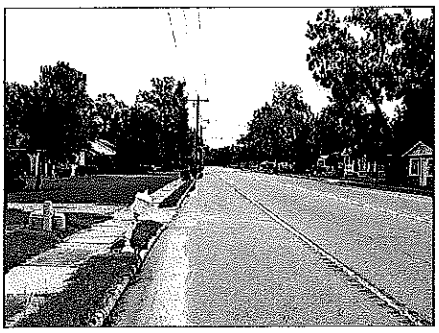
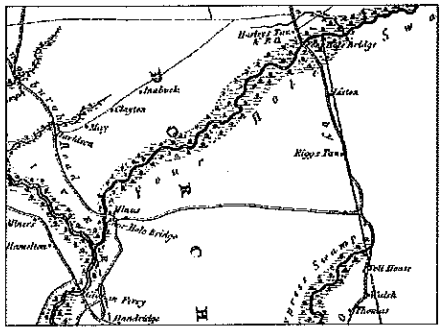
Cultural Resources Survey of the Proposed Dorchester Orangeburg Reach Water Transmission Main

Dorchester and Orangeburg Counties, South Carolina





January 2016

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CULTURAL RESOURCES CONSULTING

Cultural Resources Survey of the Proposed Dorchester Orangeburg Reach Water Transmission Main

Dorchester and Orangeburg Counties, South Carolina

January 2016

Final Report

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Abstract

Archaeologists and architectural historians with Brockington and Associates, Inc. (Brockington), conducted an intensive survey of the proposed Dorchester Orangeburg Reach Water Transmission Main, in Dorchester and Orangeburg counties, South Carolina, in September and October 2015. The proposed water transmission main will extend for 12.81 miles, with a 1.21-mile segment in southern Orangeburg County and an 11.6-mile segment in Dorchester County. The easement for the water pipeline is 30 feet wide throughout its length and lies within existing rights-of-way (ROW) of US Highways 78, 176, and 178; SC Route 27; and various streets in the Town of Harleyville. Portions of the easement within the US Highway 78 ROW were surveyed by Salo et al. (2007). This water pipeline will join other elements of the Lake Marion Regional Water Agency's water transmission system.

The survey identified five new archaeological sites (38DR448-38DR449 and 38OR361-38OR363) and one isolated find and revisited one archaeological site (38DR347). The easement also passes through a portion of Harleyville Historic Area. Archaeological sites 38DR448-38DR449 and 38OR361-38OR363 are diffuse scatters of Pre-Contact or Post-Contact materials. We recommend sites 38DR448-38DR449 and 38OR361-38OR363 and the isolated find not eligible for the National Register of Historic Places (NRHP).

We revisited 38DR347 and examined intensively a portion of the easement that passes through the site that lies outside the US Highway 78 ROW. Salo et al. (2007) originally identified the site; they found no archaeological deposits within the US Highway 78 ROW that could contribute to the NRHP eligibility but did not investigate portions of the site beyond the ROW to develop a definitive NRHP evaluation for the entire site. Close interval shovel testing and intensive metal detecting recovered no artifact or archaeological deposits within the proposed water pipeline easement that can contribute to the NRHP eligibility of 38DR347.

The proposed water pipeline will be installed underground within the ROW of streets within the Harleyville Historic Area. The setting of the Historic Area and its individual elements will not be altered such that their NRHP eligibility will be compromised or degraded. Also, we inspected the entire water pipeline route for potential historic landscapes that might be affected by the removal of trees or the alteration of other features during the installation of the water transmission main. We identified no such landscapes.

As currently designed, the proposed Dorchester Orangeburg Water Transmission Main will affect no historic properties. Should the project be redesigned such that additional portions of 38DR347 fall within the easement or that portions of the Harleyville Historic Area outside existing ROW are within the easement, then additional cultural resources investigations may be necessary to determine the redesigned Project's effect on historic properties.

Acknowledgments

We would like to thank Andrew Vane of Hazen and Sawyer, PC (Hazen and Sawyer), for providing maps and information about the proposed water pipeline and the South Carolina Public Service Authority (Santee Cooper) for funding the proposed investigations.

Scott Kitchens and Jimmy Lefebre conducted the archaeological field investigations. Sheldon Owens conducted the architectural reconnaissance. Mr. Lefebre cleaned, identified, and cataloged the recovered artifacts under the direction of Mr. Owens. Mr. Kitchens also assisted with the preparation of the site forms. Cristian LaRosa and Michael Walsh prepared the report graphics. Jon Strother and Eric Poplin provided editorial assistance. Autumn Morrison and Mr. Walsh assembled the report.

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1.0 Introduction and Methods

1.1 Introduction

From September 28 to October 19, 2015, archaeologists with Brockington conducted an intensive survey of the proposed route of the Dorchester Orangeburg Water Transmission Main in Dorchester and Orangeburg counties, South Carolina. The survey provides partial compliance with Section 106 of the National Historic Preservation Act of 1966 (as amended), as administered by the US Army Corps of Engineers (USACE) Charleston District (33 CFR 325). The results of the survey will assist the USACE in their assessment of the effect of the project on historic properties (sites, buildings, structures, objects, or districts eligible for or listed on the National Register of Historic Places [NRHP]).

The South Carolina Public Service Authority (Santee Cooper) is building the Lake Marion Regional Water System (LMRWS), a regional water system that carries water from Lakes Marion and Moultrie to surrounding communities. Segments of this water pipeline have been built; others are in the planning stages. The portion examined during this survey includes two segments, a 1.21-mile segment in Orangeburg County and an 11.60-mile segment in Dorchester County. The easement for the pipeline is 30 feet wide throughout its entire length; the proposed pipeline will consist of 12- to 24-inch diameter conduit. The Orangeburg County segment of the project corridor extends west from US Highway (US) 15 approximately 0.14 miles north of Wells Crossroads, following existing rights-of way (ROWs) through 0.21 miles of woods, and extends for another one mile along the north side of US 176, where the proposed pipeline will connect with an existing element of the LMRWS surveyed by Poplin and Baluha (2012). The Dorchester County segment of the project corridor extends east from an existing element of the LMRWS surveyed by Baluha (2014), approximately 0.01 miles west of S-18-153 (North Railroad Avenue), and extends 0.13 miles east-southeast, turning south-southwest for 0.20 miles along Hutto Street, turning again southeast along US 178/Main Street for 7.63 miles, then proceeding another 2.69 miles along US 78/178, before turning northeast and north along South Carolina (SC) Route 27 for 0.95 miles. This route follows the eastern edge of Hutto Street, the northern edges of US 78 and US 178, and the western edge of SC Route 27. In general, both segments of the project corridor extend through either agricultural or wooded lands, with the exception of approximately 0.20 miles in a suburban part of Harleyville in Dorchester County. In order to avoid impacts to existing infrastructure and wetlands, the proposed pipeline will be directionally drilled in 15 places along the easement; these include one area along US 176 to avoid a wetland, five areas along US 178 in Harleyville to avoid utilities, five areas along US 178 to avoid wetlands, and four areas along US 78/178 to avoid Four Hole Swamp. Figures 1.1 through 1.5 display the location of the proposed water pipeline.

Archaeological survey identified five new archaeological sites (38DR448-38DR449 [Dorchester] and 38OR361-38OR363 [Orangeburg]) and one isolated find (Table 1.1). Sites 38OR361 and 38OR362 contain artifacts associated with late nineteenth to twentieth century occupations, likely related to small farm complexes, tenant farms, or agricultural facilities. Sites 38OR363 and 38DR449 contain artifacts associated with eighteenth and/or nineteenth century occupations. Site 38DR448 contains artifacts associated with a Middle/Late Woodland occupation. None of these sites can generate additional information about the past. We recommend these five sites and the isolated find not eligible for the NRHP.

In addition, these investigations revisited previously recorded site 38DR347. Site 38DR347 is the site of the old Four Holes Swamp Bridge, with components associated with a Revolutionary War camp and skirmish, a Civil War camp, an eighteenth-twentieth century bridgehead and causeway, and twentieth century logging road and fish camp. Salo et al. (2007) determined that no portion of the site within the US 78/178 ROW could contribute to the NRHP eligibility of 38DR347; they did not make a definitive evaluation of the site's NRHP eligibility. The Dorchester segment of the Project extends through a portion of 38DR347. Much of this portion of the pipeline will be directionally drilled (from approximately stations 422+00 to 431+00) to avoid affecting Four Hole Swamp and 38DR347. Other portions of the proposed pipeline will be in

Table 1.1 Cultural resources identified in the project corridor.

Site	Component/Description		NRHP Status	County	Nearest Station
38OR361	19th/20th century	domestic scatter	Not eligible	Orangeburg	10+00 - 11+00
38OR362	19th/20th century	domestic scatter	Not eligible	Orangeburg	40+00
38OR363	18th/19th, 20th centuries	domestic scatter	Not eligible	Orangeburg	59+00 - 60+00
38DR347	Four Holes Swamp Bridge site (18th-20th century)	camp site, old roadbed	Requires Evaluation	Dorchester	420+00 - 429+00
38DR448	Middle/Late Woodland	ceramic and lithic scatter	Not eligible	Dorchester	170+00
38DR449	19th/20th century	domestic scatter	Not eligible	Dorchester	252+00 - 253+00
Harleyville Historic Area		39 contributing resources	Not eligible	Dorchester	24+00 - 36+00
219 687	ca. 1915	167 E. Main St. (SFR)	Not eligible	Dorchester	28+00
219 688	1911	179 E. Main St. (SFR)	Not eligible	Dorchester	29+00 - 30+00

the US 78/178 ROW, surveyed by Salo et al. (2007) that contain no archaeological deposits that can contribute to the NRHP eligibility of the site. One segment of the proposed pipeline easement lies outside the surveyed ROW. Intensive examination through close interval shovel testing and metal detecting encountered no artifacts or archaeological deposits in this portion of 38DR347. Therefore, the proposed pipeline project will not alter 38DR347 in such a way that its future NRHP eligibility may be compromised.

Architectural reconnaissance of the proposed water line easement revealed no historic landscapes that may be affected by the project. The water pipeline, when installed, will be completely underground, limiting or precluding effects to historic architectural resources. One short segment of the proposed pipeline extends through 0.25 miles of the Harleyville Historic Area along US 178 (East Main Street), between Hutto Street and First Bend Road. Fick and Davis (1997) first recorded the Harleyville Historic Area, a collection of 39 historic architectural resources. Contributing Historic Architectural Resources 219 687 and 219 688 (single family residences) stand close to the pipeline easement. However, the proposed water pipeline will be installed within the 75-foot road US 178 ROW approximately 18 feet from the centerline of the road. Therefore, the project will not alter the setting or condition of either building or the Harleyville Historic Area in such a way that their NRHP eligibility may be compromised.

In summary, the proposed Dorchester Orangeburg Reach Water Transmission Main Project will not affect any historic properties. Should design of the proposed pipeline be altered, particularly within 38DR347 or the Harleyville Historic Area, additional cultural resources investigations will be necessary to determine if the project may affect historic properties.

A description of the methods employed during these investigations concludes Chapter 1. Chapter 2 presents an overview of the natural and cultural setting of the project area. Chapter 3 presents the results of the survey and management recommendations. An inventory of the artifacts recovered during the survey appears in Appendix A.

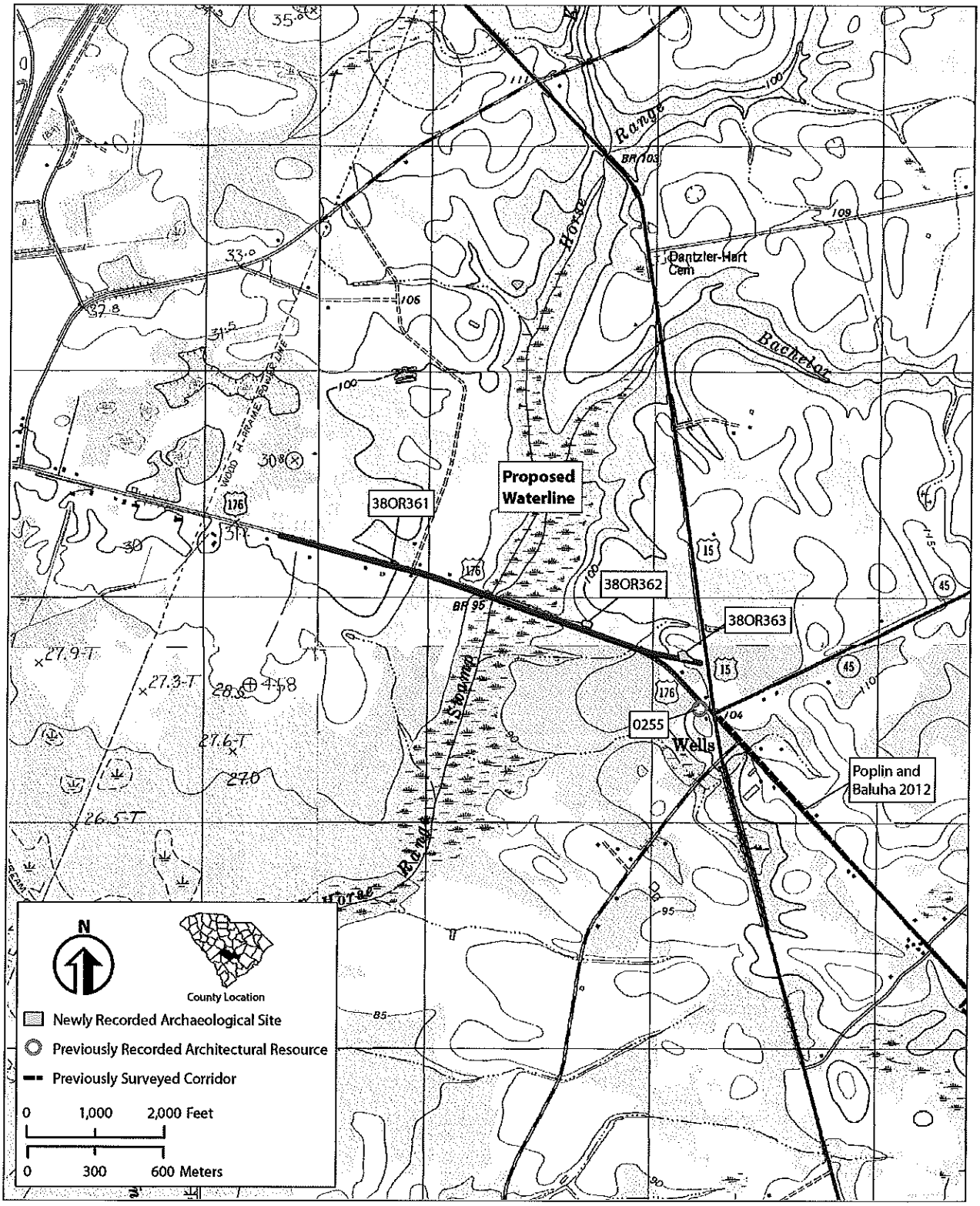

Figure 1.1 The Orangeburg segment of the Dorchester Orangeburg Reach Water Transmission Main on the USGS (1982) *Felderville, SC,* (1987) *Holly Hill, SC,* (1979) *Vance, SC,* and (1982) *Wadboo Swamp, SC* quadrangles.

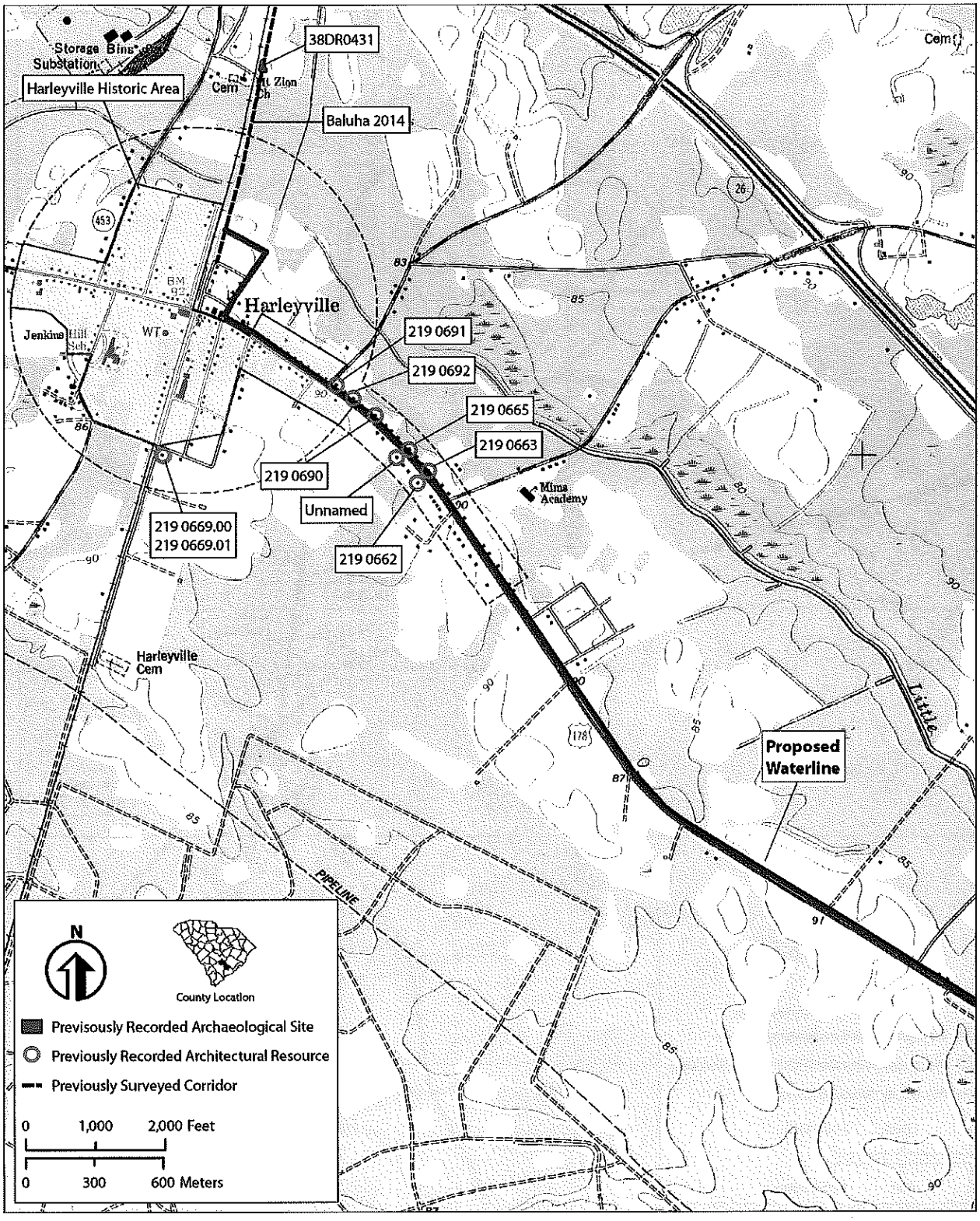

Figure 1.2 The northern portion of the Dorchester segment of the Dorchester Orangeburg Reach Water Transmission Main on the USGS (1973) *Harleyville, SC* quadrangle.

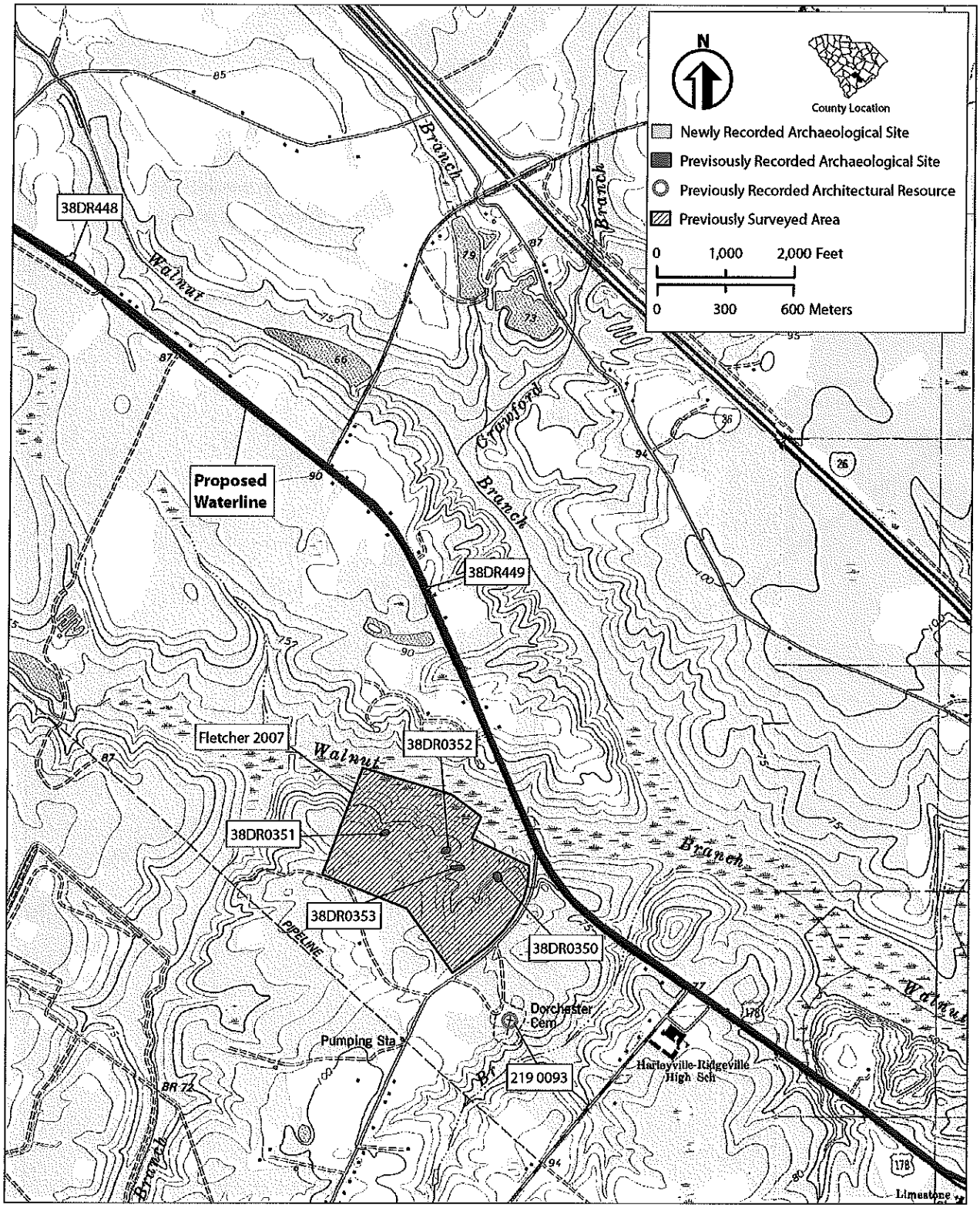

Figure 1.3 The north-central portion of the Dorchester segment of the Dorchester Orangeburg Reach Water Transmission Main on the USGS (1973) *Harleyville, SC* and (1987) *Pringletown, SC* quadrangles.

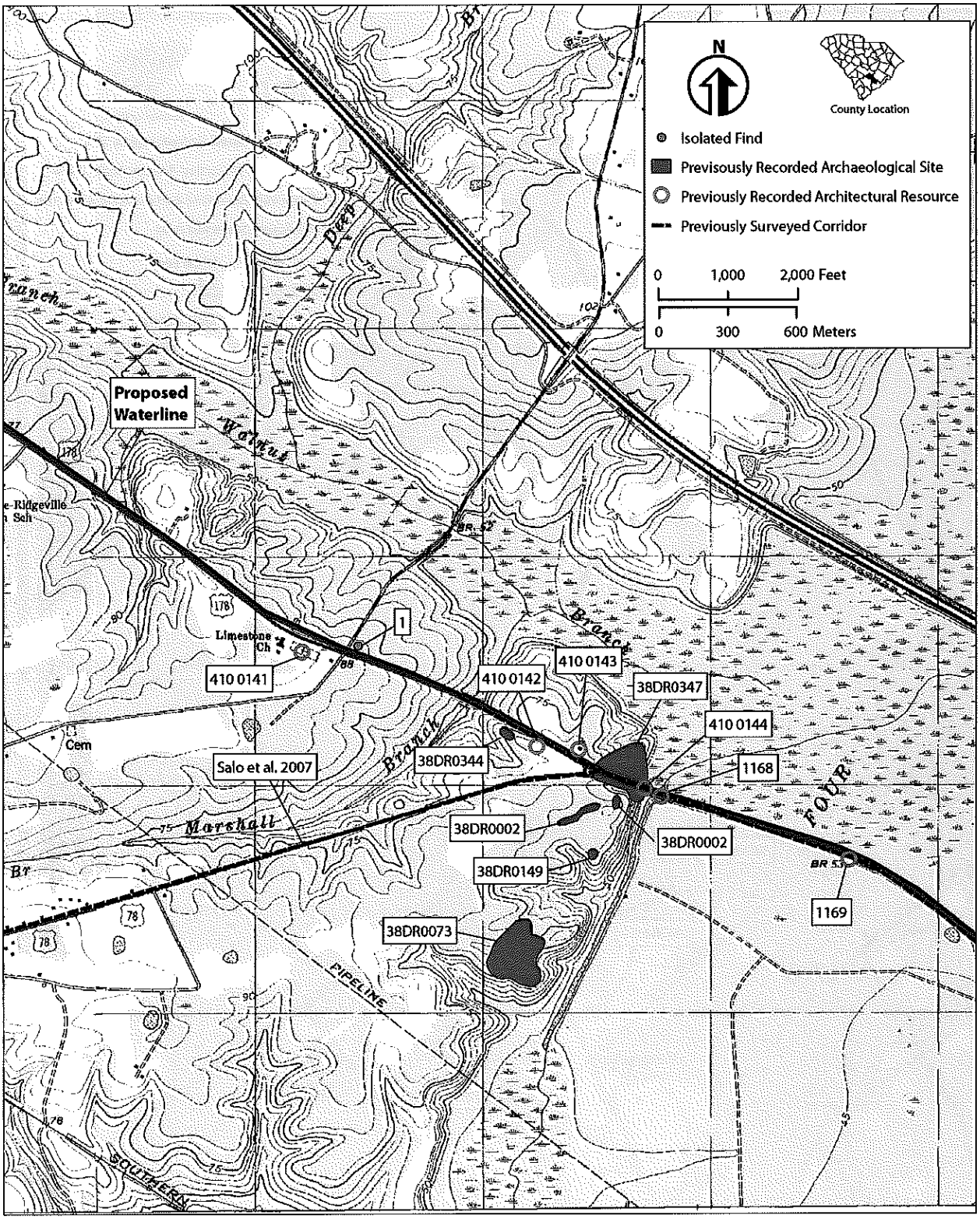

Figure 1.4 The south-central portion of the Dorchester segment of the Dorchester Orangeburg Reach Water Transmission Main on the USGS (1973) *Harleyville, SC* and (1987) *Pringletown, SC* quadrangles.

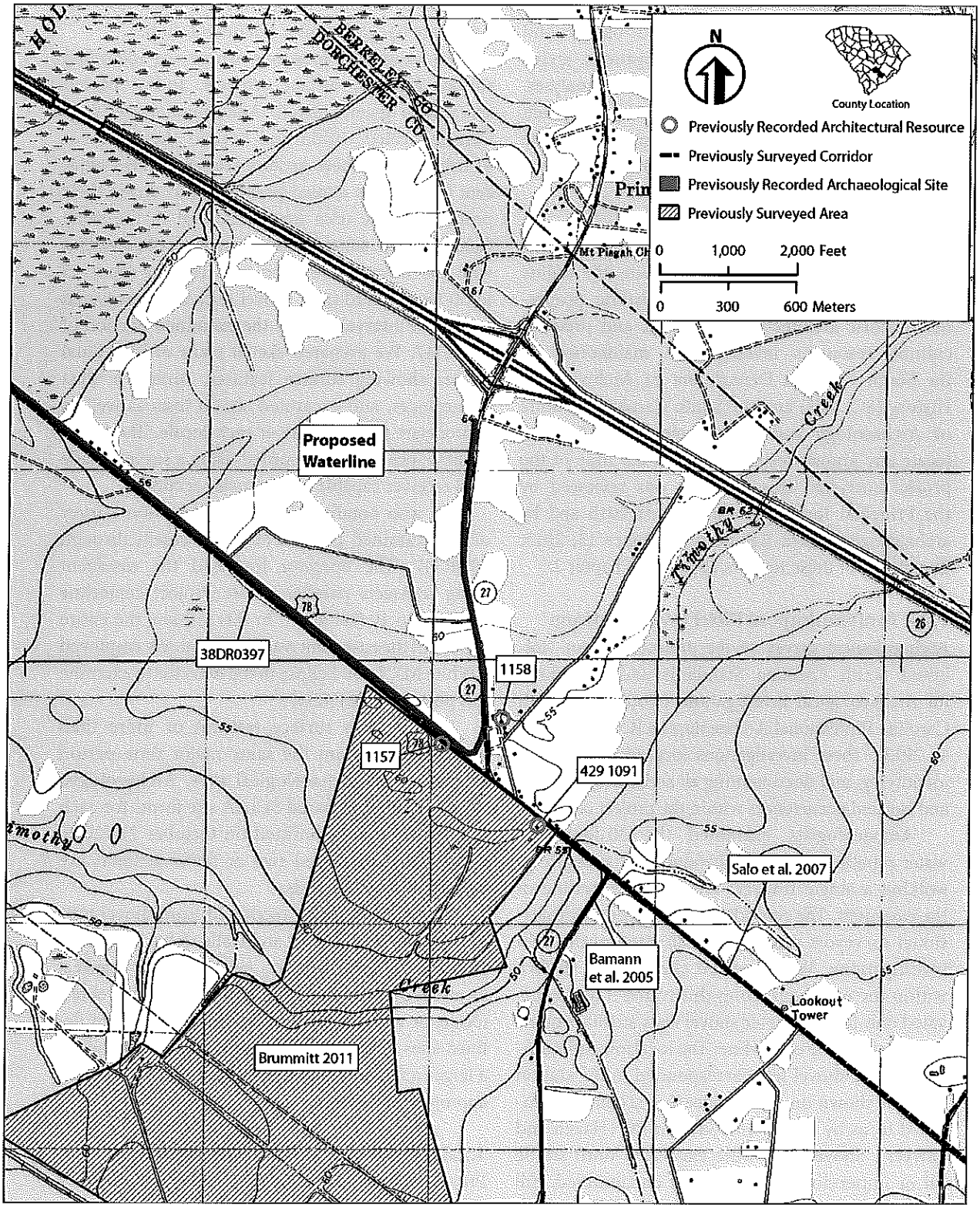

Figure 1.5 The southern portion of the Dorchester segment of the Dorchester Orangeburg Reach Water Transmission Main on the USGS (1973) *Harleyville, SC* and (1987) *Pringletown, SC* quadrangles.

1.2 Methods

The survey entailed four major tasks: background research, archaeological field investigations, architectural field investigations, and laboratory analyses. Descriptions of the methods employed during each task follow. A discussion of the assessment of the NRHP eligibility of the identified resources concludes Chapter 1.

1.2.1 Background Research

For this project, we reviewed ArchSite, the online database of archaeological sites, historic properties, historic architectural resources, and previous cultural resources investigations maintained by the South Carolina Department of Archives and History (SCDAH) and the South Carolina Institute of Archaeology and Anthropology (SCIAA), to locate any known resources within 0.5 mile of the project corridor. This database was reviewed by the Principal Investigator in August 2015 and by archaeologist David Baluha on October 12, 2015. The results of these reviews appear in Chapter 2.

1.2.2 Archaeological Field Investigations

Archaeological survey of the project corridor followed South Carolina Standards and Guidelines for Archaeological Investigations (Council of South Carolina Professional Archaeologists [COSCAPA] et al. 2013). These investigations focused on locating, identifying, and documenting all archaeological sites and isolated occurrences within the project corridor.

Archaeologists examined the 30-foot-wide water pipeline easement throughout its length by walking a single transect along the centerline of the easement. The centerline was flagged by professional surveyors prior to the initiation of the field investigations. We inspected the ground surface within the easement along this transect and excavated one-foot diameter shovel tests at 100-foot intervals along the centerline. The location and number of each shovel test corresponded to the station number shown on the engineering schematic provided to us by Hazen and Sawyer, PC (Hazen and Sawyer). Shovel tests were excavated until sterile fill or impervious subsoils were encountered. Fill from all shovel tests was screened through ¼-inch mesh hardware cloth. Investigators recorded information concerning the soil conditions and the presence or absence of artifacts for each test. All tests were backfilled after documentation.

We examined locations where we identified surface features, surface artifacts, and/or buried artifacts in greater detail. Additional shovel tests were excavated within and beyond the easement to help delimit these artifact scatters, unless adjacent landowners denied permission to access their property. These tests were excavated in the same fashion as the survey shovel tests described above, with the intervals between tests ranging from 25 to 50 feet. In addition, shovel tests were excavated at 33-foot intervals across the examined portion of 38DR347. We prepared sketch plans of individual locales showing surface features, surface artifact occurrences, and excavated shovel tests as well as appropriate photographs of each locale. The limits of these locales were recorded using a survey-grade GPS receiver capable of sub-meter accuracy.

We also conducted a metal detection survey of the examined portion of the easement through 38DR347. The operator traversed the easement along transects parallel to the Project centerline spaced 8 to 10 feet apart. In this fashion, the entire surface of the easement was examined. We employed a White MXT 950 Eclipse metal detector to examine this portion of 38DR347.

Locales with surface features or more than three artifacts from the same major time period are defined as archaeological sites. Archaeologist Scott Kitchens prepared SCIAA site forms for each site, which were submitted on October 21, 2015. Locales that produced two or fewer artifacts are defined as isolated finds.

We placed artifacts recovered from shovel tests or the ground surface in archivally stable, resealable plastic bags. Each bag was labeled by the transect location, by its relationship to a transect shovel test locale, or with respect to a site grid. Bags from defined sites or isolated finds were placed together in a larger archivally stable, resealable plastic bag, also appropriately labeled.

1.2.3 Architectural Field Investigations

Project architectural historian Sheldon Owens drove along the roads that parallel the proposed pipeline easement in Dorchester and Orangeburg counties. Since the pipeline will be installed underground, it

will have no visual impact on any buildings; therefore, we did not conduct an intensive survey of the built environment within or adjacent to the proposed pipeline easement. Mr. Owens also inspected the easement to identify any historic landscapes or yards associated with known historic buildings or features. No such landscapes were noted.

1.2.4 Laboratory Analyses

All retained artifacts were transported to Brockington's Mount Pleasant laboratory facility where they were cleaned according to their material composition and fragility, sorted, and inventoried. Most artifacts were washed in warm water with a soft-bristled toothbrush. Each separate archaeological context from within each site (surface collection, shovel test, or test unit) was assigned a specific provenience number. The artifacts from each provenience were separated by artifact type, using published artifact type descriptions from sources pertinent to the project area. Artifact types were assigned a separate catalog number, and artifacts were analyzed and quantity and weight were recorded. Certain artifacts tend to decompose through time, resulting in the recovery of fragments whose counts exaggerate the original amount present; in this case, artifact weight is a more reliable tool for reconstructing past artifact density. Artifacts that were weighed but not counted include biological (i.e., wood, charcoal), floral, and faunal artifacts that have not been modified into a tool (e.g., bone comb or handle) and building materials (e.g., brick, mortar, tabby, slate, building stone). All artifact analysis information was entered into a coded Microsoft Access 2010™ database.

Typological identification as manifested by technological and/or stylistic attributes served as the basis for the Pre-Contact artifact analysis. Ceramic artifacts (i.e., potsherds and residual sherds) composed the majority of Pre-Contact artifacts recovered. Lab personnel classified all Pre-Contact ceramic sherds larger than two-by-two-cm by surface treatment and aplastic content. When recognizable, diagnostic attributes were recorded for residual sherds (i.e., potsherds smaller than two-by-two-cm). Residual sherds lacking diagnostic attributes were tabulated as a single group. Sherds were compared to published ceramic type descriptions from Anderson et al. (1996) and Cable (2002).

Following Andrefsky (2001, 2006), Crabtree (1972), and Odell (2003), lithic artifacts are described by material and morphological characteristics. Typically, lithic debitage is organized by the presence of cortex (cortical or non-cortical), reduction stage (bifacial or core), and size grade (one quarter, one half, three quarters, or one inch). These investigations recovered only one lithic artifact, a piece of chert debitage. Chert (or cryptocrystalline silica) is a sedimentary rock formed from microcrystalline quartz. Chert often occurs as nodules or bubbles in a parent rock such as limestone (Andrefsky 2006:52). Chert artifacts recovered during the project are made from Coastal Plain chert variants.

Post-Contact artifact analysis was primarily based on observable stylistic and technological attributes. Artifacts were identified with the use of published analytical sources commonly used for the region. Historic artifacts were identified by material (e.g., ceramic, glass, metal), type (e.g., whiteware), color, decoration (e.g., transfer-printed, slipped, etched, embossed), form (e.g., bowl, mug), method of manufacture (e.g., molded, wrought), production date range, and intended function (e.g., tableware, personal, clothing). The primary sources used were Noël Hume (1969) and the Charleston Museum's type collection. Additional historic ceramic sources included Brown (1982), Carnes (1980), Dieringer and Dieringer (2001), and Slesin et al. (1997). We consulted Jones and Sullivan (1985) to identify bottle glass and Jones (1986) to identify bottle and container glass forms. Nails were identified using Lounsbury (1994) and Nelson (1977).

All artifacts were bagged in 4-mil-thick archivally stable polyethylene bags. Artifact types were bagged separately within each provenience and labeled using acid-free paper labels. Provenience bags were labeled with the site number, provenience number, and provenience information. Proveniences were separated by site and placed into appropriately labeled acid-free boxes. Artifacts are temporarily stored at the Mount Pleasant office of Brockington until they are ready for final curation. Upon the completion and acceptance of the final report, the artifacts and all associated materials (artifact catalog, field notes, photographic materials, and maps) will be transferred to the SCIAA for curation.

1.2.5 Assessment of NRHP Eligibility

All cultural resources encountered are assessed as to their significance based on the criteria of the NRHP. As per 36 CFR 60.4, there are four broad evaluative criteria for determining the significance of a particular resource and its eligibility for the NRHP. Any resource (building, structure, site, object, or district) may be eligible for the NRHP that:

A. is associated with events that have made a significant contribution to the broad pattern of history;

B. is associated with the lives of persons significant in the past;

C. embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, possesses high artistic value, or represents a significant and distinguishable entity whose components may lack individual distinction; or

D. has yielded, or is likely to yield, information important to history or prehistory.

A resource may be eligible under one or more of these criteria. Criteria A, B, and C are most frequently applied to historic buildings, structures, objects, non-archaeological sites (e.g., battlefields, natural features, designed landscapes, or cemeteries), or districts. The eligibility of archaeological sites is most frequently considered with respect to Criterion D. Also, a general guide of 50 years of age is employed to define "historic" in the NRHP evaluation process. That is, all resources greater than 50 years of age may be considered. However, more recent resources may be considered if they display "exceptional" significance (Sherfy and Luce n.d.).

Following *National Register Bulletin: How to Apply the National Register Criteria for Evaluation* (Savage and Pope 1998), evaluation of any resource requires a twofold process. First, the resource must be associated with an important historic context. If this association is demonstrated, the integrity of the resource must be evaluated to ensure that it conveys the significance of its context. The applications of both of these steps are discussed in more detail below.

Determining the association of a resource with a historic context involves five steps (Savage and Pope 1998). First, the resource must be associated with a particular facet of local, regional (state), or national history. Secondly, one must determine the significance of the identified historical facet/context with respect to the resource under evaluation. A lack of Native American archaeological sites within a project area would preclude the use of contexts associated with the Pre-Contact use of a region.

The third step is to demonstrate the ability of a particular resource to illustrate the context. A resource should be a component of the locales and features created or used during the historical period in question. For example, early-nineteenth-century farmhouses, the ruins of African American slave settlements from the 1820s, and/or field systems associated with particular antebellum plantations in the region would illustrate various aspects of the agricultural development of the region prior to the Civil War. Conversely, contemporary churches or road networks may have been used during this time period but do not reflect the agricultural practices suggested by the other kinds of resources.

The fourth step involves determining the specific association of a resource with aspects of the significant historic context. Savage and Pope (1998) define how one should consider a resource under each of the four criteria of significance. Under Criterion A, a property must have existed at the time that a particular event or pattern of events occurred, and activities associated with the event(s) must have occurred at the site. In addition, this association must be of a significant nature, not just a casual occurrence (Savage and Pope 1998). Under Criterion B, the resource must be associated with historically important individuals. Again, this association must relate to the period or events that convey historical significance to the individual, not just that this person was present at this locale (Savage and Pope 1998). Under Criterion C, a resource must possess physical features or traits

that reflect a style, type, period, or method of construction; display high artistic value; or represent the work of a master (an individual whose work can be distinguished from others and possesses recognizable greatness) (Savage and Pope 1998). Under Criterion D, a resource must possess sources of information that can address specific important research questions (Savage and Pope 1998). These questions must generate information that is important in reconstructing or interpreting the past (Butler 1987; Townsend et al. 1993). For archaeological sites, recoverable data must be able to address specific research questions.

After a resource is associated with a specific significant historic context, one must determine which physical features of the resource reflect its significance. One should consider the types of resources that may be associated with the context, how these resources represent the theme, and which aspects of integrity apply to the resource in question (Savage and Pope 1998). As in the antebellum agriculture example given above, a variety of resources may reflect this context (farmhouses, ruins of slave settlements, field systems, etc.). One must demonstrate how these resources reflect the context. The farmhouses represent the residences of the principal landowners who were responsible for implementing the agricultural practices that drove the economy of the South Carolina area during the antebellum period. The slave settlements housed the workers who conducted the vast majority of the daily activities necessary to plant, harvest, process, and market crops.

Once the above steps are completed and the association with a historically significant context is demonstrated, one must consider the aspects of integrity applicable to a resource. Integrity is defined in seven aspects of a resource; one or more may be applicable depending on the nature of the resource under evaluation. These aspects are location, design, setting, materials, workmanship, feeling, and association (36 CFR 60.4; Savage and Pope 1998). If a resource does not possess integrity with respect to these aspects, it cannot adequately reflect or represent its associated historically significant context. Therefore, it cannot be eligible for the NRHP. To be considered eligible under Criteria A and B, a resource must retain its essential physical characteristics that were present during the event(s) with which it is associated. Under Criterion C, a resource must retain enough of its physical characteristics to reflect the style, type, etc., or work of the artisan that it represents. Under Criterion D, a resource must be able to generate data that can address specific research questions that are important in reconstructing or interpreting the past.

2.0 Environmental and Cultural Setting

2.1 Environmental Setting

The proposed Dorchester Orangeburg Reach Water Transmission Main Project lies on the inner edge of the Lower Coastal Plain of South Carolina. This portion of the Lower Coastal Plain consists of a series of low ridges separated by dense swamps. Major river drainages lie to the north and east (the Santee), to the west (the Edisto), and to the south and west (the Ashley and the Cooper). This terrain lies atop a series of marine terraces that represent the former shorelines of North America. Changes in sea level through time resulted in the formation of these terraces; most are composed of sandy soils with some gravels derived from beach and deltaic deposits associated with the Atlantic shorelines of the Pleistocene epoch (Kovacik and Winberry 1989). Most of the project corridor lies on one of these terraces, the Wicomico. The Wicomico terrace occurs at 65-100 feet above mean sea level (amsl) (DeFrancesco 1988:83).

Before intensive settlement and agricultural modification, the study area contained a similar series of vegetative communities. General sources such as Quarterman and Keever (1962) and Shelford (1963) summarize the information on floral and faunal communities in the area. Most of the extant woodlands today are mixed pine/hardwood forests. A mixed forest supports an active faunal community including deer and small mammals (e.g., various squirrels and mice, opossum, raccoon, rabbit, fox, skunk), birds (e.g., various songbirds, ducks and wading birds, quail, turkey, doves, hawks, owls), and reptiles/amphibians (e.g., frogs, toads, lizards, snakes, turtles, alligator). Freshwater fish are abundant in the streams and marshes of the region, and shellfish are present in large numbers in most of the tidally affected waters throughout the region.

The project corridor extends through a variety of micro-environments and contains many different named soil types. The majority of the soils within the project corridor are characterized as nearly level, well drained to very poorly drained, and strongly acidic. Soils data for the project corridor was compiled from USDA soil surveys of Dorchester and Orangeburg counties (DeFrancesco 1988; Eppinette 1990) and from the National Resources Conservation Service's online *Web Soil Survey* (http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm). Table 2.1 summarizes the types of soils encountered within the project route.

United States Department of Agriculture (USDA) soil surveys provide climatic data for Dorchester and Orangeburg counties (DeFrancesco 1988; Eppinette 1990). The climate of this area is subtropical, with mild winters and long, hot, and humid summers. The average daily temperature reaches a peak of 80.1°F in July although average highs are in the 80°F range from May through September. A mean high of 46.8°F characterizes the coldest winter month, January. Precipitation averages 47 inches per annum. Most rain falls in the summer months during thunderstorms; snowfall is very rare. Also, the climate is very supportive of agriculture. Prevailing winds are light and generally from the south and southwest although hurricanes and other tropical storms occasionally sweep through the area, particularly in the fall months.

The proposed pipeline easement extends through a mix of commercial, residential, and pastoral areas. Figures 2.1-2.5 display the proposed pipeline easement on recent aerial photographs (the locations of the identified sites, isolated finds, and historic architectural resources also are indicated). In Orangeburg County near Wells Crossroads, the pipeline easement passes through agricultural lands and mixed hardwood/pine forest. In Dorchester County, the pipeline easement begins in a mixed hardwood/pine forest northeast of Harleyville and extends south into a residential/commercial area within Harleyville before turning east along US 178. Along US 178, the pipeline easement extends through heavily wooded, predominately flat areas, with occasional isolated swamps. East of the intersection of US 78 and US 178, the pipeline easement extends across Four Hole Swamp for approximately 1.2 miles. Once crossing Four Hole Swamp, the pipeline easement extends through a broad, wooded area, before turning north at SC Route 27. Figures 2.6-2.10 provide views of the project setting.

Table 2.1 Soils encountered in the project corridor.

Soil Name/Texture	Location	Topography	Water Table	Ph Description	Drainage	Easement Percent
Albany fine sand	uplands	nearly level	1.0-2.5 feet	very strongly acid	somewhat poorly drained	
Alpin fine sand	uplands	nearly level	n/a	strongly acid	excessively drained	
Blanton sand	uplands	nearly level	2.5-3.5 feet	strongly acid	well drained	2.0
Chipley sand	flood plains	nearly level	2.0-3.0 feet	strongly acid	moderately well drained	
Bonneau fine sand	uplands	nearly level	3.5-5.0 feet	very strongly acid	well drained	13.0
Coxville loam	depressions	nearly level	0-1.0 feet	strongly acid	poorly drained	4.4
Daleville silt loam	depressions	nearly level	0-1.0 feet	very strongly acid	poorly drained	
Foreston loamy fine sand	uplands	nearly level	1.5-3.5 feet	very strongly acid	moderately well drained	
Goldsboro loamy sand	uplands	nearly level	1.5-2.5 feet	moderately acid	moderately well drained	4.1
Grifton fine sandy loam	uplands	nearly level	0-1.0 feet	strongly acid	poorly drained	16.1
Haplaquents, loamy	uplands	nearly level	n/a	n/a	n/a	5.8
Izagora silt loam	uplands	nearly level	1.5-2.5 feet	extremely acid	moderately well drained	
Jedburg loam	uplands	nearly level	0.5-1.5 feet	very strongly acid	somewhat poorly drained	
Lynchburg loamy sand	flats	level	0.5-1.5 feet	very strongly acid	somewhat poorly drained	10.0
Mouzon fine sandy loam	depressions	nearly level	0-1.0 feet	moderately acid	poorly drained	23.1
Noboco loamy sand	uplands	nearly level	2.5-4.0 feet	moderately acid	moderately well drained	8.1
Ocilla loamy sand	uplands	nearly level	0.1-2.5 feet	very strongly acid	somewhat poorly drained	
Osier loamy fine sand	depressions	nearly level	0-1.0 feet	extremely acid	poorly drained	
Pantego sandy loam	depressions	level	0-1.0 feet	very strongly acid	very poorly drained	3.2
Pelham sand	depressions	nearly level	0.5-1.5 feet	very strongly acid	poorly drained	
Plummer loamy sand	depressions	nearly level	2.0-1.5 feet	extremely acid	poorly drained	
Rains sandy loam	depressions	level	0-1.0 feet	very strongly acid	poorly drained	3.7
Rutlege loamy fine sand	drainages	nearly level	0-1.0 feet	extremely acid		
Water	n/a	n/a	n/a	n/a	n/a	1.2

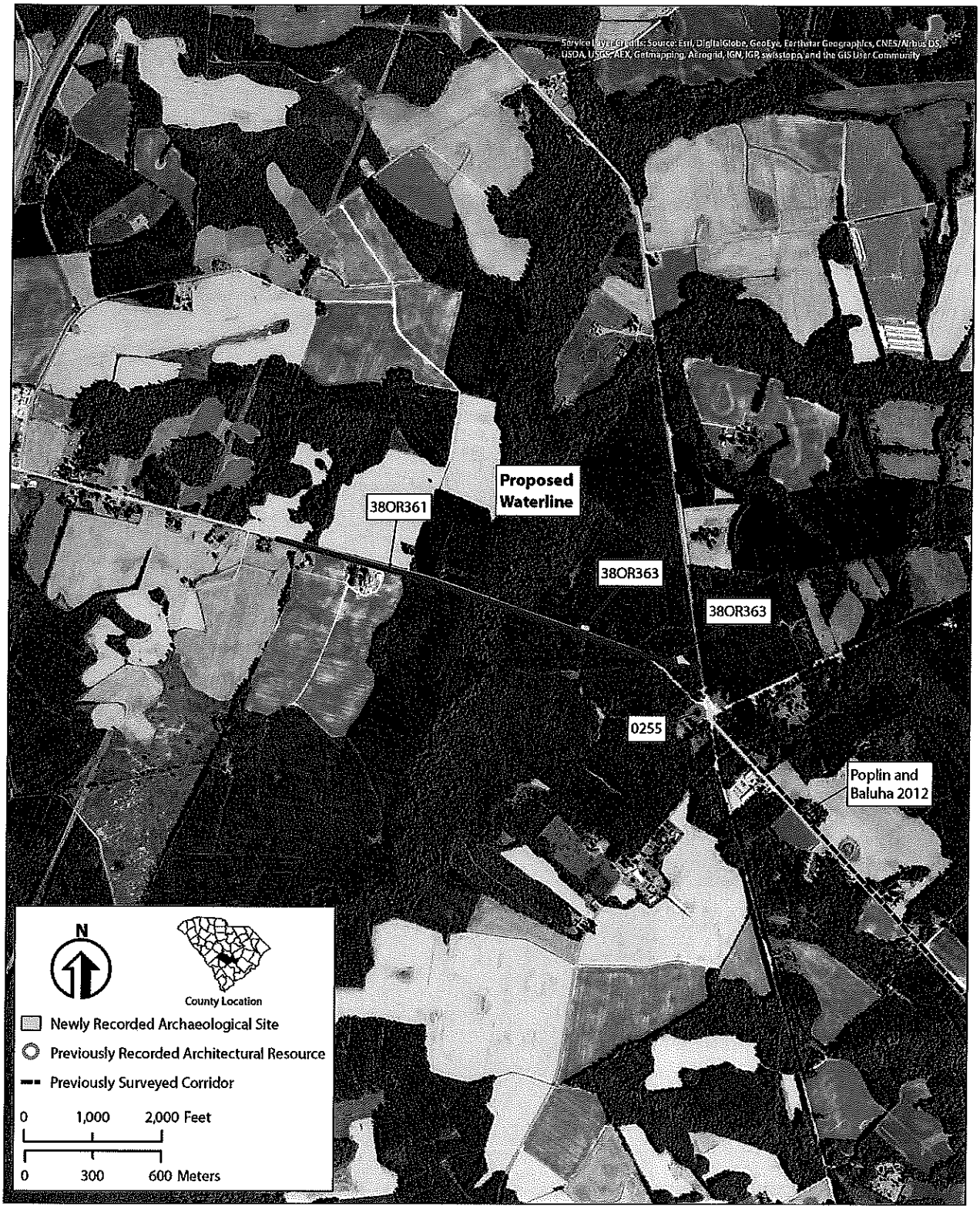

Figure 2.1 The Orangeburg segment of the Dorchester Orangeburg Reach Water Transmission Main on recent aerial imagery.

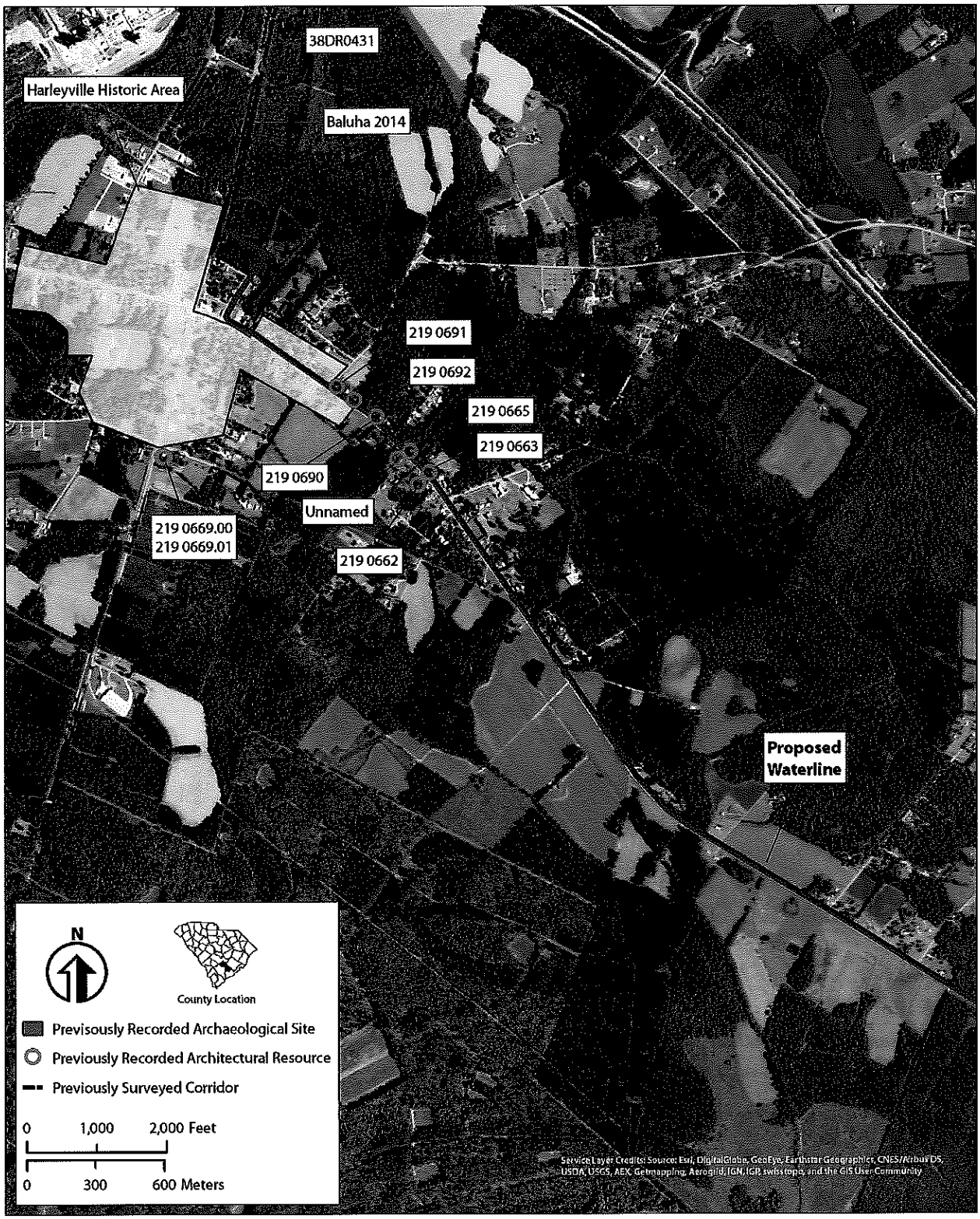

Figure 2.2 The northern portion of the Dorchester segment of the Dorchester Orangeburg Reach Water Transmission Main on recent aerial imagery.

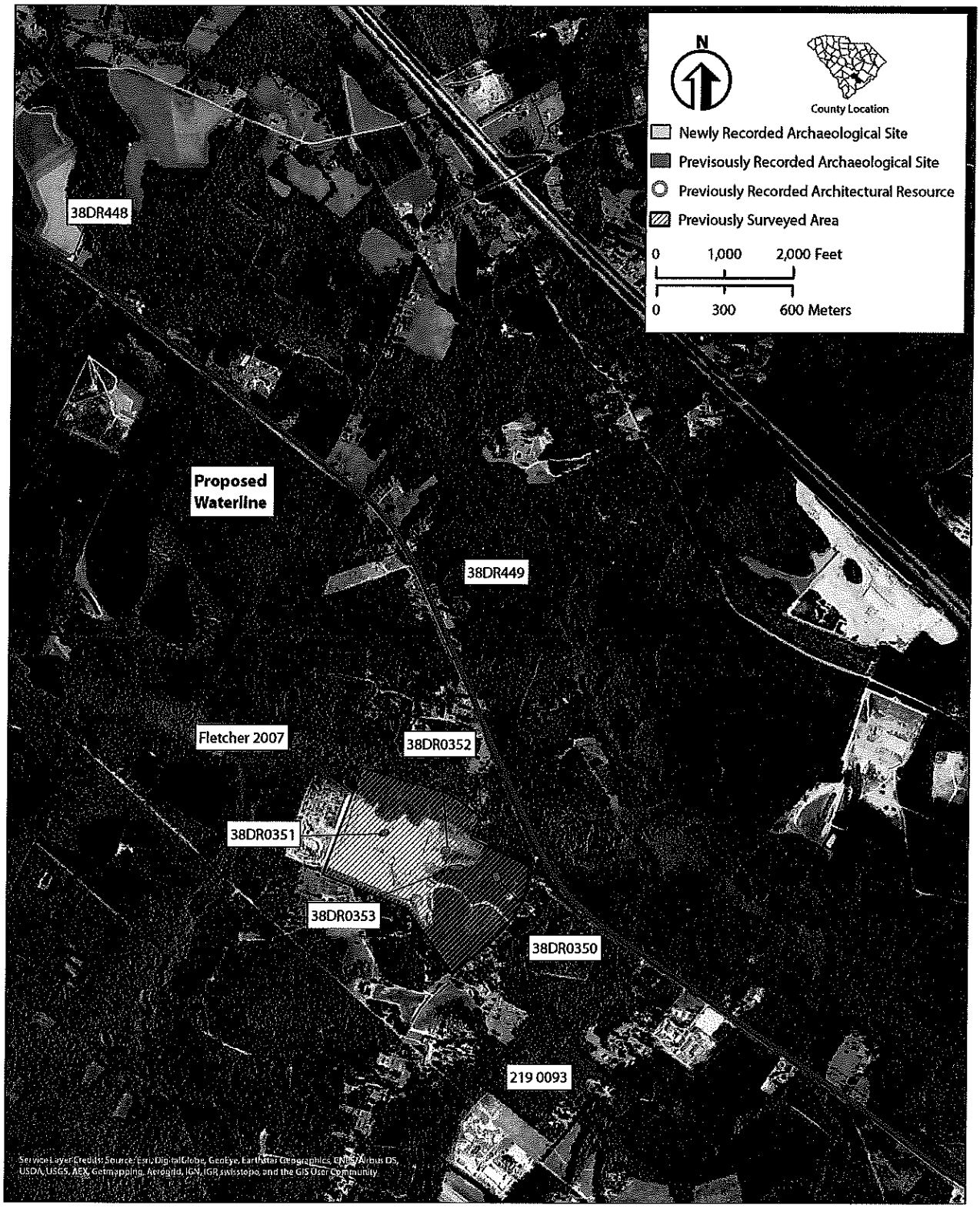

Figure 2.3 The central portion of the Dorchester segment of the Dorchester Orangeburg Reach Water Transmission Main on recent aerial imagery.

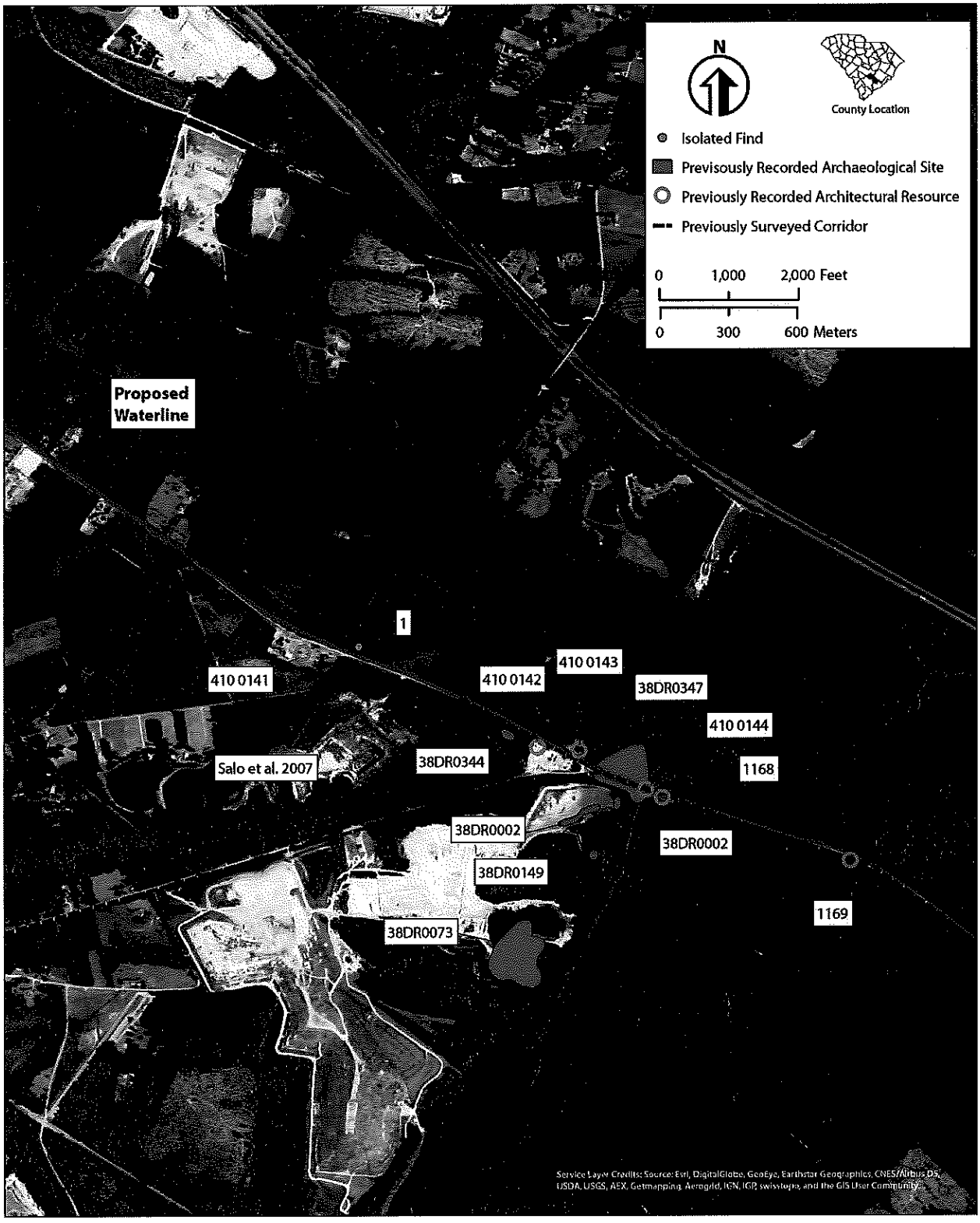

Figure 2.4 The southern portion of the Dorchester segment of the Dorchester Orangeburg Reach Water Transmission Main on recent aerial imagery.

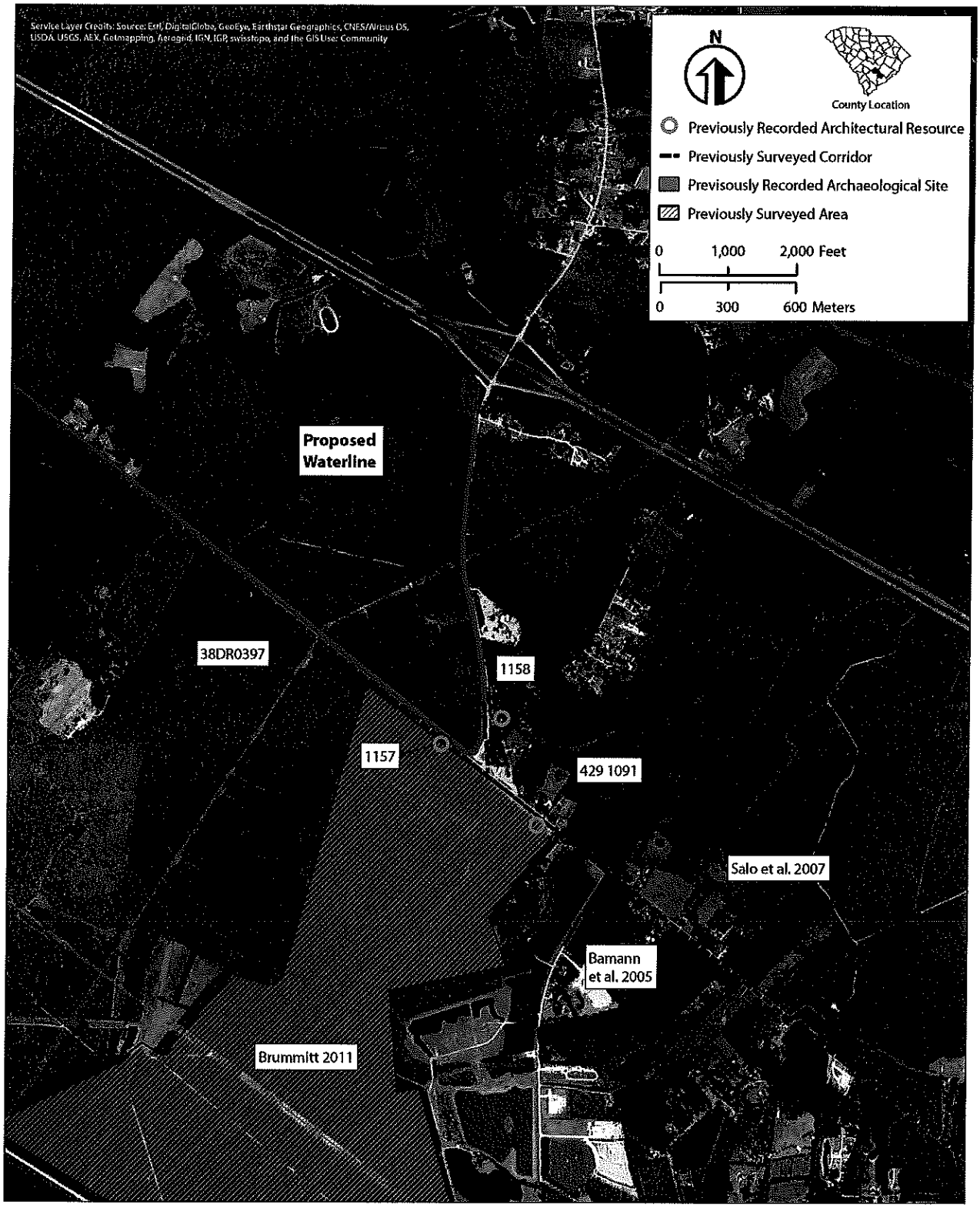

Figure 2.5 The southernmost portion of the Dorchester segment of the Dorchester Orangeburg Reach Water Transmission Main on recent aerial imagery.

Figure 2.6 Views of the proposed Dorchester Orangeburg Reach Water Transmission Main, swamp along US 78/178 looking north (top) and mixed forest near Harleyville looking east (bottom).

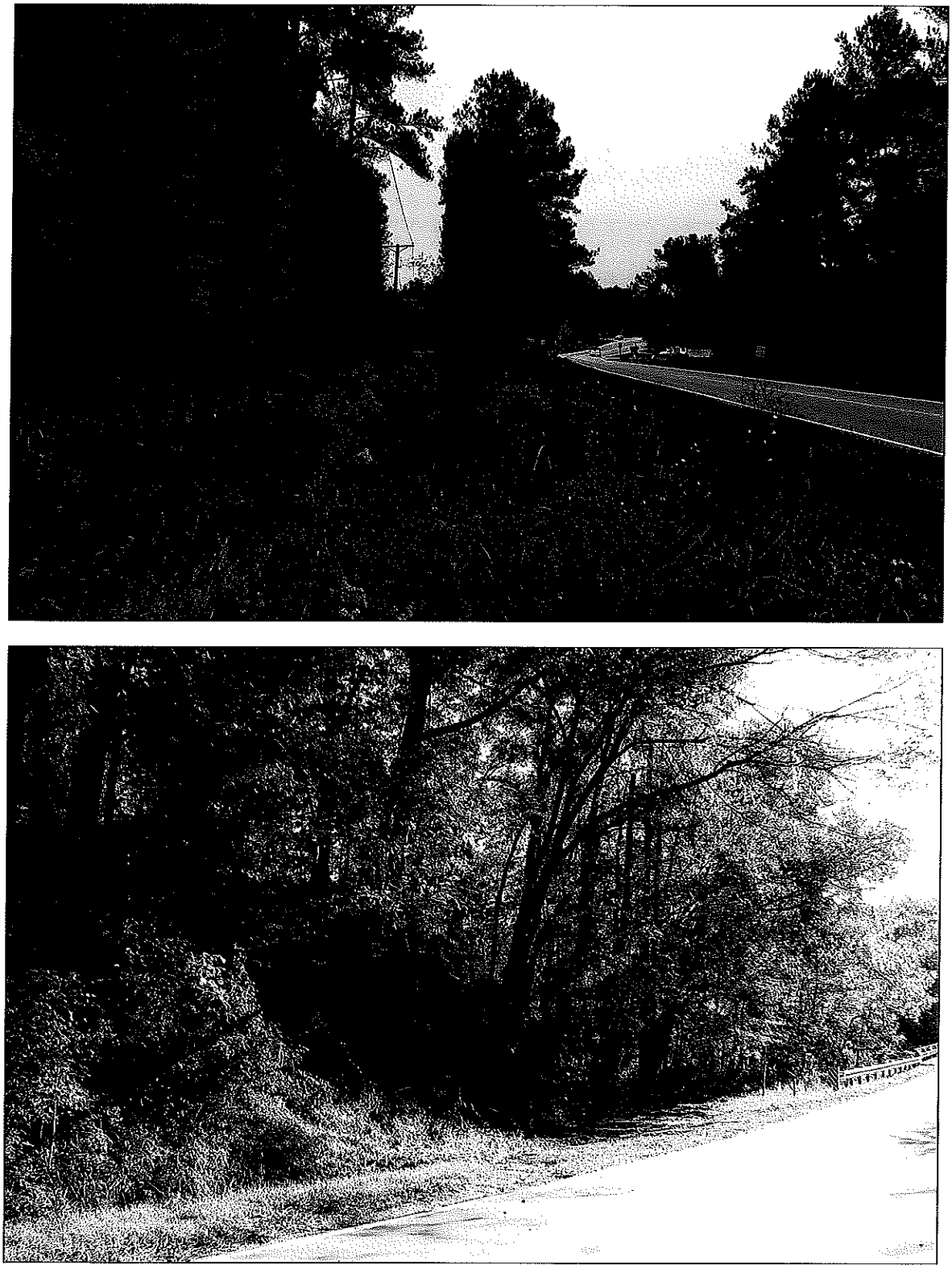

Figure 2.7 Views of the proposed Dorchester Orangeburg Reach Water Transmission Main, along SC-27 looking south (top) and along US 78/178 near Four Hole Swamp looking east (bottom).

Figure 2.8 Views of the proposed Dorchester Orangeburg Reach Water Transmission Main, along US 178 near Taylor Pond Road, looking southeast (top), and along US 178 near Melanie Lane looking southeast (bottom).

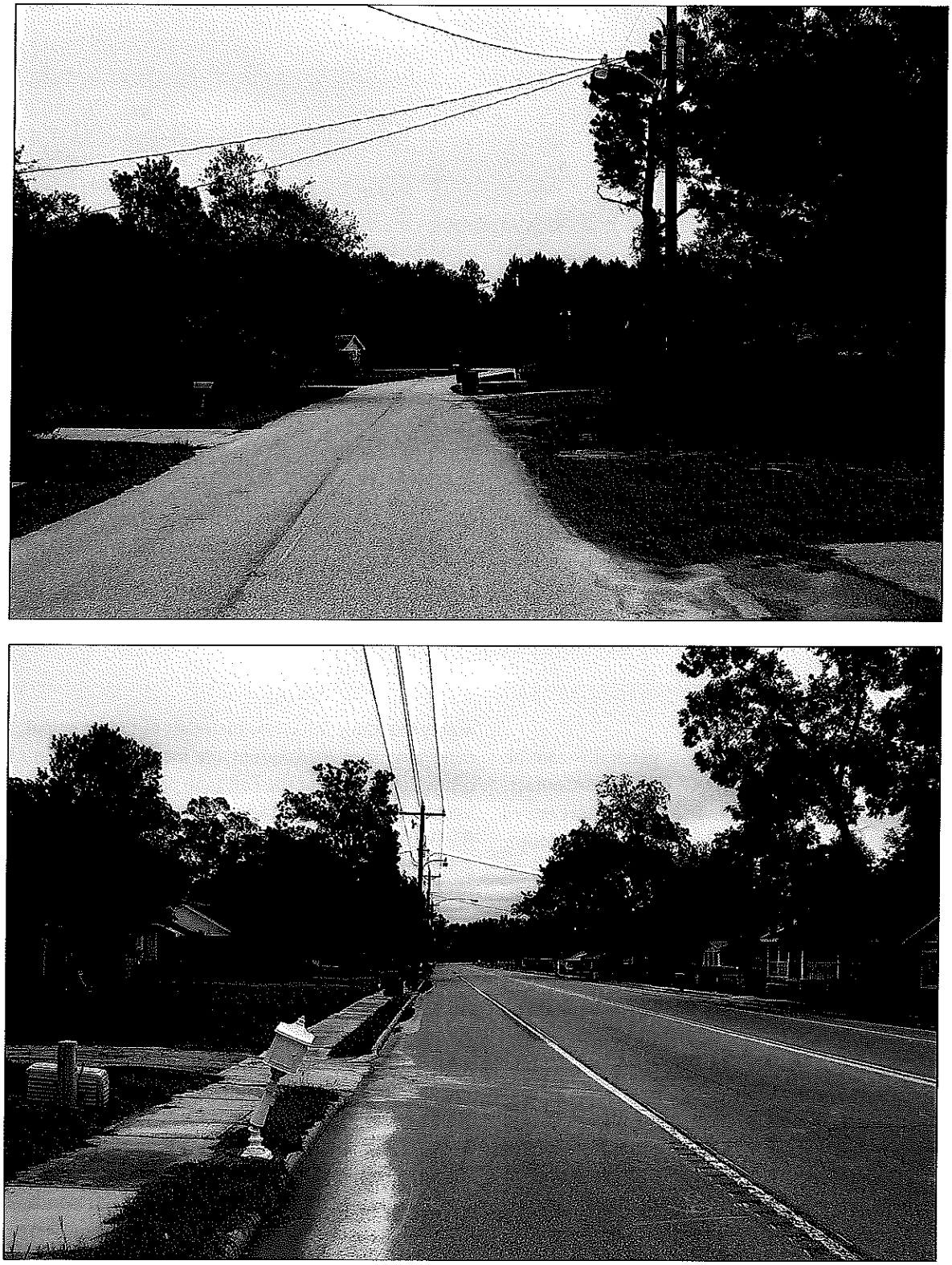

Figure 2.9 Views of the proposed Dorchester Orangeburg Reach Water Transmission Main, along Hutto Street looking south (top) and along US 178 from Woodover Farm Street looking east (bottom).

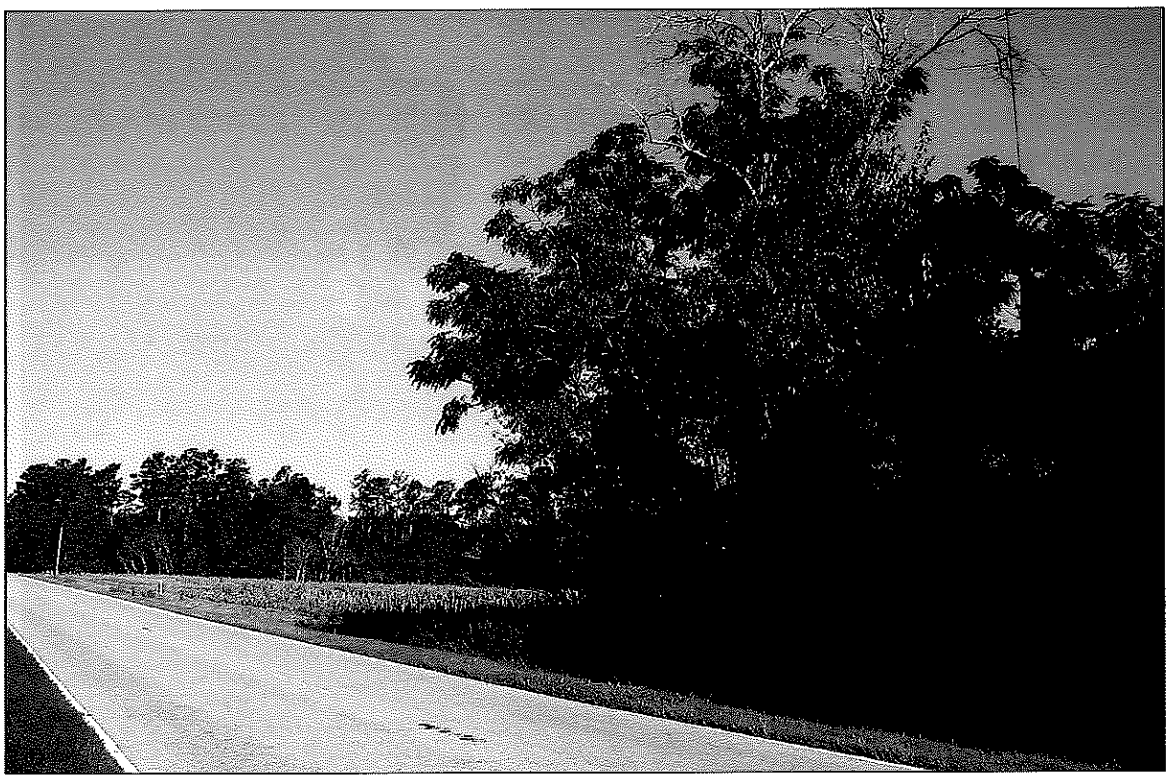

Figure 2.10 View of the proposed Dorchester Orangeburg Reach Water Transmission Main along US 176 near Alpine Drive looking west.

2.2 Cultural Setting

The history of South Carolina generally can be divided into three primary eras: Pre-Contact, Contact, and Post-Contact. The Pre-Contact era of coastal South Carolina has received much attention from archaeologists. The present interpretations of that prehistory are presented briefly in this section. Readers are directed to Goodyear and Hanson (1989) for detailed overviews of previous research in the region. The following summary is divided into periods that represent distinct cultural adaptations in the region.

2.2.1 Pre-Contact Era

Paleoindian Period (10000–8000 BC). Human presence in the South Carolina Coastal Plain apparently began about 12,000 years ago with the movement into the region of hunter-gatherers. Goodyear et al. (1989) have reviewed the evidence for the Paleoindian occupation of South Carolina. Based on the distribution of distinctive fluted spear points diagnostic to the period, they see the major sources of highly workable lithic raw materials as the principal determinant of Paleoindian site location. The concentration of sites at the Fall Line possibly indicates a subsistence strategy of seasonal relocation between the Piedmont and Coastal Plain. Based on data from many sites excavated over most of North America, Paleoindian groups were generally nomadic. Their subsistence focused on the hunting of large mammals, specifically the now-extinct mammoth, horse, camel, and giant bison. Groups were probably small (i.e., kin-based bands of 50 or fewer persons). As the environment changed at the end of the Wisconsin glaciation, Paleoindian groups had to adapt to new forest conditions in the Southeast and throughout North America.

Archaic Period (8000–1500 BC). The Archaic is a long period of adaptation to modern forest conditions in eastern North America. Caldwell (1958) has characterized the period as movement toward Primary Forest Efficiency, meaning that during this period human groups continually developed new and

more effective subsistence strategies for exploiting the wild resources of the modern oak-hickory forest. Based on extensive work in the North Carolina Piedmont, Coe (1964) subdivided the Archaic period into several sequential phases recognizable by distinctive stone point/knife forms. Coe's (1964) sequence has been confirmed over large parts of the Southeast and is applicable to most of South Carolina. The Archaic also is divided into three temporal subperiods: Early (8000–6000 BC), Middle (6000–2500 BC), and Late (2500–1000 BC).

Archaic groups probably moved seasonally within a regular territory, planning and scheduling the exploitation of wild plant and animal resources. Anderson and Hanson (1988) developed a settlement model for the Early Archaic (8000–6000 BC) in South Carolina involving seasonal movement of relatively small groups (bands) within major river drainages. The project area lies within the range of the Saluda/Broad band. Anderson and Hanson (1988) hypothesize that Early Archaic use of the Lower Coastal Plain was limited to seasonal (springtime) foraging camps and logistical camps; aggregation camps and winter base camps are thought to have been near the Fall Line. They also suggest that as population increased in the Middle Archaic (6000–2500 BC), band mobility decreased and territoriality increased. Blanton and Sassaman (1989) reviewed the archaeological literature on the Middle Archaic subperiod. They document an increased simplification of lithic technology through this period, with increased use of expedient, situational tools. Furthermore, they argue that the use of local lithic raw materials is characteristic of the Middle and Late Archaic. Blanton and Sassaman (1989:68) conclude that "the data at hand suggest that Middle Archaic populations resorted to a pattern of adaptive flexibility as a response to 'mid-Holocene environmental conditions' such as variable precipitation, sea level rise, and differential vegetational succession." These processes resulted in changes in the types of resources available from year to year.

Generally, there is evidence of extensive trade networks covering large areas of North America and of the establishment of sedentary villages during the Late Archaic subperiod (2500–1000 BC). Some of the best evidence of sedentary villages occurs along the South Carolina coast as large middens of oyster shell and other food remains. These refuse heaps probably indicate substantial, relatively long-term habitations. Also, the first evidence of the manufacture and use of ceramics dates from the Late Archaic subperiod.

Woodland Period (1500 BC–AD 1000). During the succeeding Woodland period, sedentism apparently increased, although scheduled exploitation of wild food resources in a seasonal round continued. The Woodland period is noteworthy for several technological and social developments: (1) the widespread manufacture and use of ceramics for cooking and storage, (2) the beginnings of agriculture, and (3) construction of burial mounds and other earthworks. While evidence of burial mounds and agriculture is not extensive at the few South Carolina Woodland-period sites investigated in detail (Brooks and Canouts 1984; Trinkley 1980, 1990), ceramics are widespread and are found at many small sites throughout the state. The varied manufacturing procedures and decorative styles of these ceramics allow differentiation of site collections into three subperiods (Early, Middle, and Late) and inferences of group movement and influence from adjacent geographic areas. Trinkley (1980) and Anderson et al. (1982) have developed classificatory schemes for Woodland-period groups based on ceramics from many sites. Following Anderson et al. (1982), Poplin et al. (1993) developed a classificatory scheme for the ceramic-producing prehistoric periods in the Charleston region.

Mississippian Period (AD 1000–1521). The final period of prehistory in South Carolina, the Mississippian period, begins about AD 1000 and ends with the arrival and colonization of the area by Europeans in the 1500s and 1600s. During the Mississippian period, agriculture became well established, and sedentary villages and towns became the dominant habitation type (although relatively isolated farmsteads were also apparently common [see Brooks and Canouts 1984]). Ferguson (1971) proposed a model of Mississippian settlement involving major political centers dominated and surrounded by smaller villages and farmsteads. Major centers were apparently spaced about 100 miles apart; hypothesized centers in the project region were located at

Town Creek, North Carolina; near Camden, Lake Marion, and Charleston, South Carolina; and near Augusta and Savannah, Georgia (Ferguson 1971). Anderson (1989) and DePratter (1989) have identified large political centers on the Wateree River (near Camden), on the Oconee River (in central Georgia), and at Savannah (Georgia). These centers usually contained one or more large mounds upon which temples were built. It should be noted that the ceremonial center at the original Charles Towne settlement on Albemarle Point (38CH1) contained no mound structure (South 2002). Mississippian society appears to have been highly stratified, with hereditary ruling families, middle and poorer classes, and slaves (usually prisoners taken in war from other groups).

2.2.2 Contact Era

The Contact era began in South Carolina with the first Spanish explorations into the region in the 1520s. Native American groups encountered by the European explorers and settlers probably were living in a manner quite similar to the late Pre-Contact Mississippian groups identified in archaeological sites throughout the Southeast. However, the initial European forays into the Southeast contributed to the disintegration and collapse of the aboriginal Mississippian social structures; disease, warfare, and European-sponsored slave raids all contributed to the rapid decline of the regional Native American populations during the sixteenth and seventeenth centuries (Dobyns 1983; Ramenofsky 1982; Smith 1984). By the late seventeenth century, Native American groups in coastal South Carolina apparently lived in small, politically and socially autonomous, semi-sedentary groups (Waddell 1980). By the mid-eighteenth century, very few Native Americans remained in the region; all had been displaced or annihilated by the ever-expanding English colonial settlement of the Carolinas (Anderson and Logan 1981:24-25).

Waddell (1980) identified 19 distinct groups between the mouth of the Santee River and the mouth of the Savannah River in the mid-sixteenth century. Anderson and Logan (1981:29) suggest that many of these groups probably were controlled by Cofitachequi, the dominant Mississippian center/polity in South Carolina, prior to its collapse. By the seventeenth century, all were independently organized. These groups included the Coosaw, Etiwan, and Sewee along the Ashley, Cooper, and Wando rivers and the Santee farther to the interior. The Coosaw inhabited the area along the upper Ashley River. The Etiwans were mainly settled on the north and east sides of Charleston Harbor, but their range extended to the head of the Cooper River. The territory of the Sewee met the territory of the Etiwan high up the Cooper, and extended to the north as far as the Santee River (Orvin 1973:14).

The ethnohistoric record from coastal South Carolina suggests that the Contact-era groups of the region followed a seasonal pattern that included summer aggregation in villages for planting and harvesting domesticates and dispersal into one- to three-family settlements for the remainder of the year (Waddell 1980:147-151). This coastal adaptation is apparently very similar to the Guale pattern of the Georgia coast, as reconstructed by Crook (1986:18).

2.2.3 Post-Contact Era

The Carolina coast was first permanently settled by Europeans in 1670. The earlier Spanish attempts to settle at San Miguel de Gualdape (1526) to the north and at Santa Elena (1566–1587) to the south, as well as the short-lived French settlement on Port Royal (1562), primarily resulted in the reduction of the local Indian populations. The establishment of Charles Towne by the British in 1670, however, sparked a period of intensive hide and slave trade with the Indians of the region and provided a base from which settlers quickly spread up the Cooper River and its tributaries. Charles Towne initially was settled under the proprietary system; not until 1719 did South Carolina become a royal colony.

The early economic development in the region initially focused on Indian trade; however, naval stores production soon replaced the deerskins, slaves, and other local commodities acquired from the aboriginal inhabitants of the region. Trade with the Indians was pursued aggressively through the beginning of the eighteenth century, but by 1716 conflicts with the Europeans, as well as disease, had drastically reduced or displaced the local native population.

Naval stores production flourished for a short period with the encouragement of bounties provided by the Crown. However, England failed to

recognize the extent of the supply of pine on the Carolina coastal strand, and the production of naval stores quickly surpassed demand.

The new colony was organized with the parish as the local unit of government. The church building itself was to serve both religious and political purposes. As Gregorie (1961:5) explains, "The parish church was to be the center for the administration of some local government in each parish, for at that time there was not a courthouse in the province, not even in Charleston."

In 1720, there were 107 white taxpayers and 2,027 slaves in St. James Goose Creek Parish, which contains much of the project area (Petty 1975:24). Four parishes had larger populations of taxpayers, but only one, St. Andrews, had more slaves. Most of the slaves were involved in the production of rice. As early as 1720, rice accounted for half of the colony's profits, and the importance of rice grew over the next 140 years. It was complemented by the introduction of indigo as a cash crop in 1740 (Pinckney 1976). While rice production was restricted to the river marshes, indigo grew best in well-drained soils.

By the 1740s, the population of South Carolina had expanded dramatically. More areas were settled, with plantations spreading throughout much of the Lowcountry. Large-scale agricultural production was achieved through the operation of plantations that employed slave labor. Slaves were brought from West Africa to perform the many tasks necessary to produce cash crops on the plantations. Slave labor was especially essential to rice production, with knowledgeable slaves (i.e., those taken from African rice-producing societies) conducting and directing most of the activities associated with rice growing and harvesting (Agha et al. 2011; Edelson 2005; Joyner 1984). This system of production would continue until the end of the Civil War, which resulted in the abolition of slavery throughout the United States.

Most of the early settlements and plantations focused on the Cooper, Wando, Ashley, and Stono rivers and Goose Creek. These waters provided the best opportunities for profitable agricultural production (i.e., rice cultivation) as well as the best avenues of transportation to Charleston or other settlements in the region (South and Hartley 1985). Evidence of the many plantations along these rivers remains today primarily as archaeological sites although some plantations, such as Rice Hope near Moncks Corner, are still occupied. Interior lands such as those near Harleyville often served as pasture lands for cattle and swine or as a source of timber and game for plantation populations.

Revolution. The following discussion about the Revolutionary War in the region borrows from Salo et al. (2007). The colonies declared their independence from Britain in 1776 following several years of increasing tension over taxation and trade restrictions imposed on them by the British Parliament. South Carolinians were divided during the war although most citizens ultimately supported the American cause. Those individuals who remained loyal to the British government tended to reside in Charleston or in certain enclaves within the interior of the province (Edgar and Bailey 1977).

Britain's Royal Navy attacked Fort Sullivan (later renamed Fort Moultrie) near Charleston in 1776 but failed to take the fort. The defeat bolstered the morale of American revolutionaries throughout the colonies, but for next few years the Lowcountry was quiet (Lumpkin 1981:42-46). The British returned to the lower colonies in 1778, however, besieging and capturing Savannah late in December. British General Henry Clinton believed that the southern colonies were more loyal to the British Empire and that political division could be exploited (Mattern 1995:91; Weigley 1973:24). A major British expeditionary force landed on Seabrook Island in the winter of 1780, and then marched north and east to invade Charleston from its landward approaches (Lumpkin 1981:42-46). Clinton's forces were large, including 10,000 men and a support fleet commanded by Admiral Marriot Arbuthnot (Alden 1957:239). After its fall, Charleston subsequently became a base of operations for British campaigns into the interior of South Carolina, Georgia, and North Carolina.

On October 14, 1780, General Nathanael Greene succeeded General Gates as Commander in Chief of the Southern Army (Matloff 1969:90-93). During Greene's campaign in the interior of the colony, several military actions occurred in the project area and specifically at the bridge at Four Holes Swamp in 1781 and 1782. On April 8, 1781, Colonel William Harden of the Georgia Militia, with 70 to 100

mounted men, surprised and captured 26 Loyalists including Captain John Barton. The next day, Major George Cooper, one of Harden's subordinates, assaulted Barton's post. The combat was minimal, and Barton surrendered to Cooper. The Americans suffered losses of one killed and two wounded; the Loyalists had one killed, three wounded, and three taken prisoner. The exact location of this incident was not determined (Ripley 1983:154). Figure 2.11 highlights the location of Four Holes Bridge on Mouzon's (1775) map of North and South Carolina (Cumming 1966).

In response to the Patriot siege of Ninety-Six, British Colonel Francis Rawdon, regimental commander of the Volunteers of Ireland, left Charleston with his forces to break the siege (Gordon 2003:156-157). He crossed Four Holes Creek at the bridge on June 12, 1781. Later that day, Rawdon and his forces arrived in Orangeburg. In a letter to Greene on June 15, Colonel Thomas Sumter reported that Rawdon's movement was slow and that there were still British dragoons at Orangeburg and some more infantry a few miles behind them. Seeing an opportunity because of Rawdon's slow movement, Greene ordered forces under Andrew Pickens and William Washington to slow Rawdon's column (Gordon 2003:156-157). This style of fighting that included the targeting of a slower, large conventional force by quicker, smaller forces characterized Greene's strategy in the war.

Francis Rawdon, the leader of the British forces that moved through the project area, was an important British military figure. Rawdon was born in County Down, the son of John Rawdon, First Earl of Moira, and Elizabeth Hastings, Baroness Hastings. He joined the British army in 1771 and served at the battles of Bunker Hill, Brooklyn, White Plains, Monmouth and Camden; at the attacks on Forts Washington and Clinton; and at the siege of Charleston. Military historians indicate that his most important military achievement was the organization of a corps at Philadelphia, called the Irish Volunteers. The force was significant in the British victory at Hobkirk's Hill, South Carolina. In 1781, Rawdon was injured and returned to England. After the war, in 1813, Rawdon was appointed Governor-General of India, where he led the British in victory during the Gurkha War (1814–1816), in the final conquest of the Marathas in 1818, and in the purchase of the island of Singapore in 1819. His domestic policy in India was largely successful, leading to the repair of the Mogul canal system in Delhi as well as educational and administrative reforms. He was raised to the rank of Marquess of Hastings in 1817. Hastings' tenure in India ended due to a financial scandal in 1823; he returned to England and was appointed Governor-General of Malta in 1824 (*Encyclopedia Britannica* 1911).

After the unsuccessful American siege of Ninety-Six, Rawdon's force returned to Charleston, and Greene returned his forces to the interior of South Carolina. With the arrival of the American regular army with their supplies and reinforcements, partisans began to attack British outposts more regularly (Gordon 2003:159). On June 16, 1781, Francis Marion ordered Colonel Peter Horry to suppress the Loyalists on the Pee Dee and sent Major Hezekiah Maham to attack some Loyalists collecting at Four Holes Swamp. Upon Rawdon's removal as the British commander, Lieutenant Colonel Alexander Stewart took command of the British forces. On June 29, 1781, Stewart and elements of the Third Regiment camped next to Four Holes Bridge (Gordon 2003:159).

The following month, July 1781, Greene expanded his partisan fight against the British forces in South Carolina. He ordered Sumter to harass the British forces in and around Charleston. However, Sumter did not have the forces to fight a major engagement with the British directly, so he carried out four separate raids in conjunction with attacks against Lieutenant Colonel James Coates and elements of the 19th Regiment of Foot at Monck's Corner and Biggin Church. The Patriot raids targeted British forces at Dorchester, Four Holes Bridge, Goose Creek, and Wadboo Bridge. The basic purpose of these raids was to cut off Coates' retreat from Monck's Corner (Gordon 2003:160-161).

Patriot dragoons under Colonel Henry Hampton of Sumter's Brigade conducted the raid at Four Holes Bridge. Hampton was sent to seize Four Holes Bridge on the north fork of the Edisto. He succeeded in taking the bridge, which was unoccupied, and remained there for a short time. Impatient, he rode on to join his brother Colonel Wade Hampton, who was riding down toward Goose Creek and the outskirts

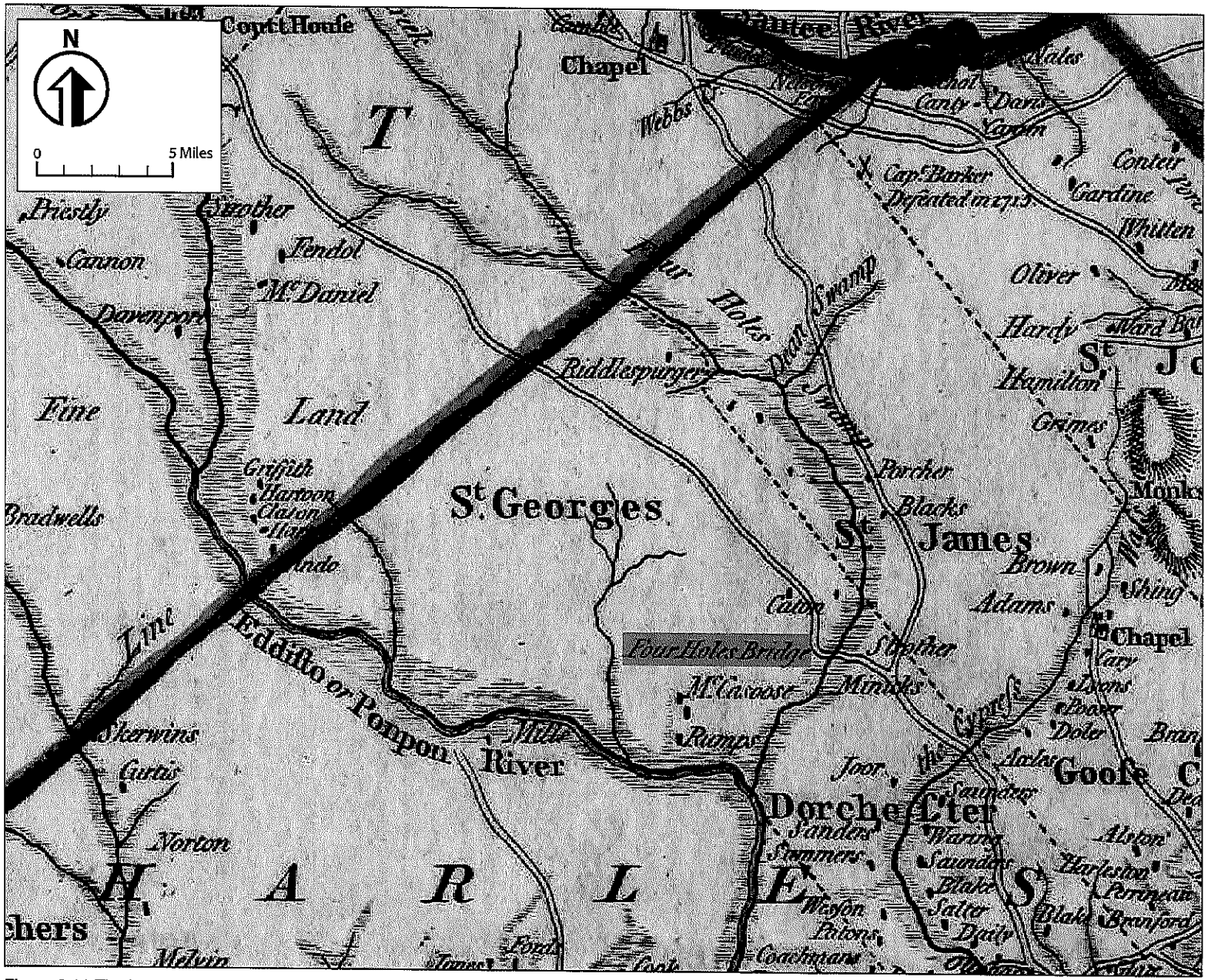

Figure 2.11 The location of Four Holes Bridge on Mouzon's (1775) map of North and South Carolina (Cumming 1966).

of Charleston. Finally, after the American victory at Yorktown and the renewed American offensive in South Carolina, General Sumter posted men at Orangeburg and Four Holes Swamp in December 1781 to cut off communication between the Tories and the British army (Gibbes 1853:221).

Antebellum. The period between the close of the American Revolution and the beginning of the Civil War was characterized in South Carolina, and throughout the South, by plantation agriculture based on slave labor and the production of staple crops such as cotton and rice. It was also a period of increasing sectional tensions, with Southerners emphasizing the political expedience of states' rights, nullification, and agricultural expansion as means to protect their slave-based society. The northern segment of the current project is located in the former Orangeburg District and the southern segment in St. George's Parish in Colleton District.

Since many of the area's roads ran through deep sand or swampy bogs, many travelers found the roads time-consuming for passengers and inadequate for shipping goods. Before the railroad opened in the 1830s, cotton and cattle had to be hauled or driven through miles of mud to reach the markets of Charleston, and merchants floated goods to Charleston from Dorchester. The first railroad in South Carolina ran from Charleston to Hamburg (North Augusta), and it shipped cotton from the backcountry to Charleston. Much of the lumber for the railroad came from the Summerville area. The railroad was open from Charleston to Summerville by June 1832, to Branchville by November 1832, and completely to Aiken by October 1833 (Fick and Davis 1997:19).

In the wake of the Revolutionary War, indigo waned quickly as an important crop due to the removal of the British bounty on it. However, rice production continued to expand. It had grown quickly during the eighteenth century in its importance to the Lowcountry's economy, and development of tidal rice cultivation increased its importance further still. By the late eighteenth century, planters were expanding their fields into the vast marshlands and building even larger dikes, canals, and levees to maximize the use of the tides to grow the cereal. This placed a higher value on marshes along rivers where the tidal action rolled into the fresh water, such as the Ashepoo, Cooper, Santee, Pee Dee, and Combahee rivers (Chaplin 1993:227-276). The result was a distinctive landscape, depicted on many maps from the late eighteenth and nineteenth centuries. Plats of rice plantations from this period show a series of buildings, including rice machines, slave cabins, and the main house, that seem minor features in the midst of the pattern of rice canals and dams.

Rice and cotton agriculture drove the area's economy during the first half of the nineteenth century until the Civil War. However, the Ashley River region began to decline in importance in the years after 1820. By the 1840s, William Ruffin noted that the lands in St. George's Parish were "almost left untilled, are rarely inhabited by the proprietors,...& the whole represents a melancholy scene of abandonment, desolation & ruin" (Mathew 1992:78). Ruffin went on to say that great houses were falling into ruin, and estates were easy to obtain as the land sold frequently, "though the continued & great decline of value makes every successive sale at a lower rate than the preceding" (Mathew 1992:78).

Orangeburg Road operated as an important travel route. The 1825 Mills' Atlas map of Colleton District shows two taverns, Riggs Tavern and Harleys Tavern and Post Office, and a tollhouse near the project corridor. Figure 2.12 shows a portion of Mills' (1825) map of Colleton District. William Harley opened the first post office in the area that became Dorchester County in 1803 at his tavern. Those traveling back and forth to the backcountry often handled business transactions at taverns in addition to spending the night (Fick and Davis 1997:17). It is not surprising that a tavern such as this was located along this major road. Taverns were among the most important social, political, and economic institutions in American colonial life and often were located at ferry sites and along important transportation routes (Rockman and Rothschild 1984:112; Moore 1979:5). In addition to taverns, the 1825 Mills' Atlas map of Colleton District shows few residences along the road, which would indicate a very small number of settlers in the area at this time.

The railroad changed the landscape of Dorchester County. Summerville grew far beyond other, more isolated summer villages (Fick and Davis 1997:20). The railroad ran through small towns lo-

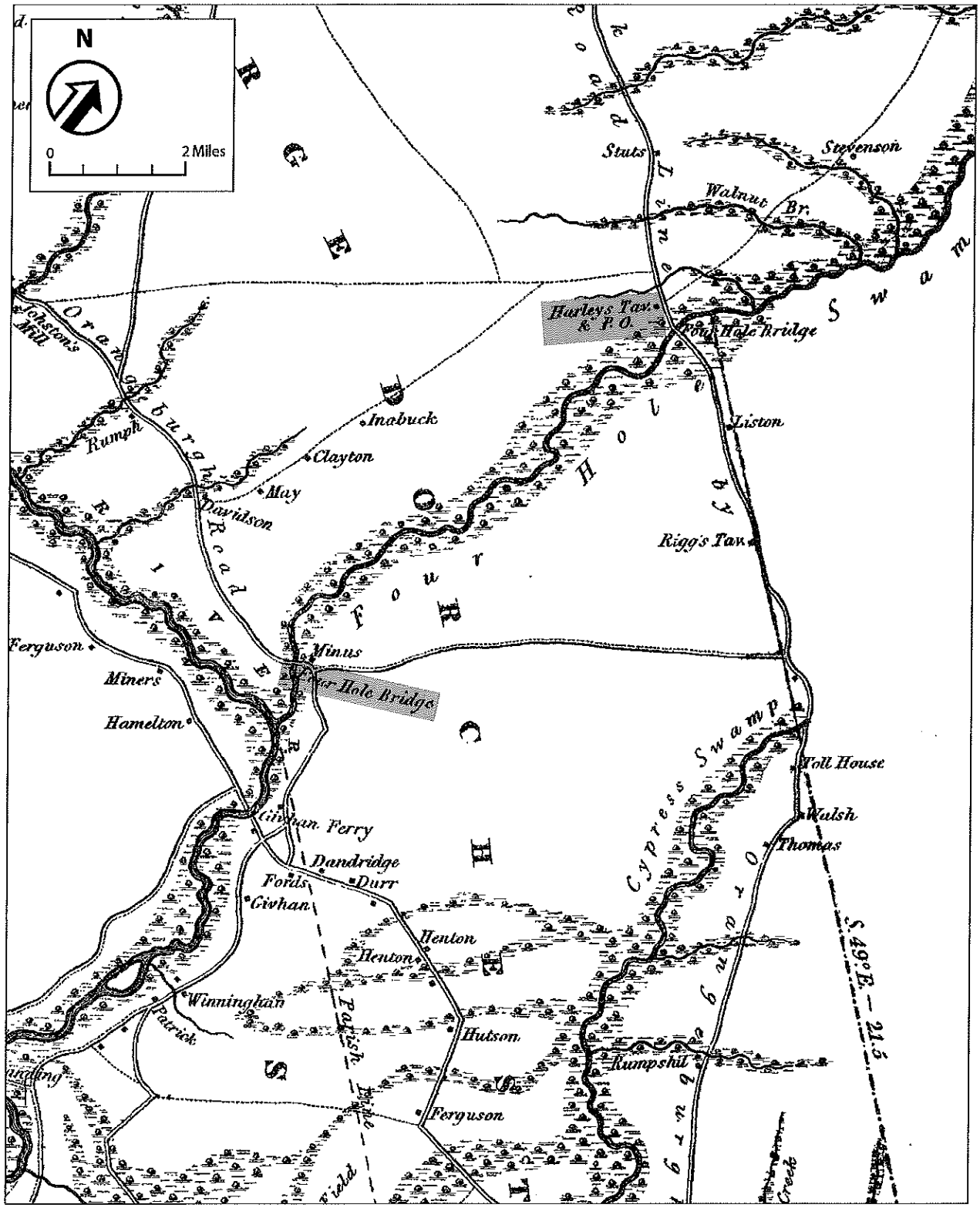

Figure 2.12 A portion of Mills' (1825) map of Colleton District showing the approximate location of the project corridor.

cated along the project corridor, such as Byrds and Pregnall (named after families living in the area), Dorchester, Harleyville, and Jedburg.

Civil War (1861–1865). Although the Civil War brought extensive battles to Charleston, there were no major battles in the project area. The main impact of the war was complete social and economic upheaval throughout the region. Intermittent raids by Union troops resulted in the loss of food, seed, and livestock. The end of the Civil War in 1865 and the emancipation of the slaves completed the destruction of the plantation system. Additionally, the dissection and redistribution of some of the plantations at the end of the war effectively destroyed the plantation system of production in South Carolina and throughout the South.

In October 1863, Confederate Captain Robert Barnwell made a reconnaissance of the area from the South Carolina Railroad Bridge across the Edisto to Ridgeville. He stated in a report to Major General J. F. Gilmer that the key to the defense of the railroad was the bridge over the Edisto River. He suggested a defense line including two companies of infantry at the railroad bridge, two companies of infantry at Raysor's Bridge, and two companies of infantry at Four Holes Bridge, over Four Holes Swamp (*The War of the Rebellion: A Compilation of the Official Records of the Union and Confederate Armies* [*OR*] 1901- Series 1, Vol. 28 (Part 2):447).

On January 3, 1865, General Sherman prepared for his march into the interior of South Carolina by sending a portion of his troops to Beaufort, South Carolina, from Savannah. Along the way, they encountered resistance at Hardeeville, South Carolina. A portion of Sherman's men then traveled to Pocotaligo, South Carolina, on January 14, 1865. Five days later, on January 19, 1865, Sherman ordered his entire army to march into South Carolina. However, foul weather slowed the progress of the columns. As his forces moved into the state, Sherman first sent an expeditionary force toward Charleston in the hope of buttoning down the forces in the city. Sherman stated in a report to General U. S. Grant that:

On the 25th a demonstration was made against the Combahee Ferry and railroad bridge across the Salkehatchie, merely to amuse the enemy, who had evidently adopted that river as his defensive line against our supposed objective, the city of Charleston. I reconnoitered the line in person, and saw that the heavy rains had swollen the river so that water stood in the swamps for a breadth of more than a mile, at a depth of from one to twenty feet. Not having the remotest intention of approaching Charleston, a comparatively small force was able, by seeming preparations to cross over, to keep in their front a considerable force of the enemy disposed to contest our advance on Charleston (*OR* 1901 Series 1, Vol. 47:18).

Sensing that Sherman's force might attack Charleston from the north, in January 1865, an unknown Confederate commander recommended that the Four Holes Bridge and surrounding area be strengthened. He argued that if overwhelmed, the defenders could quickly put themselves west of Four Holes Swamp and use the swamp as a natural defense (*OR* 1901 Series 1, Vol. 47 (Part 2):1076). Confederate General P. G. T. Beauregard ordered Lieutenant General W. J. Hardee, Commander of the Department of Charleston, to "hold enemy in check behind Four Hole Swamp and Sandy Run to the Santee, and effectively guard crossings of that river to the Westeree, or enemy may reach Northeastern Railroad before your movement" (*OR* 1901 Series 1, Vol. 47 (Part 2):1167).

The defense of the Four Holes Swamp area turned out to be important. On February 10, 1865, Lieutenant General Hardee ordered Major General Stevenson to send the part of Stevenson's forces commanded by Lafayette McLaws to Four Holes Swamp by rail (*OR* 1901 Series 1, Vol. 47 (Part 2):1144). One Union intelligence report dated February 14, 1865 stated that Conner's brigade (1,500 strong) of Longstreet's corps had been guarding a bridge over Four Holes Swamp to counter any Union advance on Charleston from Orangeburg (*OR* 1901 Series 1, Vol. 47 (Part 2):418). However, the Confederate forces were overwhelmed all along their defense line; Sherman marched to Columbia, and Union forces gained control of Summerville and Orangeburg and the areas between.

On May 7, 1865, a Union brigade moved from Charleston and camped in the vicinity of Bacon's Bridge. The next day, the Union brigade moved to Summerville, and the commander stationed detachments at Ridgeville and Four Holes Swamp (*OR* 1901

Series 1, Vol. 47 (Part 1):168). Later that month, the Union army ordered the 107th Ohio Volunteers to occupy Summerville, and its commander send units to guard the railroad from Charleston to Four Holes Creek. At the same time, Union General Hartwell's brigade was ordered to Orangeburg to guard the railroad from that point to Four Holes Creek (*OR* 1901 Series 1, Vol. 47 (Part 3):484).

Reconstruction and the Postbellum Period. Profound changes for the area both economically and socially followed the end of hostilities in 1865. The antebellum economic system disintegrated as a result of emancipation and the physical destruction of agricultural property through neglect and (to a lesser extent) military action. Landowners and laborers found adjustments even more difficult due to a constricted money supply and huge debts. The changes were enormous. Land ownership was reshuffled as outsiders began purchasing former plantations abandoned in the wake of the Civil War. Newly freed slaves often exercised their freedom by moving, making the labor situation even more unsettled (Kovacik and Winberry 1989:106).

One result of this upheaval was a variety of labor systems for whites as well as the new freedmen; this fostered an era of experimentation and redefinition in the socio-economic relationships between the freed African Americans and white landowners. The Reconstruction period also witnessed a drastic increase in the number of farms and a drastic decrease in average farm size as predominately white landowners began selling and/or renting portions of their holdings (Kovacik and Winberry 1989:106-108).

Another important change in the region after the Civil War was the arrival of the railroad. As it did across the nation, the emergence of the railroad and its corresponding landscape resulted in dramatic changes in South Carolina. While South Carolina did not have extensive railroad networks like the Northern states, its railroads played an important role in the state's history. Railroads began to appear in the early 1800s in the United States, but South Carolina initially focused on other aspects of its transportation infrastructure. For example, between 1817 and 1829, the state of South Carolina spent almost $2 million on eight canals on the Broad, Congaree, Saluda, and Wateree rivers. However, by 1852 the state had withdrawn financial support from the canals, partly because of the emergence of the railroads. By 1847, the General Assembly had established a revolving fund to aid in the construction of railroads (Grant 2006; Hollis 1968). Scott (1989, 1990) provides a discussion of the growth of railroads in South Carolina. Scott argues that, in both antebellum Georgia and South Carolina, state governments did not demonstrate the golden age of laissez-faire capitalism, as some historians argue; rather, the state governments were involved in the management and promotion of the state economy. In particular, states actively promoted railroads and banking to advance their economies.

The railroad in the project area had come early. The first passenger railroad in the United States was the South Carolina Canal and Rail Road Company, chartered in December 1827. The railroad ran the nation's first regularly scheduled steam-powered passenger train—the wood-burning *Best Friend of Charleston*—over a six-mile section out of Charleston, South Carolina, in 1830. By 1833, it ran a 136-mile line to Hamburg, South Carolina, and was the longest line in the world. Near the end of the nineteenth century, Southern Railway, a conglomerate of other lines, consolidated many of the railroads in the South, including the one that is in the project area.

The Town of Harleyville was incorporated in 1893, growing up around the intersection of the 1885 Charleston, Sumter, and Northern Railroad over the Orangeburg-Charleston Highway (US 178). Early settlement in the Harleyville area is indicated in Mills' (1825) map of Colleton District with the name of "Riddlespurger." The first post office in the area is indicated on maps as "Ridell," perhaps a shortened version of "Riddlespurger" (Fick and Davis 1997:53). By 1900, the Town of Harleyville supported numerous business establishments with an estimated population of 300. Then as now, the Town of Harleyville remains largely agrarian, as the commercial hub for local farmers, loggers, and now workers associated with nearby mining facilities. Figures 2.13 and 2.14 show portions of the USACE (1920a) *Eutwaville, SC* and USACE (1920b) *Ridgeville, SC* quadrangles, with the locations of the proposed project easement superimposed.

On April 7, 1934, South Carolina Governor Ibra Blackwood signed into law the act that cre-

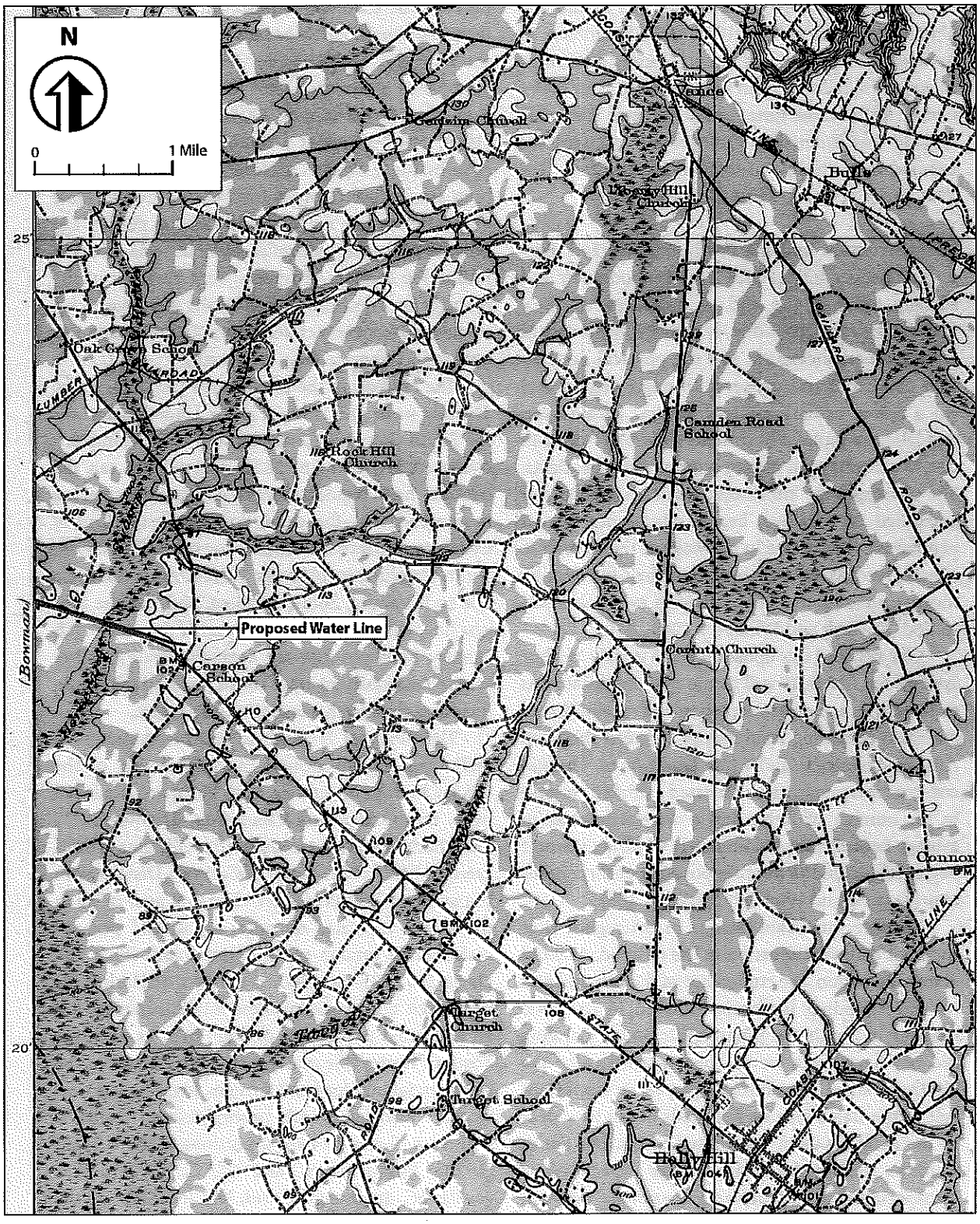

Figure 2.13 The location of the Dorchester Orangeburg Reach Water Transmission Main Project on the USACE (1920a) *Eutawville* quadrangle.

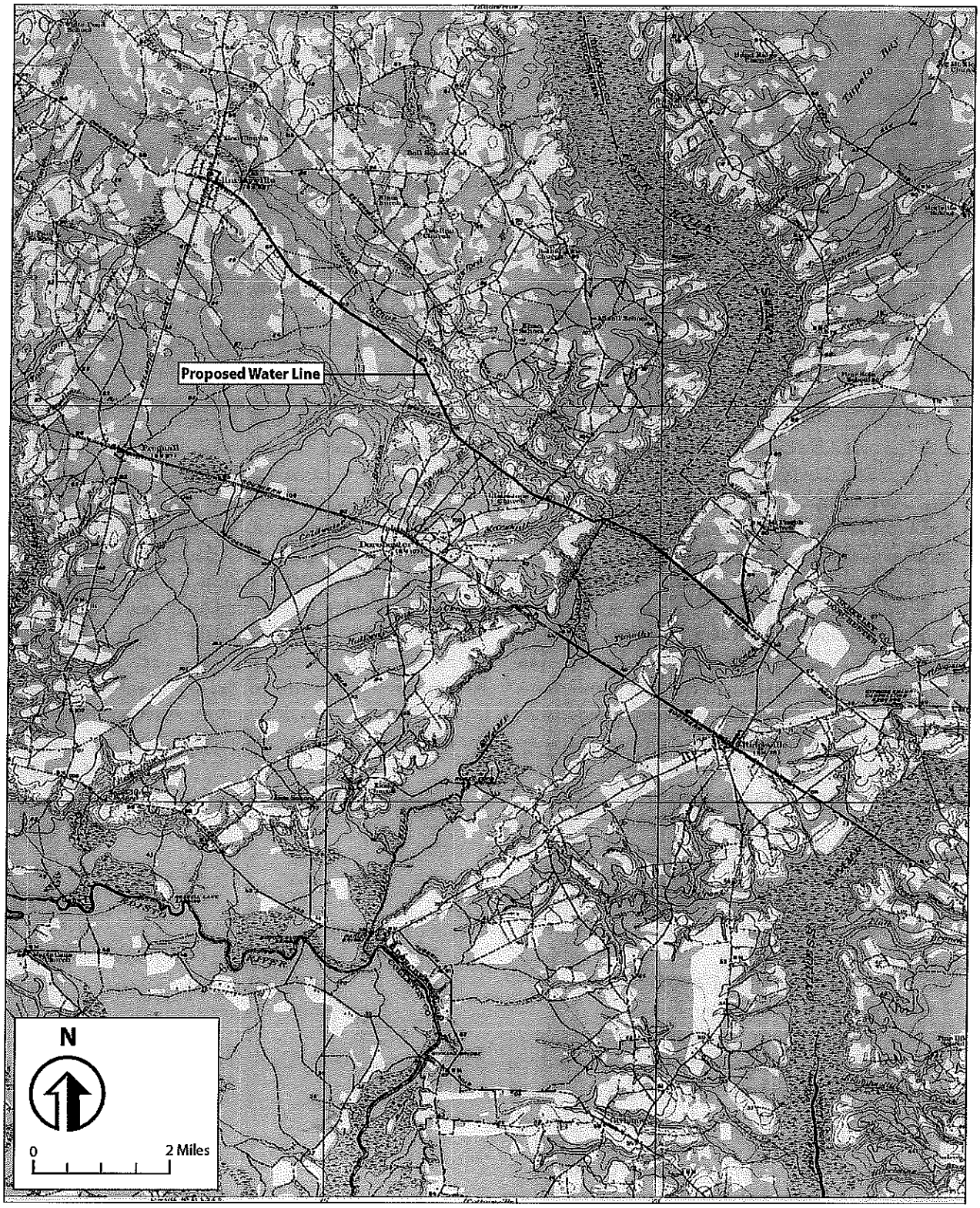

Figure 2.14 The location of the Dorchester Orangeburg Reach Water Transmission Main Project on the USACE (1920b) *Ridgeville* quadrangle.

ated the South Carolina Public Service Authority, known as Santee Cooper (Santee Cooper, no date). The Authority was created during the Great Depression as part of President Franklin Roosevelt's New Deal but orchestrated by several key South Carolina legislators, including Governor Blackwood (*Evening Post* 1941a:18). Prior to this project, the Santee and Cooper rivers remained untapped resources for the area's residents, many of whom had been struggling since the end of the Civil War. In addition, damming of these rivers helped curb disastrous flood episodes, which plagued the area in the early twentieth century. The construction of the Santee Dam that created Lake Marion and the Pinopolis dam that created Lake Moultrie and the Diversion Canal that connects both lakes was preceded by the largest land-clearing project in United States history, with over 12,500 workers clearing over 177,000 acres, allowing Santee Cooper to sell an estimated 200,000,000 board feet of lumber by 1941 (Edgar 2010; *Evening Post* 1941b:18). Even today, Santee Cooper provides most of the electricity for the Lowcountry of South Carolina.

Today, this portion of Dorchester and Orangeburg counties maintains its rural and agrarian nature. Cotton and soybeans are the most commonly grown crops, usually by farmers who rent or own large pieces of land. Much of the land also remains in the hands of timber companies or is leased to timber companies, who grow pines for both paper pulp and saw timber. More recently, mining interests have developed a number of large mines, particularly for the production of cement from soft limestones or marls that underlie this portion of the Coastal Plain of South Carolina. Harleyville lies near two of the largest of these mines in South Carolina, facilities managed by Argo USA and Holcim US.

2.2.4 Previous Cultural Resources Investigations

To date there have been 11 relevant cultural resource investigations conducted within 0.5 mile of the project corridor; Table 2.2 summarizes these projects. These include two other projects conducted on behalf of the South Carolina Public Service Authority and Hazen and Sawyer, PC as part of the Lake Marion Regional Water System, including Poplin and Baluha (2012) and Baluha (2014). In 1996, Fick and Davis (1997) conducted a historic resources survey of Dorchester County, which subsumes the Dorchester County portion of the current project. Salo et al. (2007) surveyed the portion of the project corridor along US 78. In addition, Bamann and Stewart's (2005) survey near the intersection of US 78 and SC Route 27 covered a portion of the project corridor.

A total of 46 historic resources and 11 archaeological sites are located within 0.5 mile of the project corridor. Table 2.3 summarizes the 46 historic resources; Table 2.4 summarizes the 11 archaeological sites. Of these 57 cultural resources, only one archaeological site (38DR347) is eligible for the NRHP. Site 38DR347 includes an artifact scatter and landscape features associated with multiple components, including a Revolutionary War camp, Revolutionary War skirmish, and Civil War camp at Four Hole Swamp bridge and the remnants of the old Four Hole Swamp bridge itself. Salo et al. (2007) examined intensively the portion of the site within the US 78/178 ROW, and determined that there were no archaeological deposits or landscape features within that portion of the site that could contribute to its NRHP eligibility. No investigation of the entire site has been conducted to date. Therefore, 38DR347 requires further evaluation to determine its NRHP eligibility. The current project extends through a portion of 38DR347, within the US 78/178 ROW and through portions that have not been examined intensively to date.

Table 2.2 Previous Investigations Conducted within 0.5 km of the project corridor.

Reference(s)	Organization	Investigation Description/Type		Proximity	Resources
Cassedy 1990	Garrow and Associates, Inc.	Cultural resources survey and testing for the proposed expansion of the Oakridge Landfill	Reconnaissance; testing	south of US-78/US-178	38DR2
Gunn 1991	Garrow and Associates, Inc.	Archaeological testing of 38DR149 at Oakridge landfill	Testing	south of US-78/US-178	38DR149
Gunn 1993	Garrow and Associates, Inc.	Archaeological testing of 38DR73 at Oakridge landfill	Testing	south of US-78/US-178	38DR73
Fick and Davis 1997	Preservation Consultants, Inc.	Historic resource survey of Dorchester County	Reconnaissance	encompasses project in Dorchester County	46 historic resources (see Tables 2.3 and 2.4)
Bamann and Stewart 2005	Coastal Carolina Research, Inc.	Cultural resources survey of the intersection of US-78 and SC-27	Intensive survey	adjacent at US-78/SC-27 intersection	429 1091
Salo et al. 2007	Brockington	Cultural resources survey of a 39.6 km section of the US-78 Improvements Project	Intensive survey	adjacent along 4.7 km from US-78/US-178 interchange to Ridgeville Rd.	38DR344, 38DR347; 1157, 1158, 1168, 1169
Fletcher 2007	Brockington	Cultural resources survey of the Sandhill Road Mine Tract	Intensive survey	0.1 km southwest of US-178 near Sandhill Rd.	38DR350-38DR353
Brummitt 2009	S&ME, Inc.	Cultural resources survey of the 331-acre MeadWestvaco Harleyville Tract	Reconnaissance	south of US-78 near Ridgeville Rd.	38DR397
Brummitt 2011	S&ME, Inc.	Cultural resources survey of the 700-acre Ridgeville Commerce Park	Reconnaissance	south of US-78 near SC-27	429 1091
Poplin and Baluha 2012	Brockington	Cultural resources survey of the Wells Crossroad to Holly Hill Reach Water Transmission Mains	Intensive survey	intersects with current project near Wells Crossroad	255
Baluha 2014	Brockington	Cultural resources survey of the Harleyville Reach Water Transmission Main	Intensive survey	intersects with current project near Harleyville	38DR431

Table 2.3 Previously identified historic resources located within 0.5 mile of the project corridor.

Resource	Description	Address	Date	NRHP Status	Reference(s)
Individual Resources					
255	I-style single family residence	6128 Old State Road	ca. 1880	Not evaluated	Poplin and Baluha 2012
1157	gable-front single family residence	US-78	ca. 1940	Not eligible	Salo et al. 2004
1158	gable-front single family residence	US-78	ca. 1940	Not eligible	Salo et al. 2004
1168	concrete tee-beam bridge	US-78, Four Hole Swamp	1948	Not eligible	Salo et al. 2004
1169	concrete tee-beam bridge	US-78, Four Hole Swamp	1948	Not eligible	Salo et al. 2004
219 93	Dorchester Cemetery	Infinity Drive	ca. 1870	Not eligible	Fick and Davis 1997
219 664	unknown	unknown	unknown	Not eligible	Fick and Davis 1997
219 669.00	Creighton house single family residence	207 S. Railroad Avenue	ca. 1890	Not eligible	Fick and Davis 1997
219 669.01	Creighton house outbuilding	207 S. Railroad Avenue	ca. 1890	Not eligible	Fick and Davis 1997
410 141	Limestone Baptist Church Cemetery	1890 Highway 178	ca. 1900	Not eligible	Fick and Davis 1997
410 142	Old Harley Cemetery	US-178	1867	Not eligible	Fick and Davis 1997
410 143	Hilton House	1890 Highway 178	ca. 1910	Not eligible	Fick and Davis 1997
410 144	Four Holes Swamp Bridge Monument	US-178	1928	Not eligible	Fick and Davis 1997
429 1091	single family residence (destroyed)	1061 Highway 78	ca. 1920	Not eligible	Fick and Davis 1997; Bamann and Stewart 2005; Brummitt 2011
Harleyville Historic District (Not eligible)					
219 662	single family residence	308 E. Main St.	ca. 1940	Contributing element of district	Fick and Davis 1997
219 663	single family residence	305 E. Main St.	ca. 1915	Contributing element of district	Fick and Davis 1997
219 665	Methodist parsonage single family residence	209 E. Main St.	1915	Contributing element of district	Fick and Davis 1997
219 666.00	Harleyville School	S. Railroad Ave.	1937	Contributing element of district	Fick and Davis 1997
219 666.01	Harleyville School Gym	S. Railroad Ave.	1937	Contributing element of district	Fick and Davis 1997
219 667	Residence	171 John St.	1942	Contributing element of district	Fick and Davis 1997
219 668	Mims House	176 S. Railroad Ave.	ca. 1930	Contributing element of district	Fick and Davis 1997
219 671	Johnson House	Waymer St.	ca. 1935	Contributing element of district	Fick and Davis 1997
219 672	Residence	136 Hill St.	ca. 1935	Contributing element of district	Fick and Davis 1997
219 673	Hussey House	112 Judge St.	ca. 1915	Contributing element of district	Fick and Davis 1997

Table 2.3 Previously identified historic resources located within 0.5 mile of the project corridor (continued).

Resource	Description	Address	Date	NRHP Status	Reference(s)
Harleyville Historic District (Not eligible)					
219 674	Bell House	147 Kate St.	ca. 1885	Contributing element of district	Fick and Davis 1997
219 675	Residence	131 Kate St.	ca. 1925	Contributing element of district	Fick and Davis 1997
219 676.00	Pearcy-Utsey House	104 W. Main St.	ca. 1890	Contributing element of district	Fick and Davis 1997
219 676.01	Harleyville Post Office	104 W. Main St.	1931	Contributing element of district	Fick and Davis 1997
219 677	Utsey House	114 Bowman St.	ca. 1905	Contributing element of district	Fick and Davis 1997
219 678	Harleyville School	118 Bowman St.	1898	Contributing element of district	Fick and Davis 1997
219 679	Moorer House	140 W. Main St.	ca. 1890	Contributing element of district	Fick and Davis 1997
219 680	Westbury House	144 W. Main St.	ca. 1915	Contributing element of district	Fick and Davis 1997
219 681	Parler House	133 W. Main St.	ca. 1880	Contributing element of district	Fick and Davis 1997
219 682	Murray House	125 W. Main St.	ca. 1910	Contributing element of district	Fick and Davis 1997
219 683	Westbury Hardware	111-113 W. Main St.	ca. 1915	Contributing element of district	Fick and Davis 1997
219 684	Westbury Building	107-109 W. Main St.	ca. 1910	Contributing element of district	Fick and Davis 1997
219 685	Dotson House	120 W. Main St.	1898	Contributing element of district	Fick and Davis 1997
219 686	Quattlebaum House	156 E. Main St.	ca. 1910	Contributing element of district	Fick and Davis 1997
219 687	Residence	167 E. Main St.	ca. 1915	Contributing element of district	Fick and Davis 1997
219 688	Hilton House	179 E. Main St.	1911	Contributing element of district	Fick and Davis 1997
219 689	Knight House	224 E. Main St.	ca. 1915	Contributing element of district	Fick and Davis 1997
219 690	Baker house single family residence	217 E. Main St.	ca. 1920	Contributing element of district	Fick and Davis 1997
219 691	single family residence	229 E. Main St.	ca. 1925	Contributing element of district	Fick and Davis 1997
219 692	single family residence	257 E. Main St.	ca. 1915	Contributing element of district	Fick and Davis 1997
219 693	Residence	153 W. Main St.	ca. 1910	Contributing element of district	Fick and Davis 1997
219 694	Utsey's Store	161 W. Main St.	ca. 1925	Contributing element of district	Fick and Davis 1997
219 695	Murray House	164 W. Main St.	1899	Contributing element of district	Fick and Davis 1997

(continued)

Table 2.3 Previously identified historic resources located within 0.5 mile of the project corridor (continued).

Resource	Description	Address	Date	NRHP Status	Reference(s)
Harleyville Historic District (Not eligible)					
219 696	Hutto House	178 W. Main St.	ca. 1910	Contributing element of district	Fick and Davis 1997
219 697	Residence	188 W. Main St.	ca. 1915	Contributing element of district	Fick and Davis 1997
219 698	Residence	200 W. Main St.	ca. 1915	Contributing element of district	Fick and Davis 1997
219 699	Bair House	289 W. Main St.	ca. 1925	Contributing element of district	Fick and Davis 1997

Table 2.4 Previously identified archaeological sites located within 0.5 mile of the project corridor.

Number	Component	Description	NRHP Status	Reference
38DR2	Unknown Pre-Contact	ceramic and lithic scatter	Not eligible (destroyed)	Cassedy 1990
38DR73	Woodland	ceramic and lithic scatter	Eligible (destroyed)	Cassedy 1990; Gunn 1993
38DR149	Woodland	ceramic	Eligible (destroyed)	Cassedy 1990; Gunn 1991
38DR344	Early/Middle Woodland	ceramic scatter	NE	Salo et al. 2007
38DR347	18th-20th century	Revolutionary War camp and skirmish site; Civil War camp; old roadbed	Requires Evaluation	Salo et al. 2007
38DR350	Unknown Pre-Contact	ceramic and lithic scatter	NE	Fletcher 2007
38DR351	Unknown Pre-Contact; 19th/20th century	ceramic and lithic scatter; domestic scatter	NE	Fletcher 2007
38DR352	Unknown Pre-Contact; unknown Post-Contact	ceramic and lithic scatter; domestic scatter	NE	Fletcher 2007
38DR353	Unknown Pre-Contact	ceramic and lithic scatter	NE	Fletcher 2007
38DR397	19th/20th century	scatter	NE	Brummitt 2009
38DR431	19th/20th century	scatter	NE	Baluha 2014

3.0 Results and Recommendations

Cultural resources survey of the easement of the proposed Dorchester Orangeburg Reach Water Transmission Main included intensive archaeological survey and architectural reconnaissance. These investigations identified five new archaeological sites (Sites 38DR448, 38DR449, and 38OR361-38OR363) and one isolated find. Investigators also revisited previously recorded site 38DR347. A portion of the waterline easement also passes through the Harleyville Historic Area. A description of these sites and isolated artifacts follow. Management recommendations conclude Chapter 3.

3.1 Archaeological Investigations

The easement for the proposed Dorchester Orangeburg Reach Water Transmission Main extends 12.81 miles along two segments in Orangeburg and Dorchester counties, South Carolina. Cassedy (1990) and Salo et al. (2007) previously investigated approximately 2.63 miles of the easement along US 178 and US 78/178 in Dorchester County. During the current investigation, investigators excavated a total of 350 shovel tests, which covers approximately 6.63 miles. Shovel tests were not excavated in the remainder of the corridor for a variety of reasons, including ground disturbance, slope, wetlands, and inundated areas.

3.1.1 38OR361

Cultural Affiliation: *late nineteenth/ early twentieth century*
Site Type: *Post-Contact domestic scatter*
Site Dimensions: *50 feet diameter*
Elevation: *100 feet above mean sea level (amsl)*
Nearest Water Source: *Horse Range Creek (1,600 feet east)*
Soil Type/Texture: *Goldsboro Loamy Sand*
Vegetation: *soybeans*
NRHP Recommendation: *not eligible*

Site 38OR361 is a surface scatter of Post-Contact domestic artifacts located in an agricultural field north of US 176, 470 feet west of the intersection of US 176 and Alpine Drive in Orangeburg County (see Figures 1.1 and 2.1). The site measures 50 feet in diameter. At present, the agricultural field is planted with soybeans. A ditch and utility corridor parallel US 176. Surface visibility at the site was fair (26–50 percent exposed). Two consecutive negative shovel tests at 50-foot intervals and US 176 define the site boundaries. Figure 3.1 displays a plan of 38OR361; Figure 3.2 provides views of Site 1 on October 7, 2015.

We excavated seven shovel tests at 50-foot intervals in and around 38OR361; none of these shovel tests produced artifacts. Soils across the site include a grayish brown (10YR5/2) loamy sand 0–1.00 foot (ft) below surface (bs) over a pale brown (10YR6/3) fine sand 1.00-1.33 ft bs and a brownish yellow (10YR6/6) sandy loam 1.33-1.50 ft bs, underlain by a yellowish brown (10YR5/6) sandy clay loam 1.50-2.00+ ft bs. These soils are similar to those described by DeFrancesco (1988) as Goldsboro Loamy Sand. All artifacts were recovered from a single surface provenience. None of the shovel tests exposed subsurface cultural features.

We recovered four artifacts from 38OR361. These include one brick fragment, one undecorated ironstone sherd, one cobalt blue container glass fragment, and one milk glass jar seal fragment. Two of these artifacts are temporally diagnostic: ironstone (1840-1930) and milk glass (1869-present).

Site 38OR361 is located in an agricultural field directly across US 176 from an extant farmstead. The USACE (1920a) Eutawville, SC quadrangle shows a building where the farmstead is today and another building on the opposite side of the highway in close proximity to 38OR361. However, neither the South Carolina State Highway Department (SCSHD) (1939) General Highway and Transportation Map of Orangeburg County, the South Carolina Department of Highways and Public Transportation (SCDHPT) (1969) General Highway Map of Orangeburg County, nor the USGS (1979) Vance, SC quadrangle show any buildings near 38OR361. Therefore, 38OR361 is the likely location of a late-nineteenth to mid-twentieth-century tenant farm that was destroyed or abandoned prior to the 1930s.

We assessed the NRHP eligibility of 38OR361 with respect to NRHP Criteria A-D (see Section 1.2.5). Site 38OR361 contains artifacts associated with a late-nineteenth- to mid-twentieth-century

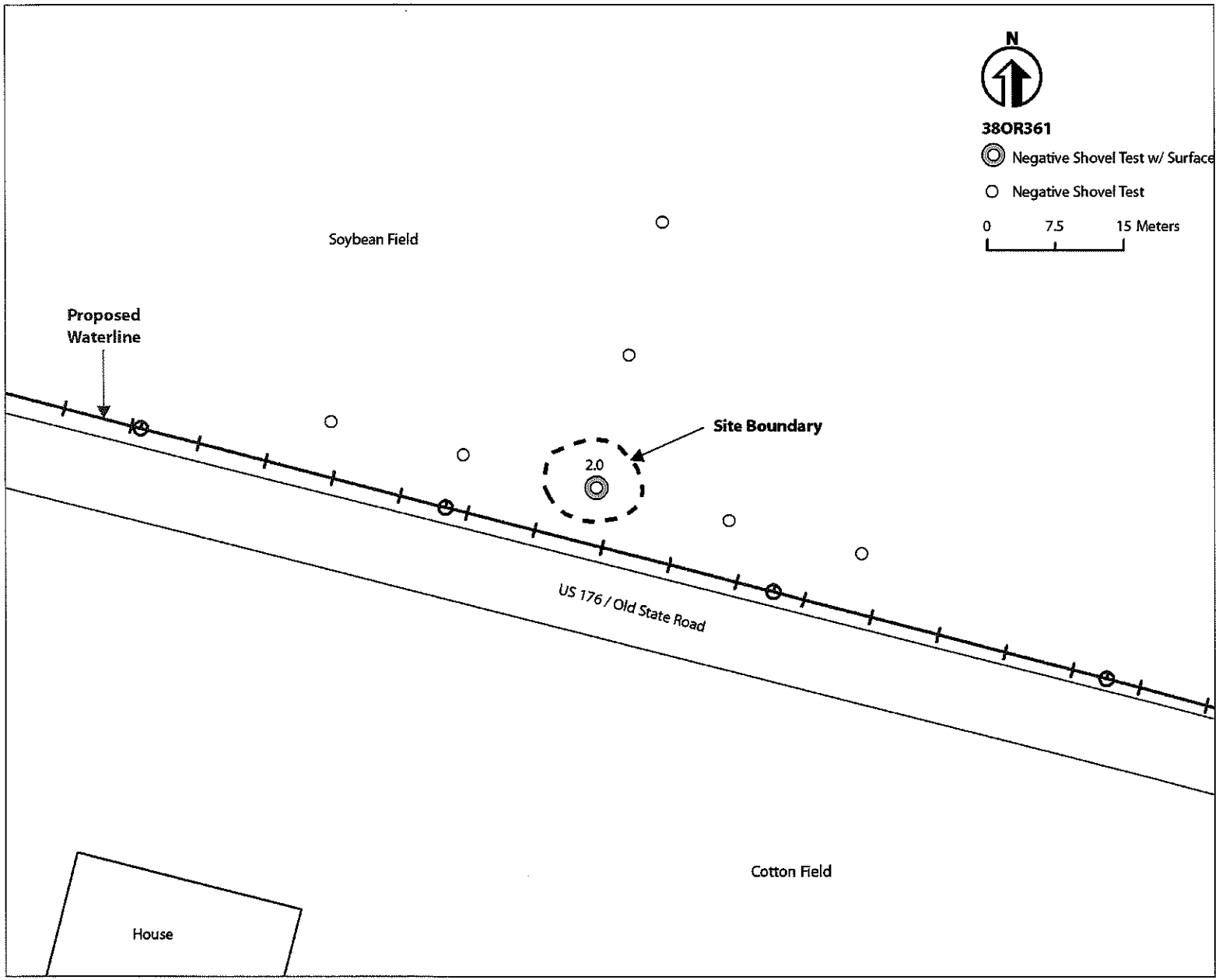

Figure 3.1 Plan of 38OR361.

Figure 3.2 Views of 38OR361 looking west (top) and north (bottom).

occupation. These kinds of archaeological sites are common in Orangeburg County. The few artifacts recovered do not occur in concentrations sufficient to interpret activities that occurred at the site and all the artifacts were recovered from the surface. These factors suggest that this site does not have the potential to contain a substantial artifact assemblage and/or intact cultural features. Additional investigation of 38OR361 is unlikely to generate information beyond the period of use and the presumed function(s) presented above. Site 38OR361 cannot generate significant information concerning the past settlement patterns or land-use practices in Orangeburg County. Therefore, we recommend 38OR361 not eligible for the NRHP. Additional management of this site is not warranted.

3.1.2 38OR362

Cultural Affiliation: *late nineteenth - late twentieth century*
Site Type: *Post-Contact domestic scatter*
Site Dimensions: *100 by 100 feet*
Elevation: *95 feet amsl*
Nearest Water Source: *Horse Range Creek (965 feet west)*
Soil Type/Texture: *Goldsboro Loamy Sand*
Vegetation: *soybeans*
NRHP Recommendation: *not eligible*

Site 38OR362 is a surface/subsurface scatter of Post-Contact domestic artifacts located in a wooded area north of US 176, 2,200 feet northwest of Wells Crossroads in Orangeburg County (see Figures 1.1 and 2.1). The site measures 100-by100-feet. A dilapidated, plank-sided, wood-framed building with a brick chimney stands in the center of the site. Vegetation across the site consists of planted loblolly pines with a dense understory; wisteria vines have overtaken the building. Surface visibility at the site was poor (1-25 percent exposed). Two consecutive negative shovel tests at 50-foot intervals and US 176 define the site boundaries. Figure 3.3 displays a plan of 38OR362; Figures 3.4 and 3.5 provides views of 38OR362 on October 7, 2015.

We excavated 18 shovel tests at 50-foot intervals in and around 38OR362; five of these shovel tests produced artifacts. Soils across the site include a grayish brown (10YR5/2) loamy sand 0–1.00 ft bs over a pale brown (10YR6/3) fine sand 1.00-1.33 ft bs, and a brownish yellow (10YR6/6) sandy loam 1.33-1.50 ft bs, underlain by a yellowish brown (10YR5/6) sandy clay loam 1.50-2.00+ ft bs. These soils are similar to those described by DeFrancesco (1988) as Goldsboro Loamy Sand. Artifacts were recovered from an average depth of 1.00 ft bs and a maximum depth of 1.10 ft bs. None of the shovel tests exposed subsurface cultural features.

We recovered 30 artifacts from 38OR362. These include one brick fragment, two unidentifiable nails, three brown glass container fragments, 16 clear glass container fragments, one light blue glass container fragment, two light green glass container fragments, one undecorated ironstone sherd, and four undecorated whiteware sherds. Five of these artifacts are temporally diagnostic: ironstone (1840-1930) and whiteware (1830-present).

Site 38OR362 is located in a wooded area north of US 176, 2,200 feet northwest of Wells Crossroads. The USACE (1920a) Eutawville, SC quadrangle and the SCSHD (1939) and SCDHPT (1969) maps show multiple buildings in this area. However, no buildings are shown on the USGS (1979) Vance, SC quadrangle. Therefore, 38OR362 was likely abandoned in the late 1970s.

We assessed the NRHP eligibility of 38OR362 with respect to NRHP Criteria A-D (see Section 1.2.5). A dilapidated building still stands at the site but it retains insufficient integrity for recordation in the South Carolina Statewide Survey. Site 38OR362 contains artifacts associated with a late-nineteenth- to late-twentieth-century occupation. These kinds of archaeological sites are common in Orangeburg County. The few artifacts recovered do not occur in concentrations sufficient to interpret activities that occurred at the site and all the artifacts were recovered from the upper soil horizon. These factors suggest that this site does not have the potential to contain a substantial artifact assemblage and/or intact cultural features. Additional investigation of 38OR362 is unlikely to generate information beyond the period of use and the presumed function(s) presented above. Site 38OR362 cannot generate significant information concerning the past settlement patterns or land-use practices in Orangeburg County. Therefore, we recommend 38OR362 not eligible for the NRHP. Additional management of this site is not warranted.

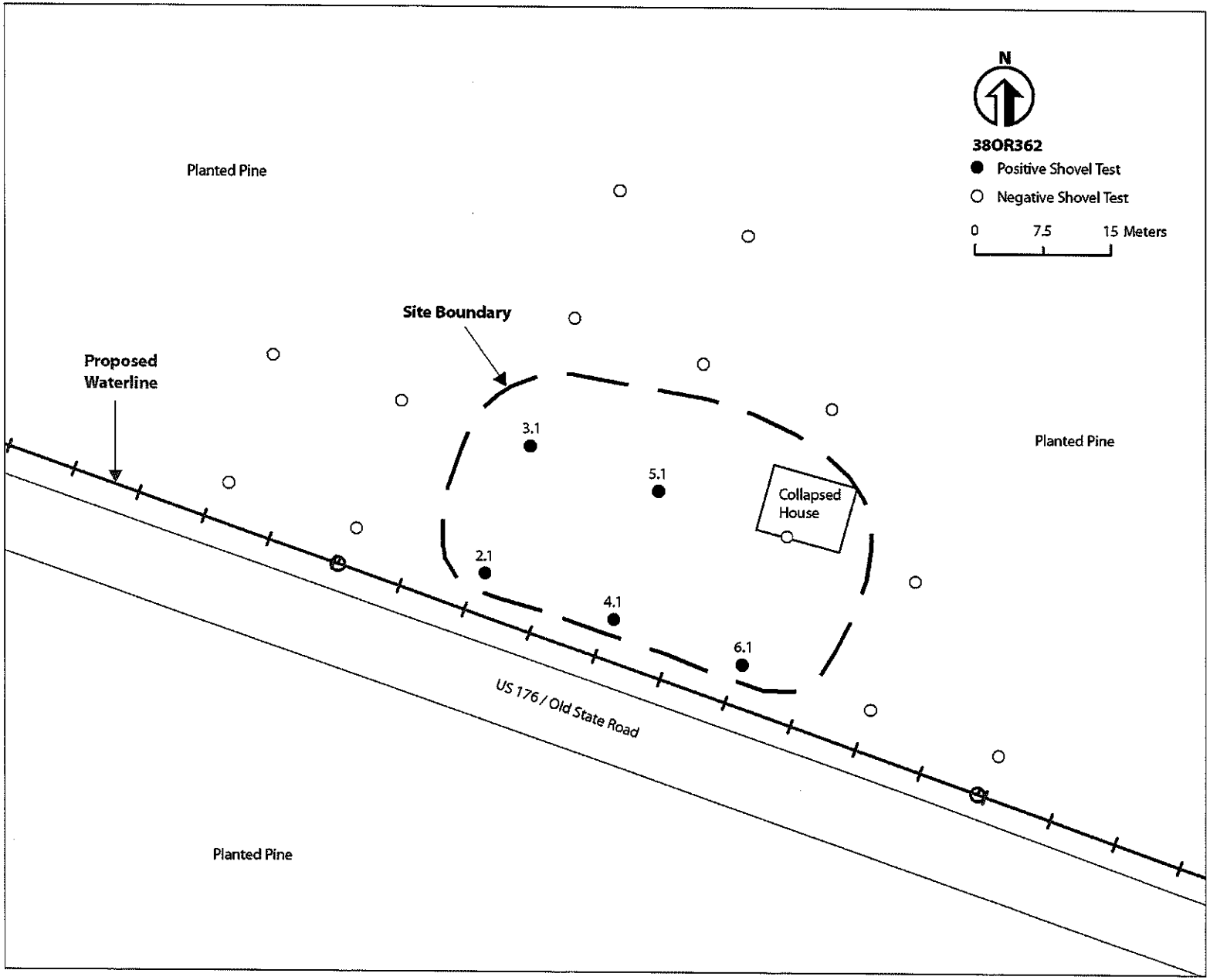

Figure 3.3 Plan of 38OR362.

Figure 3.4 Views of 38OR362 looking west (top) and north (bottom).

Figure 3.5 Views of the collapsed building at 38OR362, looking northeast (top) and southwest showing chimney (bottom).

3.1.3 38OR363

Cultural Affiliation: *late eighteenth - early nineteenth century, twentieth century*
Site Type: *Post-Contact domestic scatter*
Site Dimensions: *150 by 230 feet*
Elevation: *95 feet amsl*
Nearest Water Source: *Horse Range Creek (965 feet west)*
Soil Type/Texture: *Goldsboro Loamy Sand*
Vegetation: *planted loblolly pines, mixed hardwoods and pines*
NRHP Recommendation: *not eligible*

Site 38OR363 is a surface/subsurface scatter of Post-Contact domestic artifacts located in a wooded area 800 feet north-northwest of Wells Crossroads in Orangeburg County (see Figures 1.1 and 2.1). The site measures 150-by-230-feet. Investigators observed two ramshackle farm structures at 38OR363, a collapsed pole barn and a standing chicken coop. Vegetation across the site consists of stands of planted loblolly pines and mixed hardwoods and pines with a dense understory; wisteria vines cover the structures. Surface visibility at the site was poor (1-25 percent exposed). Two consecutive negative shovel tests at 50-foot intervals define the site boundaries. Figure 3.6 displays a plan of 38OR363; Figures 3.7 and 3.8 provides views of the site on October 7, 2015.

We excavated 25 shovel tests at 50-foot intervals in and around 38OR363; five of these shovel tests produced artifacts. Soils across the site include a very dark grayish brown (10YR3/2) loamy sand 0–1.17 ft bs over a light yellowish brown (10YR6/4) fine sand 1.17-2.00 ft bs, underlain by a yellowish brown (10YR5/8) sandy clay loam 2.00+ ft bs. These soils are similar to those described by DeFrancesco (1988) as Noboco Loamy Sand. We recovered artifacts from an average depth of 0-1.10 ft bs and a maximum depth of 1.33 ft bs. None of the shovel tests exposed subsurface cultural features.

We recovered 10 artifacts from 38OR363. These include one unidentifiable iron fragment, one undecorated ironstone sherd, one clear glass container fragment, two alkaline glazed stoneware sherds, one light olive green glass container fragment, one olive green glass container fragment, one undecorated pearlware sherd, one annular pearlware sherd, and one transfer printed whiteware sherd. Seven of these artifacts are temporally diagnostic, including pearlware (1780-1840) and whiteware (1830-present); alkaline glazed stoneware and light olive to olive green bottle glass artifacts are indicative of nineteenth century occupations. Site 38OR363 is located in a wooded area 800 feet north-northwest of Wells Crossroads. The USACE (1920a) Eutawville, SC quadrangle and the SCSHD (1939) and SCDHPT (1969) maps show multiple buildings in this area. However, no buildings are shown on the USGS (1979) Vance, SC quadrangle. Therefore, 38OR363 was likely abandoned in the late 1970s. No nineteenth century maps we reviewed show settlements in the vicinity of the site.

We assessed the NRHP eligibility of 38OR363 with respect to NRHP Criteria A-D (see Section 1.2.5). Two ramshackle structures associated with twentieth century agricultural activities are located at 38OR363; neither retains sufficient integrity to be recorded in the South Carolina Statewide Survey. In addition, 38OR363 contains artifacts associated with a late-eighteenth to late-nineteenth century occupation. The few artifacts recovered do not occur in concentrations sufficient to interpret activities that occurred at the site and no evidence of intact features was encountered. These factors suggest that this site does not have the potential to contain a substantial artifact assemblage and/or intact cultural features. Additional investigation of 38OR363 is unlikely to generate information beyond the period of use and the presumed function(s) presented above. Site 38OR363 cannot generate significant information concerning the past settlement patterns or land-use practices in Orangeburg County. Therefore, we recommend 38OR363 not eligible for the NRHP. Additional management of this site is not warranted.

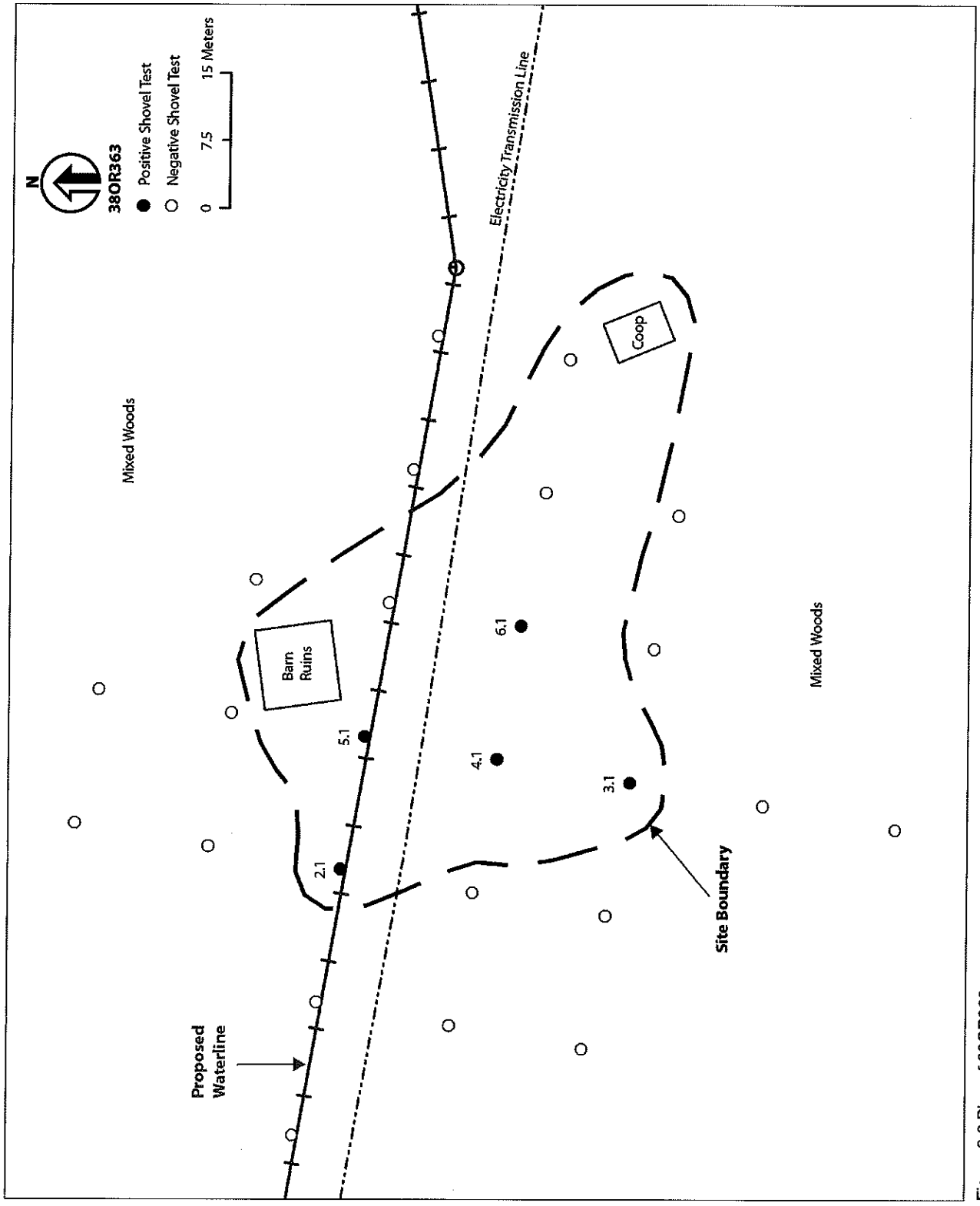

Figure 3.6 Plan of 38OR363.

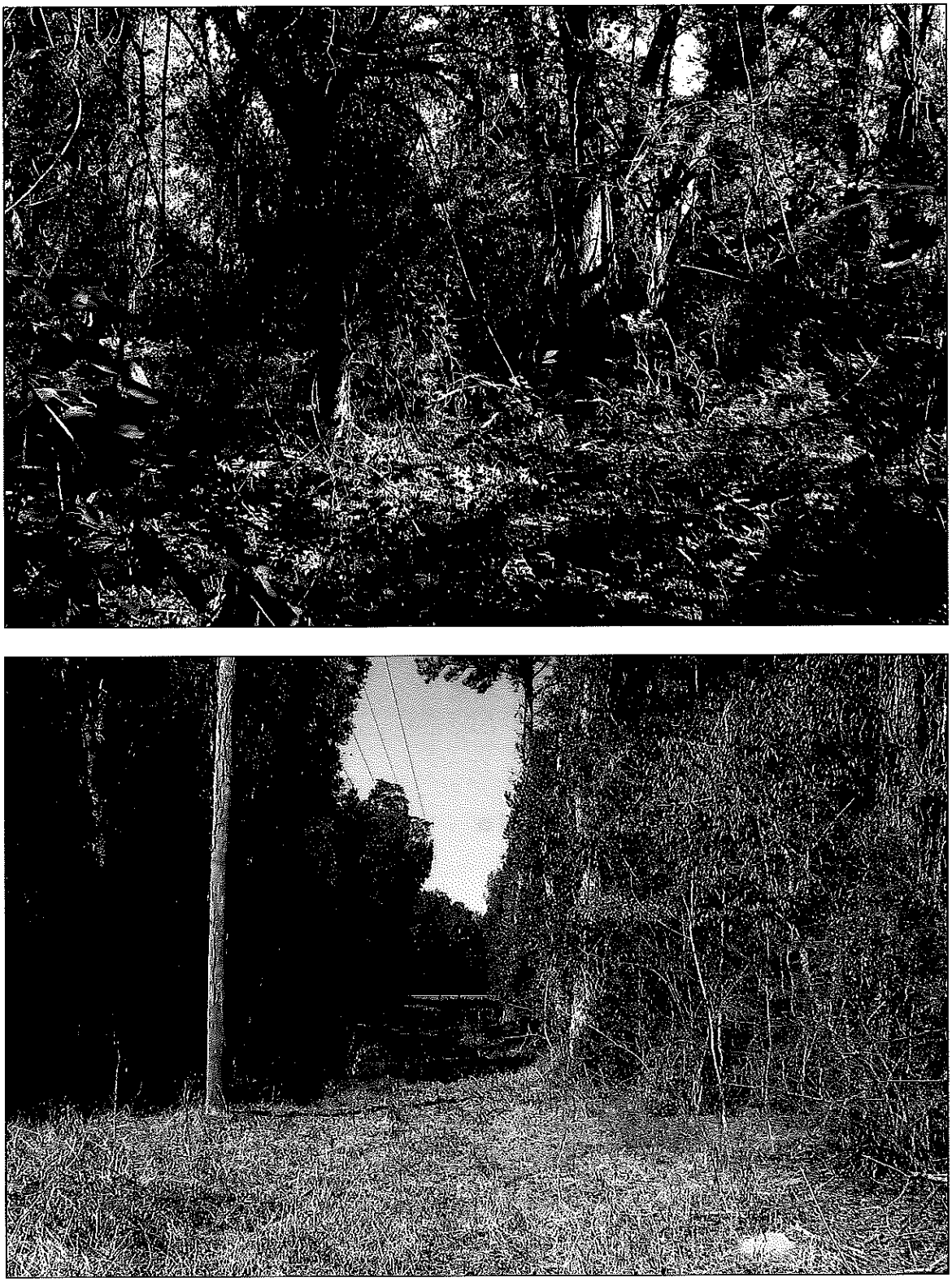

Figure 3.7 Views of 38OR363, looking north (top) and looking west along utility corridor (bottom).

Figure 3.8 Views of the structures at 38OR363, looking south at ruins of old pole barn (top) and looking southeast at chicken coop (bottom).

3.1.4 38DR448

Cultural Affiliation: *Middle/Late Woodland (Berkeley)*
Site Type: *Pre-Contact ceramic and lithic scatter*
Site Dimensions: *260 by 260 feet*
Elevation: *85 feet amsl*
Nearest Water Source: *Little Walnut Branch (3,000 feet northeast)*
Soil Type/Texture: *Ocilla Sand*
Vegetation: *grass*
NRHP Recommendation: *not eligible*

Site 38DR448 is a subsurface scatter of Pre-Contact ceramic and lithic artifacts located in an agricultural field northeast of US 178, approximately 1,950 feet southeast of the intersection of US 178 and Johnson Road in Dorchester County (see Figures 1.3 and 2.3). The site measures 260-by-260-feet. At present, vegetation across the site consists of grass. Surface visibility at the site was poor (1-25 percent exposed). Two consecutive negative shovel tests at 50-foot intervals and US 178 define the site boundaries. Figure 3.9 displays a plan of 38DR448; Figure 3.10 provides views of 38DR448 on October 7, 2015.

We excavated 22 shovel tests at 50-foot intervals in and around 38DR448; six of these shovel tests produced artifacts. Soils across the site include a very dark gray (10YR3/1) to light brownish gray (2.5Y6/2) loamy sand 0–1.25 ft bs over a pale brown (10YR6/3) loamy sand 1.25-2.50 ft bs, underlain by a brownish yellow (10YR6/6) sandy clay loam 2.50+ ft bs. These soils are similar to those described by Eppinette (1990) as Ocilla Sand. We recovered artifacts from an average depth of 0.17-1.17 ft bs and a maximum depth of 1.33 ft bs. None of the shovel tests exposed subsurface cultural features.

We recovered nine artifacts from 38DR448. These include eight ceramic artifacts and one lithic artifact (chert bifacial reduction flake). The ceramic artifacts include two residual sherds, two eroded sherds, three plain sherds, and one cord marked sherd. The cord marked, eroded, and plain sherds display grog and sand temper, which is temporally diagnostic of Berkeley phase ceramics, a tradition dating from the Middle to Late Woodland subperiods. It is likely 38DR448 functioned as a seasonal resource extraction camp along a tributary of Little Walnut Branch.

We assessed the NRHP eligibility of 38DR448 with respect to NRHP Criteria A-D (see Section 1.2.5). Site 38DR448 produced a low number of artifacts, and the few artifacts recovered do not occur in concentrations sufficient to interpret activities that occurred at the site. Shovel tests exposed no evidence of intact cultural features (e.g., artifact caches, hearths, or posts). These factors suggest that additional investigation of 38DR448 would be unlikely to generate information beyond the period of use and the presumed function(s) presented above. Therefore, we recommend 38DR448 not eligible for the NRHP. Additional management of this site is not warranted.

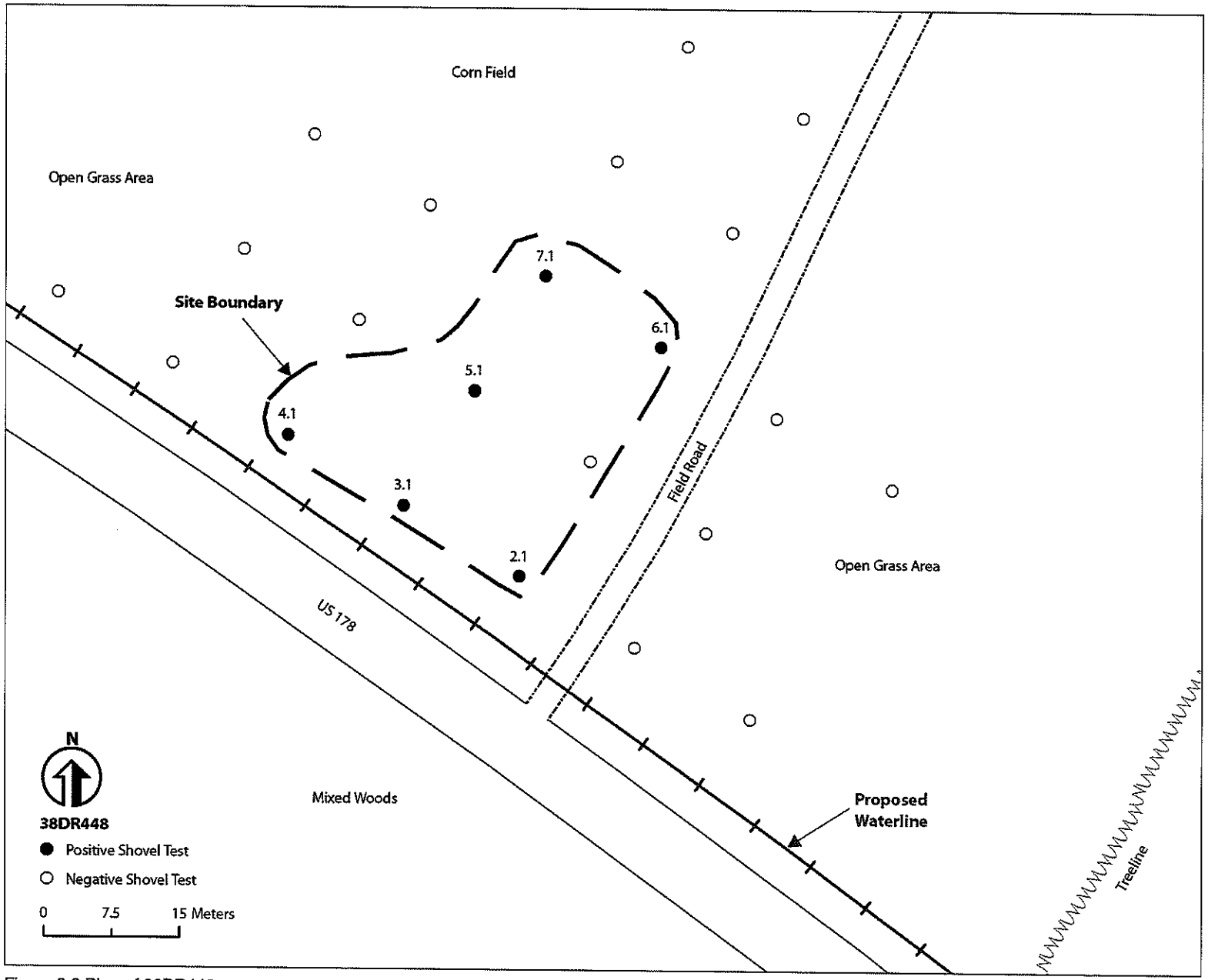

Figure 3.9 Plan of 38DR448.

Figure 3.10 Views of 38DR448, looking northwest (top) and looking southeast (bottom).

3.1.5 38DR449

Cultural Affiliation: *early nineteenth - late twentieth century*
Site Type: *Post-Contact domestic scatter*
Site Dimensions: *50 by 75 feet*
Elevation: *85 feet amsl*
Nearest Water Source: *Crawford Branch (1,800 feet northeast)*
Soil Type/Texture: *Goldsboro Loamy Sand*
Vegetation: *weeds*
NRHP Recommendation: *not eligible*

Site 38DR449 is a surface/subsurface scatter of Post-Contact domestic artifacts located in a fallow field east of US 178, 440 feet south-southeast of the intersection of US 178 and Menia Road in Dorchester County (see Figures 1.3 and 2.3). The site measures 50-by-75-feet. Vegetation across the site consists of primary growth such as briars and weeds. Surface visibility at the site was poor (1-25 percent exposed). Two consecutive negative shovel tests at 50-foot intervals and US 178 define the site boundaries. Figure 3.11 displays a plan of 38DR449; Figure 3.12 provides a view of the site on October 8, 2015.

We excavated 12 shovel tests at 50-foot intervals in and around 38DR449; two of these shovel tests produced artifacts. Soils across the site include a grayish brown (10YR5/2) loamy sand 0–1.00 ft bs over a pale brown (10YR6/3) fine sand 1.00-1.33 ft bs and a brownish yellow (10YR6/6) sandy loam 1.33-1.50 ft bs, underlain by a yellowish brown (10YR5/6) sandy clay loam 1.50-2.00+ ft bs. These soils are similar to those described by Eppinette (1990) as Goldsboro Loamy Sand. Artifacts were recovered at 0-1.33 ft bs. None of the shovel tests exposed subsurface cultural features.

We recovered seven artifacts from 38DR449. These include one unidentifiable nail, three clear glass container fragments, one light olive green glass container fragment, one olive green glass container fragment, and one undecorated whiteware sherd. The light olive to olive green glass container fragments are indicative of a nineteenth century occupation; whiteware indicates an early-nineteenth-century to modern occupation.

Site 38DR449 is located in a fallow field east of US 178 in Dorchester County. Neither the USACE (1920b) Harleyville, SC quadrangle (Figure 2.14), the SCSHD (1939a) General Highway and Transportation Map of Dorchester County, the SCDHPT (1969b) General Highway Map of Dorchester County, nor the USGS (1973) Harleyville, SC quadrangle show any buildings near 38DR449. Therefore, it is likely that 38DR449 represents a minor activity area, such as an outbuilding or a refuse disposal site.

We assessed the NRHP eligibility of 38DR449 with respect to NRHP Criteria A-D (see Section 1.2.5). Site 38DR449 contains artifacts associated with a nineteenth century occupation. The few artifacts recovered do not occur in concentrations sufficient to interpret activities that occurred at the site and all the artifacts were recovered from the upper soil horizon. These factors suggest that this site does not have the potential to contain a substantial artifact assemblage and/or intact cultural features. Additional investigation of 38DR449 is unlikely to generate information beyond the period of use and the presumed function(s) presented above. Site 38DR449 cannot generate significant information concerning the past settlement patterns or land-use practices in Dorchester County. Therefore, we recommend 38DR449 not eligible for the NRHP. Additional management of this site is not warranted.

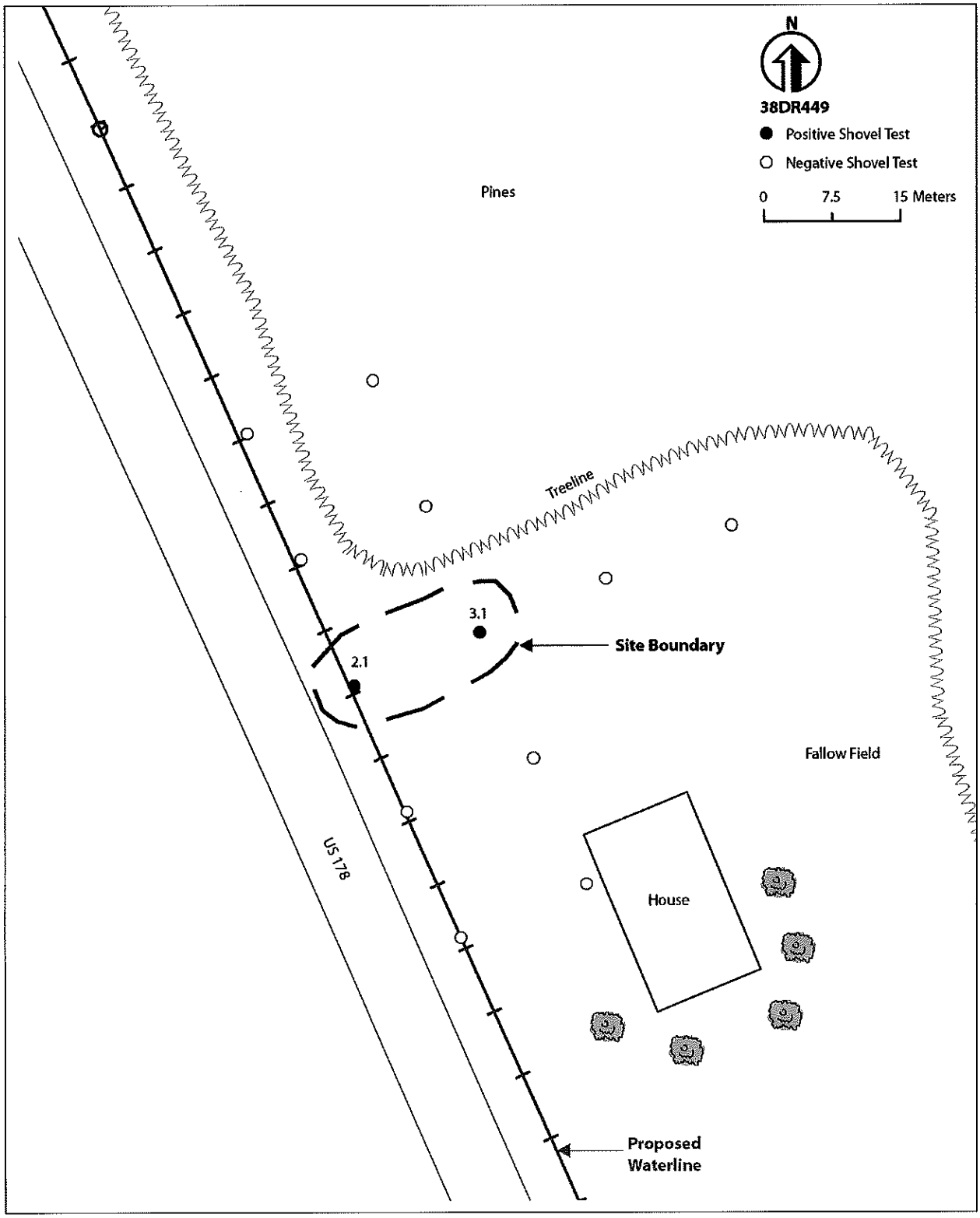

Figure 3.11 Plan of 38DR449.

Figure 3.12 View of 38DR449 looking west toward US 178.

3.1.6 Site 38DR347

Cultural Affiliation: *eighteenth to twentieth century*
Site Type: *possible Revolutionary War camp and skirmish area; possible Civil War camp; old roadbed(s)*
Site Dimensions: *830 by 1,200 feet*
Elevation: *85 feet amsl*
Nearest Water Source: *Four Holes Swamp*
Soil Type/Texture: *Blanton fine sand, Mouzon fine sandy loam*
Vegetation: *mixed pines and hardwood; swamp*
NRHP Recommendation: requires evaluation / no effect

The easement of the proposed Dorchester Orangeburg Reach Water Transmission Main extends through 38DR347, a site whose NRHP eligibility has not been determined. Salo et al. (2007) first recorded 38DR347. The following description of 38DR347 is extracted from Salo et al. (2007:76-84):

Site 38DR347 measures approximately 253 meters north/south by 366 meters east/west (830 by 1,200 feet). The western portion of the site is located along a high bluff overlooking Four Holes Swamp. US-78/178 cuts deeply through this bluff and the western portion of the site. Additionally, a fairly large area in the western portion of the site, to the north of US-78/178, has been excavated, most likely for fill dirt used for the earlier construction of the highway. The eastern portion of the site is fairly low and is located only on a small area of land adjacent to the swamp to the north of US-78/178. This portion of the site is mostly covered with fill material associated with the current roadbed and possibly the previous 1920s-era bridge.

Site 38DR347 also contains the remnants of what may be the old eighteenth-century causeway/bridge crossing Four Holes Swamp. This causeway remnant extends slightly from the west bank of the swamp, approximately 60 meters (200 feet) north of US-78/178. The Four Holes Swamp Bridge marker indicates that the first bridge across Four Holes Swamp was constructed approximately 60 meters (200 feet) north of the present bridge. This leads us to believe that the causeway remnant we identified in the northern portion of 38DR347 is indeed the western end of the original circa 1770–1780 swamp crossing. Additionally, an old, deeply cut road leads

from this causeway remnant to the west, out to present-day US-178. Another road of indeterminable age is located along a hill to the northwest of the old causeway remnant. It is unknown whether this road is associated with the original swamp crossing or more recent logging activities. The circa 1920s bridge (replaced in the late 1920s) crossing Four Holes Swamp was located immediately to the north of the present-day bridge. A modern fish camp building is located on the high bluff west of the swamp, approximately 30 meters (100 feet) to the north of US-78/178. The top of the bluff may have been altered during the construction of the fish camp. The site area is wooded in mixed pines and hardwoods, with wetlands vegetation in and adjacent to Four Holes Swamp.

The major point of interest of site 38DR347 is that it lies in the general locale of several Revolutionary War and Civil War encampments and skirmishes (see Chapter 2). There are reports that a Revolutionary War outpost was once located somewhere atop the high bluff located to the west of Four Holes Swamp. The bluff would have afforded a commanding view of the swamp crossing to the east. The site has produced artifacts which may be associated with the military presence(s) in the area.

The northern boundary of site 38DR347 is largely defined by the old road/logging road. The western boundary of the site is defined by the point where the old, deeply cut road leading from the swamp intersects with US-178. The southern and eastern boundaries of the site are defined by the extent of our positive metal detection investigations at the site. We did not fully determine the northern or southern limits of the site since they could extend far outside our area of investigations, depending on the extent of military activities in the area.

During the current investigation, investigators excavated four shovel tests at 33-foot intervals in the easement (between Stations 422+00 and 423+00) across 38DR347. In addition, a metal detection survey was conducted within the easement. These efforts produced no artifacts. The metal detection survey identified numerous targets, all of which were modern refuse. This portion of 38DR347 slopes sharply to the north away from the embankment supporting the US 78/178 ROW. Figure 3.14 is an engineer's schematic of the current project with the site boundary of 38DR347 superimposed, showing the location of excavated shovel tests and the metal detection survey. Figure 3.15 provides a view of 38DR347 in the easement.

Salo et al. (2007) made no NRHP recommendation for 38DR347 but determined that there were no archaeological deposits within the US 78/178 ROW within the site that could contribute to its NRHP eligibility. Similarly, the current investigations recovered no evidence that archaeological deposits or materials that may contribute to the NRHP eligibility of the site lie within the proposed water line easement.

Most of 38DR347 lies beyond the US 78/178 ROW and the proposed water line easement. There have been rigorous investigations of the portions of the site outside the ROW/easement. Thus, the NRHP status of 38DR347 has yet to be determined. The historical associations of the Four Hole Swamp Bridge with actions during the Revolutionary and Civil Wars suggest that the site may be eligible. However, until the integrity of the site and its ability to reflect these significant events has been demonstrated, the site remains unevaluated.

As currently designed, the proposed water pipeline will not alter the site in such a fashion that its future NRHP eligibility may be compromised. Therefore, the project will not affect 38DR347. Should the project be redesigned in such a way that larger portions of the site lie within the easement, additional investigations will be necessary to determine the potential effects of the project on this site.

3.1.7 Isolate 1

Archaeological survey also identified one isolated artifact occurrence (Isolate 1). Isolate 1 includes one brick fragment recovered from a single shovel test at a depth of 0-1.33 ft bs. Isolate 1 is located in a wooded area north of US 178, approximately 2,100 feet southeast of the intersection of US 178 and Limestone Road in Dorchester County (Figures 1.4 and 2.4). Isolated artifact occurrences can generate no additional information about the past and are not eligible for the NRHP.

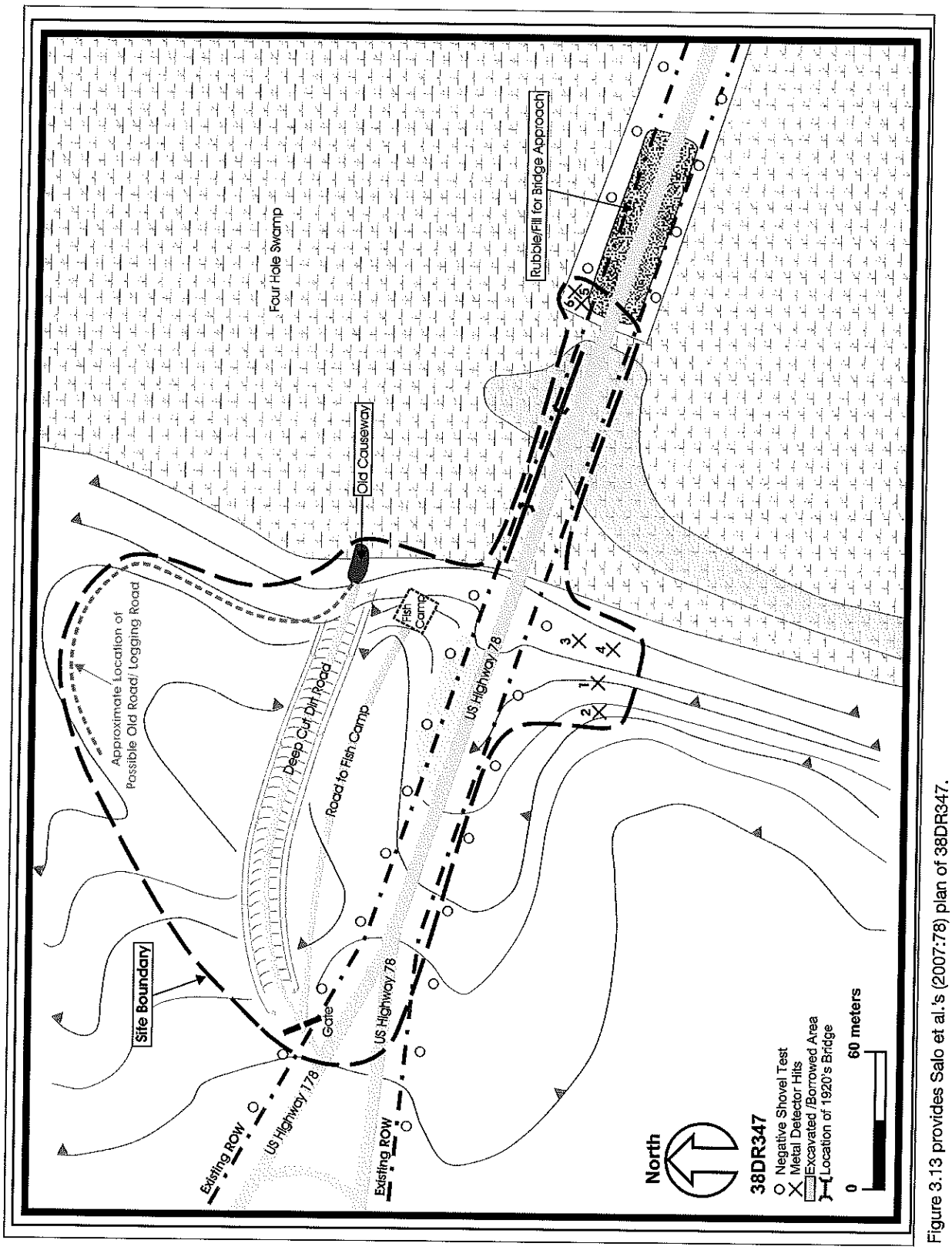

Figure 3.13 provides Salo et al.'s (2007:78) plan of 38DR347.

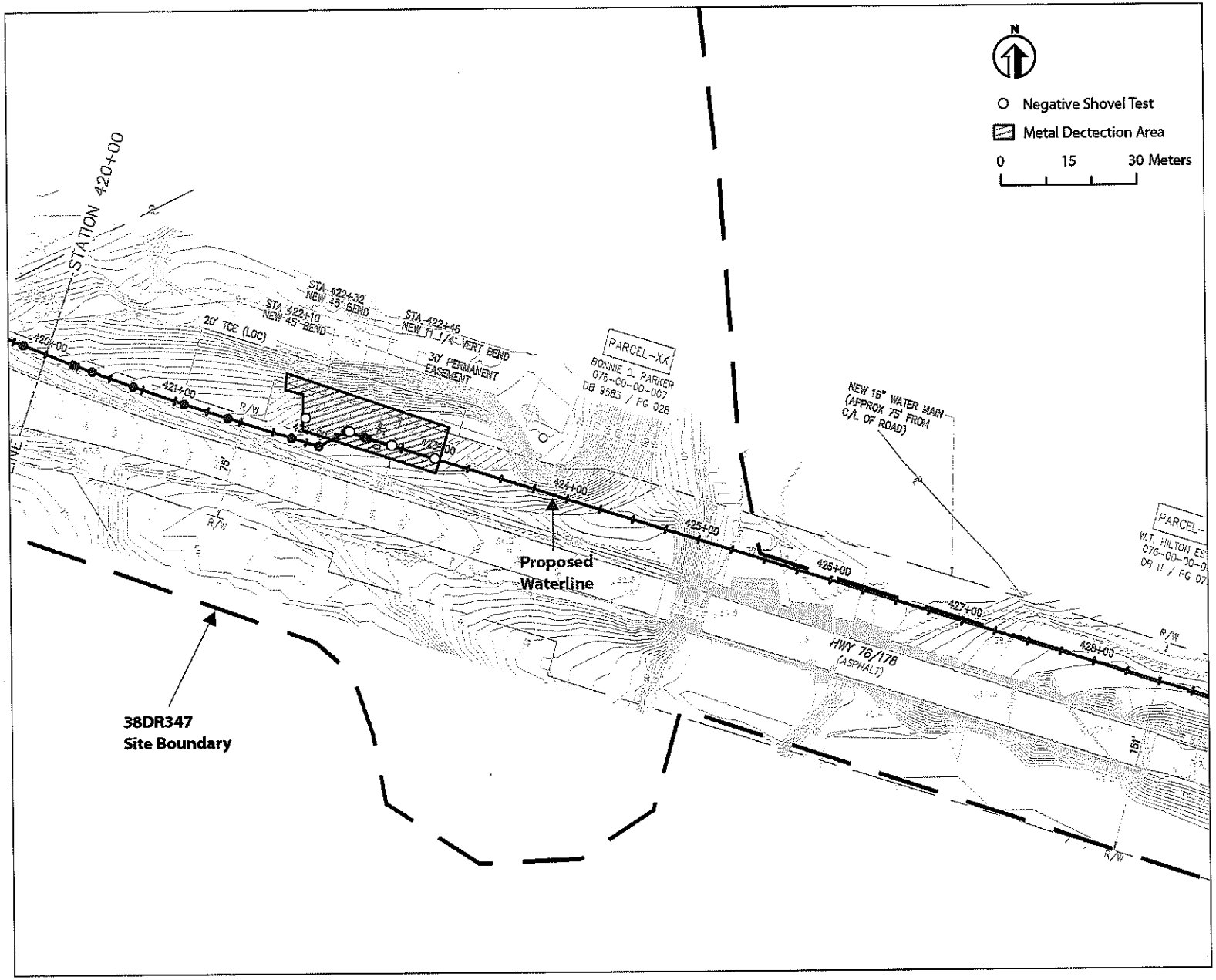

Figure 3.14 Engineer's schematic of the project easement with the boundary of 38DR347 superimposed, showing the location of excavated shovel tests and the metal location survey.

Figure 3.15 Views of the project easement through 38DR347 during the current investigation looking east (top) and west (bottom).

3.2 Architectural Survey

Inspection of the project corridor along SC Route 27, US 78/178, through the Harleyville Historic Area, and along US 176 identified no historic landscapes that could be altered by the installation of the proposed water pipeline. No historic architectural resources not currently recorded in the South Carolina Statewide Survey were observed. As currently designed, the water pipeline will not alter the setting of the Harleyville Historic Area once it is installed in the ROW of the various roads and streets. Should the design of the project change such that the water line easement will include areas outside the road ROW, additional assessment will be necessary to determine if the project may affect the Harleyville Historic Area.

3.3 Management Recommendations

Cultural resources survey of the easement of the proposed Dorchester Orangeburg Reach Water Transmission Main revisited one previously identified archaeological site (38DR347), the Harleyville Historic Area, and identified five archaeological sites (38DR448-38DR449 and 38OR361-38OR363) and one isolated artifact find. Sites 38DR448-38DR449 and 38OR361-38OR363 and the isolated artifact find are recommended not eligible for the NRHP. There are no deposits or features within the proposed water pipeline easement that passes through a small portion of 38DR347 that can contribute to its NRHP eligibility; the project will not affect this site. Activities associated with the installation of the Dorchester Orangeburg Reach Water Transmission Main Project will not affect the Harleyville Historic Area. Thus, the Project will not affect any historic properties and should be allowed to proceed as planned.

Should the design of the project change such that additional portions of 38DR347 lie within the easement or that areas within the Harleyville Historic Area outside the street/road ROW are within the easement, additional investigation of 38DR347 and assessment of the Harleyville Historic Area will be necessary to determine if the Project may affect these resources.

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Appendix A
Artifact Catalog

Artifact Catalog

Brockington and Associates, Inc. uses the following proveniencing system. Provenience 1 designates general surface collections. Numbers after the decimal point designate subsequent surface collections, or trenches. Proveniences 2 to 200 designate shovel tests. Controlled surface collections and 50 by 50 cm units are also designated by this provenience range. Proveniences 201 to 400 designate 1 by 1 m units done for testing purposes. Proveniences 401 to 600 designate excavation units (1 by 2 m, 2 by 2 m, or larger). Provenience numbers over 600 designate features. For all provenience numbers except 1, the numbers after the decimal point designate levels. Provenience X.0 is a surface collection at a shovel test or unit. X.1 designates level one, and X.2 designates level two. For example, 401.2 is Excavation Unit 401, level 2. Flotation samples are designated by a 01 added after the level. For example, 401.201 is the flotation material from Excavation Unit 401, level 2.

Table of Contents

Site Number: 38DR448

Catalog #	*Count*	*Weight (in g)*	*Artifact Description*	*Lithic Type*	*Ceramic Type*	*Temporal Range*	*Comments*
SITE NUMBER:	38DR448						
Provenience Number:		2 . 1	**Area J, Shovel Test 18, 470m North, 500m East, 0-35cm**				
1	1	4.2	Eroded and Indeterminate Decoration Body Sherd, Coarse Grog and Sand Tempered				Berkeley?
2	1	2.2	Body Sherd, Coarse Grog and Sand Tempered				Berkeley?
3	1	1.1	Residual Sherd				
Provenience Number:		3 . 1	**Area J, Shovel Test , 485m North, 500m East, 0-35cm**				
1	1	0.4	Chert Non-Cortical Bifacial Reduction 1/2 inch Flake Fragment				
Provenience Number:		4 . 1	**Area J, Shovel Test 19, 500m North, 500m East, 0-40cm**				
1	1	3	Cord Marked Body Sherd, Coarse Grog and Sand Tempered				Berkeley?
Provenience Number:		5 . 1	**Area J, Shovel Test , 485m North, 515m East, 10-30cm**				
1	1	2.4	Residual Sherd				
Provenience Number:		6 . 1	**Area J, Shovel Test , 470m North, 530m East, 0-30cm**				
1	1	6.3	Body Sherd, Coarse Grog and Sand Tempered				Berkeley?
Provenience Number:		7 . 1	**Area J, Shovel Test , 485m North, 530m East, 20-40cm**				
1	2	7.6	Body Sherd, Coarse Grog and Sand Tempered				Berkeley?

Site Number: 38DR449

Catalog #	*Count*	*Weight (in g)*	*Artifact Description*	*Lithic Type*	*Ceramic Type*	*Temporal Range*	*Comments*
SITE NUMBER:	38DR449						
Provenience Number:		**2 . 1**	**Area H, Shovel Test 36, 500m North, 500m East, 0-40cm**				
1	1	0.7	Whiteware, Fragment				
2	2	0.4	Colorless Glass Fragment				
3	1	0.8	Light Olive Green Glass Fragment				
4	1	4.2	Unidentifiable Square Unknown Manufacture Nail				
Provenience Number:		**3 . 1**	**Area H, Shovel Test , 500m North, 515m East, 0-40cm**				
1	1	5.3	Colorless Glass Base				
2	1	5.1	Olive Green Glass Fragment				heavily patinated
SITE NUMBER:	38OR361						
Provenience Number:		**2 . 0**	**Area O, Surface Collection, 75G Brick D.I.F**				
1	1	75	Brick, Fragment				discarded in field
2	1	4	Ironstone, Body				
3	1	7.3	Cobalt Blue Glass Bottle Fragment				
4	1	4	Milkglass Canning Jar Lid Liner Fragment				
SITE NUMBER:	38OR362						
Provenience Number:		**2 . 1**	**Area P, Shovel Test 27, 500m North, 470m East, 0-30cm**				
1	1	2	Brick, Fragment				discarded in lab
2	1	3.2	Whiteware, Rim				
3	1	0.3	Brown Glass Fragment				
Provenience Number:		**3 . 1**	**Area P, Shovel Test , 515m North, 470m East, 0-25cm**				
1	2	2.4	Colorless Glass Bottle Fragment				
2	1	4.6	Light Blue Window Glass Fragment				
Provenience Number:		**4 . 1**	**Area P, Shovel Test , 500m North, 485m East, 0-30cm**				
1	1	0.2	Whiteware, Fragment				
2	1	1	Brown Glass Fragment				
3	2	1.9	Light Green Glass Bottle Fragment				
4	5	6.3	Colorless Glass Bottle Fragment				
5	1	10.2	Colorless Glass Base				
6	1	3.6	Colorless Molded Glass Fragment				

Site Number: 38OR362

Catalog #	*Count*	*Weight (in g)*	*Artifact Description*	*Lithic Type*	*Ceramic Type*	*Temporal Range*	*Comments*
Provenience Number:		5 . 1	**Area P, Shovel Test , 515m North, 485m East, 0-30cm**				
1	2	4.6	Whiteware, Fragment				
2	2	1.9	Colorless Glass Fragment				
3	1	5.5	Colorless Glass Base				
4	1	4.3	Colorless Glass Embossed Fragment				
5	2	5	Unidentifiable Unknown Manufacture Nail				
Provenience Number:		6 . 1	**Area P, Shovel Test 28, 500m North, 500m East, 0-35cm**				
1	1	0.6	Ironstone, Fragment				
2	1	0.3	Brown Glass Fragment				
3	2	2.4	Colorless Glass Bottle Fragment				
4	1	4.2	Colorless Glass Embossed Bottle Base				

SITE NUMBER: 38OR363

Provenience Number:		2 . 1	**Area P, Shovel Test 40, 500m North, 500m East, 0-40cm**				
1	1	1.6	Stoneware, Alkaline Glazed Gray-Bodied Fragment				
Provenience Number:		3 . 1	**Area P, Shovel Test , 470m North, 515m East, 0-30cm**				
1	1	1.1	Whiteware, Blue Overglaze Transfer Printed Rim				burned
Provenience Number:		4 . 1	**Area P, Shovel Test , 485m North, 515m East, 0-35cm**				
1	1	3.4	Stoneware, Alkaline Glazed Gray-Bodied Body				
2	1	2	Pearlware, Base				
3	1	0.5	Pearlware, Yellow Annular Rim				
4	1	2.5	Olive Green Glass Fragment				
Provenience Number:		5 . 1	**Area P, Shovel Test , 500m North, 515m East, 0-30cm**				
1	1	1.4	Light Olive Green Glass Bottle Fragment				
Provenience Number:		6 . 1	**Area H, Shovel Test , 485m North, 530m East, 0-30cm**				
1	1	5.4	Ironstone, Fragment				
2	1	2.3	Colorless Glass Fragment				
3	1	21.5	Iron Unidentified				small hole in one end

SITE NUMBER: Isolate 1

Provenience Number:		2 . 1	**Area E, Shovel Test 22, 500m North, 500m East, 0-40cm, 5g brick D.I.F**				
1	1	5	Brick, Fragment				discarded in field

Appendix B
SHPO Correspondence

From: Dale, Emily
To: jesse.s.helton@usace.army.mil
Cc: Eric Poplin
Subject: Dorchester Orangeburg Reach Water Transmission Main
Date: Wednesday, December 09, 2015 2:27:32 PM
Attachments: Dorchester Orangeburg Reach Water Transmission Main.docx

Hi Jesse,

Today I reviewed the above-referenced project and sent the attached letter to your office and realized just after the mail went out that I forgot to put in our request for final reports with the technical comments! Can you please append the following statement when you get it:

To complete the consultation process: We require one (1) bound and one (1) unbound hard copy on acid-free paper and one (1) digital copy in PDF format. Investigators should send all copies directly to SHPO. SHPO will distribute the appropriate copies to SCIAA.

Thank you,

Emily Dale

—
Emily K. Dale
Archaeologist/GIS Coordinator
South Carolina Department of Archives and History
8301 Parklane Road
Columbia, SC 29223
803-896-6181
edale@scdah.state.sc.us

December 9, 2015

Bret Walters
Department of the Army
Charleston District, Corps of Engineers
Planning and Environmental Branch
69-A Hagood Avenue
Charleston, South Carolina, 29403

Re: Dorchester Orangeburg Reach Water Transmission Main
Dorchester and Orangeburg Counties, South Carolina
SHPO Site Number 15-ED0188

Dear Bret Walters:

Thank you for your letter of November 16, which we received on November 20, regarding the above-referenced project. We also received a completed Section 106 Project Review form and draft survey report entitled *Cultural Resources Survey of the Proposed Dorchester Orangeburg Reach Water Transmission Main, Dorchester and Orangeburg Counties, South Carolina* as supporting documentation for this undertaking. The State Historic Preservation Office is providing comments to the U.S. Army Corps of Engineers pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR 800. Consultation with the SHPO is not a substitution for consultation with Tribal Historic Preservation Offices, other Native American tribes, local governments, or the public.

The report meets the guidelines set forth in the *South Carolina Standards and Guidelines for Archaeological Investigations.* During the course of the survey, investigators five new archaeological sites (38DR448, 38DR449, 38OR361, 38OR362, and 38OR363) and revisited one previously identified site (38DR347). None of the five newly identified sites are recommended eligible for listing in the National Register of Historic Places (NRHP), and the site 38DR347 remains unevaluated for NRHP listing. The portion of the easement that passes through 38DR347 was examined intensively and no archaeological deposits were identified. It is therefore recommended that this portion of the site does not contribute to its eligibility and it will, therefore, not be affected by the proposed ground-disturbing activities. We concur with this recommendation.

The proposed pipeline will be installed underground in the Harleyville Historic Area. As it will not be visible and will not alter any of the historic structures, Brockington recommends that the project will not affect the Harleyville Historic Area. We concur with Brockington's recommendation that the proposed project will have **no effect** on historic properties.

If you have any questions, please contact me at (803) 896-6181 or edale@scdah.state.sc.us.

Sincerely,

Emily Dale
Staff Archaeologist/GIS Coordinator
State Historic Preservation Office

cc: Eric Poplin, Brockington
Keith Derting, SCIAA

Technical Comments

Throughout the report, the author changes between referring to site 38DR347 as eligible for NRHP listing and as unevaluated. The site remains unevaluated.