	2	-	**18**
33Pk212	Railside Farmstead	1	-	-	-	1	-	-	1	1	-	-	-	2	-	-	**6**
33Pk213	Log Pen Farmstead	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	**2**
33Pk217	Stockdale Road Dairy	2	-	-	-	1	-	-	1	1	3	-	2	5	1	-	**16**
33Pk218	Cornett Farmstead	1	-	-	-	-	1	1	-	-	4	-	-	1	-	-	**8**
33Pk311	Brodess Farmstead	1	-	-	-	1	-	-	1	-	5	-	1	3	2	-	**14**
33Pk312	Condon Farmstead	1	-	-	-	-	-	1	-	-	-	-	-	1	-	-	**3**
33Pk317	Mechling House Site	1	-	-	-	-	-	1	-	-	-	-	-	1	1	-	**4**
33Pk318	Mechling Farmstead	1	-	-	-	1	-	-	1	-	4	-	-	3	3	-	**13**
33Pk320	Map Loc. 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	**1**
33Pk321	Map Loc. 3	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	**1**
33Pk322	Map Loc. 4	1	-	-	-	-	-	-	1	-	3	-	-	-	1	-	**6**
33Pk324	Map Loc. 50	1	-	-	-	-	-	-	3	1	1	1	-	5	-	-	**12**
33Pk327	Map Loc. 28	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	**1**
	Map Loc. 37	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	**1**
33Pk331	Map Loc. 53	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	**1**
33Pk345	Gibson Cabin	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	**2**
33Pk359	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	**1**
33Pk360	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	**1**
33Pk364	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	**2**
	Total	**19**	**1**	**1**	**1**	**8**	**3**	**5**	**22**	**7**	**42**	**1**	**7**	**44**	**15**	**4**	**180**

* Includes only sites containing archaeological evidence of building foundations.

5.1. FOUNDATION TYPES AND MATERIALS

The historic-era buildings that once stood at PORTS were built with a variety of foundation types, including support pier, continuous wall, and concrete slab. Foundations are important archaeologically since they are all that remains of nearly every historic-era structure at PORTS.

Structures with support pier foundations were quite common during the nineteenth and early twentieth centuries in southern Ohio. This construction system involved the placement of stone piers on the corners of the intended building plan, in regularly spaced rows along the outer walls and through the center of the foundation. The building was then built upon wooden sills that were positioned across the piers. Two general types of stone support pier foundations were observed among the archaeological remains at the PORTS historic-era sites: 1. rough stacked stone piers; and 2. cut sandstone block pier foundations.

5.1.1. Rough Stacked Stone (Fieldstone) Support Pier

At least 21 structures from 12 PORTS historic-era sites included support pier foundations made from stacked irregular pieces of sandstone (fieldstone). These rough stacked stone support piers are the most common foundation type in the PORTS assemblage (Table 15). This building material would have been readily available, as it occurs naturally along steep side slopes and in stream beds, and it could have been procured at little cost with minimal effort. It is also likely that this type of foundation building material was used for the earliest PORTS farmstead buildings. Although rough stacked piers were frequently used for small, light-weight outbuildings or sheds, they were also observed among many house foundations at PORTS. Examples of two house foundations with rough stacked stone piers include Stockdale Road Dairy (House 1) and South Shyville Farmstead—both are depicted in Figures 62 and 63.

Table 15. Rough stacked stone (fieldstone) support pier foundations documented to date within PORTS.

OAI #	Site Name	House	Recreational Cabin	Summer Kitchen	Barn	Dairy Parlor	Outbuilding/ Shed	Total
33Pk185/ 193	South Shyville Farmstead	1	-	-	1	-	-	**2**
33Pk194	North Shyville Farmstead	-	-	-	-	-	1	**1**
33Pk203	Ruby Hollow Farmstead	1	-	-	-	-	2	**3**
33Pk206/ 364	Terrace Farmstead	1	-	-	-	-	2	**3**
33Pk211	Bamboo Farmstead	1	-	1	-	-	-	**2**
33Pk212	Railside Farmstead	-	-	-	1	-	-	**1**
33Pk217	Stockdale Road Dairy	2	-	-	-	-	-	**2**
33Pk345	Gibson Cabin	-	1	-	-	-	-	**1**
33Pk311	Brodess Farmstead	1	-	-	-	1	-	**2**

OAI #	Site Name	House	Recreational Cabin	Summer Kitchen	Barn	Dairy Parlor	Outbuilding/ Shed	Total
33Pk317	Mechling House Site	1	-	-	-	-	-	**1**
33Pk318	Mechling Farmstead	1	-	-	-	-	1	**2**
33Pk218	Cornett Farmstead	1	-	-	-	-	-	**1**
	Total	**10**	**1**	**1**	**2**	**1**	**6**	**21**

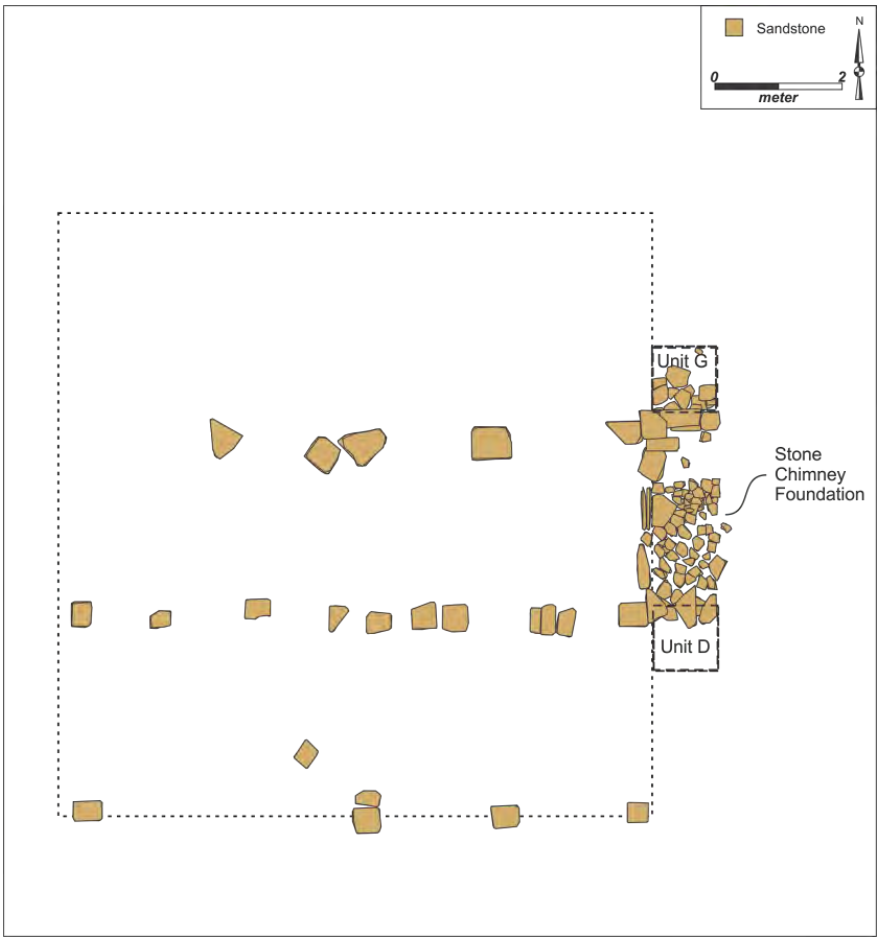

Figure 62. Example of a rough stacked stone support pier house foundation at Stockdale Road Dairy (33Pk217).

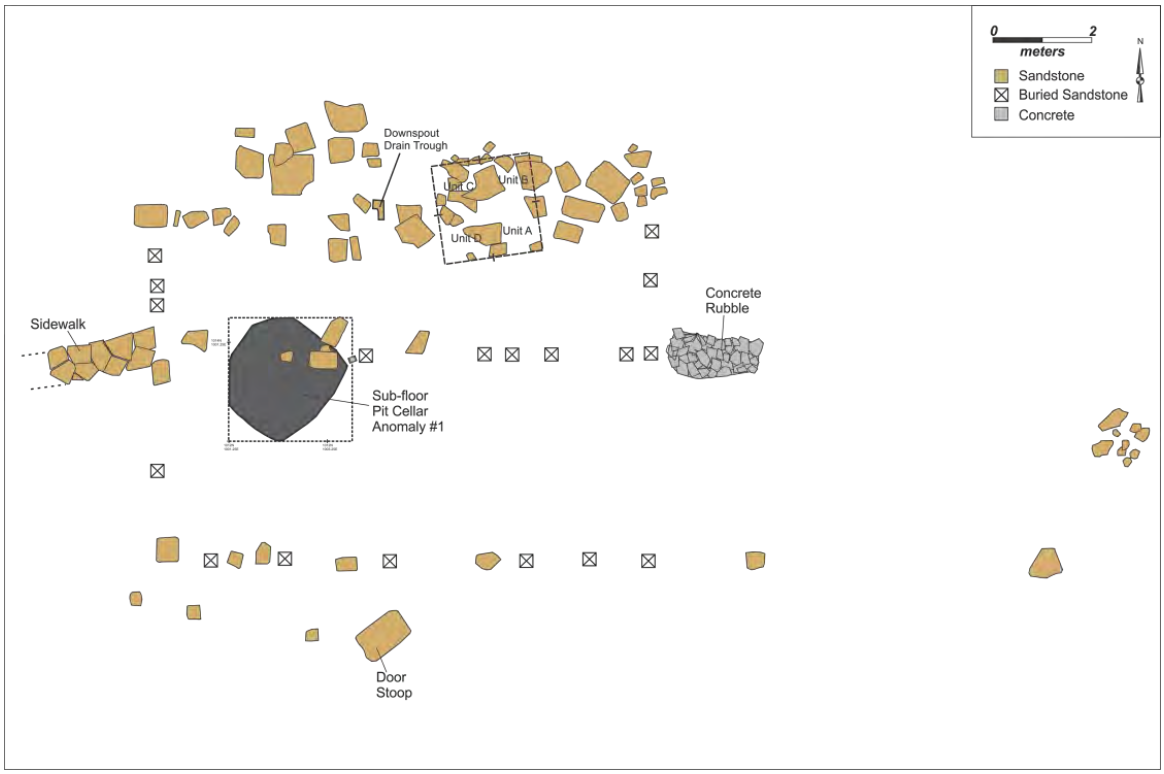

Figure 63. Example of a rough stacked stone support pier house foundation at South Shyville Farmstead (33Pk185).

5.1.2. Cut Sandstone Block Support Pier Foundations

Cut sandstone block support pier foundations are somewhat rare among the archaeological remains at the PORTS historic-era sites (Table 16). These support pier foundations are generally made of cut sandstone in the form of somewhat cube-shaped blocks and tend to be arranged at regular intervals in a symmetrical pattern. Unlike the rough sandstone piers, which tend to be closely spaced, these piers tend to be spaced at wider intervals. Examples of this foundation type were documented at Terrace Farmstead (33Pk206) and Bamboo Farmstead (33Pk211) and are depicted in Figures 64-66. Block support piers are assumed to be more costly than rough sandstone fieldstone, and it is likely that the stone was procured from formal quarries. The use of this building material probably took more effort as well, as the building stone would have been transported from greater distances. This suggests that these structures were more costly to build.

At least seven structures at four of the PORTS farmstead sites contain cut sandstone block pier support foundations (Table 16). All appear to be for larger outbuildings of a type that would have had horizontal wood sills and wood plank floors. Bamboo Farmstead, however, has a large barn foundation with cut sandstone block piers (Figure 65). Rather than being used to support horizontal sills, these stone piers would have supported vertical frame posts, allowing the barn interior to be open with a floor at the ground level. The Bamboo Farmstead barn also has a poured concrete milking platform, which would have been a modification to the older original structure.

Table 16. Cut sandstone block support pier foundations within PORTS.

OAI #	Site Name	House	Barn	Shed/ Outbuilding	Unknown	Total
33Pk194	North Shyville Farmstead	-	1	-	1	**2**
33Pk206/ 364	Terrace Farmstead	-	1	1	-	**2**
33Pk211	Bamboo Farmstead	-	1	1	-	**2**
33Pk312	Condon Farmstead	1	-	-	-	**1**
	Total	**1**	**3**	**2**	**1**	**7**

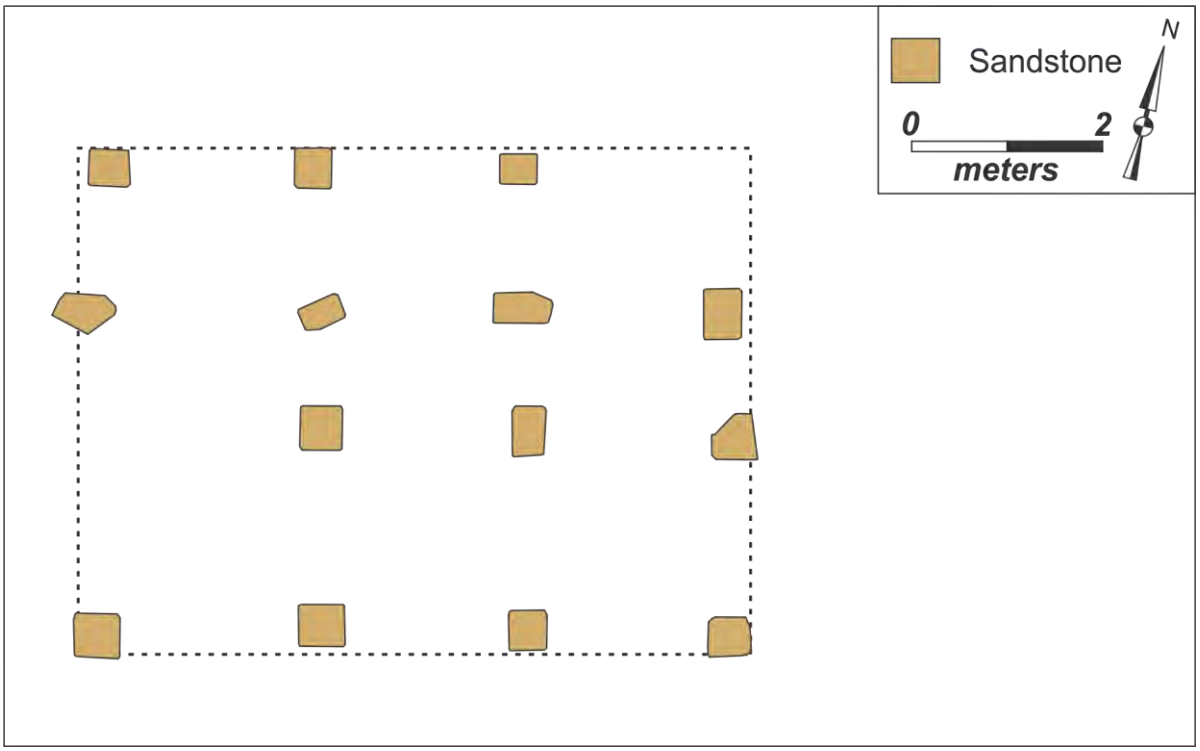

Figure 64. Example of a cut sandstone block support pier outbuilding foundation from Bamboo Farmstead (33Pk211).

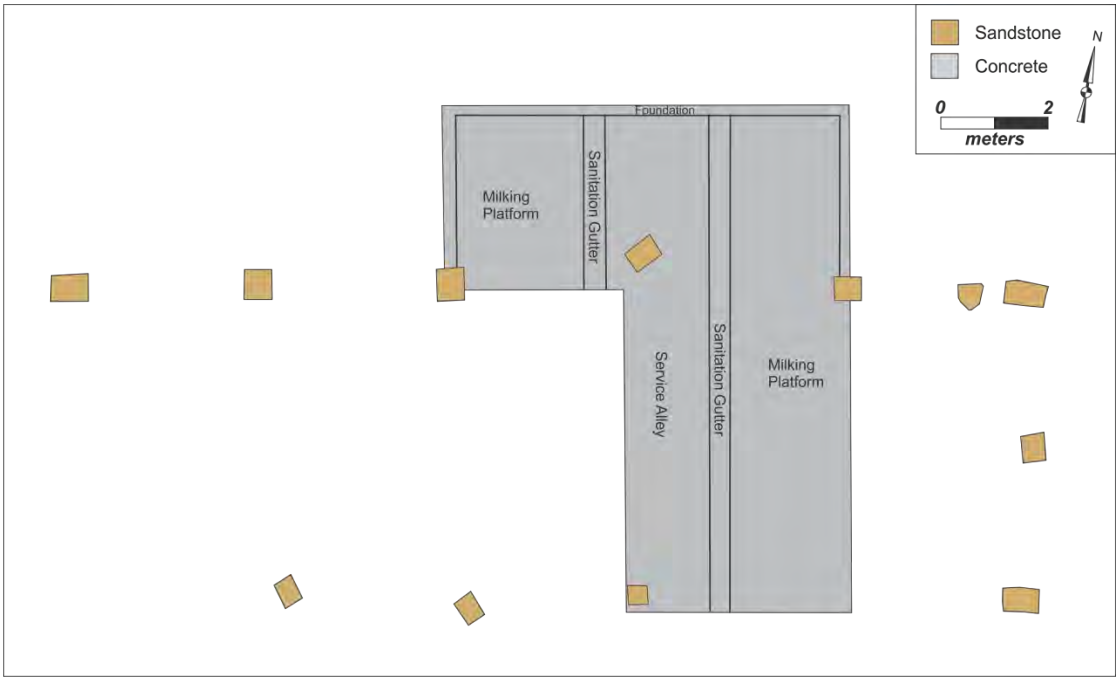

Figure 65. Example of a cut sandstone block support pier barn foundation with poured concrete milking parlor improvement from Bamboo Farmstead (33Pk211).

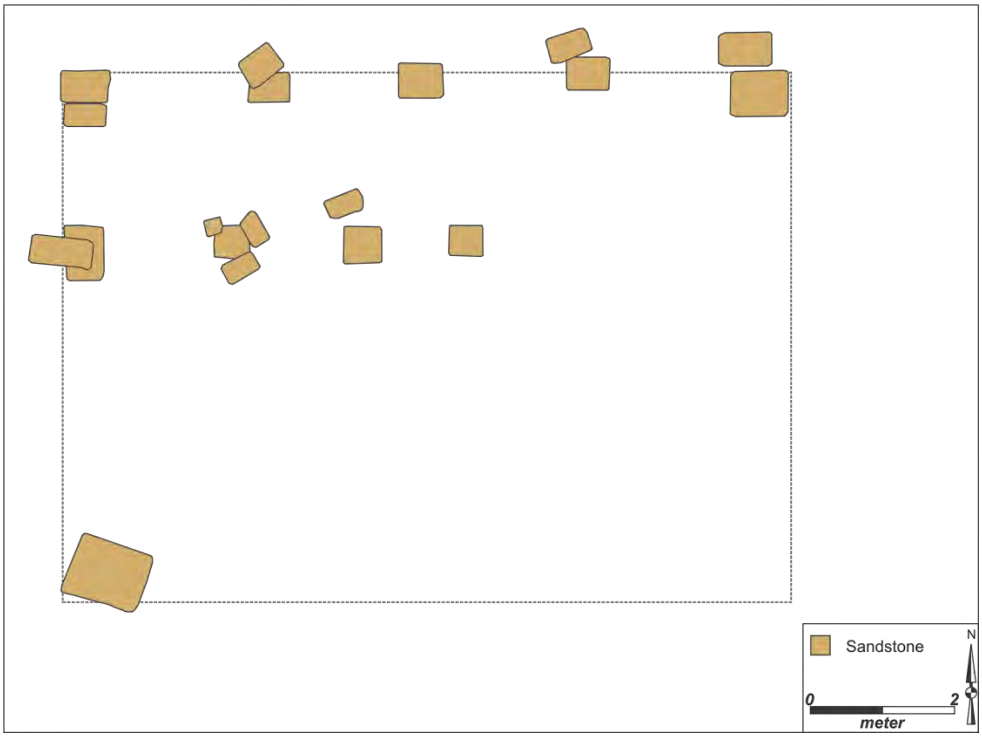

Figure 66. Example of a cut sandstone block support pier outbuilding foundation from Terrace Farmstead (33Pk206).

5.1.3. Rough Sandstone (Fieldstone) Masonry

Ten structures at seven of the PORTS sites contain foundation remains made with rough sandstone masonry. This type of foundation wall masonry is constructed of dry-laid irregular pieces of sandstone or fieldstone in continuous walls. Figures 67 and 68 illustrate two examples of house cellars made with rough sandstone masonry from Brodess and Terrace farmsteads. Table 17 lists each farmstead with evidence of this foundation type. This type of building material reflects the use of locally available stone that naturally outcrops along steep side slopes and stream bottoms within or near PORTS. This material was probably the least costly building material available and was potentially procured at no cost beyond labor. It is also likely that fieldstone masonry was used for some of the earliest foundations.

Table 17. Rough sandstone (fieldstone) masonry foundations within PORTS.

OAI #	Site Name	House Cellar	Chimney/ Stove Base	External Root Cellar	Total
33Pk185/193	South Shyville Farmstead	-	-	1	**1**
33Pk206/364	Terrace Farmstead	1	1	-	**2**
33Pk217	Stockdale Road Dairy	1	2	-	**3**
33Pk311	Brodess Farmstead	1	-	-	**1**
33Pk312	Condon Farmstead	-	-	1	**1**
33Pk317	Mechling House Site	-	-	1	**1**
33Pk322	Map Location 4	-	1	-	**1**
	Total	**3**	**4**	**3**	**10**

Figure 67. Photograph of a rough fieldstone masonry cellar foundation (background) with cinder block and poured concrete (foreground) at Brodess Farmstead (33Pk311).

Figure 68. Photograph of a rough fieldstone masonry cellar foundation (partially collapsed) at Terrace Farmstead (33Pk206).

5.1.4. Dressed/Cut Sandstone Masonry

Dressed or cut sandstone block masonry foundations (n=4) were also documented in the PORTS farmstead archaeological assemblage (Table 18). This foundation type is characterized by large sandstone blocks that are cut and hewn into fairly regular sizes and shapes. Figure 69 shows an example of a dressed stone masonry house cellar at Ruby Hollow Farmstead. Unlike the fieldstone masonry, the cut sandstone would have been quarried and transported from elsewhere. A house cellar at Bamboo Farmstead is made from what appears to be McDermott sandstone. McDermott sandstone is a high quality stone from a quarry located approximately 15 miles southwest of the site, near Portsmouth. The quarry was established in 1897 by brothers William and Michael McDermott and is still in operation today. A barn foundation at Bamboo Farmstead has two parallel stone block masonry walls, but the remainder of the foundation is cut stone block piers. In contrast to rough stone masonry, which made use of naturally occurring sandstone within PORTS, dressed/cut sandstone would have required considerable effort and cost to acquire.

Table 18. Dressed/cut sandstone masonry foundations within PORTS.

OAI #	Site Name	Internal House Cellar	External Root Cellar	Barn	Total
33Pk203	Ruby Hollow Farmstead	1	-	-	**1**
33Pk211	Bamboo Farmstead	1	-	1	**2**
33Pk218	Cornett Farmstead	-	1	-	**1**
	Total	**2**	**1**	**1**	**4**

Figure 69. Photograph of a cut stone masonry cellar foundation wall (with a poured concrete floor) at Ruby Hollow Farmstead (33Pk203).

5.1.5. Poured Concrete and Cinderblock

Poured concrete and cinderblock are the most common materials used in foundations at PORTS sites, where these materials were found in 68 foundations at 18 of the sites (Table 19). Of note is the fact that barns, milking parlors, and waterworks structures account for nearly two-thirds (64%) of the occurrences. The widespread use of concrete as a building material did not occur until about 1920, 21 years after the portable cement kiln was patented in 1899 (Miller 2000). The widespread use of cinder block occurred around the same time. Both materials represent modern construction and improvement efforts within farmsteads in the PORTS area and are likely to post-date the 1920s. Concrete and cinderblock were often used for the construction of garage pads or slabs, milking platforms, foundation improvements within houses and other structures, and house cellars (Figures 70-72). Initials and dates inscribed in the concrete at the Ruby Hollow Farmstead, in the cellar floor and a milking parlor, demonstrate that concrete was poured there in the late 1930s. The use of concrete in dairy facilities (barns and milking parlors) is, in part, a response to the introduction of early and mid-twentieth century sanitation standards for commercial milk production. With the aid of water (e.g., with the aid of modern concrete cisterns and pump houses), poured concrete floors are easy to keep clean, which helped insure a cleaner milk product. In some cases, the concrete milking parlors were part of barns built anew to incorporate the modern building materials, as at the South Shyville Farmstead and the Stockdale Road Dairy. At other sites, such as Bamboo Farmstead, the concrete was added to existing barns and surrounds the older building members.

Table 19. Poured concrete and cinderblock foundations within PORTS.

OAI#.	Site Name	House	Partial House	House Cellar	External Root Cellar	Barn	Dairy Parlor	Shed/ Out-building	Silo	Water-works	Septic Tank	Garage	Unknown	Total
33Pk184	Davis Farmstead	1	-	-	1	1	-	1	-	2	-	1	-	**7**
33Pk185/ 193	South Shyville Farmstead	-	-	-	-	-	1	-	-	-	-	-	-	**1**
33Pk194	North Shyville Farmstead	1	-	-	-	1	-	-	-	-	1	1	-	**4**
33Pk195	Beaver Road Farmstead	-	-	-	-	-	-	-	-	-	-	-	1	**1**
33Pk197	Dutch Run Rd. Farmstead	-	-	-	-	-	-	-	-	1	-	-	-	**1**
33Pk203	Ruby Hollow Farmstead	-	-	1*	-	1	1	-	-	2	-	1	-	**6**
33Pk206/ 364	Terrace Farmstead	-	-	1	-	-	1	-	-	1	-	-	-	**3**
33Pk211	Bamboo Farmstead	-	-	-	-	-	1	-	-	5	1	1	-	**8**
33Pk212	Railside Farmstead	1	-	-	-	-	1	-	-	1	-	-	-	**3**
33Pk217	Stockdale Road Dairy	-	-	-	-	1	1	-	-	4	-	2	-	**8**
33Pk218	Cornett Farmstead	-	-	-	1	-	-	-	-	-	-	-	-	**1**
33Pk311	Brodess Farmstead	-	1	-	-	1	-	-	-	2	-	1	-	**5**
33Pk317	Mechling House Site	-	-	-	-	-	-	-	-	1	-	-	-	**1**
33Pk318	Mechling Farmstead	-	-	1	-	-	-	1	-	1	-	-	-	**3**
33Pk320	Map Location 2	-	-	-	-	-	-	-	-	-	-	-	1	**1**
33Pk322	Map Location 4	-	-	-	-	1	-	2	-	-	-	-	-	**3**
33Pk324	Map Location 50	1	-	-	-	3	1	1	1	4	-	-	-	**11**
33Pk331	Map Location 53	-	-	-	-	1	-	-	-	-	-	-	-	**1**
	Total	**4**	**1**	**3**	**2**	**10**	**7**	**5**	**1**	**24**	**2**	**7**	**2**	**68**

*Floor only

Figure 70. Photograph of a poured concrete milking platform at Ruby Hollow Farmstead (33Pk203).

Figure 71. Photograph of a poured concrete cellar foundation at Terrace Farmstead (33Pk206).

Figure 72. Photograph of a poured concrete slab roof (stone masonry walls have mortar skim coat) on external root cellar at Cornett Farmstead (33Pk218).

5.2. HOUSE FOUNDATIONS

Nineteen house foundations were documented at 27 of the PORTS sites (Table 14). Three farmsteads (Terrace, Bamboo, and Stockdale Road Dairy) each contain two house foundations, each one representing different periods of farmstead development. The Bamboo Farmstead houses all may be part of a single house with an el-shaped addition.

House foundation plans vary significantly across the PORTS farmstead assemblage. It is not feasible to discuss all variability, as there seems to be little or no patterning, but examples of different foundation plans are presented in Figures 73-78. Figure 73 illustrates the South Shyville Farmstead's house foundation, which has a nearly square plan, archaeologically, and corresponds to what is visible on aerial photographs. The flagstone sidewalk extending off the west side of the house leads to the public roadway. No clear chimney foundation is evident in this plan, but a considerable amount of large building stone along the house's north side could be the remains of chimney foundation. A sub-floor pit or trap cellar was found on the interior west end of the house. Subfloor pits were very common in early houses in the southern United States, where they often appeared in front of the fireplace.

Figure 74 depicts the house foundation at Ruby Hollow Farmstead (33Pk203). Very little remains of this foundation, with the exception of a dressed/cut stone block cellar, several displaced support piers, and a portion of a displaced wall on the south side. The cellar had a poured concrete floor with a synthetic linoleum-like floor covering. These two attributes would have been "modern" improvements to an older foundation. The aerial photos show a very

different house plan in this area, including an attached structure to the west and possibly to the north. Off the northeast corner of the foundation is a pump house foundation and an associated well or cistern. Not depicted in this image is a privy vault several meters to the east. The differences between the house plan visible on the aerial photographs and the archaeological foundation reflects the level of surface disturbance, probably from the building demolition, at this site and the resolution of the aerial photo graphs, which sometimes are difficult to interpret.

Figure 75 depicts the more recent House 2 foundation at Stockdale Road Dairy. House 1, interpreted to be an older structure, is located in the interior of the farmstead to the south. The earlier house is a rectangular-shaped support pier foundation with an end chimney. The second house foundation has a roughly T-shaped plan that corresponds with what is visible on the aerial photos. A cellar with an external stairwell extends off the back of the house. Excavations along one house foundation wall uncovered regularly spaced stone block piers with lighter stone rubble between the piers. Additional excavations near the middle of the house's front portion revealed a square-shaped stone pavement thought to be a chimney or stove base. Small pieces of brick, probably from a chimney, were also documented in and around this feature. A stone-lined well and an associated concrete pump house foundation are located on the west side of the house. The pump house probably provided water to the house through a modern plumbing system.

Figure 76 depicts the house foundations at Bamboo Farmstead (33Pk211). House 1, which is interpreted as the oldest house, is represented by a large rectangular-shaped foundation made with cut sandstone block piers and partial cut sandstone masonry along either end. A sub-floor pit or trap cellar was found near the west end of the foundation. The house also had two end chimneys reminiscent of an I-House plan. The I-House was a common house plan in the Ohio Region from around 1820-1890 (Gordon 1992). Adjacent to the east end of House 1 is House 2, represented by a cut sandstone masonry cellar. This foundation has a roughly square to rectangular plan, though the structure above it probably extended to the north and west on a stone pier foundation. On the south side of the cellar is a massive, well-made chimney foundation that extends from the floor of the cellar to the top of the cellar wall. The aerial photographs show a third structure to the south, between the cellar and the main house, but only displaced foundation piers were found on the surface in this area. This third structure was probably a summer kitchen. The cellar and summer kitchen may have been attached to the main house, forming a large, L-shaped building. Additions of this type were a very common way to enlarge houses built using the I-House pattern. Associated with the house foundations are what appears to be a concrete septic system and a concrete cistern. Both of these are modern additions that would have provided indoor plumbing for the house.

The Mechling Farmstead (33Pk318) house foundation is only partially intact, but appears to have had a large rectangular stone support pier plan (Figure 77). The plan depicted in Figure 76 corresponds with what is visible on the 1938/39 and 1951 aerials. Poured concrete and cinder block repairs are evident along the north side. Although no chimney foundations are visible on the surface, a machine-made-brick chimney fall was documented on the northwest corner. On the foundation's east end is a poured concrete and cinder block cellar. What is odd about this apparent house addition is that the cellar appears to extend beyond the house foundation. It is possible that a shed-roof addition or porch covered the eastern part of the cellar. Off the northeast corner of the house is a stone lined well with a poured concrete well-box.

Brodess Farmstead (33Pk311) contains the most unusual house foundation plan (Figure 78). Rough stone masonry forms an interior cellar, and several rough stone support piers for the rest of the house remain intact. Poured concrete pads and foundation walls, however, form much

of the foundation's outline, which is nearly square and has a chamfer or beveled bay on the southeast end. This feature creates a Victorian-style house plan, which was common in urban areas of the eastern United States during the late part of the nineteenth century. Associated with the house is a large concrete cistern on the west side, a stone-lined well adjacent to the south side, and a double chambered stone-lined septic system off the northwest corner. These facilities would have serviced a modern indoor plumbing system, though the septic system is clearly an "older" design, probably dating to the early part of the twentieth century. The sidewalk that extends to the north of the foundation leads to a privy vault. The privy was possibly an older facility, but may have remained functional into the 1950s. To the north of the Brodess Farmstead house foundation is a large stone masonry retaining wall that extends farther to the east. The purpose of the retaining wall appears to be decorative because the topographic slope does not appear to be steep enough to necessitate a structural retention wall at this location.

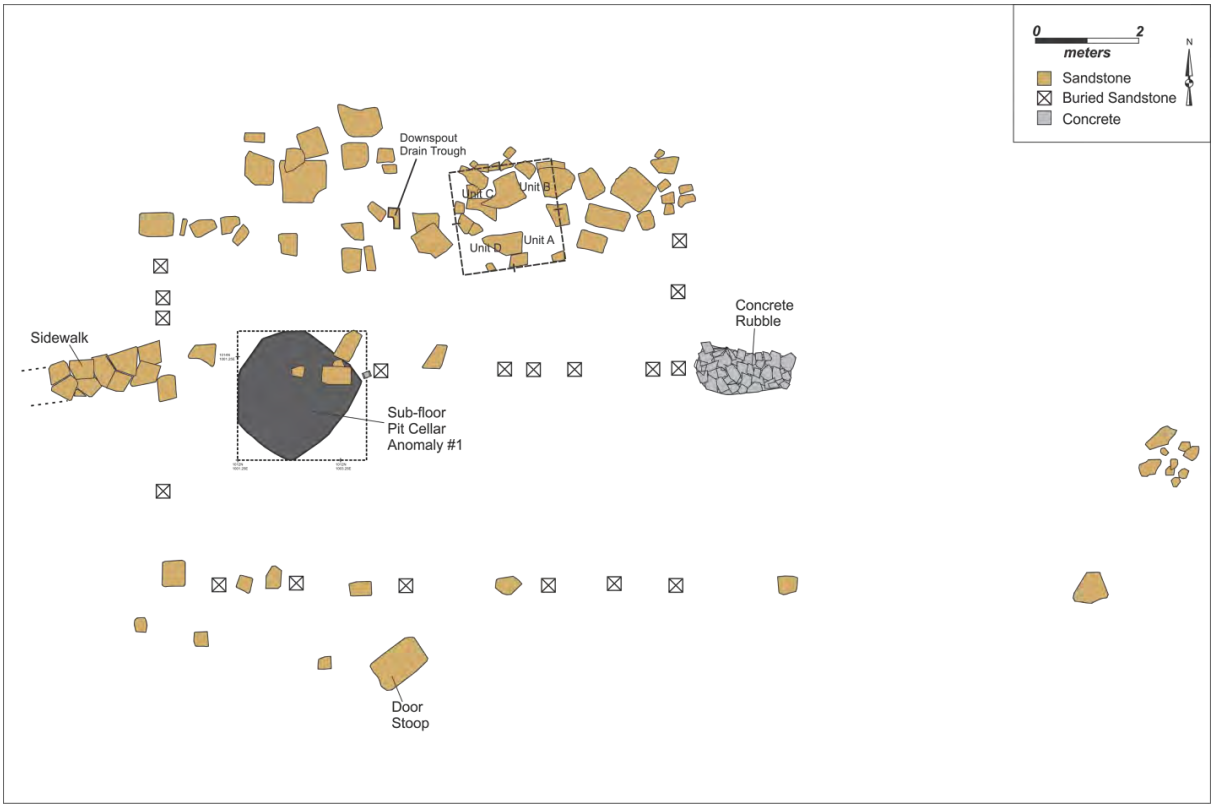

Figure 73. Illustration of the house foundation at South Shyville Farmstead (33k185).

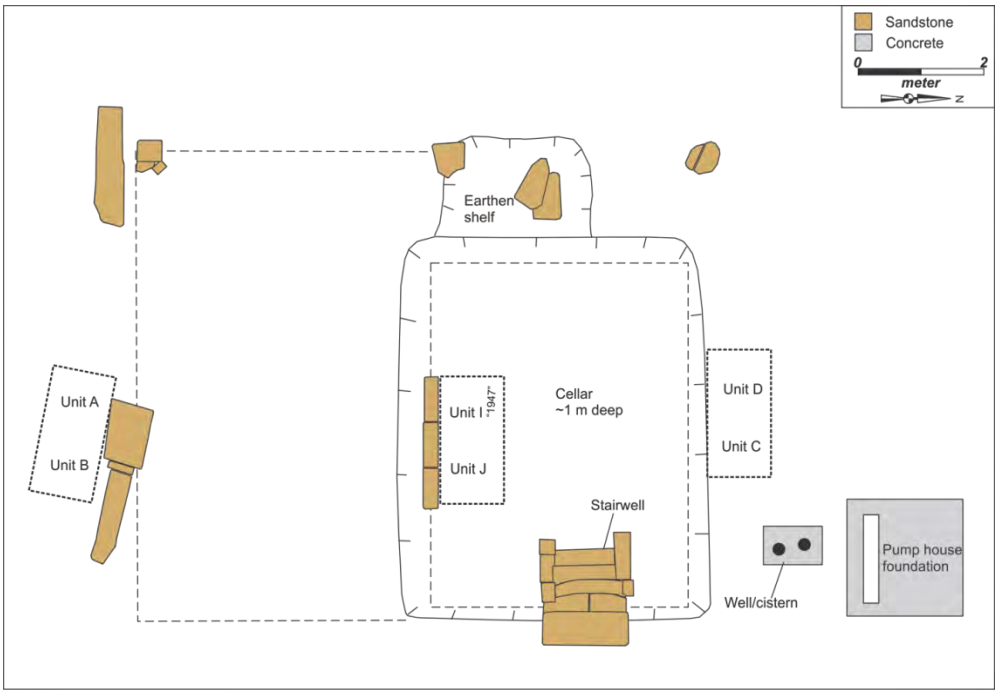

Figure 74. Illustration of the house foundation at Ruby Hollow Farmstead (33Pk203).

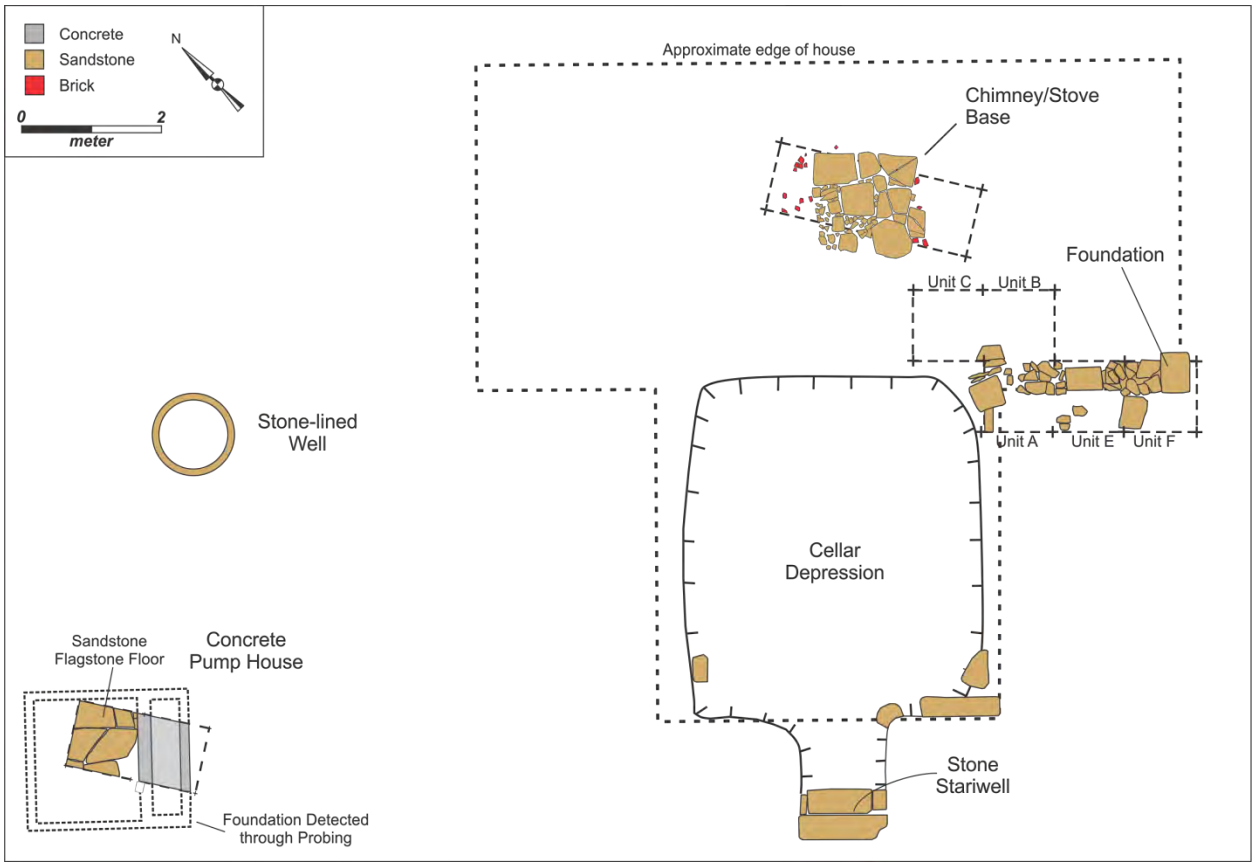

Figure 75. Illustration of a house foundation at Stockdale Road Dairy (33Pk217).

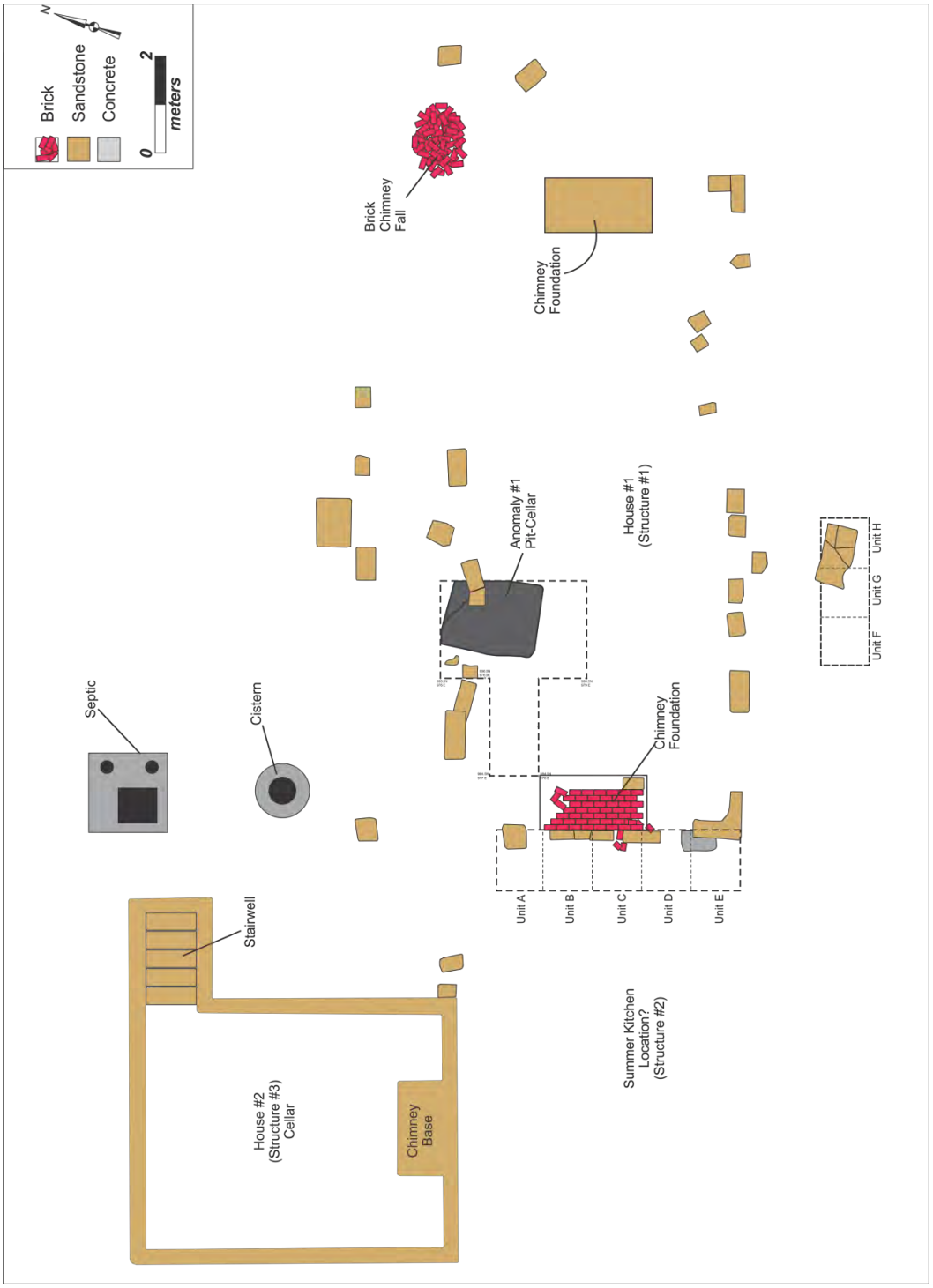

Figure 76. Illustration of house arrangement at Bamboo Farmstead (33Pk211).

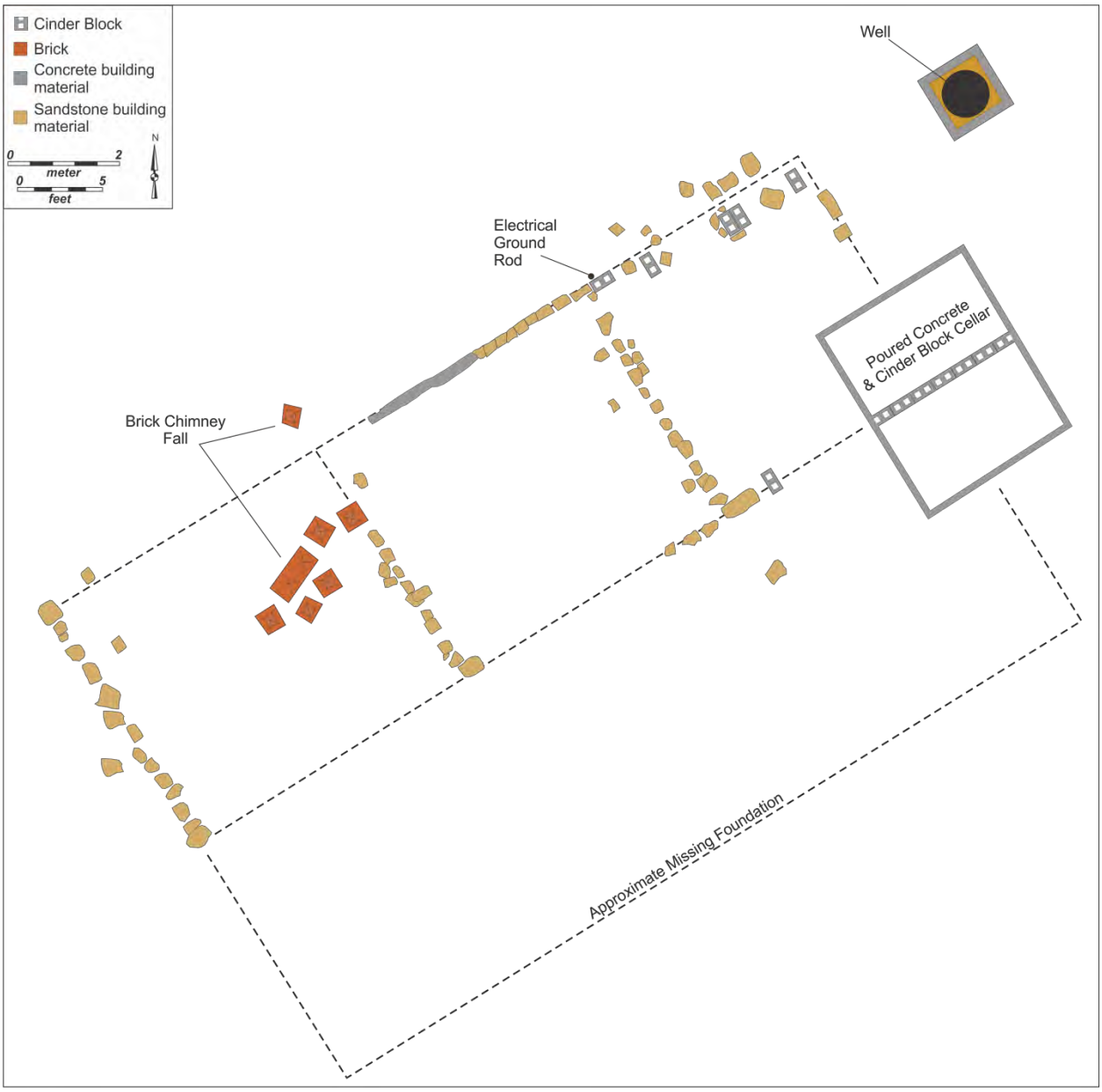

Figure 77. Illustration of the house foundation at Mechling Farmstead (33Pk318).

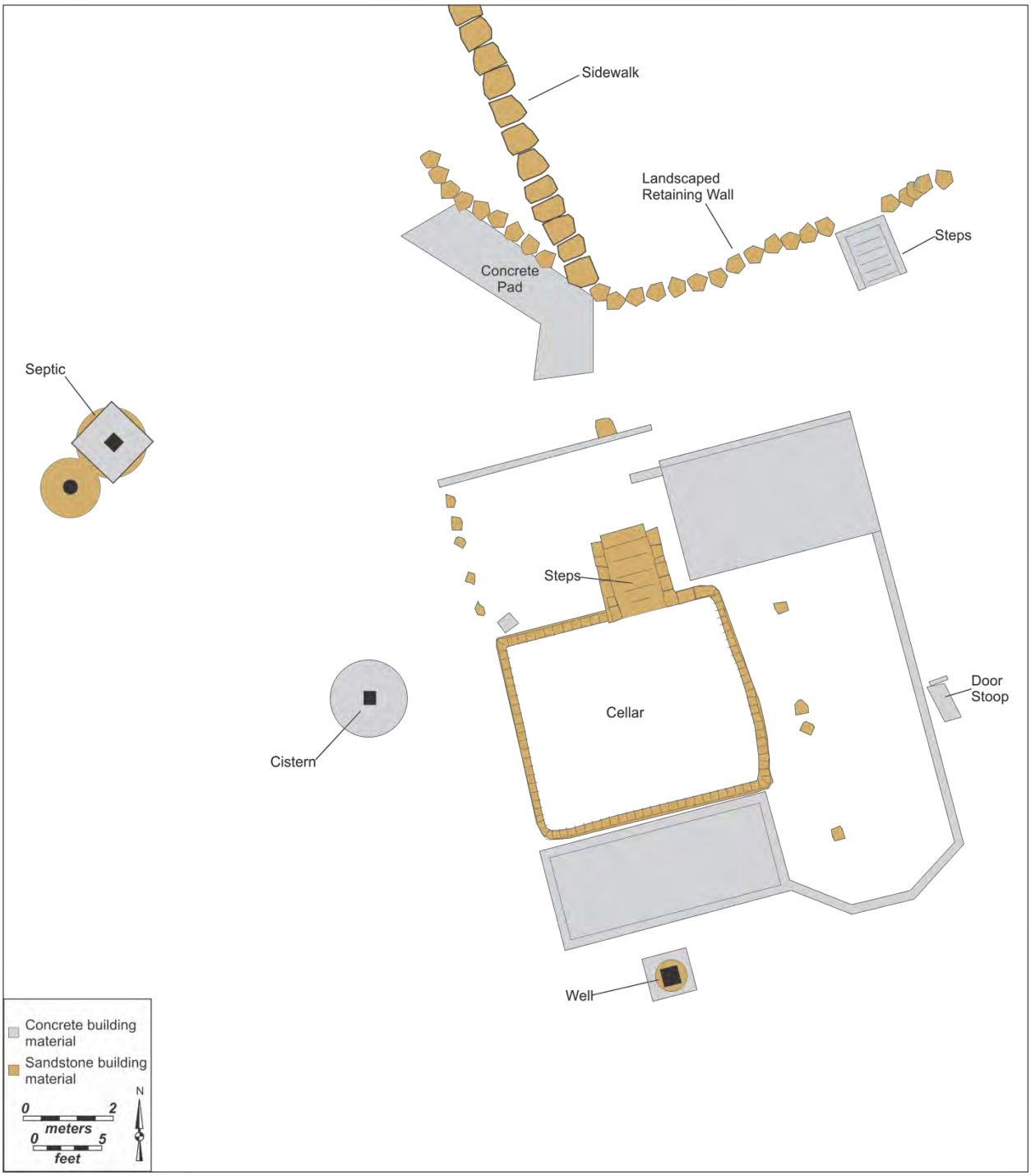

Figure 78. Illustration of the house foundation at Brodess Farmstead (33Pk311).

5.3. CELLARS

Three types of cellars were documented at 12 of the PORTS farmsteads, for a total of 17 cellars identified during archaeology investigations (Table 20). The most common type is the interior house cellar, which tends to be part of a larger support pier foundation and is found at eight of the PORTS sites. Examples of these are depicted in the house plans in Figures 74-78. Most are constructed with rough stone masonry, though several were built with cut/dressed sandstone block masonry. The second house at Terrace Farmstead (33Pk206/364), constructed after 1938, has a poured concrete cellar. This cellar, unlike the others, may have been a full basement foundation similar to those found in modern homes.

The second most frequent cellar type is the exterior root cellar, which is a subterranean or semi-subterranean structure located near the house. Root cellars were documented at six of the PORTS sites. Examples of these are depicted in Figures 79-81. Most are constructed of rough stone masonry; however, in some cases the building stone was scavenged for other needs and the cellars are now simply represented by key-hole shaped depressions. The Mechling Farmstead root cellar is made of poured concrete and may have had a wood framed structure above. The Cornett Farmstead root cellar was made of cut stone block and has a poured concrete slab roof (Figure 72).

Less frequent at the PORTS farmsteads is the interior sub-floor pit or trap cellar. This cellar type is defined as a small square-shaped pit that would have been accessible through the house floor. This cellar type would have been used for short term storage of root vegetables, eggs, and possibly home-canned items. It was a common cellar type in the South and Mid-Atlantic regions of the United States until it was replaced by larger, more formal cellars in the nineteenth century. Three pit cellars were found, one at each of three different farmsteads (Table 20). Figures 82 and 83 illustrate examples of pit cellar features documented at South Shyville Farmstead (33Pk185) and Bamboo Farmstead (33Pk211). These tend to be 5.0-6.0 feet (1.5-1.8 m) square, 1.5-2.0 feet (0.5-0.6 m) deep, and located on the interiors of support pier foundations (i.e., underneath the floors of the houses). Pit cellars may be commonly associated with support pier foundations but likely are underrepresented in the PORTS archaeological results because they are difficult to find. Two pit cellars, one at South Shyville Farmstead (33Pk185/193) and the other at Cornett Farmstead (33Pk218), were identified using a GPR survey, which is very useful for finding this type of below-ground feature. The third pit cellar, found at Bamboo Farmstead (33Pk211), was identified with extensive soil coring within the house foundation.

Table 20. Cellar types within PORTS.

OAI #	Site Name	Interior House Cellar	Interior Pit/ Trap	Exterior Root Cellar	Total
33Pk184	Davis Farmstead	-	-	1	**1**
33Pk185/193	South Shyville Farmstead	-	1	1	**2**
33Pk203	Ruby Hollow Farmstead	1	-	-	**1**
33Pk206/364	Terrace Farmstead	2	-	-	**2**
33Pk211	Bamboo Farmstead	1	1	-	**2**
33Pk212	Railside Farmstead	1	-	-	**1**
33Pk217	Stockdale Road Dairy (House 2)	1	-	-	**1**
33Pk218	Cornett Farmstead	-	1	1	**2**
33Pk311	Brodess Farmstead	1	-	-	**1**
33Pk312	Condon Farmstead	-	-	1	**1**
33Pk317	Mechling House Site	-	-	1	**1**
33Pk318	Mechling Farmstead	1	-	1	**2**
	Total	**8**	**3**	**6**	**17**

Figure 79. Photograph of the external root cellar at Mechling Farmstead (33Pk318).

Figure 80. Photograph of the external root cellar at Condon Farmstead (33Pk312).

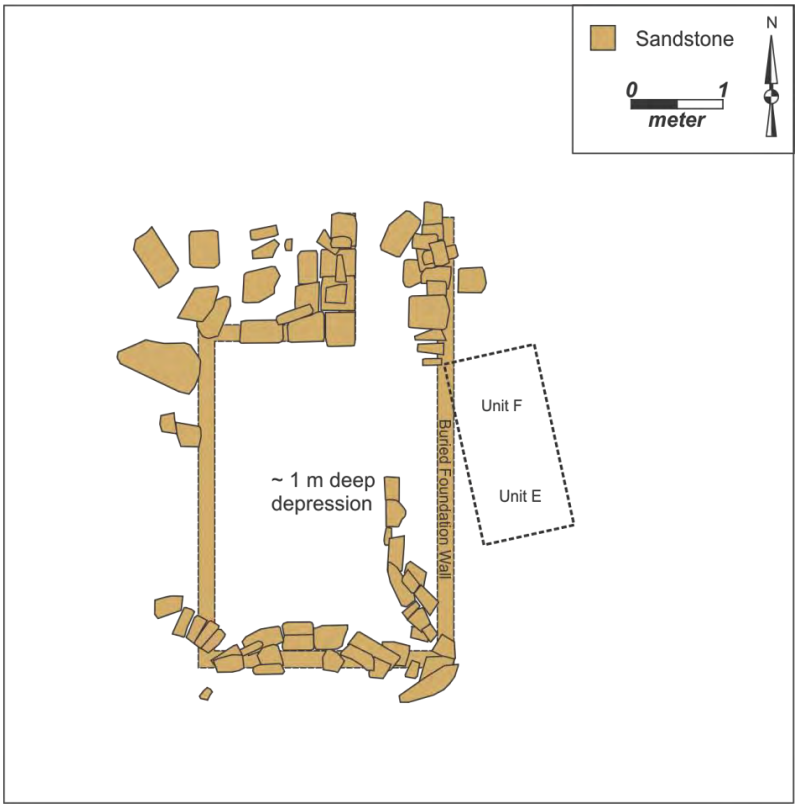

Figure 81. Planview illustration of an external root cellar at South Shyville Farmstead (33Pk185).

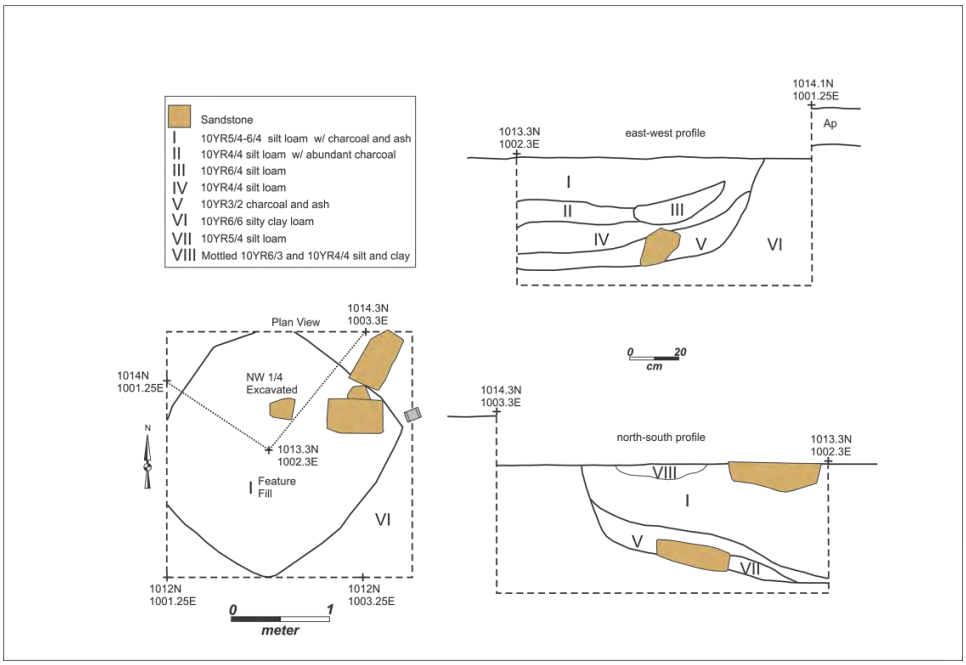

Figure 82. Plan view and cross-section (profile) illustrations of an internal pit/trap cellar and soil horizons at South Shyville Farmstead (33Pk185).

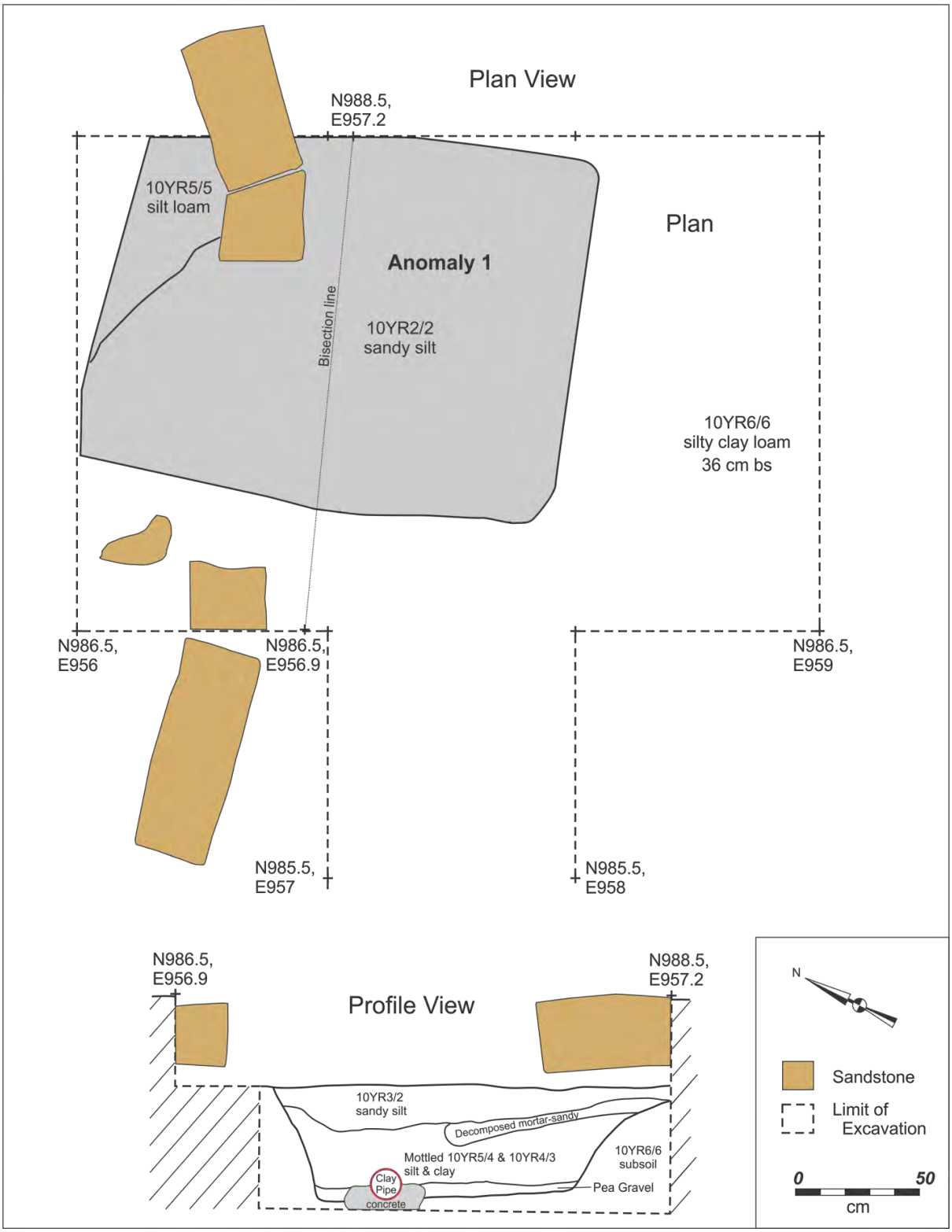

Figure 83. Plan view and profile illustration of an internal pit/trap cellar at Bamboo Farmstead (33Pk211).

5.4. OUTBUILDINGS

Outbuildings are a common element of the PORTS sites and they account for 46 percent of all structures archaeologically identified (see Table 14). Figures 6-33, presented in Section 3, illustrate the arrangement of outbuildings relative to houses based on archaeological information and the 1938/39 and 1951 aerial photographs. Identified outbuilding types include barns, milking parlors, sheds, root cellars, and garages, and this accounts for half of all outbuildings. The other half of the outbuildings are part of the shed/outbuilding type, which is a catch-all category that includes buildings of unknown function. However, these typically smaller buildings likely served as workshops, chicken coops, storage sheds, wood or coal sheds, and grain/feed storage structures. Despite the presence of dairying facilities at many of the PORTS farmsteads, only one site (33Pk324) contains evidence of a silo. This indicates that the dairying operations at most of the PORTS farmsteads did not require the use of silage for cow feed.

5.4.1. Barns

Barn foundations are distinguished from other outbuildings based largely on size and foundation type, as they tend to be very large open bays. Twenty-one barn foundations were archaeologically documented amongst the PORTS sites (see Table 14), several of which are illustrated in Figures 84-88. Associated with seven of these barns are milking parlors or milking platforms (Figures 86-88). The milking platforms are all constructed of poured concrete, have sanitation gutters, have feed and service alleys, and, in some cases, provide evidence of stanchion anchors. Stanchions are metal structures that divided the milking stalls. Several of the stanchions at Stockdale Road Dairy (33Pk217) are still intact. South Shyville/Wagon Wheel Farmstead (33Pk185/193) and Ruby Hollow Farmstead (33Pk203) appear to have isolated milking parlors with no associated barn foundations surrounding them. Either these were stand-alone parlors or the barn foundations have been removed and are no longer evident on the surface. While several of the milking parlors are additions to older stone barn foundations (e.g., Figure 87), the Stockdale Road Dairy parlor is attached to a large poured concrete barn foundation. Stockdale's platform is also very large and would have accommodated 14-16 cows, whereas the others would have accommodated 6-8 cows. The number of milking stations does not necessarily represent the number of cows residing on a farm, but instead indicates the number of cows that could have been simultaneously milked. For example, a farm with a 6-8 cow milking platform could have had many more cows than any of the other farms, but cycled them through the milking process in groups of 6-8. However, Stockdale Road Dairy and possibly site 33Pk324 were large dairy farms with what appear to be very modern and more elaborate milking facilities, suggesting that these farms were more focused on dairying than the other farms.

Figure 84. Illustration of a barn foundation at Ruby Hollow Farmstead (33Pk203).

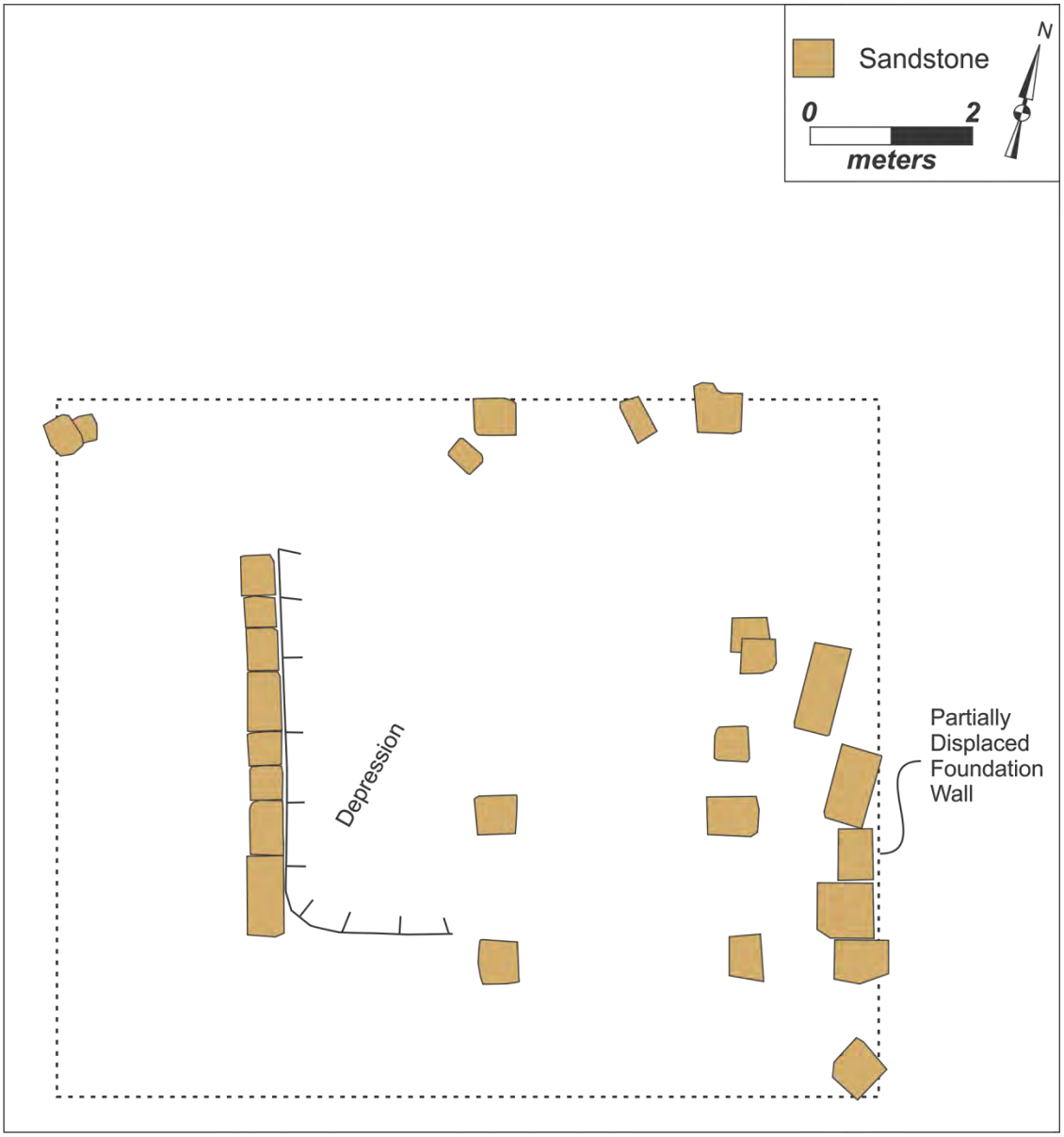

Figure 85. Illustration of a barn foundation at Bamboo Farmstead (33Pk211).

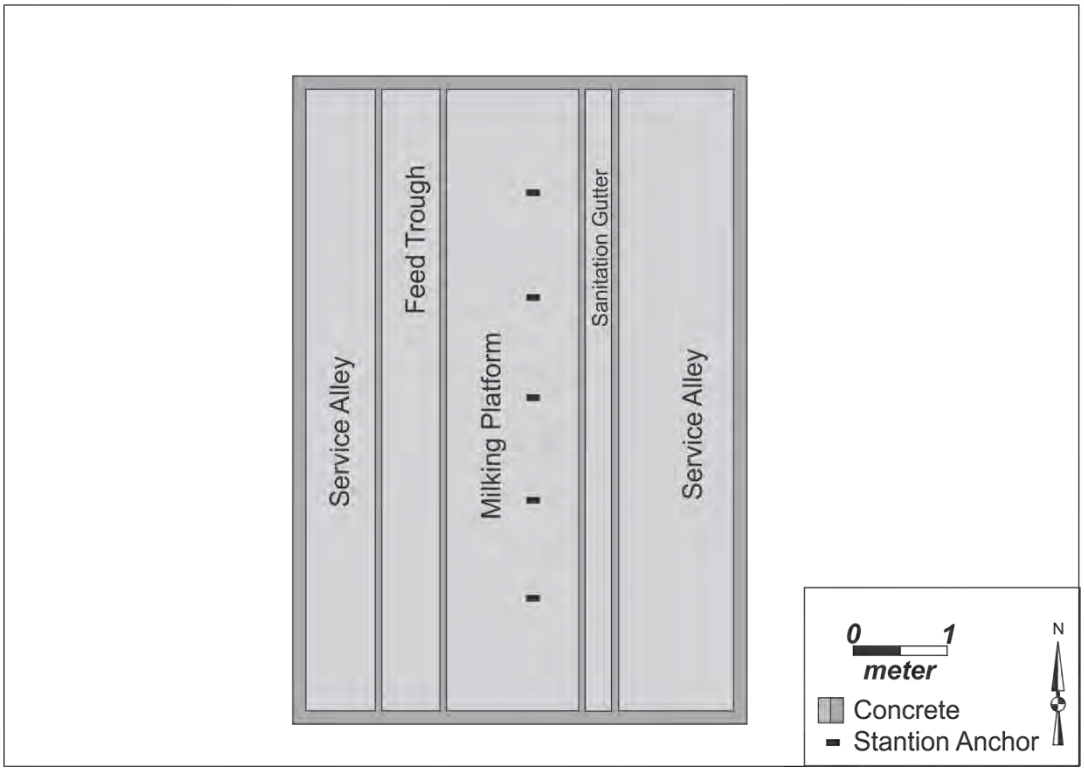

Figure 86. Illustration of a milking platform at South Shyville Farmstead (33Pk185).

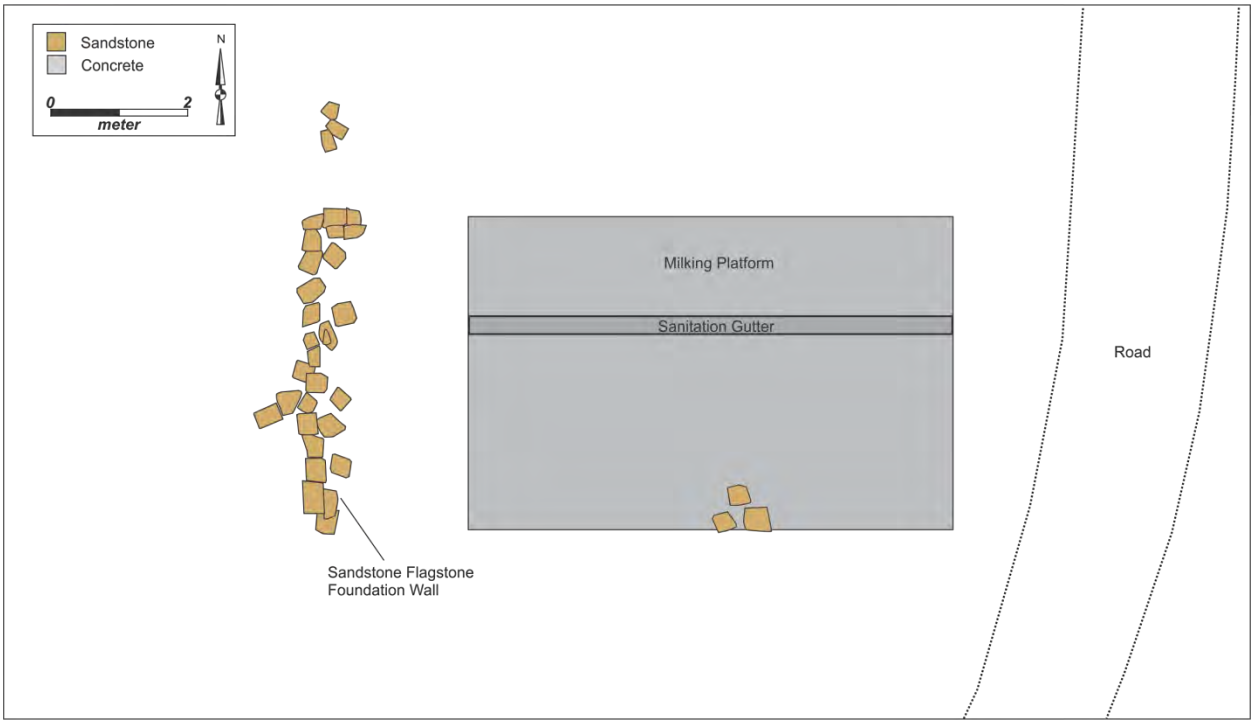

Figure 87. Illustration of a barn foundation with internal milking platform at Terrace Farmstead (33Pk216).

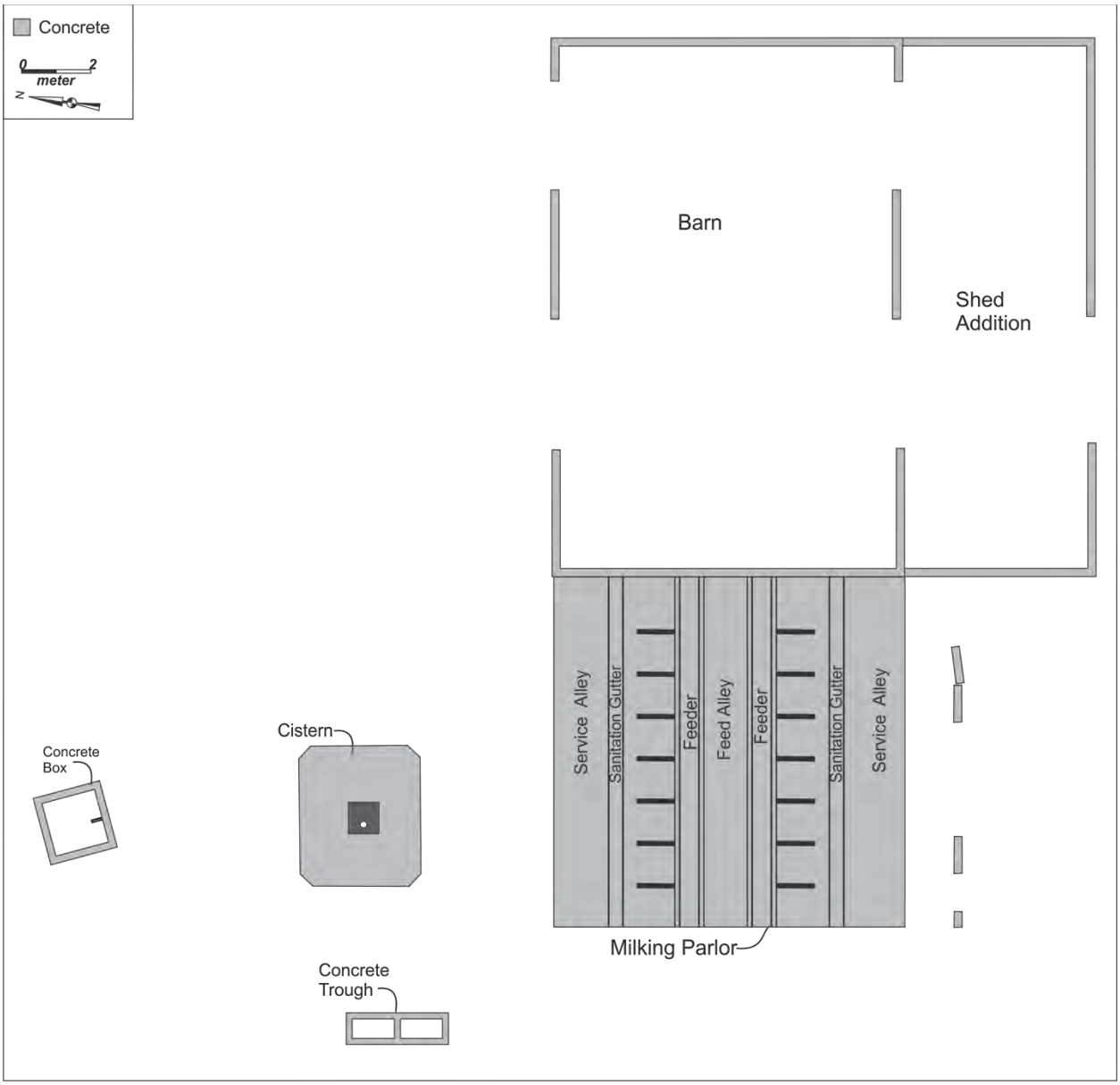

Figure 88. Illustration of a barn and attached milking parlor at Stockdale Road Dairy (33Pk217).

5.4.2. Garages

At least seven garage foundations were archaeologically identified at the PORTS sites (see Table 14). Most of these are either poured concrete slabs or are a combination of cinder block and poured concrete (Figure 89 and 90). The Brodess Farmstead contains a garage foundation composed of a concrete slab overtop of a rough sandstone masonry foundation. Concrete garage foundations clearly reflect modern additions (post 1920s) to older PORTS farmsteads. These probably housed automobiles, which became common household possessions during twentieth century.

The North Shyville Farmstead (33Pk194) contains a large concrete garage foundation with an underground fuel tank. These may be associated with what was once a commercial automobile repair shop.

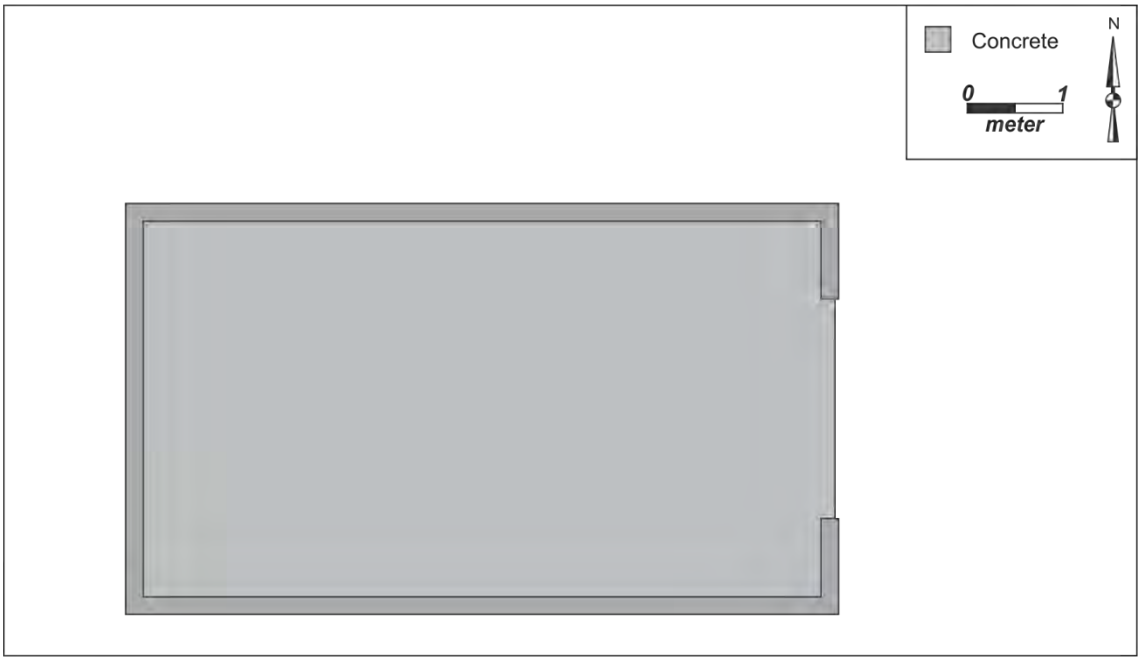

Figure 89. Illustration of a poured concrete garage at Ruby Hollow Farmstead (33Pk203).

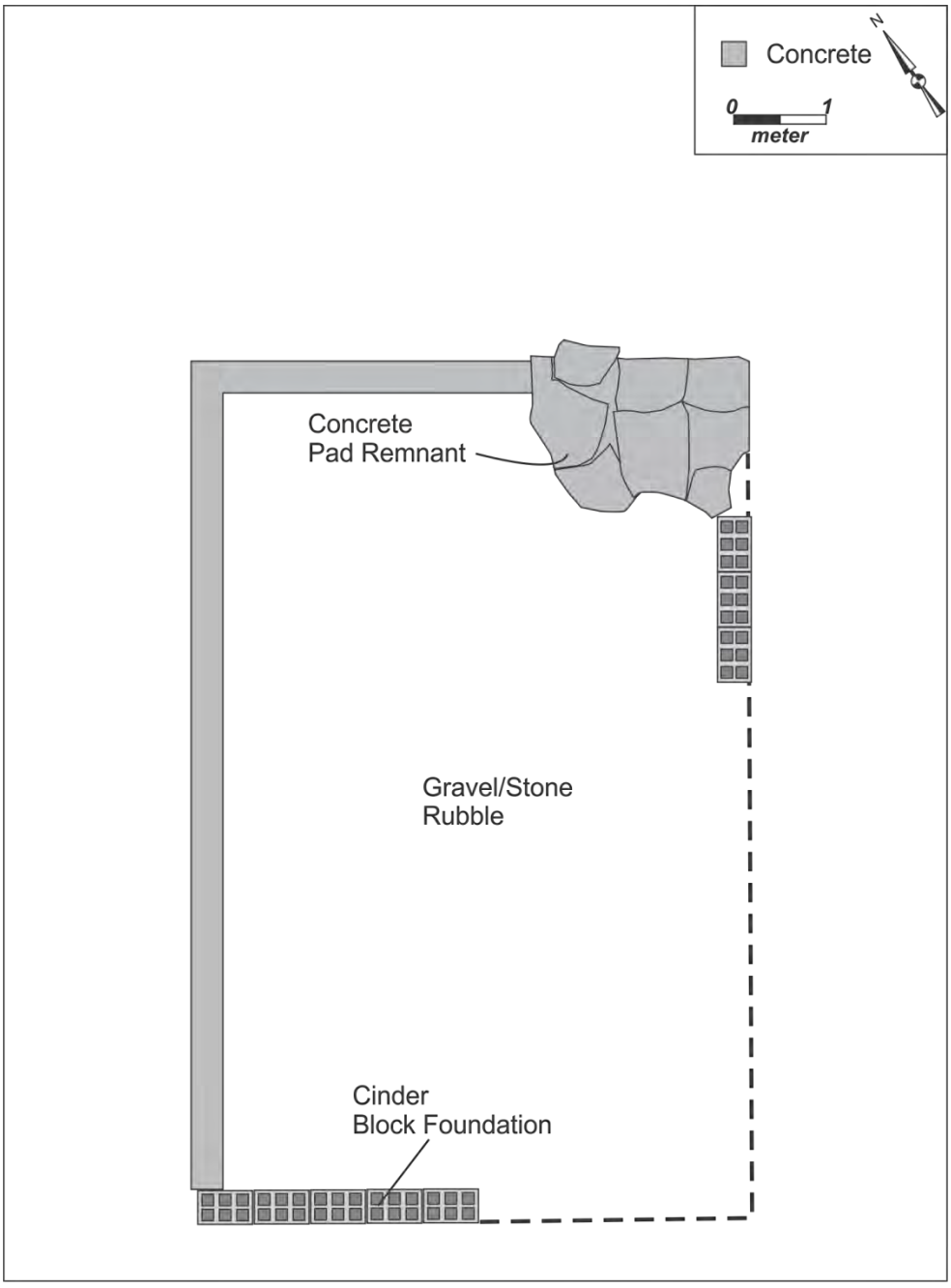

Figure 90. Illustration of a cinder block and poured concrete garage foundation at Stockdale Road Dairy (33Pk217).

5.4.3. Sheds/Outbuildings

At least 42 shed-like outbuilding foundations were archaeologically documented at the PORTS sites (Table 14). These have small foundation outlines, usually with rough stone support piers or foundation walls, and some of the older foundations were repaired or improved with cinder blocks and concrete (Figures 91-93). Terrace Farmstead (33Pk206/364) and Bamboo Farmstead (33Pk311) contain large outbuilding foundations that consist of several parallel rows of sandstone block piers (see Figures 64 and 66). Unlike barns, these buildings did not have open interior bays; instead the rows of piers supported elevated floors and thus it cannot be determined what the buildings looked like beyond knowing its rough size. These buildings probably housed workshops.

An outbuilding foundation at Stockdale Road Dairy (33Pk217), located near House 2, has a "light" pier grid foundation but contains a somewhat square-shaped depression on the southwest corner (Figure 91). An attempt was made to excavate this depression, but excessive water during an unusually wet field season prevented a full investigation. The purpose of this depression remains unclear, but its size and shape suggests that it might be a privy pit. If so, the privy would have been on the interior of a larger structure, which is unusual for privies. Stockdale Road Dairy was a large dairy farm, so a "mud room" with the amenity of a privy near the house would have been a useful facility.

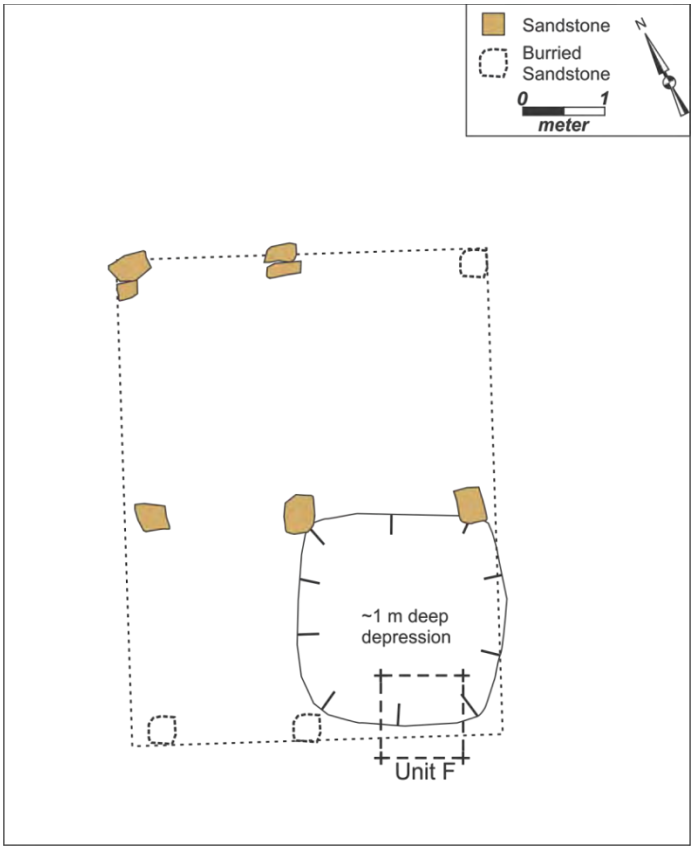

Figure 91. Illustration of a small outbuilding foundation with possible privy vault in southwest corner at Stockdale Road Dairy (33Pk217).

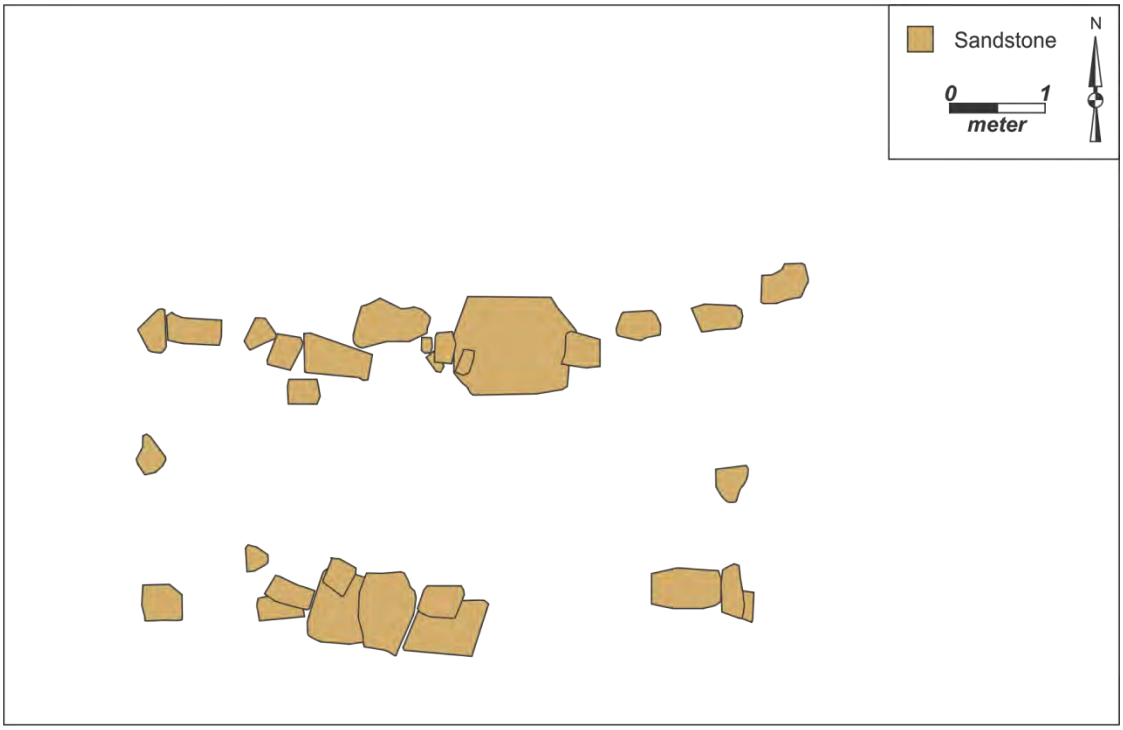

Figure 92. Illustration of a small outbuilding foundation at Ruby Hollow Farmstead (33Pk203).

Figure 93. Illustration of a small outbuilding foundation at the Mechling Farmstead (33Pk318).

5.5. PRIVIES

Modern plumbing is evident at nearly every PORTS farmstead investigated at the Phase II level. Since most farmsteads were built and occupied during the nineteenth century, it is likely that all contain at least one outhouse or privy. In rural America, outhouses very frequently remained in operation well after the introduction of modern indoor plumbing. This seeming resistance to modern plumbing may simply be because privies were convenient facilities for those working outdoors. Privies also were a "second bathroom" when the indoor facilities were otherwise occupied. Privy use also persisted into the era of modern plumbing because those who grew up with privies simply were accustomed to using the outdoor facilities. One of the main research goals of the Phase II investigations of six farmsteads conducted by Pecora and Burks (2012a) was to locate and investigate privy vaults. Privy vaults are archeologically important because often they contain distinct layers of refuse that can be used to date the time when the privy was open and the farm was in operation. Privies also contain direct evidence of what people living on the farms were eating, especially those foods containing small, tough seeds.

Table 21 lists the sites (n=11) where privy vaults were encountered at PORTS. More than likely, most of the other farmsteads contain filled-in privies that no longer are visible at the surface. Figure 94 is a plan view map of the privy locations at Mechling Farmstead. There appears to be a cluster of privies located off the southwest corner of the house and behind the root cellar. It is likely that only one of these was in use at any one time. The presence of three shows that when one was full, another was dug nearby and the building atop the old privy pit was likely moved to the new location. One of the privies found at the Ruby Hollow Farmstead is illustrated in Figure 94. Three plan view drawings of the excavation show how the outline of the privy pit changed as the excavation went deeper. The profile of the excavation gives us a clear view of the sloping walls of a vandal's pit in the top of the privy and the intact edges of a square privy shaft below the disturbed layers. Soil coring was used below four feet, because of wet soil conditions, to show that much intact privy fill is still present and it contains "night soil" with large amounts of small seeds. Figure 95 shows a similarly vandalized privy at the Bamboo Farmstead. In this case a layer of sandstone slabs was found at the bottom of the privy shaft and it was found that much of the privy's fill had be disturbed by the vandals' excavations.

Few artifacts were recovered from the archaeological excavations of the PORTS privy vaults. This may be due, in part, to the removal of artifacts at the Ruby Hollow Farmstead and Bamboo Farmstead privies by vandals. But some intact privies had very few artifacts when excavated, as at Cornett Farmstead, which contained only a few relatively modern artifacts, including a plastic toy (Pecora and Burks 2012a). A botanical analysis of small soil samples taken from the very bottoms of the Ruby Hollow Farmstead and Bamboo Farmstead privy vaults identified large quantities of various berry seeds, including strawberry, blackberry, and raspberry. High frequencies of berry seeds are common indicators of the presence of privy "night soil" (fecal matter that has biodegraded over time and become soil-like), and indicate that the lower levels of the privies are intact. The presence of early-mid nineteenth century ceramics in the Ruby Hollow Farmstead privies (or the vandals' spoil piles surrounding the privies), at least, suggests that some privies at PORTS may contain time-sensitive artifacts.

Table 21. Privy vaults and septic systems identified at PORTS sites.

OAI #	Site Name	Wood-Lined	Brick-Lined	Earthen-Walled	Unknown	Concrete Septic Tank	Stone-Lined Septic Tank	Total
33Pk184	Davis Farmstead	-	1	1-wood base, earth walls	-	-	-	**2**
33Pk194	North Shyville Farmstead	-	-	-	-	1	-	**1**
33Pk203	Ruby Hollow Farmstead	-	-	2	-	-	-	**2**
33Pk211	Bamboo Farmstead	-	-	-	-	1	-	**1**
33Pk217	Stockdale Road Dairy	-	-	1	-	-	-	**1**
33Pk218	Cornett Farmstead	-	-	1	-	-	-	**1**
33Pk311	Brodess Farmstead	-	-	-	1	-	1	**2**
33Pk317	Mechling House Site	-	-	-	1	-	-	**1**
33Pk318	Mechling Farmstead	1	-	-	2	-	-	**3**
33Pk322	Map Location 4	-	-	1	-	-	-	**1**
	Total	**1**	**1**	**6**	**4**	**2**	**1**	**15**

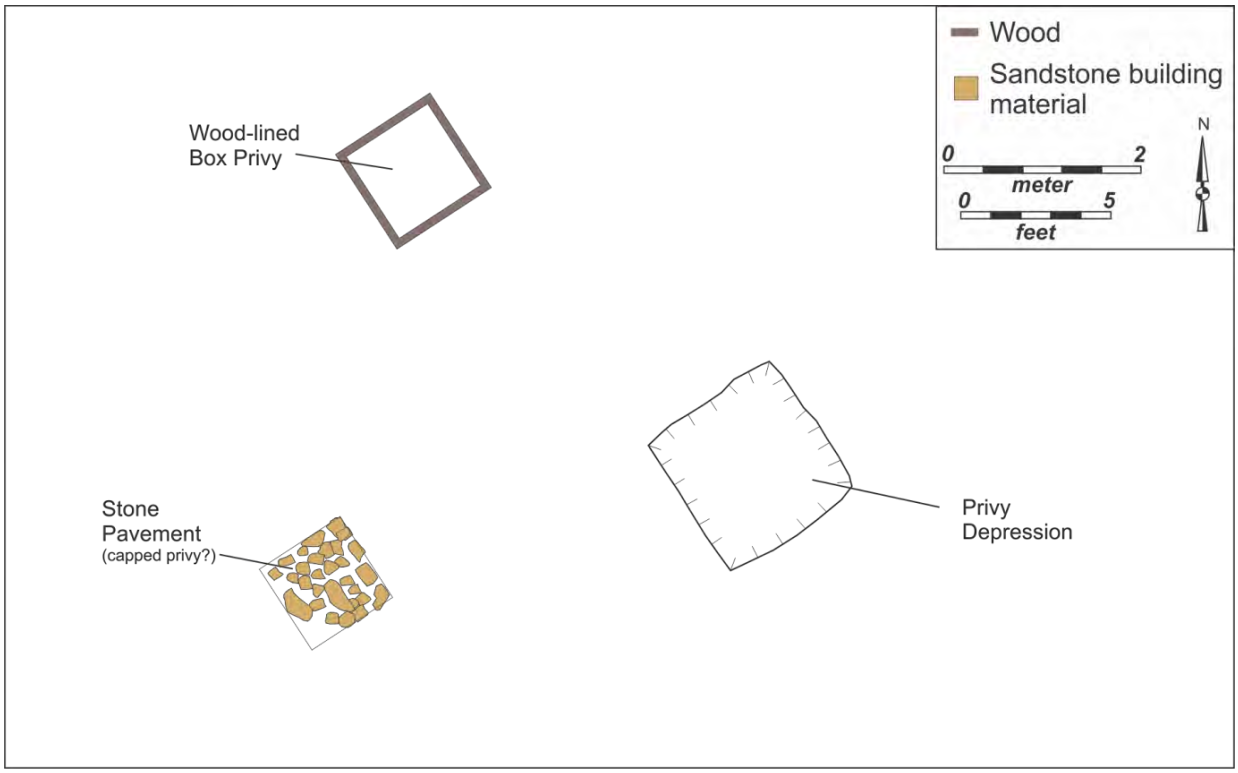

Figure 94. Illustration of privy arrangement at Mechling Farmstead (33Pk318).

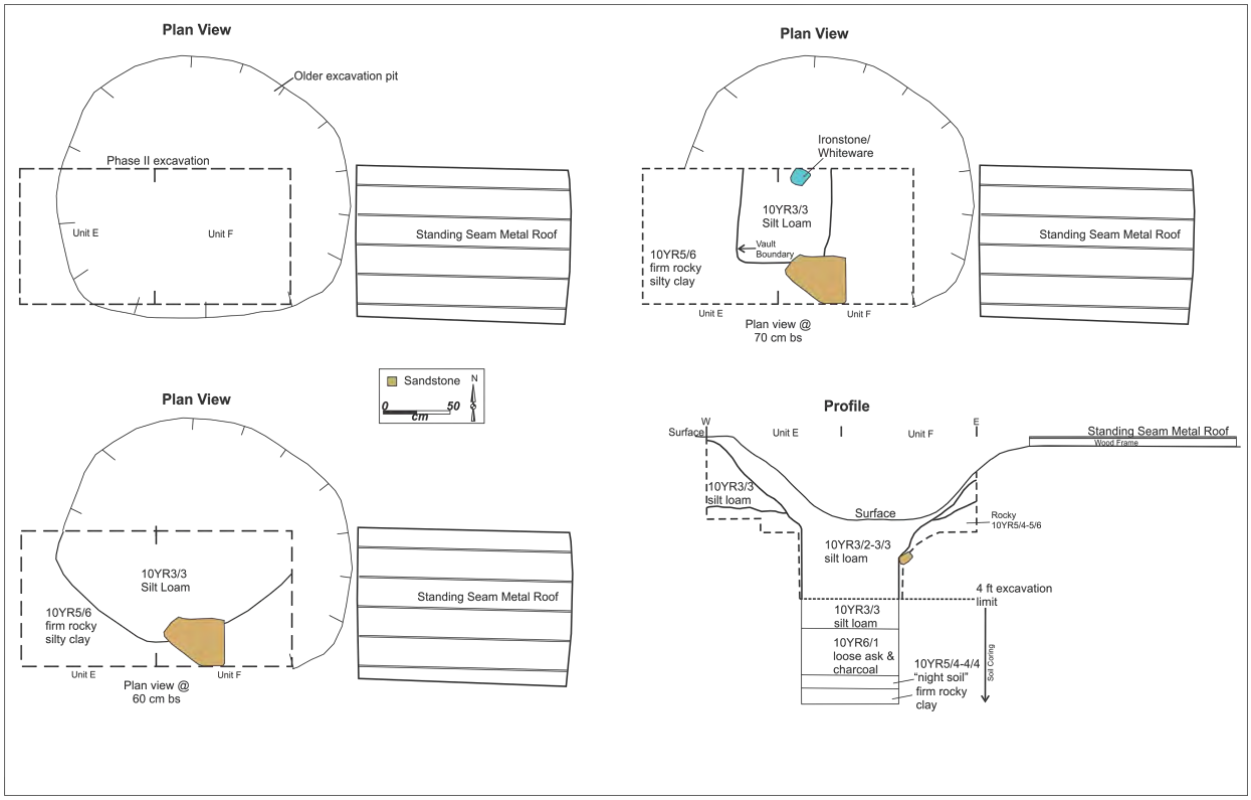

Figure 95. Illustration of a vandalized privy vault at Ruby Hollow Farmstead (33Pk203).

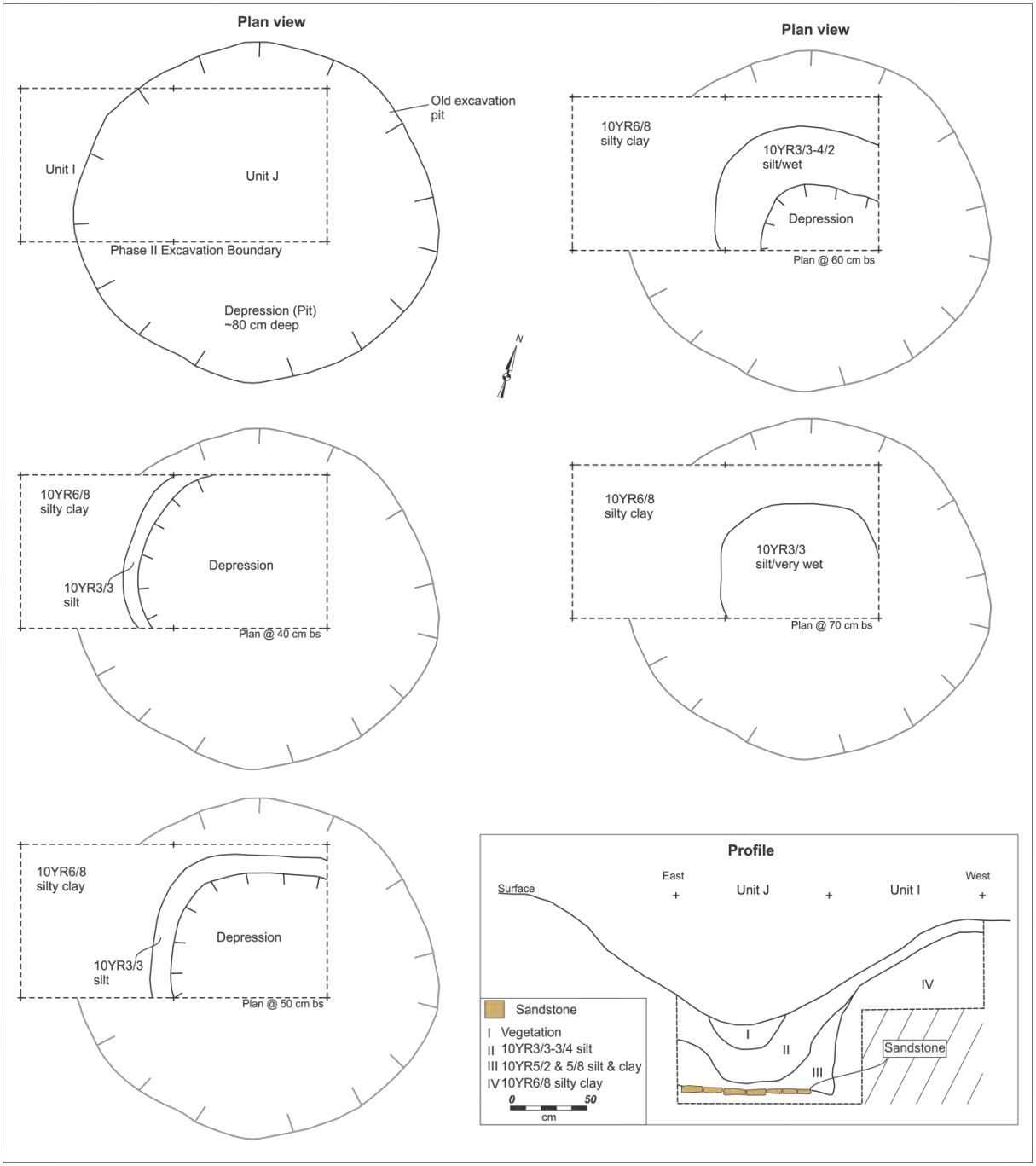

Figure 96. Illustration of a vandalized privy vault at Bamboo Farmstead (33Pk211).

5.6. SEPTIC SYSTEMS

Only North Shyville Farmstead (33Pk194), Bamboo Farmstead (33Pk211), and Brodess Farmstead (33Pk311) contain what are interpreted to be septic systems near the house foundations (see Table 19). These represent modern plumbing improvements, and their absence at other PORTS farmsteads may indicate a reluctance for adopting this expensive technology prior to about 1950. All three documented septic systems were found near house foundations, as seen in Figures 12 (small circle and square features NW of House 1) and 17. The Bamboo Farmstead septic tank is a square-shaped, partitioned subterranean box with a square portal and two circular vent holes. This structure is possibly part of a water system (see Section 5.7), but the smell of its interior is typical of that expected for a septic system.

The Brodess Farmstead septic system consists of two cylindrical-shaped, subterranean vaults lined with rough stone masonry (Figures 17 and 97). The first chamber is capped with a poured concrete frame and slab. The output for this is probably located in a gully to the west.

Figure 97. Photograph of the septic system at Brodess Farmstead (33Pk311).

5.7. WATER SYSTEMS

Almost every PORTS farmstead contains at least one well, often a stone-lined well associated with a house foundation or large barn (Tables 22 and 23). More elaborate and modern water systems or "water works" were identified, archaeologically, at some of the larger farmsteads, especially in association with dairy milking parlors. After the turn of the twentieth century, strict sanitation measures were required of dairy operations. Water, of course, was critical for this purpose, as it was necessary for cleaning the milking platforms, cow utters, and milking equipment. This greater demand for water near dairy operations may be why sites with dairying facilities also have more elaborate and modern water works.

Stone-lined wells are very common and numerous occurrences appear in the farmstead plan maps presented in Figures 6-33. Examples of typical stone-lined wells at PORTS are depicted in Figures 36, 98 and 99. It is likely that all farmsteads contain wells, but in some cases these were not found during the various archaeological surveys at each of the sites. Filled-in wells can be hard to detect at the surface when a site is covered in vegetation and leaf litter. Only one modern well, a vertical ceramic pipe, was found adjacent to House 2, the newer house, at Terrace Farmstead (33Pk206/364). South Shyville/Wagon Wheel Farmstead (33Pk185/193) contained three stone-lined wells, one of which was originally documented in the 1997 Phase I survey as a separate site (33Pk193) by Schweikart et al. (1997).

Cisterns also are very common water features at PORTS farmsteads, though most appear to be made of poured concrete or have poured concrete tops and skim coats of mortar on their interior walls (Tables 22 and 23). One exception is a brick-lined cistern found at the North Shyville Farmstead (33Pk194). Figures 100 and 101 depict examples of two different cistern types. The Mechling Farmstead (33Pk318) cistern is a cube-shaped subterranean concrete structure with a flat slab roof (Figure 100). On the roof is a portal and ceramic vent pipe. Near the Brodess Farmstead (33Pk311) house is a subterranean dome or bell-shaped concrete cistern with a massive circular cap and a square portal (Figure 101). The subterranean dome or bell-shaped cistern is the most common type documented at PORTS.

Several of the farmsteads contain what this report refers to as "water works" or "well houses," and consist of two or three elements: a well or cistern, a well house foundation, and a large rectangular or square-shaped trough (Tables 22 and 23). Those with the troughs are usually located adjacent to dairying facilities, such as at Bamboo Farmstead (33Pk211) and Stockdale Road Dairy (33Pk217) Farmsteads. In instances where the trough is absent, the water works tends to be located near a house foundation. Examples of these are illustrated in Figures 102 and 103; in addition, Figures 7, 10-12, and 15 show how these features articulate with various house and barn foundations. The water works appear to represent modern improvements to the farmsteads, especially on dairy farms where water would have been used for the animals and for maintaining proper sanitation (e.g., washing cows, milking facilities, and milking equipment).

In most cases, cisterns and pump house foundations are made of poured concrete and are clearly modern or more recent additions to the farmsteads. Stockdale Road Dairy, however, has a partitioned poured concrete pump house with a flagstone floor near the more recent house (House 2). The stone floor may represent an older structure, or simply a desire to make use of inexpensive and locally available building material.

Table 22. Water systems associated with houses within PORTS.

OAI #	Site Name	Stone-Lined Well	Concrete Well	Tile/Ceramic Well	Concrete Pump House	Concrete Cistern	Concrete-Lined Brick Cistern	Brick Cistern	Concrete Trough/ Reservoir	Well or Cistern Unknown Material	Total
33Pk184	Davis Farmstead	-	-	-	-	-	1	-	1	-	**2**
33Pk185/ 193	South Shyville Farmstead	3	-	-	1	-	-	-	-	-	**4**
33Pk194	North Shyville Farmstead	-	-	-	-	-	-	1	-	-	**1**
33Pk203	Ruby Hollow Farmstead	-	1	-	1	-	-	-	-	-	**2**
33Pk206/ 364	Terrace Farmstead	-	-	1	1	-	-	-	-	-	**2**
33Pk211	Bamboo Farmstead	-	-	-	1	1	-	-	-	-	**2**
33Pk212	Railside Farmstead	-	-	-	-	1	-	-	-	-	**1**
33Pk217	Stockdale Road Dairy	1	-	-	1	-	-	-	-	-	**2**
33Pk218	Cornett Farmstead	1	-	-	-	-	-	-	-	-	**1**
33Pk311	Brodess Farmstead	1	-	-	-	1	-	-	-	-	**2**
33Pk312	Condon Farmstead	1	-	-	-	-	-	-	-	-	**1**
33Pk317	Mechling House Site	-	-	-	-	1	-	-	-	-	**1**
33Pk318	Mechling Farmstead	1	-	-	-	-	-	-	-	-	**1**
33Pk321	Map Location 3	-	-	-	-	-	-	-	-	1	**1**
33Pk324	Map Location 50	-	-	-	-	-	-	-	-	1	**1**
	Map Location 37	1	-	-	-	-	-	-	-	-	**1**
33Pk345	Gibson Cabin	1	-	-	-	-	-	-	-	-	**1**
	Total	**10**	**1**	**1**	**5**	**4**	**1**	**1**	**1**	**2**	**26**

Table 23. Water systems associated with barns/dairy barns within PORTS.

OAI #	Site Name	Stone-Lined Well	Concrete Well	Concrete Pump House	Concrete Cistern	Brick Cistern	Concrete Trough	Concrete Box? (holding tank?)	Total
33Pk184	Davis Farmstead	-	-	1	-	-	1	-	**2**
33Pk185/193	South Shyville Farmstead	1	-	-	-	-	-	-	**1**
33Pk194	North Shyville Farmstead	-	-	-	-	1	-	-	**1**
33Pk197	Dutch Run Rd. Farmstead	-	1	-	-	-	-	-	**1**
33Pk211	Bamboo Farmstead	-	-	1	1	-	1	-	**3**
33Pk212	Railside Farmstead	1	-	-	-	-	-	-	**1**
33Pk217	Stockdale Road Dairy	-	-	-	1	-	1	1	**3**
33Pk311	Brodess Farmstead	-	-	-	1	-	-	-	**1**
33Pk318	Mechling Farmstead	-	-	-	1	-	-	-	**1**
33Pk324	Map Location 50	-	-	-	2	-	2	-	**4**
33Pk359	-	1	-	-	-	-	-	-	**1**
33Pk360	-	1	-	-	-	-	-	-	**1**
	Total	**4**	**1**	**2**	**6**	**1**	**5**	**1**	**20**

Figure 98. Photograph of the stone-lined well at Condon Farmstead (33Pk312).

Figure 99. Photograph of the stone-lined well at Brodess Farmstead (33Pk311).

Figure 100. Photograph of the poured concrete cistern at Mechling Farmstead (33Pk318).

Figure 101. Photograph of the poured concrete cistern cap at Brodess Farmstead (33Pk311).

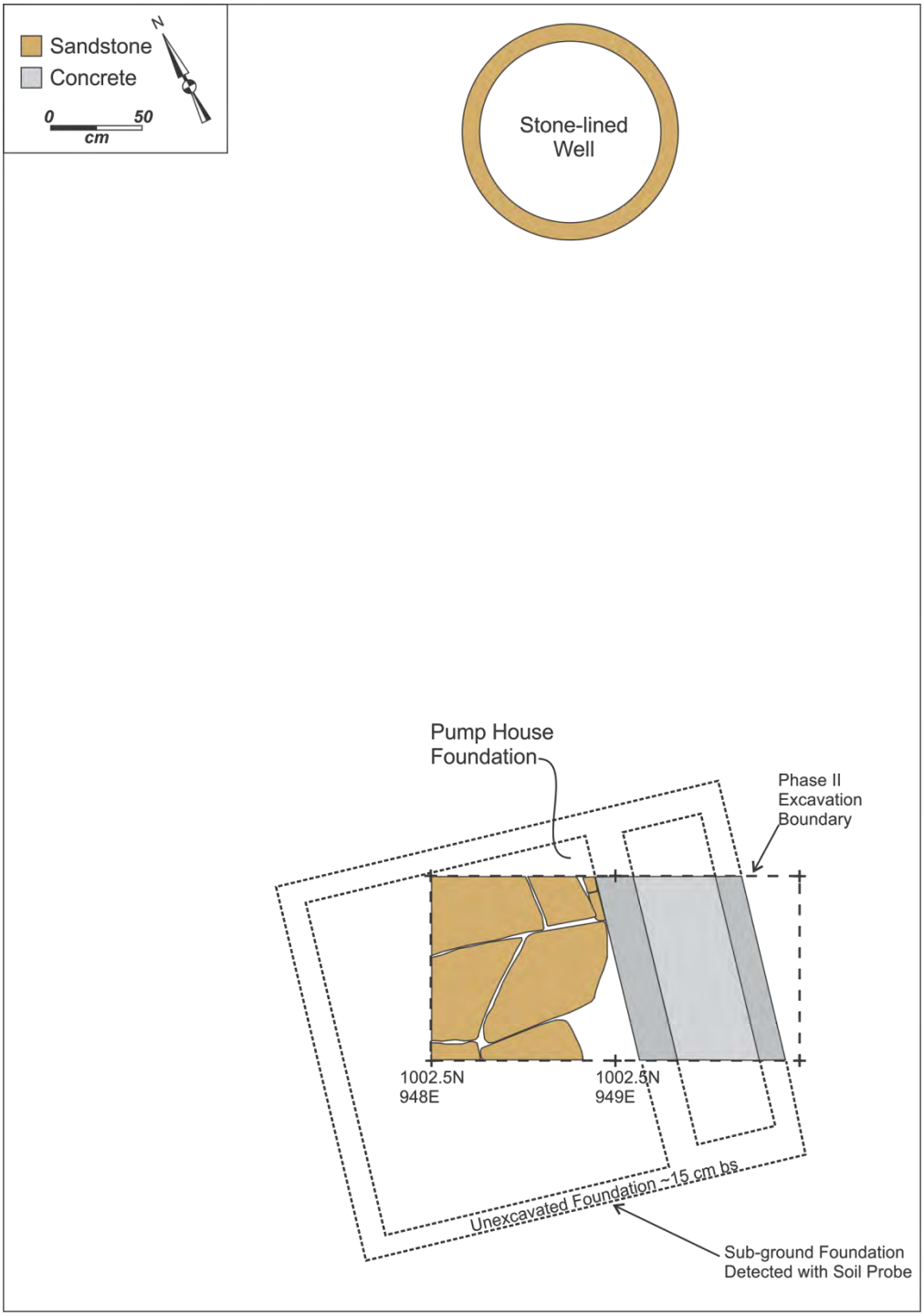

Figure 102. Plan view illustration of a pump house and stone-lined well associated with the house at Stockdale Road Dairy (33Pk217).

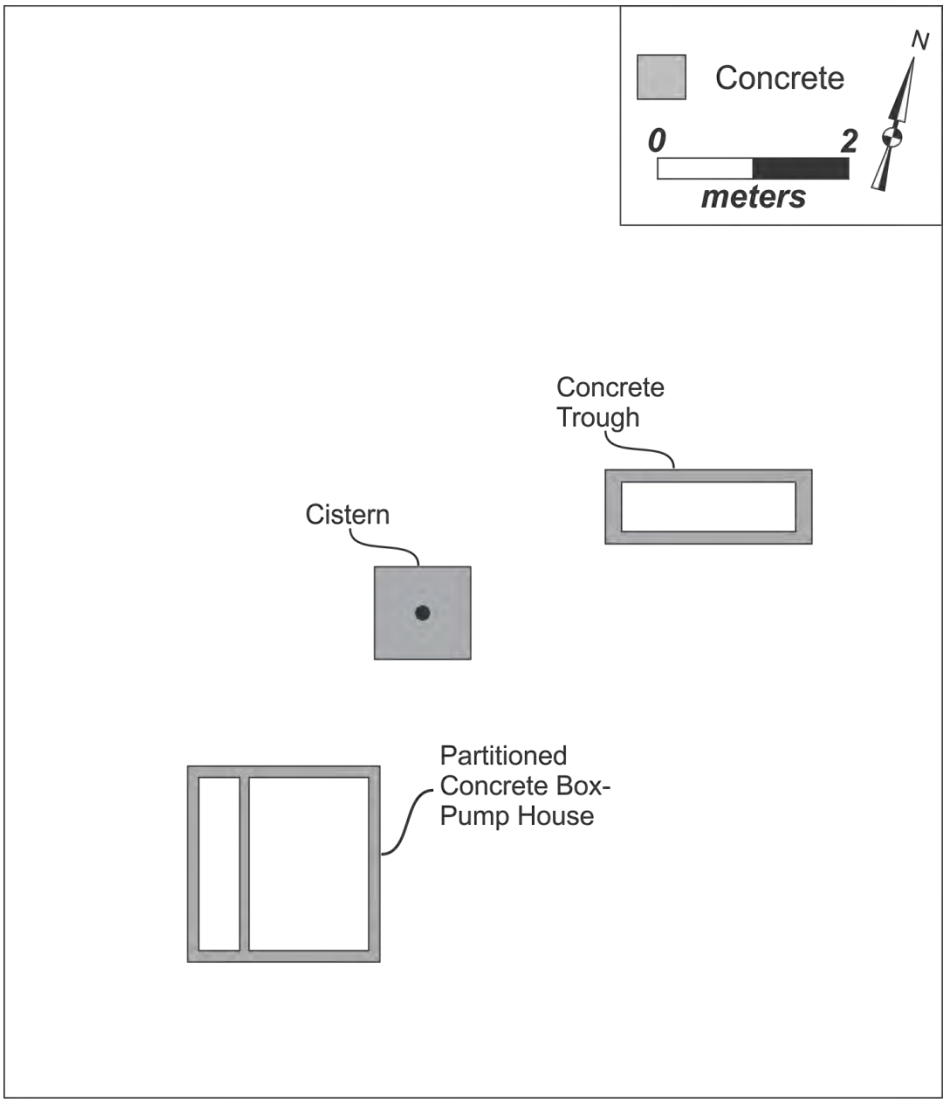

Figure 103. Illustration of the pump house, cistern, and trough associated with the dairy barn at Bamboo Farmstead (33Pk211).

6. ARTIFACT ASSEMBLAGES

The archaeological excavations at PORTS farmsteads and other historic-era sites have produced a considerable number of artifacts. Table 24 summarizes the excavation effort and artifact assemblage size from 29 significant artifact-producing sites that include 16 farmsteads, three house sites, one recreational cabin, five farmstead components (2 of these are grouped with farmsteads), one large artifact scatter, two churches, and one school (refer to Table 1 for detailed references). Excluded from this list are any farmstead (n=6), house (n=4), or farmstead component (n=1) sites that produced no artifacts, most artifact scatters (n=8) (because they were considered insignificant), all refuse dumps (n=5), all isolated finds (n=4), the bridge (n=1), both cemeteries (n=2), and a church site that produced no artifacts, for a subtotal of 32 sites (of the total 61). Table 24 provides information about site size, the total number of excavated shovel tests and 1x1 meter units, the number of positive (artifact-bearing) shovel tests and 1x1 m units, total square meters excavated, and the average number of artifacts per positive shovel test. Much of the information in Table 24 has already been referred to in the site descriptions in Section 3.

Artifact assemblage size is, in part, a reflection of the amount of excavation carried out at each site location. Shovel testing was conducted on a regular grid (5 and 10 meter intervals in most cases) within each site. The average number of artifacts per positive shovel test is the best measure of artifact density at these sites. These data show considerable variability in terms of artifact density across the PORTS sites. As is expected of school and church sites, artifact density was very low, but not significantly different from most of the farmsteads, with the exception of Mechling House Site, Terrace Farmstead, South Shyville Farmstead, and Mechling Farmstead. Artifact density may be a factor of occupation duration, though this assertion is not supported by all of the sites. Ruby Hollow Farmstead, for instance, had a relatively low artifact density and was much older than Mechling House Site and Mechling Farmstead.

It is somewhat over-simplistic to assume that artifact assemblages are the result of gradual artifact accumulation over the lifespan of a farmstead. Instead, most assemblages are composed of the items left behind by specific events that resulted in rapid artifact accumulation, such as the abandonment and demolition of the farmsteads. Clearly, architectural debris such as nails and window glass are deposited when buildings are constructed, remodeled, or razed. There is a significant difference between the composition of an assemblage deposited as the result of a living home that was burned down and an assemblage around a home that was abandoned and never lived in again. In fact, it is likely that artifact density and composition is a reflection of how and when the farmsteads were abandoned. Those abandoned in response to the AEC land purchase have the potential to contain higher artifact frequency because with the prospect of moving to a new home, people were probably more prone to leave behind many items that were viewed as unnecessary or undesirable. The AEC had no intention of maintaining the PORTS farmsteads for continued occupancy, so there was no incentive for the previous landowners to "clean-up" before leaving. In contrast, the Emma Farmer Farmstead was purchased by the Brodess Family in the 1920s or 30s, well before the AEC land purchase. Brodess razed the Emma Farmer Farmstead structures and converted the land to cultivated field. When they moved out, the Farmer family may have been more considerate of their former neighbor and the land's new owner and probably cleaned the farmstead of extraneous items that would otherwise have been left behind. Brodess likely made an effort to clean up glass containers and nails, and may have salvaged any remaining hardware, windows, and other items before totally demolishing the farmstead buildings and plowing under the ground.

Table 24. Summary of PORTS excavation effort and artifact assemblage size.

OAI #	Site Name	Site Size (m^2)	Total Shovel Tests (n)	Positive Shovel Tests (n)	Total 1x1 m Units (n)	Positive 1x1 m Units (n)	Total m^2 Excavated	Total Artifacts	Artifacts per m^2 Excavated	Total Artifacts from Shovel Tests (n)	Average Number of Artifacts per Positive Shovel Test (n)
33Pk184	Davis Farmstead	7,400	285	99	11	11	82.25	2767	34	281	2.8
33Pk185/193	South Shyville/Wagon Wheel Farmstead	18,575	342	108	8	8	93.5	2389	25.5	1183	11
33Pk194	North Shyville Farmstead	36,075	617	200	16	14	170.25	1901	11	1014	5.1
33Pk195	Beaver Road Farmstead	4,000	144	41	9	9	45	435	10	231	5.6
33Pk203	Ruby Hollow Farmstead	10,000	324	95	16	16	97	3224	33	664	7
33Pk206/364	Terrace Farmstead	14,000	316	147	12.5	12.5	92.5	4264	46	2112	14.4
33Pk211	Bamboo Farmstead	18,000	402	117	10	10	110.5	4038	37	986	8.4
33Pk212	Railside Farmstead	3,200	65	18	6	6	22.5	1086	48	92	5.1
33Pk213	Log Pen Farmstead	2100	60	29	4	4	19	1961	103	224	7.7
33Pk217	Stockdale Road Dairy	16,000	400	83	14	14	114	1120	10	437	5.3
33Pk311	Brodess Farmstead	11,148	142	51	0	0	35.5	372	11	372	7.3
33Pk318	Mechling Farmstead	5,016	181	117	0	0	45.25	1180	26	1180	10.1
33Pk322	Map Location 4	3,120	105	66	0	0	26.25	334	13	334	5.1
33Pk324	Map Location 50	12,000	252	32	0	0	63	109	2	109	3.4
33Pk326	Map Location 27	16,000	61	0	0	0	15.25	0	0	0	0
33Pk349	Emma Farmer Farmstead	10,000	59	11	0	0	14.75	37	3	37	3.4
33Pk218	Cornett Farmstead	14,000	396	70	9	9	108	927	8	462	6.6
33Pk312	Condon Farmstead	4,459	115	71	0	0	28.75	517	18	517	7.3
33Pk317	Mechling House Site	2,600	149	104	0	0	37.25	1603	43	1603	15.4
33Pk345	Gibson Cabin	600	24	2	0	0	6	6	1	6	3
33Pk197	Dutch Run Rd. Farmstead	2,000	102	16	8	6	33.5	293	9	72	4.5
33Pk359	-	~1,400	34	21	0	0	8.5	121	14	121	5.8
33Pk360	-	~890	14	3	0	0	3.5	8	2	8	2.7
33Pk369	(artifact scatter)	300	13	5	0	0	3.25	20	6	20	4
33Pk327	Church: Map Loc. 28	149	38	6	0	0	9.5	56	6	56	9.3
33Pk330	Church: Map Loc.52	no data available	28	3	0	0	7	9	1	9	3
33Pk323	Moore School / Map Location 5	927	60	19	0	0	15	119	8	119	6.3

6.1. ARTIFACT FUNCTIONAL GROUPS

An attempt was made to group the various artifacts from the PORTS farmsteads into functional groups, based loosely on the scheme developed by South (1977). As a classification device and tool for discussion and comparison, functional groups are useful in that they distill large numbers of artifact types or categories into groups of types or categories that are related. While this is useful for considering what general kinds of activities occurred at a given site or group of sites, it can also obscure important variability in an assemblage. But as it is used in this report, it enables simple broad comparisons .

Perhaps the most useful distinction made by grouping artifacts into functional groups is the presence and absence of kitchen and architecture group artifacts. Kitchen group artifacts include material remains related to the kitchen, such as storage, preparation, and serving vessels made of ceramic; eating and serving utensils (i.e., forks, knives, and spoons); and glass food preparation, serving, and storage containers, among other things. Architecture group artifacts are objects related to built structures, such as houses, outbuildings, fences, wells, and cisterns. Such structures consist of a variety of things that can be preserved in the archaeological record, chief among these being nails, bricks, slate shingles, and window glass fragments.

Not surprisingly, architecture and kitchen group artifacts dominate most of the PORTS farmstead assemblages. Objects in other groups, such as furniture, hardware, and personal items, tend to occur in relatively low frequencies.

Table 25 summarizes the functional groups documented in each assemblage for this project. The "other" group combines the activity, fuel, faunal, tool, farm implement, equestrian, and miscellaneous groups. Grouping these artifact classes in this way can make it difficult to easily identify potentially interesting variability across assemblages. For example, the Davis Farmstead (33Pk184) has an unusually high proportion and frequency of furniture items while other farmstead sites (e.g., Terrace, Bamboo, and Railside) produced relatively few hardware group artifacts. These specific and small-scale patterns could have a variety of causes, from sampling error to actual cultural behaviors in the past.

Table 26 compares the proportions of architecture and kitchen group artifacts. Just over half of the assemblages have a much higher proportion of architecture group artifacts over the other groups. One way to explain such a high percentage of architecture group artifacts they may not have experienced everyday domestic activities such as that would create kitchen waste. Dutch Run Road Farmstead (33Pk197), Bamboo Farmstead (33Pk211), a church site (33Pk327), and the Moore School site (33Pk323) have unusually high proportions of architecture group items. This is expected for church and school sites, where kitchen-related domestic activities would have been relatively infrequent. The Dutch Run Road and Bamboo farmsteads stand out among other farmsteads in that they have unusually large amounts of architectural debris relative to kitchen waste. In part this is a function of Dutch Run Road Farmstead's relatively small assemblage with few kitchen group items, and in part it is due to Bamboo Farmstead's high frequency of brick (an architecture group artifact) from excavations within and adjacent to a chimney fall. Excluding this brick, the Bamboo Farmstead architecture-to-kitchen group ratio is closer to 2:1. Therefore the context of a site's excavation can bias its assemblage. Nevertheless, farmstead sites with lower amounts of kitchen refuse may have had a formal refuse disposal area and fastidiously clean site occupants.

The amount of refuse in the farmstead yard may also be related to the "modernization" of the farm. Cabak et al. 1999 note that the presence or absence of refuse (including all artifact

groups) at farmsteads in their large South Carolina sample was related to modernization, with "modern" farms having less refuse and "traditional" farms having more. Modern farms contain more recent building materials, such as concrete asphalt shingles, and buildings and debris related to mechanized machinery; traditional farms lack changes to accommodate machinery and have buildings constructed with traditional materials, which in the case of PORTS would be field and cut stone for foundations. Of course, many of the PORTS farmsteads have the archaeological remains of both—i.e., they are traditional farms that have become modernized. In the Cabak et al. (1999) example, traditional sites produced an average of 7.4 artifacts per positive shovel test, transitional sites had 6.4, and modern sites had 3.7. Since their shovel tests were only 35x35 cm in size, we must adjust the PORTS artifact density figures (based on 50x50 cm shovel tests) for comparisons. And when we do this (by multiplying by 0.49), the PORTS artifact densities range from 1.3-7.5 artifacts per positive shovel test, with an average of 3.1. This average artifact density is more consistent with modern farms in the South Carolina sample. This is somewhat unexpected since the PORTS farms may be somewhat older than the bulk of the sampled South Carolina farms, and thus the PORTS farms should have more debris surrounding them as with traditional farms in the South Carolina sample. One probable cause of this discrepancy is the number of shovel tests excavated—in Cabak et al.'s (1999) sample each site received only 20-30 shovel tests, while at PORTS the number of positive shovel tests per site ranged from 3-200. A large number of low density shovel tests from the fringes of the PORTS farmstead middens has brought down the PORTS artifact densities as measured by computing the numbers of artifacts per positive shovel test. Regardless, the numbers of artifacts per positive shovel test is very consistent between PORTS and the South Carolina sample of Cabak et al.

Another explanation for small amounts of debris around the PORTS farmstead houses is that these farmsteads may not ever have experienced a period of decline as they transitioned from one generation/occupation to the next. Periods of decline can produce lax trash disposal behaviors whereby kitchen trash can accumulate in the yard—the closest and most expedient place in which to dump trash.

Approximately 20 percent of the PORTS assemblages produced nearly equal proportions of architecture and kitchen group items, and nearly 30 percent produced significantly higher proportions of kitchen group items. The general paucity of architecture group items at these sites, especially Railside Farmstead (33Pk212) and site 33Pk369, is possibly a reflection of how they were abandoned and razed. Sites lacking much in the way of architecture group objects could be places where the buildings and/or select architecture group objects were scavenged and removed from the site before the site was finally abandoned and left to become an archaeological site. The 33Pk369 assemblage is probably biased due to limited excavation, as the assemblage is very small.

The amounts and relative frequencies of various kinds of artifacts and functional groups is first and foremost dependent on the amount and location of excavation on a site. Generally speaking, it is possible Phase II level excavation efforts may not be enough to produce a sample of artifacts that is representative of an entire farm complex—especially if the farm's refuse dump is not located and sampled.

Table 25. Functional artifact groups from PORTS sites.

OAI #	Site Name	n/%	Architecture	Kitchen	Furniture	Hardware	Personal	Other	TOTAL
33Pk184	Davis Farmstead	n	532	1606	587	0	0	42	2767
		%	***19.2***	***58.0***	***21.1***	***0.0***	***0.0***	***1.7***	***100.0***
33Pk185/ 193	South Shyville Farmstead	n	1023	1074	19	64	10	199	2389
		%	***42.8***	***45.0***	***0.8***	***2.7***	***0.4***	***8.3***	***100.0***
33Pk194	North Shyville Farmstead	n	1172	455	12	2	6	255	1902
		%	***61.7***	***23.9***	***0.6***	***0.1***	***0.3***	***13.4***	***100.0***
33Pk195	Beaver Road Farmstead	n	116	235	14	8	0	62	435
		%	***26.7***	***54.0***	***3.2***	***1.8***	***0.0***	***14.3***	***100.0***
33Pk197	Dutch Run Rd. Farmstead	n	280	8	0	2	0	3	293
		%	***95.6***	***2.7***	***0.0***	***0.7***	***0.0***	***1.0***	***100.0***
33Pk203	Ruby Hollow Farmstead	n	1898	889	5	221	13	198	3224
		%	***58.9***	***27.6***	***0.2***	***6.8***	***0.4***	***6.1***	***100.0***
33Pk206/ 364	Terrace Farmstead	n	2020	1632	2	108	21	481	4264
		%	***47.4***	***38.2***	***0.1***	***2.5***	***0.5***	***11.3***	***100.0***
33Pk211	Bamboo Farmstead	n	2876	559	25	121	9	448	4038
		%	***71.2***	***13.8***	***0.6***	***3.0***	***0.2***	***11.2***	***100.0***
33Pk212	Railside Farmstead	n	79	694	0	269	5	39	1086
		%	***7.3***	***63.8***	***0.0***	***24.8***	***0.5***	***3.6***	***100.0***
33Pk213	Log Pen Farmstead	n	576	1092	19	49	11	214	1961
		%	***29.4***	***55.7***	***1.0***	***2.5***	***0.5***	***10.9***	***100.0***
33Pk217	Stockdale Road Dairy	n	669	215	1	53	10	172	1120
		%	***59.7***	***19.2***	***0.1***	***4.7***	***0.9***	***15.4***	***100.0***
33Pk218	Cornett Farmstead	n	423	244	2	54	14	190	927
		%	***45.6***	***26.4***	***0.2***	***5.8***	***1.5***	***20.5***	***100.0***
33Pk311	Brodess Farmstead	n	204	121	2	16	3	26	372
		%	***54.8***	***32.5***	***0.6***	***4.3***	***0.8***	***7.0***	***100.0***
33Pk312	Condon Farmstead	n	173	260	1	65	9	9	517
		%	***33.5***	***50.3***	***0.2***	***12.6***	***1.7***	***1.7***	***100.0***
33Pk317	Mechling House Site	n	415	847	6	31	13	291	1603
		%	***25.9***	***52.8***	***0.4***	***1.9***	***0.8***	***18.2***	***100.0***
33Pk318	Mechling Farmstead	n	492	530	16	66	5	71	1180
		%	***41.7***	***44.9***	***1.4***	***5.6***	***0.4***	***6.0***	***100.0***
33Pk322	Map Location 4	n	190	108	0	6	0	30	334
		%	***56.9***	***32.3***	***0.0***	***1.8***	***0.0***	***9.0***	***100.0***
33Pk323	Map Location 5 Moore School	n	67	11	0	0	1	40	119
		%	***56.3***	***9.2***	***0.0***	***0.0***	***0.9***	***33.6***	***100.0***
33Pk324	Map Loc. 50	n	43	55	2	3	0	6	109
		%	***39.4***	***50.5***	***1.8***	***2.8***	***0.0***	***5.5***	***100.0***
33Pk327	Church: Site 28	n	51	3	0	2	0	0	56
		%	***91.1***	***5.3***	***0.0***	***3.6***	***0.0***	***0.0***	***100.0***
33Pk330	Church: Map Loc. 52	n	6	3	0	0	0	0	9
		%	***66.7***	***33.3***	***0.0***	***0.0***	***0.0***	***0.0***	***100.0***
33Pk345	Gibson Cabin	n	6	0	0	0	0	0	6
		%	***100.0***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***	***100.0***
33Pk349	Emma Farmer Farmstead	n	17	20	0	0	0	0	37
		%	***46.0***	***54.0***	***0.0***	***0.0***	***0.0***	***0.0***	***100.0***
33Pk359	-	n	64	31	0	0	1	25	121
		%	***52.9***	***25.6***	***0.0***	***0.0***	***0.8***	***20.7***	***100.0***
33Pk360	-	n	5	3	0	0	0	0	8
		%	***62.5***	***37.5***	***0.0***	***0.0***	***0.0***	***0.0***	***100.0***
33Pk369	-	n	1	18	0	0	0	1	20
		%	***5.0***	***90.0***	***0.0***	***0.0***	***0.0***	***5.0***	***100.0***

Table 26. PORTS architecture-to-kitchen group ratio.

OAI #	Site Name	Architecture Artifacts	Kitchen Artifacts	Architecture:Kitchen Ratio
33Pk197	Dutch Run Rd. Farmstead	280	8	35:1
33Pk327	Church: Map Loc. 28	51	3	17:1
33Pk323	Moore School: Map Loc. 5	67	11	6:1
33Pk211	Bamboo Farmstead	2876	559	5:1
33Pk217	Stockdale Road Dairy	669	215	3:1
33Pk194	North Shyville Farmstead	1172	455	2.5:1
33Pk203	Ruby Hollow Farmstead	1898	889	2:1
33Pk359	-	64	31	2:1
33Pk330	Church: Map Loc. 52	6	3	2:1
33Pk322	Map Location 4	190	108	1.8:1
33Pk218	Cornett Farmstead	423	244	1.7:1
33Pk311	Brodess Farmstead	204	121	1.7:1
33Pk360	-	5	3	1.7:1
33Pk206/364	Terrace Farmstead	2020	1632	1.2:1
33Pk185/193	South Shyville Farmstead	1023	1074	1:1
33Pk318	Mechling Farmstead	492	530	1:1
33Pk349	Emma Farmer Farmstead	17	20	1:1
33Pk324	Map Loc. 50	43	55	1:1
33Pk312	Condon Farmstead	173	260	1:1.5
33Pk213	Log Pen Farmstead	576	1092	1:2
33Pk195	Beaver Road Farmstead	116	235	1:2
33Pk317	Mechling House Site	415	847	1:2
33Pk184	Davis Farmstead	532	1606	1:3
33Pk212	Railside Farmstead	79	694	1:8.8
33Pk369	-	1	18	1:18

6.2 CERAMICS

Historic-era ceramics, a significant portion of all kitchen group assemblages, were one of the most important artifact classes at the PORTS sites, for a variety of reasons. Figure 104 depicts examples of a small variety of ceramic types and decoration styles collected from a sample of the PORTS farmsteads. Concentrations of ceramics at the PORTS historic-era sites were most often found around houses or in domestic refuse dumps. Because of this, they are a useful artifact class in shovel test data for identifying domestic sites and locating houses. Ceramics are also particularly time sensitive because they are so well documented in the historical archaeology literature. In the PORTS research, ceramics were an important means for dating the occupation time span at each site—especially the beginning of a site's occupation. While land deed records have provided some evidence of when farmsteads and houses first appeared on land parcels, the time periods represented in the ceramic assemblages were an independent and more precise indicator of site occupation time (of course, the time lag between ceramic manufacture, often in England, and discard at the PORTS sites is an important factor to consider).

Ceramics can be examined using several different kinds of classification schemes, including those that focus on the type of vessel (e.g., plate, tea cup, and chamber pot) and those that only highlight the type of pottery (e.g., redware, stoneware, porcelain). With highly fragmented archaeological assemblages, such as those from the PORTS sites, the simplest and most reliable classifications are those that only focus on the type of pottery represented by each sherd. Table 27 provides data on the quantities and types of ceramics recovered from each site. Redware, yellowware, and pearlware are common ceramic types widely produced and used during the early nineteenth century—the earliest period of farmstead occupation at PORTS (see Appendix C for definitions of each ware type). Stoneware and whiteware became common later in the nineteenth century and are still manufactured today, as are ironstone and porcelain. Rockingham and Delftware are very rare among the PORTS sites. Decorations on the ceramics were also key in estimating manufacture dates and thus dating the deposition of ceramic refuse at the PORTS sites.

Early period (early-mid 1800s) ceramics (redware, yellowware, and pearlware) are rare at PORTS and, combined, never contribute to more than 17 percent of any given assemblage, with the exception of site 33Pk360, which produced a very small ceramic assemblage consisting of only three artifacts and therefore the earlier types make up a much higher percentage (Table 27). Seven assemblages, including those from churches and a school site produced no redware, yellowware, or pearlware. The absence or near absence of these ceramic types at five of the PORTS farmsteads is probably a reflection of the age of these sites—they date primarily to the twentieth century. Deed records and historical aerial photographs, for example, demonstrate that Cornett Farmstead (33Pk218) and Mechling House Site (33Pk317) were constructed relatively late, after the turn of the twentieth century, and therefore would not be expected to contain early ceramics. Nine assemblages with higher proportions of redware, yellowware, and pearlware are known to be older, dating back to the mid-to-late nineteenth century. Table 28 lists mean ceramic dates for each assemblage and, therefore, possible dates for initial farmstead development. In many cases limited archival information (i.e., deed records) help support these occupation ranges.

Whiteware, followed by stoneware, tends to dominate all ceramic assemblages (Table 27). Given that most of the PORTS farmsteads were developed during the latter part of the

nineteenth century and were abandoned by the 1950s, the predominance of whiteware is not surprising since whiteware was the most common type of ceramic available during this period. Ironstone, which was popular from the 1840s until the early part of the twentieth century (though it was especially common in the late 1800s), is the third most common ceramic type after stoneware.

One interesting and common pattern found at nearly all of the farmsteads and domestic sites was the occurrence of ceramics sherds around houses, except House 1 at Stockdale Road Dairy. While it seems odd that people would dispose of trash in their yards, this is a very common pattern found all around the world at sites occupied by all manner of families and individuals—not just those of western European culture. When and how this trash made its way into the house yards, however, is an important detail that often is overlooked by archaeologists. Many simply assume that the trash built up in yard areas on a day to day basis. But this may not have been the case. The artifacts found around many of the houses at the PORTS sites represent several or more decades of deposition. If this deposition occurred slowly, the buildup of trash may not have even been noticeable to the site occupants. In some cases, there are concentrations of ceramic debris in particular site areas, such as to the northwest and down slope from the Bamboo Farmstead house, or way out by the large barn at the Stockdale Road Dairy. In these two cases the ceramic concentrations contain a large percentage of the older ceramic types recovered at these two sites. Such discrete ceramic dumping areas could be indicative of a variety of past events or processes. For example, since ceramics are often tied to the female head of the house, a change in this position (e.g., a new wife or the death of elderly parent or grandparent) could represent a purge of old ceramics associated with this individual. Ceramic debris might also have accumulated when a family moved and decided to leave behind some of their out-dated possessions.

Regardless of our interpretations of the many fascinating events and processes that are represented by the ceramics and other artifact classes found at the PORTS sites, none of these observations would have been possible if the artifacts had not been recovered during the field work. Because most of the PORTS historic-era sites are not plowed, they retain excellent patterning in the distribution of the surface-deposited artifacts (e.g., artifacts tied to specific activity areas; the general accumulation of artifacts as midden; and discrete trash dumping locations). And many of the surface artifact concentrations cover fairly small areas. In fact, we would argue that most of the artifact surface concentrations could have been overlooked if it were not for the use of tight-interval (i.e., 5-meter) shovel testing. While larger excavation units around house foundations encountered many artifacts, a significant percentage of the ceramic assemblage was recovered from midden and refuse dumps located during shovel testing.

Table 27. PORTS farmstead household ceramic assemblages.

OAI #	Site Name	n/%	Redware	Yellowware	Pearlware	Stoneware	Whiteware	Unidentified Whiteware	Rockingham	Ironstone	Porcelain	Delftware	TOTAL
33Pk184	Davis Farmstead	n	1	8	0	8	117	0	0	15	7	0	156
		%	***0.6***	***5.1***	***0.0***	***5.1***	***75.0***	***0.0***	***0.0***	***9.6***	***4.6***	***0.0***	***100.0***
33Pk185/ 193	South Shyville/ Wagon Wheel Farmstead	n	32	6	7	62	223	6	6	27	3	0	372
		%	***8.6***	***1.6***	***1.9***	***16.7***	***59.9***	***1.6***	***1.6***	***7.3***	***0.8***	***0.0***	***100.0***
33Pk194	North Shyville Farmstead	n	7	8	0	82	110	0	0	11	10	0	228
		%	***3.1***	***3.5***	***0.0***	***36.0***	***48.2***	***0.0***	***0.0***	***4.8***	***4.4***	***0.0***	***100.0***
33Pk195	Beaver Road Farmstead	n	3	0	0	5	23	0	0	2	1	0	34
		%	***8.9***	***0.0***	***0.0***	***14.7***	***67.6***	***0.0***	***0.0***	***5.9***	***2.9***	***0.0***	***100.0***
33Pk197	Dutch Run Rd. Farmstead	n	0	0	0	1	1	0	0	0	0	0	2
		%	***0.0***	***0.0***	***0.0***	***50.0***	***50.0***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***	***100.0***
33Pk203	Ruby Hollow Farmstead	n	15	1	32	47	311	5	1	21	10	0	443
		%	***3.4***	***0.2***	***7.2***	***10.6***	***70.2***	***1.1***	***0.2***	***4.8***	***2.3***	***0.0***	***100.0***
33Pk206/ 364	Terrace Farmstead	n	16	2	29	122	228	3	2	69	4	0	475
		%	***3.4***	***0.4***	***6.1***	***25.7***	***48.0***	***0.6***	***0.4***	***14.6***	***0.8***	***0.0***	***100.0***
33Pk211	Bamboo Farmstead	n	6	9	4	37	115	1	2	83	4	0	261
		%	***2.3***	***3.4***	***1.5***	***14.2***	***44.1***	***0.4***	***0.8***	***31.8***	***1.5***	***0.0***	***100.0***
33Pk212	Railside Farmstead	n	5	1	0	4	23	0	0	3	0	0	36
		%	***13.9***	***2.8***	***0.0***	***11.1***	***63.9***	***0.0***	***0.0***	***8.3***	***0.0***	***0.0***	***100.0***
33Pk213	Log Pen Farmstead	n	6	0	0	13	28	1	0	15	2	0	65
		%	***9.2***	***0.0***	***0.0***	***20.0***	***43.1***	***1.5***	***0.0***	***23.1***	***3.1***	***0.0***	***100.0***
33Pk217	Stockdale Road Dairy	n	12	0	1	28	45	2	0	4	2	0	94
		%	***12.8***	***0.0***	***1.1***	***29.8***	***47.9***	***2.1***	***0.0***	***4.2***	***2.1***	***0.0***	***100.0***
33Pk218	Cornett Farmstead	n	0	0	0	1	4	0	0	0	3	0	8
		%	***0.0***	***0.0***	***0.0***	***12.5***	***50.0***	***0.0***	***0.0***	***0.0***	***37.5***	***0.0***	***100.0***
33Pk311	Brodess Farmstead	n	1	1	0	6	30	0	0	11	0	0	49
		%	***2.0***	***2.0***	***0.0***	***12.3***	***61.2***	***0.0***	***0.0***	***22.5***	***0.0***	***0.0***	***100.0***
33Pk312	Condon Farmstead	n	1	7	1	42	65	0	0	18	0	0	134
		%	***0.7***	***5.2***	***0.7***	***30.9***	***47.8***	***1.5***	***0.0***	***13.2***	***0.0***	***0.0***	***100.0***
33Pk317	Mechling House Site	n	0	1	1	37	193	18	0	65	3	0	318
		%	***0.0***	***0.3***	***0.3***	***11.6***	***60.7***	***5.7***	***0.0***	***20.4***	***1.0***	***0.0***	***100.0***
33Pk318	Mechling Farmstead	n	3	11	0	34	76	5	0	28	4	0	161
		%	***1.9***	***6.8***	***0.0***	***21.1***	***47.2***	***3.1***	***0.0***	***17.4***	***2.5***	***0.0***	***100.0***
33Pk322	Map Loc. 4	n	0	3	0	2	36	0	0	5	0	0	46
		%	***0.0***	***6.5***	***0.0***	***4.3***	***78.3***	***0.0***	***0.0***	***10.9***	***0.0***	***0.0***	***100.0***
33Pk323	Moore School Map Loc. 5	n	0	0	0	0	2	0	0	2	0	0	4
		%	***0.0***	***0.0***	***0.0***	***0.0***	***50.0***	***0.0***	***0.0***	***50.0***	***0.0***	***0.0***	***100.0***
33Pk324	Map Loc. 50	n	0	0	0	1	3	0	0	1	0	1	6
		%	***0.0***	***0.0***	***0.0***	***16.6***	***50.0***	***0.0***	***0.0***	***16.6***	***0.0***	***16.6***	***100.0***
33Pk327	Church: Map Loc. 28	n	0	0	0	0	1	0	0	1	0	0	2
		%	***0.0***	***0.0***	***0.0***	***0.0***	***50.0***	***0.0***	***0.0***	***50.0***	***0.0***	***0.0***	***100.0***
33Pk330	Church: Map Loc. 52	n	0	0	0	0	2	0	0	0	0	0	2
		%	***0.0***	***0.0***	***0.0***	***0.0***	***100.0***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***	***100.0***

Table 27. PORTS farmstead household ceramic assemblages, *continued*.

OAI #	Site Name	n/%	Redware	Yellowware	Pearlware	Stoneware	Whiteware	Unidentified Whiteware	Rockingham	Ironstone	Porcelain	Delftware	TOTAL
33Pk349	Emma Farmer Farmstead	n	2	0	0	5	4	0	0	7	0	0	18
		%	*11.0*	*0.0*	*0.0*	*28.0*	*22.0*	*0.0*	*0.0*	*39.0*	*0.0*	*0.0*	*100.0*
33Pk359	-	n	1	2	0	3	2	14	0	3	0	0	25
		%	*4.0*	*8.0*	*0.0*	*12.0*	*8.0*	*56.0*	*0.0*	*12.0*	*0.0*	*0.0*	*100.0*
33Pk360	-	n	0	1	0	1	1	0	0	0	0	0	3
		%	*0.0*	*33.3*	*0.0*	*33.3*	*33.4*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*100.0*
33Pk369	-	n	0	0	0	0	18	0	0	0	0	0	18
		%	*0.0*	*0.0*	*0.0*	*0.0*	*100.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*100.0*
Total	-	**n**	**111**	**61**	**75**	**541**	**1661**	**55**	**11**	**391**	**53**	**1**	**2960**
		%	***3.8***	***2.1***	***2.5***	***18.3***	***56.1***	***1.9***	***0.4***	***13.2***	***1.8***	***0.03***	***100.0***

Table 28. Temporal data from selected PORTS farmsteads, house sites, churches, and schools.

OAI #	Site Name	Mean Ceramic Date	Mean Ceramic Date Excluding Undecorated Whiteware	Percentage of Ceramics Pre-1880 Terminal Production Date	Inferred Period of Occupation
33Pk203	Ruby Hollow Farmstead	1851	1870	27.7	1850s-1952
33Pk324	Map Loc. 50	1857	1842	16.6	1910-1952
33Pk330	Church-Map Loc. 52	1860	1860	0	1891-1952
33Pk327	Church-Site Map Loc. 28	1873	1885	0	ca. 1884-1952
33Pk206/364	Terrace Farmstead	1874	1864	13.4	1860s-1952
33Pk197	Dutch Run Rd. Farmstead	1876	1868	0	ca. 1905-1952
33Pk217	Stockdale Road Dairy	1876	1866	40.7	1838-1952
33Pk185/193	South Shyville Farmstead	1877	1865	11.2	1875-1952
33Pk349	Emma Farmer Farmstead	1877	1873	0	1870s-1922
33Pk194	North Shyville Farmstead	1878	1874	0	1870s-1952
33Pk211	Bamboo Farmstead	1878	1871	11.5	1840s-1953
33Pk317	Mechling House Site	1878	1878	2.8	pre-1905-1956
33Pk312	Condon Farmstead	1879	1824	5.9	1867-1938
33Pk369	-	1879	1870	11.1	1880s-1950s
33Pk318	Mechling Farmstead	1880	1870	5.0	pre-1905-1956
33Pk213	Log Pen Farmstead	1881	1881	0	1905-1952
33Pk311	Brodess Farmstead	1882	1873	10.2	1870s-1956
33Pk322	Map Loc. 4	1884	1884	4.3	1884-1952
33Pk195	Beaver Road Farmstead	1886	1888	0	1871-1952
33Pk184	Davis Farmstead	1888	1894	<0.1	1905-1951
33Pk212	Railside Farmstead	1890	1890	0	1933-1952
33Pk323	Moore School	1891	1896	0	Pre-1884-1952
33Pk218	Cornett Farmstead	1895	1901	0	1905-1956
33Pk326	Map Loc. 27	n/a	n/a	0	1870s-1952
33Pk345	Gibson Cabin	n/a	n/a	0	1923-1960

Figure 104. Images of selected ceramics from a sample of the PORTS farmstead sites.

7. DISCUSSION AND RECOMMENDATIONS

Various levels of archaeological investigation within the 3,777 acres of PORTS in Pike County, Ohio have resulted in the documentation of 61 archaeological sites that date to the historic-era (Schweikart et al. 1997; Klinge 2010; Klinge and Mustain 2011; Burks 2011a; Pecora 2011; Mustain and Klinge 2011; 2012; Vehling et al. 2011; Mustain 2012; Mustain and Lamp 2012; Garrard and Burden 2012; Norr 2012; Trader 2011; Pecora 2012; Pecora and Burks 2012a; 2012b). *Historic-era* refers to the period of time after European migration into the Americas. The PORTS historic-era sites were primarily occupied during the mid-late 1800s and early-mid 1900s.

For sake of discussion and presentation, we have divided the PORTS historic-era archaeological sites into ten categories: (1) residential sites (farmstead, house, and recreational cabin sites) (n=30); (2) farmstead components (n=5); (3) a recreational cabin (n=1); (4) refuse dumps (n=5); (5) artifact scatters (n=9); (6) isolated finds (n=4); (7) a bridge (n=1); (8) cemeteries (n=2); (9) church sites (n=3), and (10) a school site (n=1). One of the artifact scatters is associated with a second bridge abutment. Table 29 provides a summary of the PORTS historic-era sites, including assigned OHI numbers, site name (if existing), site type (based on the current analysis), site condition, NRHP eligibility recommendation, and report reference. Our assessment of site condition refers to the site's archaeological condition (degree of preservation and potential to generate more information), and it is a judgment call based on what has been documented to date at each site as presented in the various archaeology reports. Fair to good condition refers to sites, mostly farmstead and house sites, that (1) have not been too seriously impacted by large-scale earth moving, (2) retain several building foundation remains (that correspond to building locations on aerial photos), and (3) have meaningful artifact patterning. As a general trend, the artifact patterning at many of the farmstead and house sites is defined by concentrations of artifacts near or around house foundations. The artifact assemblages also tend to be comprised mainly of architectural debris (nails, building stone, brick, and window glass) and kitchen debris (ceramics and container glass). "Poor" condition is assigned to sites that lack most of the foundation remains and exhibit little evidence of artifact patterning. Most sites labeled "poor condition" have been heavily compromised by major earth moving activities associated with the development of PORTS.

Although this report attempts to summarize all historic-era archaeological sites documented within PORTS, it emphasizes the farmstead and house sites that are in "good" condition because most of these have been subjected to rather extensive Phase II and enhanced Phase I-level surveys. The other site types, such as refuse dumps, artifact scatters, and isolated finds, are rarely investigated beyond the standard Phase I survey level, and the quality and quantity of archaeological data is limited.

Farmstead and house sites are the most common site type at PORTS. Historical map and aerial photograph resources demonstrate that the land making up the PORTS facility contained at least 68 building (or clusters of buildings) locations between about 1905 and 1952. The PORTS archaeological investigations found archaeological remains at 38 of these locations, including several school and church sites. All other historically mapped building locations were found to either lack archaeological remains or are presumed to lack archaeological remains because they are located within the developed portions of PORTS.

Table 29 also summarizes the NRHP eligibility for all PORTS historic-era archaeological sites (n=61). The Holt Cemetery (33Pk214) and the Mount Gilead Church and Cemetery

(33Pk189) sites were determined to be eligible for the NRHP through consultation with the Ohio Historic Preservation Office (OHPO). Further consultation with the OHPO and other consulting parties is recommended regarding the treatment and protection of these two sites.

All other sites, such as refuse dumps, isolated finds, artifact scatters, and bridge abutments are considered to be ineligible for the NRHP. Likewise, all of the farmstead and house sites were also determined to be ineligible as individual preservation units. This means that as individual sites, each does not appear to meet the criteria for NRHP eligibility.

While the PORTS historic-era archaeological sites, as individual preservation units, are not eligible for the NRHP, as a group they have the potential to contribute to the understanding of a late nineteenth and early twentieth century farming community in southern Ohio. Phase II and enhanced Phase I-level surveys conducted at some of these sites have resulted in a tremendous amount of archaeological data. Limited archival background research in these studies, focused mainly on historic map resources and property deeds, has provided a glimpse into the dynamic historical landscape of this rural farming community. The existing archaeological information presented in various survey reports and summarized here, coupled with future additional archival research regarding the people who created these sites, has considerable research potential.

PORTS is unique because the creation of the AEC facility encapsulated and preserved the archaeological remains of a large portion of a late nineteenth and early twentieth century rural community within the bounds of the 3,777-acre reservation. Additionally, nearly all of these sites have not been damaged by agricultural plowing. It is true that Ohio contains (or once contained) many farmstead and house sites from the same era, but the circumstantial preservation unintentionally afforded by the creation of PORTS has provided archaeologists the opportunity to study an assemblage of farmstead and house sites within a geographically confined space. Because of their proximity to each other it is likely that the various families knew (or knew of) each other, helped each other, voted together, shared similar problems, lost sons to various wars, intermarried, and attended the same schools and churches. Decisions about what to cultivate and when to plant or harvest in any given season or whether or not to venture into the dairying business, were certainly issues that were resolved through interaction between neighbors and friends residing in geographic proximity. It is also probable that same or near-same socio-economic status was shared by many of the community members, though with some fluctuation, up and down, through time and across generations. Much as today, life for families in the nineteenth and early twentieth century was not isolated. The understanding of the meaning behind the relative frequency of occurrence of transfer-printed pottery versus undecorated vessels is best interpreted by the comparison within a community, and it is through this comparison that we can begin to gain a better understanding of what the variability in the archaeological record of these sites might mean.

Table 29. Summary of recommendations for PORTS historic-era archaeological sites.

OAI #	Name	Type	Site Condition	Occupation/ Use Date Range	Recommendation	Report Reference
33Pk184	Davis Farmstead	Farmstead	good	1905-1951	Ineligible	Klinge and Mustain 2011
33Pk185	South Shyville Farmstead	Farmstead	good	1875-1952	Ineligible	Pecora and Burks 2012b
33Pk187	-	Farmstead	poor	Pre-1905	Ineligible	Schweikart et al. 1997
33Pk189 (PIK-206-4)	Mount Gilead Cemetery	Cemetery	good	-	NRHP Eligible	Schweikart et al. 1997
33Pk191	-	Refuse Dump	poor	Early-mid 20th century	Ineligible	Schweikart et al. 1997
33Pk192	-	Refuse Dump	poor	Early-mid 20th century	Ineligible	Schweikart et al. 1997
33Pk193	Iron Wheel Farmstead	Farmstead Component	good	1875-1952	Ineligible	Klinge and Mustain 2011
33Pk194	North Shyville Farmstead	Farmstead	good	1870s-1952	Ineligible	Klinge and Mustain 2011
33Pk195	Beaver Road Farmstead	Farmstead	good	1871-1952	Ineligible	Klinge and Mustain 2011
33Pk197	Dutch Run Road Farmstead	Farmstead Component	poor	1905-1952	Ineligible	Klinge and Mustain 2011
33Pk199	-	Isolated Find	poor	unknown	Ineligible	Schweikart et al. 1997
33Pk200	-	Artifact scatter	poor	unknown	Ineligible	Schweikart et al. 1997
33Pk201	-	Isolated Find	poor	unknown	Ineligible	Schweikart et al. 1997
33Pk202	-	Artifact scatter	poor	Early-mid 20th century	Ineligible	Schweikart et al. 1997
33Pk203	Ruby Hollow Farmstead	Farmstead	good	1850s-1952	Ineligible	Pecora and Burks 2012a
33Pk206	Terrace Farmstead	Farmstead	good	1860s-1952	Ineligible	Pecora and Burks 2012a
33Pk209	-	Artifact scatter	poor	Early-mid 20th century	Ineligible	Schweikart et al. 1997
33Pk211	Bamboo Farmstead	Farmstead	good	1860s-1953	Ineligible	Pecora and Burks 2012a
33Pk212	Railside Farmstead	Farmstead	poor	1905-1952	Ineligible	Klinge 2010
33Pk213	Log Pen Farmstead	Farmstead	poor	1905-1952	Ineligible	Klinge 2010
33Pk214 (PIK-207-12)	Holt Cemetery	Cemetery	good	-	NRHP Eligible	Burks 2009
33Pk215	-	Refuse Dump	n/a	Early-mid 20th century	Ineligible	Schweikart et al. 1997
33Pk216	-	Refuse Dump	n/a	Early-mid 20th century	Ineligible	Schweikart et al. 1997
33Pk217	Stockdale Road Dairy	Farmstead	good	1838-1952	Ineligible	Pecora and Burks 2012a
33Pk218	Cornett Farmstead	House Site/ Farmstead	fair	1905-1956	Ineligible	Pecora and Burks 2012a
33Pk311	Brodess Farmstead	Farmstead	good	1870s-1956	Ineligible	Pecora and Burks 2012b

OAI #	Name	Type	Site Condition	Occupation/ Use Date Range	Recommendation	Report Reference
33Pk312	Condon Farmstead	House Site/ Farmstead	fair	1867-1938	Ineligible	Pecora and Burks 2012b
33Pk313	Map Location 16	House Site/ Farmstead	poor	Pre-1905-1950s	Ineligible	Pecora 2011
33Pk314	Ferree Church	Church	poor	Pre-1905-1950s	Ineligible	Pecora 2011
33Pk315	Map Location 19	Farmstead	poor	Pre-1905-1950s	Ineligible	Pecora 2011
33Pk316	Map Location 20	House Site/ Farmstead	poor	Pre-1905-1950s	Ineligible	Pecora 2011
33Pk317	Mechling House Site	House Site/ Farmstead	fair	1905-1956	Ineligible	Pecora and Burks 2012b
33Pk318	Mechling Farmstead	Farmstead	good	1905-1956	Ineligible	Pecora and Burks 2012b
33Pk319	Map Location 43	House Site/ Farmstead	poor	Late 19th-early 20th century	Ineligible	Pecora 2011
33Pk320	Map Location 2	Farmstead	poor	Pre-1905-1950s	Ineligible	Mustain and Klinge 2011
33Pk321	Map Location 3	House Site/ Farmstead	poor	Pre-1905-1950s	Ineligible	Mustain and Klinge 2011
33Pk322	Map Location 4	Farmstead	poor	Pre-1905-1950s	Ineligible	Mustain and Klinge 2012
33Pk323	Moore School	School	poor	Pre-1880s-Pre-1930s	Ineligible	Mustain and Klinge 2012
33Pk324	Map Location 50	Farmstead	good	1910-1952	Ineligible	Mustain and Klinge 2012
33Pk325	Map Location 25	Farmstead	poor	Pre-1905-1950s	Ineligible	Trader 2011
33Pk326	Map Location 27	Farmstead	poor	1870s-1950s	Ineligible	Garrard 2011
33Pk327	Map Location 28	Church	poor	Late 19th-early 20th century	Ineligible	Garrard 2011
33Pk328	Map Location 36	Farmstead	poor	Pre-1905-1950s	Ineligible	Trader 2011
33Pk329	Map Location 37	Farmstead Component	poor	late	Ineligible	Trader 2011
33Pk330	Map Location 52	Church	poor	1891-1950s	Ineligible	Garrard 2011
33Pk331	Map Location 53	Farmstead Component	poor	Pre-1905-1950s	Ineligible	Trader 2011
33Pk340	-	Artifact scatter	poor	-	Ineligible	Mustain 2012
33Pk344	-	Artifact scatter	poor	Late 19th-early 20th century	Ineligible	Pecora 2012
33Pk345	Gibson Cabin	Recreational Cabin	fair	1923-1960	Ineligible	Pecora 2012
33Pk349	Emma Farmer Farmstead	Farmstead	good	1870s-1922	Ineligible	Pecora 2012
33Pk353	-	Artifact scatter	poor	Mid 19th century-1950s	Ineligible	Pecora 2012
33Pk355	-	Isolated Find	poor	-	Ineligible	Garrard & Burden 2012
33Pk356	-	Isolated Find	poor	-	Ineligible	Garrard & Burden 2012
33Pk359	-	Farmstead Component	poor	Late 19th-early 20th century	Ineligible	Garrard & Burden 2012

OAI #	Name	Type	Site Condition	Occupation/ Use Date Range	Recommendation	Report Reference
33Pk360	North Shyville Farmstead	Farmstead Component (part of 33Pk194)	poor	1870s-1952	Ineligible	Garrard & Burden 2012
33Pk362	-	Artifact scatter	poor	Mid-20th century	Ineligible	Garrard & Burden 2012
33Pk363	-	Pre-PORTS Bridge	poor	Late 19th-early 20th century	Ineligible	Garrard & Burden 2012
33Pk364	Terrace Farmstead	Farmstead Component (part of 33Pk206)	good	1960s-1952	Ineligible	Norr 2012
33Pk369	-	Artifact scatter	poor	Late 19th-early 20th century	Ineligible	Norr 2012
33Pk374	-	Artifact scatter	poor	-	Ineligible	Mustain 2012
33Pk375	-	Refuse Dump	poor	-	Ineligible	Mustain 2012

The PORTS farmstead and house sites clearly display evidence that some were more successful than others at the time they were abandoned in the 1950s. This is most evident in an evaluation of farmstead size and the widespread use of concrete, which generally was associated with the recent development of substantial dairying components. The farmsteads that contained concrete milking parlors tend to be the largest of the PORTS farmsteads, and while the size of these farmsteads averages about 100 acres, it is likely that these farms were made functionally bigger by renting cultivated fields and pasture from non-farming neighbors. Many of the smaller farmsteads and/or house sites appear to represent less affluent individuals and families, but of course this assumption could be faulty because it is entirely possible that these families held non-farming occupations that may not be visible in the archaeological record. The historical dynamics of this locale are vast and this, to some degree, is reflected in the archaeological record.

There are a range of potential topics that could be addressed with further research such as why so many properties changed hands so rapidly over time; when were the farmstead or house sites developed; when and why dairy components were added to the PORTS farmsteads; what influenced the differing price per acre paid to landowners at the time of acquisition by the AEC; who were the founding families in the area, was the PORTS area community a combination of nationalities; or was the ethnic fabric of the community set and perpetuated by the founding families; or did the ethnic composition of this community fluctuate over time and was it linked to national-level events or economic cycles. Various resources such as historical documents, including, for example, marriage and death certificates, census records, tax records, records of appraisals, and probate records could be researched and tools such as Geographic Information Systems, and genealogical databases could be used to conduct this research. Several potential research questions that might be addressed through such a document review include:

(1) Who lived at the PORTS farmstead and house sites? Do the deed records reflect the actual people or families who lived at the farmstead and house sites, or just those who owned them? The deed records list landowner names, but seldom mention houses or buildings. The landowner names do not necessarily reflect farmstead occupants.

Land acreage and houses were frequently rented to people unrelated to the landowners. Various historical records may help resolve who actually lived at the PORTS sites. This is archaeologically important because these are the people who actually created the archaeological record at each of the sites.

(2) Why did so many properties change hands so rapidly over time? The property records for many of the property parcels containing farmstead and house sites demonstrated that the properties were bought and sold quite frequently, sometimes several times in a year. Many of the transactions appear to be between family members, frequently after the death of the previous owner. This is evident in the numerous transactions for $1.00. Members of the Shy Family (among others), for example, purchased many different properties within PORTS and, in many instances, sold the same properties a short time later at a financial loss. One plausible explanation is that land parcels were purchased for their timber. Once the timber sales were completed, the land value would naturally decrease but the overall financial gain for the Shy's might have been substantial. Evidence of timbering may be present in the archival records.

(3) When were the farmstead or house sites developed? Records show that the PORTS landscape was divided into many small parcels early in the nineteenth century. People were buying and selling these properties well before the farmstead and house sites were developed, which in most cases appears to be in the latter part of the nineteenth century and the early twentieth century. Inferences were made from deed records and artifact assemblages regarding when the various farmsteads were developed based on changes in land value, tenure of landownership, and mean ceramic dates for several sites, but a review of the tax records and other historical documents may help pinpoint actual dates.

(4) At least seven of the PORTS farmsteads were found to be dairy farms based on the identification of concrete milking platforms often with discernible milking stanchions, sanitation gutters, and service alleys. Most are small, and would have accommodated 6-8 cows per milking session. The Stockdale Road Dairy (33Pk217) and possibly site 33Pk324 appear to be much larger dairy farms. The Stockdale Road Dairy has a milking platform that would have accommodated up to 16 cows. Given that the milking platforms at these sites are made of concrete, they are relatively recent additions to the farmsteads (post 1920s-1930s).

Although the dairy industry was well-developed in Ohio early in the nineteenth century, the milk was used primarily for cheese production, as cheese is suitable for long-range transport. However, early nineteenth century cattle in the Scioto Valley, which was then an important stock region, were primarily beef breeds and were not suitable for large scale milk production (Burkett 1900).

However, there is no evidence that any of the PORTS farmsteads were dairy farms prior the twentieth century. The concrete milking platforms and frequently associated water works found at many of the sites are responses to early- and mid-twentieth sanitation requirements imposed by the State of Ohio. When and why dairy

components were added to the PORTS farmsteads might be addressed through research into various historic records.

(5) Why does the price per acre paid by the AEC vary from farm to farm? This question is non-archaeological but it may be of historic interest. Land value was probably determined by land quality, timber volume, and building quality and quantity as well as the timing of the acquisition. To better address this question, appraisal records, negotiation records, public meeting records, and newspaper accounts could be reviewed.

(6) Who were the founding families in the area? Zimmerman, Holt, Clarke, Moore, Daily, Vulgamore, Boiler, Hawk(e), Van Meter, Shy, Talbot(t), Sargent, Barnes, Cutlip, Moore, Morgan, among others, were some of the first families to own land in the area that now makes up PORTS. Many of these families owned various properties in this area into the twentieth century, in addition to the Brigner, Stavens, Patterson, Scott, Farmer, Vance, and McDaniel families, as well as others. Property records and archival research could be conducted to learn more about these families and their presence on the land that is now PORTS.

(7) Many of the family names represented in this study have German or Scotts-Irish origins. It is probable that many of these people originated from Pennsylvania, Kentucky, Virginia, and possibly New England. Census records, for example, demonstrate that Henry Shy was born in Bavaria, Germany in 1832 and immigrated to the United States around 1848 (Vehling et al. 2011). By 1850, he was living in Scioto Township and began acquiring land within PORTS in the 1860s. Shy became a rather prominent citizen in the region soon after his arrival in the United States, and is probably one of the founders of Shyville. Additional census records may reveal similar information about the other PORTS families, and other questions about the origins of these families might be considered. For example, was the PORTS area community a combination of nationalities; or was the ethnic fabric of the community set and perpetuated by the founding families; or did the ethnic composition of this community fluctuate over time and was it linked to national-level events or economic cycles? Is this community a microcosm of the nation as a whole, reacting in similar ways to the Panics of 1873 or 1893, for example, or did seclusion in rural Ohio, far from most markets, insulate families in this community?

(8) This summary report makes reference to the concept of the "community" or "PORTS community." In the context of this report, this concept is used as a tool to describe a place that was preserved by the AEC development of PORTS. The history of the farmsteads has no bearing on the development of PORTS, but the development of PORTS is a historical contingency that resulted in the preservation of a fairly large assemblage of historic-era archaeological sites within a 3,777 acre reservation. It is in this context that these sites are available for study.

A true historical community may be defined as the neighborhood, township, and/or county. These would be the frame of reference from which to develop a regional context for the archaeological remains, which are confined to PORTS. Did

the PORTS farmsteads belong to just one community, or were there several different communities operating in different social contexts—religious, economic, ethnic, etc.

In summary, the PORTS historic-era archaeological sites offer a unique opportunity to link the abundance of the existing archaeological data presented in a series of archaeological survey reports with historical documentation in an effort to address some of the questions presented above, and potentially others. Life in the farmsteads, house sites, schools, churches, and cemeteries was abruptly interrupted by the AEC acquisition of the land that comprises the PORTS reservation. The result of this ultimately was the preservation of a large sample of various kinds of archaeological sites that date to the mid-nineteenth to mid-twentieth century. While no single historic-era site within PORTS was found to be eligible for the NRHP, as a group the sites have study value as they represent what was once present on this tract of land. Additional archival research is recommended for the historic-era farmsteads on the PORTS site. It will enable a better understanding of the people who livered there and how they connected through the many kinds of familiar and social relationships that provided the basis for communities. (No additional fieldwork is recommended). A research plan could be developed that considers a variety of methods to enable a better understanding of the overall historic-era archaeology of the PORTS site:

(1) Develop a GIS of all historic-era building locations, including those lacking archaeological remains, using aerial photographs (see Appendix A). PORTS once contained at least 68 historically mapped building location sites (most of which contained multiple buildings), and most of these were farmstead and house sites. Historical map resources and aerial photographs would be useful for creating plan maps of all PORTS farmstead and house locations. Estimates regarding building size, building function, and physical relationships to other buildings from the aerial photographs proved very accurate when used on archaeologically investigated sites, and this information assisted in efforts to reconstruct farm plan maps for six farmstead sites examined at the Phase II level (Pecora and Burks 2012a). For those farmsteads that have been erased from the landscape, the aerial photographs will provide a foundation for their historical reconstruction. New, crisp LiDAR-generated topographic maps with geo-referenced images of structures, coupled with information about structure size, house plans, landform, elevation, and relationship to transportation routes, for example, would provide a good basis from which to better understand the PORTS historical landscape. Existing archaeological information would be useful for understanding the material culture of those who lived on that landscape. This GIS could also include property boundaries.

(2) Make use of census records, tax records, and other archived documents, to establish the names of the families who lived at the various farmstead and house sites.

(3) Create a GIS database for property transactions, associated archaeological sites, names of property owners through time, the names of residents at farmsteads and house sites, farm acreage size, etc. Deed records proved useful for several property parcels examined for some of the farmstead and house sites presented in this report. However, it is very difficult to manage the names and acreages, as certain individuals

owned many different properties at various times. A GIS data set might help sort out the relationship between property transactions (chains of property title) and farm size throughout the course of the nineteenth and twentieth century.

(4) Develop a better understanding of the site formation processes that resulted in the archaeological record documented in the various survey reports. It is generally understood that historic-era "midden" is the result of the accumulation of artifacts through the course of a site's occupation. Most of the farmstead and house sites investigated at PORTS reveal artifact middens around and adjacent to the house foundations. This type of observation has led archaeologists to concur with the notion that this pattern reflects refuse disposal behavior. There are several potential problems with this assertion. One problem is that the PORTS site middens tend to be dominated by late period debris interspersed with far fewer older artifacts. This implies that the earlier inhabitants tended to keep their yards cleaner than the later inhabitants. The presence of ornamental plants and somewhat elaborate landscaping at some of these sites and the recovery of a lawn mower blade at one site implies that yard maintenance was important later in the occupation of at least some sites. The disposal of glass bottles, jars, and ceramics in one's yard seems to be inconsistent with this evidence of yard maintenance. How did this debris end up in these areas near to the houses? The second problem is that kitchen debris (e.g., container glass and ceramics) tends to be intermixed with large quantities of architectural debris (e.g., nails, window glass, and brick). While small amounts of architectural debris might be deposited around house foundations during building and remodeling efforts, these activities cannot account for the large amount of architectural debris in the PORTS assemblages. More likely, most of the architectural debris was probably deposited when the buildings were razed after being purchased by the AEC. Archaeologists cannot overlook the juxtaposition of both artifact classes and assume each resulted from different behaviors. Clearly archaeologists tend not to understand how such assemblages are formed and without a better understanding of these processes, it is not possible to make behavioral inferences. This effort to understand the structure and composition of the historic-era site assemblages should delve into the rich archaeological literature on eighteenth and nineteenth century farmsteads from the eastern United States, especially sites from Appalachia, Pennsylvania, and other nearby non-slave-holding areas.

(5) How do the mean ceramic dates compare with the earliest time of farmstead/house site development or earliest period of occupation. For many of the PORTS farmstead sites, inferences about the earliest period of development based on deed records correspond well with the mean ceramic dates derived from the artifact assemblages. Additional archival work may better define when (and by whom) the farmsteads were first created.

(6) Attempt to develop a family tree for all or a selection of the farmsteads. These farmsteads were tied together through family ties in a variety of ways. Family trees may be a fairly easy way to quickly demonstrate the linkages between the sites. Sources for this information include census records, property records, probate records, and marriage and death certificates.

(7) Develop summary life histories for a selection of the individuals from Option 6. Certainly some individuals will appear more often and prominently in the archival records than others. Who are these people; where were they born and into what families; when did they arrive in Pike County; what did they do for a living; what happened to them and their families through time? Developing mini-biographies for a selection of individuals from across the PORTS farmsteads will help provide more context for the archaeological remains documented to date and it will bring discussions of economy, ethnicity, archaeological site formation, etc. back to the real people would owned and/or lived at these farms and homesteads.

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9. APPENDIX A. LIST OF HISTORIC-ERA ARCHAEOLOGICAL SITES AND POTENTIAL SITE LOCATIONS WITHIN PORTS

USSP E: NAD 83 (ft.)	USSP N: NAD 83 (ft.)	Historical Map Location #	OAI	Level of Investigation	Site Type	Reference
1829121	364725	56	33Pk184	Phase I-Phase II	Farmstead	Schweikart et al. 1997; Klinge and Mustain 2011
1830223	366239	57	33Pk185	Phase I-Phase II	Farmstead	Schweikart et al. 1997: Pecora and Burks 2012
1822738	365880	58	33Pk187	Phase I	Farmstead	Schweikart et al. 1997
1829918	372128	24	33Pk189	Phase I	Mount Gilead Cemetery	Schweikart et al. 1997
1829165	364075	n/a	33Pk191	Phase I	Refuse Dump	Schweikart et al. 1997
1829040	363556	n/a	33Pk192	Phase I	Refuse Dump	Schweikart et al. 1997
1829905	366258	57	33Pk193	Phase I-Phase II	Farmstead Component	Schweikart et al. 1997; Klinge and Mustain 2011
1830563	368256	59	33Pk194	Phase I-Phase II	Farmstead	Schweikart et al. 1997; Klinge and Mustain 2011
1829718	367371	60	33Pk195	Phase I-Phase II	Farmstead	Schweikart et al. 1997; Klinge and Mustain 2011
1831306	369312	46	33Pk197	Phase I-Phase II	Farmstead Component	Schweikart et al. 1997; Klinge and Mustain 2011
1826793	376151	n/a	33Pk199	Phase I	Isolated Find	Schweikart et al. 1997
1826820	375776	n/a	33Pk200	Phase I	Artifact Scatter	Schweikart et al. 1997
1826998	376025	n/a	33Pk201	Phase I	Isolated Find	Schweikart et al. 1997
1827066	375348	n/a	33Pk202	Phase I	Artifact Scatter	Schweikart et al. 1997
1823828	376811	61	33Pk203	Phase I-Phase II	Farmstead	Schweikart et al. 1997; Pecora and Burks 2012b
1831281	371190	69	33Pk206	Phase I-Phase II	Farmstead	Schweikart et al. 1997; Pecora and Burks 2012b
1830323	365220	n/a	33Pk209	Phase I	Artifact Scatter	Schweikart et al. 1997
1826187	376407	63	33Pk211	Phase I-Phase II	Farmstead	Schweikart et al. 1997; Pecora and Burks 2012b
1832659	380290	64	33Pk212	Phase I-Phase II	Farmstead	Schweikart et al. 1997; Klinge 2010
1832311	379901	65	33Pk213	Phase I-Phase II	Farmstead	Schweikart et al. 1997; Klinge 2010
1832295	379109	n/a	33Pk214	Phase I-Geophysical Survey	Holt Cemetery	Schweikart et al. 1997; Burks 2009
1832001	378118	n/a	33Pk215	Phase I	Refuse Dump	Schweikart et al. 1997
1832131	378506	n/a	33Pk216	Phase I	Refuse Dump	Schweikart et al. 1997
1828963	375018	66	33Pk217	Phase I-Phase II	Farmstead/House Site	Schweikart et al. 1997; Pecora and Burks 2012b
1833525	375911	67	33Pk218	Phase I-Phase II	Farmstead	Schweikart et al. 1997; Pecora and Burks 2012b
1831851	375703	13	33Pk311	Reconn & Phase I+	Farmstead	Pecora 2011; Pecora and Burks 2012a
1831239	375614	14	33Pk312	Reconn & Phase I+	Farmstead/House Site	Pecora 2011; Pecora and Burks 2012a
1831459	374591	16	33Pk313	Reconnaissance	Farmstead	Pecora 2011
1829804	374213	17	33Pk314	Reconnaissance	Ferree Church	Pecora 2011
1827855	373479	19	33Pk315	Reconnaissance	Farmstead	Pecora 2011
1829479	373608	20	33Pk316	Reconnaissance	Farmstead	Pecora 2011
1833859	374108	21	33Pk317	Reconn & Phase I+	Farmstead	Pecora 2011; Pecora and Burks 2012a
1832618	373651	22	33Pk318	Reconn & Phase I+	Farmstead	Pecora 2011; Pecora and Burks 2012a

USSP E: NAD 83 (ft.)	USSP N: NAD 83 (ft.)	Historical Map Location #	OAI	Level of Investigation	Site Type	Reference
1829673	372870	43	33Pk319	Reconnaissance	Farmstead	Pecora 2011
1825588	378864	2	33Pk320	Reconn & Phase I	Farmstead	Mustain and Klinge 2011; 2012
1825209	378572	3	33Pk321	Reconn & Phase I	Farmstead	Mustain and Klinge 2011; 2012
1826396	377775	4	33Pk322	Reconn & Phase I	Farmstead	Mustain and Klinge 2011; 2012
1827202	377802	5	33Pk323	Reconn & Phase I	Moore School	Mustain and Klinge 2011; 2012
1821783	368153	50	33Pk324	Reconn & Phase I	Farmstead	Mustain and Klinge 2011; 2012
1829630	371751	25	33Pk325	Reconnaissance	Farmstead	Trader 2011
1830325	370788	27	33Pk326	Reconn & Phase I	Farmstead	Trader 2011; Vehling et al. 2011
1831619	370140	28	33Pk327	Reconn & Phase I	Church	Trader 2011; Vehling et al. 2011
1829149	367885	36	33Pk328	Reconnaissance	Farmstead	Trader 2011
1829121	366197	37	33Pk329	Reconnaissance	Farmstead	Trader 2011
1820382	367497	52	33Pk330	Reconn & Phase I	Church	Trader 2011; Vehling et al. 2011
1826934	362290	53	33Pk331	Reconnaissance	Farmstead Component	Trader 2011
1829439	374237	n/a	33Pk340	Phase I	Artifact Scatter	Mustain 2012
1831783	377828	n/a	33Pk344	Phase I	Artifact Scatter	Pecora 2012
1832682	377679	68	33Pk345	Phase I	Recreational Cabin	Pecora 2012
1833185	377038	10	33Pk349	Phase I & II	Farmstead	Pecora 2012; Pecora and Burks 2013
1833184	375666	n/a	33Pk353	Phase I	Artifact Scatter	Pecora 2012
1829421	365814	n/a	33Pk355	Phase I	Isolated Find	Garrard & Burden 2012
1830004	366032	n/a	33Pk356	Phase I	Isolated Find	Garrard & Burden 2012
1827909	363089	n/a	33Pk359	Phase I	Farmstead Component	Garrard & Burden 2012
1830356	367689	n/a	33Pk360	Phase I	Farmstead Component	Garrard & Burden 2012
1830824	370777	n/a	33Pk362	Phase I	Artifact Scatter- Bridge Abutment	Garrard & Burden 2012
1829973	368657	n/a	33Pk363	Phase I	Bridge	Garrard & Burden 2012
1831182	371536	69	33Pk364	Phase I	Farmstead Component	Norr 2012
1832789	372921	n/a	33Pk369	Phase I	Artifact Scatter	Norr 2012
1824385	375141	n/a	33Pk374	Phase I	Artifact Scatter	Mustain 2012
1825608	376890	n/a	33Pk375	Phase I	Refuse Dump	Mustain 2012
1824989	379792	1	None	Reconnaissance	Former Farmstead	Mustain and Klinge 2011
1827281	377485	6	None	Destroyed	Former Farmstead	Burks 2011a
1827267	377360	7	None	Destroyed	Former Farmstead	Burks 2011a
1830573	378877	8	None	Reconnaissance	Former Farmstead	Mustain and Klinge 2011
1831826	380112	9	None	Reconnaissance	Former Farmstead	Mustain and Klinge 2011
1832634	375701	11	None	Reconnaissance	Former Farmstead	Pecora 2011
1832216	375086	12	None	Reconnaissance	Former Farmstead	Pecora 2011

USSP E: NAD 83 (ft.)	USSP N: NAD 83 (ft.)	Historical Map Location #	OAI	Level of Investigation	Site Type	Reference
1831430	375139	15	None	Destroyed	Former Farmstead	Burks 2011a
1828659	373993	18	None	Reconnaissance	Former Farmstead	Pecora 2011
1830831	372579	23	None	Reconnaissance	Former Farmstead	Pecora 2011
1829557	370835	26	None	Reconnaissance	Former Farmstead	Trader 2011
1829551	369798	29	None	Reconnaissance	Former Farmstead	Trader 2011
1829152	367887	30	None	Destroyed	Former Farmstead	Burks 2011a
1829124	366199	31	None	Destroyed	Former Farmstead	Burks 2011a
1821799	369496	32	None	Reconnaissance	Former Farmstead	Mustain and Klinge 2011
1822289	363203	33	None	Reconnaissance	Former Farmstead	Trader 2011
1824952	378816	34	None	Destroyed	Former Farmstead	Burks 2011a
1825652	375460	35	None	Destroyed	Former Farmstead	Burks 2011a
1824410	370155	38	None	Destroyed	Former Farmstead	Burks 2011a
1821781	369479	39	None	Destroyed	Former Farmstead	Burks 2011a
1820687	367295	40	None	Reconnaissance	Former Farmstead	Mustain and Klinge 2011
1825752	367473	41	None	Reconnaissance	Former Farmstead	Mustain and Klinge 2011
1827188	367509	42	None	Destroyed	Former Farmstead	Burks 2011a
1830126	373978	44	None	Reconnaissance	Former Farmstead	Pecora 2011
1829655	369248	45	None	Reconn & Phase I	Former Farmstead	Trader 2011; Vehling et al. 2011
1831456	369489	47	None	Reconnaissance	Former Farmstead	Trader 2011
1830764	366417	48	None	Reconnaissance	Former Farmstead	Trader 2011
1824516	372396	49	None	Destroyed	Former Farmstead	Burks 2011a
1824394	367268	51	None	Destroyed	Former Farmstead	Burks 2011a
1827361	377107	54	None	Destroyed	Former Farmstead	Burks 2011a

10. APPENDIX B. ARTIFACT GROUP TYPE DEFINITIONS

Architecture Group. The architecture group includes artifacts that were associated with the construction, maintenance, or remodeling of a structure (e.g., house, barn, outbuildings, etc.). Common examples include nails, brick, window glass, building stone, sash window weights, and door knobs/handles.

Kitchen Group. The kitchen group includes artifacts that were used for food service, storage, preparation, and consumption (e.g., ceramics, container glass, metal utensils and containers, etc.).

Furniture Group. The furniture group includes artifacts that were associated with furniture such as cabinets, lamps, chairs, and figurines.

Hardware. The hardware group refers to hardware items that may or may not have been directly used for architectural purposes. Such items may include electrical insulators, battery parts, wire, screws, bolts, metal bars and rods, etc.

Personal Group. The personal group includes personal belongings such as clothing, jewelry, watches, pocket knives, or money.

Other. The PORTS historic-era archaeological sites also contain numerous other artifact groups classified as activity, fuel, faunal, tool, farm implement/transportation, and miscellaneous. These are defined below, but tend to occur in such at low frequencies that they have been grouped together as "other group" for the purposes of this discussion. Although furniture, hardware, and personal group items also tend to occur in low frequencies, they are treated individually because they sometimes represent unique or interesting items.

Activity Group. The activity group includes artifacts that were associated with activities such as gardening, children's games, and tobacco use. Examples of this group may include toys, marbles, and tobacco pipes/stems.

Fuel Group. The fuel group includes artifacts associated with heating/cooking. Coal and coal slag are the most common fuel group artifacts

Faunal Group. The faunal group includes animal bones and teeth. Most of these items are likely kitchen waste. However, animal bones frequently end up in house yards via dogs.

Tool Group. The tool group refers to all tools, with the exception of kitchen related items. Such artifacts may include hammers, files and rasps, grinding wheels, screw drivers, and wrenches.

Farm Implement/Transportation Group. This artifact group refers to items associated with farm machinery, lawn mowers, and automobiles.

Equestrian/Draft Group. The equestrian/draft group refers to items associated with horse and draft animal tack, such as harnesses, bridles, and horseshoes.

Miscellaneous Group. The miscellaneous group refers to odd items or unidentified items that cannot be clearly associated with any of the defined functional groups. Such items may include small corroded metal or plastic pieces.

11. APPENDIX C. CERAMIC WARE GROUP DEFINITIONS

Redware: Utilitarian redware is a general term for a broad class of coarse earthenware vessels that were commonly used throughout the historic period (ca. 1607- ca. 1900) in rural America. Most redware types found in the Ohio region were commonly manufactured from ca. 1805- ca. 1900, but redware potters continued production into the 1920s (Ramsay 1939) and are still producing today. Redware typically has a red to reddish brown paste with clear lead glazes designed to keep vessels water-tight. Redware was commonly used in the kitchen for preparation and sometimes presentation and consumption. It also commonly was used for storage and other utilitarian purposes, including as buckets or pails used to gather maple sap. It was one of the least expensive ceramic types available to folks living in the farmsteads at PORTS.

Pearlware: Pearlware is a more refined earthenware that was introduced in 1779 as "pearl white" by well-known potter Josiah Wedgewood (Sussman 1977, 2000). It began to be replaced by whiteware in the 1820s, but it was still in production into the 1840s. Calcined flint was added to Pearlware during mixing of the clay to produce a lighter colored paste; and to off-set the cream colored body, a blue-tinged glaze was used to create a "whiter" surface appearance. Pearlware vessels were the earliest to have large amounts of decoration, including hand-painted floral designs consisting of either single (blue during earliest period) or multiple colors (green, black, red, etc., on later vessels). Pearlware vessels, especially plates, were also commonly edge decorated (blue and green-edged) with designs such as scalloped shell-edge or feather-edge (Hunter and Miller 2009; Miller and Hunter 1990). The most expensive decorated pearlware vessels were covered in transfer-printed designs. The first transfer prints were black and were used on creamware vessels before 1779. The most common early transfer prints on pearlware were blue, especially dark blue, and they date to the early-mid 1800s. Many other colors, such as red, brown, purple, and green were also used, and transfer color is a good marker for deriving some basic date ranges for ceramic assemblages containing transfer prints (Samford 1997). Pearlware was used to make the entire range of ceramic vessels, including tea sets, dinner services (e.g., plates, platters, tureens, salt shakers, etc.), and sanitation vessels such as pitchers and chamber pots.

Whiteware: Whiteware was the first truly white-bodied, refined earthenware to be produced by European potters. It was first produced as early as 1810 but did not become popular until after 1820, and it is still being made today. Like pearlware, whiteware enjoyed many types of decoration common in the 1800s, including edge decoration, transfer prints, annular banding, hand-painted mono- and polychrome floral designs, and sponge and spatter designs. Decalcomania, a decorative technique that involved the application of a decal (typically a polychrome floral design) over the ceramic glaze, was introduced by European potters around 1890 (Miller 2000). Whiteware vessels were used for the same range of functions as pearlware.

Yellowware: American yellowware is refined earthenware with a cream to buff to deep yellow colored paste and a colorless lead or alkaline-based glaze. Yellowware was produced from around 1830-1940 and was quite common from 1830-1900 (Miller 2000). It frequently has slip-trailed annular banding and sometimes is accompanied by mocha patterns or other slip decorations such as cabling or cat's eye (Genheimer 2011). Yellowware most often appears on

archaeology sites in the form of large chamber pots and mixing bowls, but it also was used for other preparation and serving vessel types.

Ironstone: Ironstone is refined earthenware with a white body paste. This is a very durable ceramic that was fired at high temperatures. Petuntse, a micaceous or feldspathic rock, was used as a paste ingredient and had similar properties to china-stone. Ironstone sometimes has a grayish-blue color caused by the cobalt in the glaze. It is usually thicker and less porous than whiteware, and seldom has much decoration beyond impressed designs. Ironstone was manufactured from around 1840 to 1910, but it was most popular in the late nineteenth century.

Stoneware: Stoneware is a pottery type made of various mixtures of clay fired to very high temperatures, which creates a hard, non-porous and non-absorbent ceramic body. Stoneware was frequently glazed, even though is vitrified body makes it water tight without the glaze. Although used as tableware as early as the sixteenth century, stoneware in Ohio was used mostly for utilitarian vessels, such as crockery, jugs, bottles, churns, and jars. Buff- and gray-bodied stonewares were designed for storage and were produced in the Northeast United States as early as the seventeenth century and in the Midwest by the early nineteenth century. Glaze treatments include salt glazes and clay slips. Common slipped stonewares include Albany slip, produced from 1805 to 1920, and Bristol slip, produced from 1835 to present (Miller 2000).

Ohio was a major stoneware producer as early as 1804 and by 1840 there were twenty-two potters in Muskingum County alone (Ketchum 1991). Stoneware faded in popularity with the development of container glass around the turn of the twentieth century.

Porcelain: Porcelain is a durable ceramic that is fired at such high temperature that it is nearly completely vitrified, to the point that the glaze is indistinguishable from the paste. True porcelain was invented by the Chinese in the seventh century; Europeans were not able to produce it until the eighteenth century. Porcelain vessels tend to be very thin. Prior to the mid-nineteenth century, most porcelain in the United States was imported from China. After that, most of it was produced in Europe. European porcelain sometimes has a "soft" paste in which the glaze and the paste are not fully vitrified together. This is due to lower firing temperatures than the Chinese procelains. Porcelain was used for fine tableware, figurines, dolls, door knobs, toiletries, and many other items. By the twentieth century, it was used for electrical insulators and plumbing fixtures. Porcelain tea sets and dinner ware were some of the most expensive ceramics a family could own in the early and mid-nineteenth century.

Delftware: Delftware is tin-glazed refined earthenware that has a cream to light buff colored paste that typically has a chalky feel. This ware was produced mainly from 1628 to circa 1800, although some potters were still producing this ware as late as the 1850s (FLMNH 2004; Hume 1969; Miller 2000). Delftware was first produced in England and Holland but towards the end of the eighteenth century it was also being produced in Scotland. The exterior tin glaze was often poorly bonded with the body and thus the glaze is often flaked off in areas. The background enamel, which tends to be a white-bluish white-very pale blue, is mostly smooth with a matte to low-gloss finish. A pin-holing effect is sometimes observed within the enamel. Delftware experiences most of the same decorations as most other wares of the time and includes plain, hand-painted motifs, floral, geometric, landscape, and Chinese designs; monochrome colors; polychrome colors; and sponge décor arrangements (FLMNH 2004; Hume 1969; Miller 2000).

Delftware was made into many different shapes including bowls, chamber pots, drug jars, plates, vases, candlesticks, mugs, and jugs, to name a few. By the late eighteenth to early nineteenth centuries, delftware began to be replaced by both Chinese porcelain wares and the emergence of stoneware (Hume 1969).

Rockingham: Rockingham is a particular style of decoration that is found on yellowware (American and English). The paste, which is typically hard, thick, and compact, is refined earthenware with a clear lead glaze. Rockingham has a distinctive surface treatment that has a mottled appearance of brown and yellow that is dripped on the vessel resulting in a lack of patterning and covers nearly the entire container. The American market first saw Rockingham after 1788 but its peak in popularity did not occur until 1840 (FLMNH 2004; Ketchum 1987).