APPENDIX C

CULTURAL RESOURCES INVESTIGATION REPORTS
An Archaeological Resources Survey of SCE&G's Lake Murray-Lyles 230 kV Line (Segments 1 and 3)

Lexington and Richland Counties, South Carolina

November 2013
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Prepared for:
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MANAGEMENT SUMMARY

Brockington and Associates, Inc. (Brockington) conducted an archaeological survey of South Carolina Electric and Gas’ (SCE&G’s) Lake Murray-Lyles 230 kV Line (Segments 1 and 3) in Lexington and Richland Counties, South Carolina, between September 9 – September 13, 2013. Pike Energy Solutions, LLC, sponsored these investigations. The project includes two segments located between SCE&G’s Lake Murray substation in Lexington County, and Lyles substation on Lucius Road along the Broad River in Richland County. Segment 1, located to the west of a previously investigated segment (Segment 2), is 5.7 miles long, with a 100-foot wide Right-of-Way (ROW). Segment 3, located to the east of previously surveyed Segment 2, is 2.1 miles long and also with a 100-foot wide ROW. The ROW associated with Segment 2 was previously investigated by Brockington as part of a survey of SCE&G’s VC Summer St. George 230 kV Lines 1 and 2 (Balula and Bailey 2013). The Area of Potential Effects (APE) includes the entire 7.8-mile, 100-foot (30-meter) wide project corridor, which follows an existing SCE&G easement.

This investigation was carried out for PIKE Energy Solutions, LLC for the purpose of determining if any historic properties would be affected by ground disturbance associated with the construction and development of improvements to the existing transmission line corridor. This archaeological resources survey is part of the Section 106 compliance requirements pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899, as administered by the US Army Corps of Engineers (USACE). Survey methods undertaken during the investigation process were conducted in compliance with Section 106 of the National Historic Preservation Act of 1966 (as amended through 2000), and 36 CFR 800 (Protection of Historic Properties). Survey tasks were completed in compliance with criteria defined under the Secretary of the Interior’s Professional Qualification Standards (36 CFR Part 61).

Primary archaeological resource investigations included surface and subsurface survey (i.e. shovel testing) along the Lake Murray-Lyles 230 kV Transmission Line centerline, which is scheduled for upgrades and improvements. This archaeological resource investigation also includes a review of previously recorded archaeological sites within or near the existing transmission corridor. This survey specifically covers archaeological resources. An historic resource windshield survey encompassing this area has been conducted and submitted in a separate document (Owens 2013). Background research was conducted at the South Carolina Institute of Archaeology and Anthropology (SCIAA) of Columbia, South Carolina to determine if any previously recorded archaeological sites exist within the footprint of the proposed corridor.

In the course of the archaeological investigations 373 shovel test locations were examined along the 7.8-mile transmission line corridor, resulting in the identification of one previously unrecorded archaeological site. Site 38LX636 is a small non-diagnostic prehistoric artifact scatter located on a small stream terrace east of Davega Road in Lexington County. It is recommended not eligible for the National Register of Historic Places (NRHP). In addition three previously identified archaeological sites are located within or near the ROW: 38LX455 (General Historic); 38RD22 (General Prehistoric), and 38RD226 (Late Archaic). These sites were not relocated during the current survey and have presumably been destroyed by construction impacts along the ROW. As a result, there are no archaeological properties within the APE that require further management.
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1.0 INTRODUCTION AND METHODS OF INVESTIGATION

1.1 Introduction

Brockington and Associates, Inc. (Brockington) conducted an archaeological survey of South Carolina Electric and Gas Company’s (SCE & G’s) Lake Murray-Lyles 230 kV Line (Segments 1 and 3) in Lexington and Richland Counties, South Carolina, between September 9 – September 13, 2013. Pike Energy Solutions, LLC (Pike), sponsored these investigations. The project includes two segments located between SCE & G’s Lake Murray substation in Lexington County, and Lyles substation on Lucius Road along the Broad River in Richland County. Segment 1, located to the west of a previously investigated segment (Segment 2), is 5.7 miles long, with an existing 100-foot wide Right-of-Way (ROW). Segment 3, located to the east of previously surveyed Segment 2, is 2.1 miles long and also with an existing 100-foot wide ROW. The Area of Potential Effects (APE) includes the entire 7.8-mile, 100-foot (ft) (30-meter [m]) wide project corridor, which follows an existing SCE & G easement. Figure 1.1 shows the location of the project corridor. Archaeological investigations included pedestrian inspection and subsurface testing of the entire 7.8-mile long, approximately 30-m wide APE. In addition, Brockington also conducted an architectural windshield reconnaissance survey focusing on aboveground resources that are listed on the National Register of Historic Places (NRHP), or, are eligible for listing on the NRHP within a designated study area surrounding the ROW; the results of this investigation will be reported in a separate document. The ROW associated with Segment 2 was previously investigated by Brockington as part of a survey of SCE & G’s VC Summer St. George 230 kV Lines 1 and 2 (Baluha and Bailey 2013). A review of cultural resources within the Segment 3 APE was also recently completed (Moore 2013).

The purpose of the archaeological survey was to assess the impacts of the proposed project on archaeological resources eligible for inclusion on the NRHP that would be affected by ground disturbance associated with the construction and development of improvements to the existing transmission line corridor. This archaeological resources survey is part of the Section 106 compliance requirements pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899, as administered by the US Army Corps of Engineers (USACE). Survey methods undertaken during the investigation process were conducted in compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966 (as amended through 2000), and 36 CFR 800 (Protection of Historic Properties). Survey tasks were completed in compliance with criteria defined under the Secretary of the Interior’s Professional Qualification Standards (36 CFR Part 61). The Principal Investigator for this project meets the Secretary of the Interior’s Standards and Guidelines for Archaeology and Historic Preservation (36 CFR part 61) and is listed on the Register of Professional Archaeologists. This report summarizes the project scope and effect, environmental and cultural contexts, the archaeological resources survey efforts undertaken, the field methods, results of the survey and testing, and recommendations of eligibility of newly documented archaeological sites to the NRHP.
Figure 1.1 The location of SCE&G's Lake Murray-Lyles 230 kV Line (Segments 1 and 3) in Lexington and Richland Counties, South Carolina (Irmo and Columbia North South, Carolina, ArcGIS 2009 United States Geological Survey [USGS] resolution 7.5 minute topographic quadrangles).
These investigations identified one new archaeological site. Site 38LX636 is a small non-diagnostic prehistoric artifact scatter located on a small terrace east of Davega Road in Lexington County. It is recommended ineligible for the NRHP. In addition three previously identified archaeological sites are located within the ROW: 38LX455 (General Historic); 38RD22 (General Prehistoric), and 38RD226 (Late Archaic). Archaeologists could not locate these sites during the current survey; they have presumably been destroyed by construction impacts along the ROW. As a result, there are no archaeological properties within the APE that require further management.

Brockington additionally notes the Woodridge Memorial Cemetery was identified along Corley Mill Road. Maintenance facilities associated with the cemetery are within the ROW; however, no interments are located with the APE. This cemetery is not of historic age and is considered NRHP-ineligible. However, cemeteries are protected from disturbance and desecration by South Carolina law (Sections 16-17-590 and 600) and should be avoided.

The remainder of Chapter 1 describes the methods employed during this survey. Chapters 2 and 3 present the environmental and cultural setting for the project. Chapter 4 summarizes previous investigations in the project area. Chapter 5 presents site plans and descriptions for each cultural resource identified during this project. The artifact catalog is attached as Appendix A, followed by the 38LX636 site form (Appendix B).

Mr. David M. Franz, RPA (Project Archaeologist), conducted all field investigations and authored this report. His resume is included in Appendix C. Ms. Patricia Stallings served as Program Manager for Brockington and oversaw all portions of the project. Sheldon Owens (Project Historian) conducted archival background research. Cristian La Rosa and Michael Ryan served as archaeological field technicians under the supervision of James Lefebre, Brockington crew chief. Graphics were produced by David Dellenbach. This report was edited and assembled by Alicia Sullivan and Michael Walsh.

1.2 Methods of Investigation
The existing corridor route was evaluated for its potential to contain significant prehistoric or historic archaeological resources by first defining the environmental and cultural contexts. Environmental variables known to be associated with prehistoric and early historic settlement (i.e., soil drainage, proximity to water or wetland resources, relative elevation, and historic settlement patterns) were analyzed.

1.2.1 Archival Research
Background research was conducted at the South Carolina Institute of Archaeology and Anthropology (SCIAA) in Columbia, South Carolina, to determine if any previously recorded archaeological sites and archaeological investigations are within or near the project APE. Background investigations also included an examination of archaeological site forms and previous undertakings conducted near the corridor.

Initial review of pertinent information available was conducted by the Project Archaeologist via ArchSite, SCIAA and the South Carolina Department of Archives and History (SCDAH) online database. Brockington's Project Historian conducted additional archival research as part of our investigations at the physical archives of SCDAH in Columbia. In addition, the list of NRHP properties was reviewed at the SCIAA. As Brockington has performed a significant amount of cultural resources investigations in the vicinity of the APE, additional
information was also gleaned from our in-house library. We noted all previously identified archaeological resources located within a .5-mile radius of the project corridor. Information regarding these cultural resources is presented in Chapter 4.

1.2.2 Field Investigations
The Lake Murray-Lyles 230 kV Line (Segments 1 and 3) project follows the current route of an extant SCE&G easement that extends 7.8 miles (12.6 kilometers), and 100-ft (30-m) in width. The current investigation is focused on locating, identifying, and documenting all archaeological sites and isolated occurrences within the 7.8-mile long, 30-m wide easement. Tasks performed to accomplish these goals include, archaeological survey, laboratory analyses and curation, and NRHP assessment.

Archaeological survey of the Lake Murray-Lyles 230 kV Line (Segments 1 and 3) conforms to the South Carolina Standards and Guidelines for Archaeological Investigations (Council of South Carolina Professional Archaeologists [COSCAPA] et al. 2005). Our initial discovery transects were confined to the transmission line easement corridor, which averages 30 m wide, along a single pedestrian transect located along the project centerline. Brockington conducted systematic subsurface testing by excavating shovel tests (STs) at 30-m intervals along the survey transect. No STs were excavated areas of standing water, heavily disturbed or eroded areas, or on slopes greater than 15 degrees. Areas eliminated from subsurface survey include the SCE&G McMeekin Station solid waste landfill, located near the western terminus of Segment 1, heavily disturbed or inundated areas near the electrical station termini, and the Broad and Saluda River crossings. Additionally, subsurface survey in these areas was supplemented by visual inspection of the ground surface along the entire project corridor where possible.

Each ST measured approximately 30 centimeters (cm) in diameter and was excavated until reaching culturally sterile soil, the depth of which varied across the survey stands. The fill from all STs was sifted through one-quarter-inch mesh hardware cloth. Investigators recorded information relating to each ST and soil profile in field notebooks. This information included the content (e.g., presence or absence of cultural materials) and context (e.g., Munsell soil color, texture, stratification) of each test. Also noted was the environmental setting near each ST (e.g., hardwoods, marsh). Investigators also visually inspected the ground surface at each ST location where possible. All STs were backfilled upon completion.

Per South Carolina Standards and Guidelines for Archaeological Investigations (COSCAPA et al. 2005), an archaeological site is defined as an area containing three or more artifacts of a possible single occupation in a 30-m (98-ft) or less diameter of surface exposure; or where at least two STs within 30 m are positive (containing one or more artifacts); or where surface or subsurface cultural features are present. Artifacts of recent age (less than 50 years) would typically not define a site without a compelling research or management justification. Less than three artifacts in close proximity are categorized as isolated finds. Generally, if a site were to be encountered, the site boundaries would be established by the absence of artifacts or features moving outward in cardinal directions from the defined site center. The definition of site boundaries also takes into account natural features and/or boundaries (e.g., streams, bluffs, swamps) and the extent of visible surface features.

A single archaeological site, 38LX636, was identified during the survey. Investigators defined site boundaries by excavating additional STs at reduced intervals (7.5 m) around the artifact finds (Positive STs) until two consecutive STs where found to be sterile of cultural materials (Negative STs), thus establishing a 15-m buffer surrounding the resultant site.
boundaries. Delineation of 38LX636 was not pursued outside of the project ROW. In addition to these initial survey and site delineation STs, an additional 50-by-50-cm square ST was excavated until reaching culturally sterile subsoil. This larger ST can provide a window into the stratigraphy and integrity of deposits present at a particular site. This information can then assist investigators in evaluating the site significance per NRHP criteria.

Archaeological finds were recorded with a Garmin GPSmap 60CSx Global Positioning System (GPS) calibrated to the 1927 North American Datum (NAD)-27 to coordinate with the appropriate USGS 7.5-minute quadrangle. Universal Transverse Mercator (UTM) coordinates obtained from the GPS readings were entered in the ArcView software program. These coordinates were plotted on the digital USGS quadrangle for the tract. Brockington prepared a SCIAA site inventory record for the newly identified site. We submitted this site form to SCIAA for the assignment of permanent site numbers for the newly identified sites.

1.2.3 Laboratory Analysis and Curation
These investigations recovered both Pre-Contact ceramics and flaked stone artifacts associated with 38LX636. A catalog of these materials is included in Appendix A and also summarized in Chapter 5 (see Table 5.1, below).

All recovered artifacts were transported to Brockington and Associates, Inc.'s laboratory facilities, in Mount Pleasant, South Carolina, 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. Artifacts that were fragile were not washed but left to air-dry and, if needed, lightly brushed. Each separate archaeological context from within 38LX636 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. All artifact analysis information was entered into a coded database (Microsoft Access 2000).

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 and Associates, Inc. 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 SCIAA for curation.

Typological identification as manifested by technological and/or stylistic attributes served as the basis for the Pre-Contact artifact analysis. Pre-Contact artifacts (n=126) include ceramic and flaked stone artifacts from Site 38LX636. One piece of historic whiteware and two pieces of Fire-cracked rock (FCR) were also recovered from Site 38LX636.

Following Andrefsky (2001, 2006) and Crabtree (1972), lithic artifacts (n=124) were described by material and morphological characteristics. Flaked stone includes lithicdebitage such as flakes, flake fragments, and shatter, as well as cores, core fragments, and tools. Lithic debitage was also 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). Lithic
artifacts representing formal tools are classified using available published type descriptions (Anderson et al. 1982; Cambron and Hulse 1986; Justice 1987).

Numerous lithic resources were used by past inhabitants of the region. Local material used for chipped and ground stone tools during the Pre-Contact era predominantly include argillite, chert, orthoquartzite, quartz, quartzite, and a variety of metavolcanic stone (aphyric rhyolite, flow-banded rhyolite, porphyritic rhyolite, and felsic tuff). Brockington reviewed such studies as Benson (2006), Blanton (1983), Cable and Cantley (1979), Coe (1964), Daniel (1998), Green et al. (2007), Green and Nagle (2011), Oliver (1985), Trinkley and Southerland (2001), and Weaver et al. (2008). These studies provide the necessary framework to outline the kinds of lithic raw materials found in the project corridor. Here, investigators define the types of lithic raw materials encountered and discuss possible sources for these materials. Three primary raw material types were identified within the 38LX636 assemblage:

**Quartz** (also known as silicon dioxide) is composed of silicon and oxygen, the two most common elements on earth, and comes in macrocrystalline and microcrystalline forms (Andrejsy 1998:51). Quartz is the most common rock-forming mineral in the earth’s crust, found in igneous, sedimentary, and metamorphic rocks, hydrothermal veins and pegmatites, granite, sandstone, and limestone. In the region there are two types of macrocrystalline quartz: crystal and plain. Crystalline quartz is translucent and almost glassy in texture. Plain quartz is most commonly milky or translucent but also appears rosy or smoky, depending on its elemental composition. These materials occur either in streambeds or in vein formations in the Carolina Slate Belt, Sand Hills, and Southern Outer Piedmont. Macocrystalline quartz is the most preferred lithic material type in the project area, most likely because of its relative abundance.

**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 (Andrejsky 2006:52). Three chert types were recovered during the project, including chalcedony, Coastal Plain chert, and Knox chert. Knox chert is light gray to light brown and formed in limestone deposits in Alabama, Georgia, and Tennessee. Most chert artifacts recovered during the project are made from Coastal Plain chert variants. These include Allendale and Parachucla cherts. Allendale chert is one of the most abundant and significant lithic material types in South Carolina. This type of chert is formed in the Flint River limestone formation, and is available as cobbles or nodules along the Savannah River. Another type of Coastal Plain chert is referred to as Parachucla chert. Archaeologists have recovered this dark gray colored, brittle, and hydrated Coastal Plain chert variant from outcroppings of tertiary shales from the Oligocene Horizon, Parachucla Phase (Elliot and Cable 1994:123; Sloan 1908:393; Weems and Edwards 2001:124).

**Quartzite** is a metamorphic rock, originally sandstone that was converted into quartzite through heating and pressure. Quartzite is also available in streambeds in the project area. Orthoquartzite, also known as metaquartzite, can be quite fine-grained and is sometimes used for manufacturing hafted bifaces. Quartzite is the second most abundant lithic raw material found during this project. Several archaeological sites near the interface of the Sand Hills and Atlantic Southern Loam Plains produced numerous artifacts made from light brown orthoquartzite.

Additionally, Brockington identified two ceramic artifacts (i.e., potsherds and residual sherds) from 38LX636. Laboratory 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 available sources (Anderson et al. 1982;

1.2.4 NRHP Assessment of Cultural Resources
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 1998).

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 historical 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 historical 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 historical 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 historical 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.

The National Register Bulletin 41 (Potter and Boland 1992) clarifies the processes for evaluating cemeteries and burial grounds for NRHP eligibility. In the past, cemeteries were
generally not recommended eligible for the NRHP, but recent adjustments to the process have broadened the range of cemeteries which may be eligible.

To be eligible under Criterion A, a cemetery must be "associated with events that have made a significant contribution to the broad patterns of our history". The cemetery may be linked to a specific event, or to an important long-term trend.

Criterion B requires that the person or persons of the cemetery are of "outstanding" significance to the community, state, or nation. Most family and church cemeteries containing remains of early settlers and their descendants would not qualify under Criterion B.

1.2.5 Research Realms as NRHP Eligibility Guides
For this project, Brockington will link the research needs of the project corridor with specific site attributes (integrity, clarity, artifact frequency, and artifact diversity [cf. Butler 1987]). These specific site attributes are those originally defined by Glassow (1977) and are used here to generally assist in ranking research potential. Table 1.1 presents a list of recognized regional research realms. Investigators evaluated each site based on the research realms posited in Table 1.1 and within its cultural context. Then, each site's merit was weighed regarding its potential to provide information to address specific topics.
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<td>Extraction technology (mineral, timber, clay)</td>
</tr>
<tr>
<td>Lithic reduction patterns</td>
<td>Production technology (pottery, brick, etc.)</td>
</tr>
<tr>
<td>Lithic raw material patterns</td>
<td>Water-powered processing technology</td>
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<tr>
<td>Cultural history sequence</td>
<td>Workers' lifeways</td>
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<tr>
<td>Ceramic typology/chronology</td>
<td>Military defenses</td>
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<tr>
<td>Culture history direct dating</td>
<td>Military strategy</td>
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<tr>
<td>Extraction/processing: steatite, clay, lithic material</td>
<td>Conflict reconstruction</td>
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<tr>
<td>Assemblage variation/site function</td>
<td>Military lifeways</td>
</tr>
<tr>
<td>Feature analysis/site function</td>
<td>Assemblage variation/site function</td>
</tr>
<tr>
<td>Site use intensity through time</td>
<td>Feature analysis/site function</td>
</tr>
<tr>
<td>Native American group determinable (Contact only)</td>
<td>Site occupants determinable</td>
</tr>
</tbody>
</table>
2.0 ENVIRONMENTAL SETTING

2.1 Introduction
SCE&G's Lake Murray-Lyles 230 kV Line (Segments 1 and 3) project extends 7.8 miles and includes two segments located between SCE&G's Lake Murray Station in Lexington County, and a substation on Lucius Road along the Broad River in Richland County (see Figure 1.1). The following environmental overview provides a state and regional perspective of the project. Within this framework, Brockington discusses aspects of the present environment and changes that occurred during the Holocene.

2.2 Present Environment

2.2.1 State and Regional Setting
The project route extends across a mosaic of agricultural, commercial, industrial, recreational, and residential lands. Figures 2.1 through 2.4 provide views of the project corridor. According to the geographers Kovacik and Winberry (1989:212-213), the project route is located within the distinct Midlands vernacular and geographic regions of South Carolina. This region is a commercial/industrial area centered around Columbia (Kovacik and Winberry 1989:213). The original corridor dates from the 1930s and 1960s and has become integrated into both the cultural and natural landscape. At present, portions of the corridor are utilized in agriculture (e.g., fields and pasture), for commercial and industrial means (e.g., SCE&G McMeekin Station solid waste landfill, Woodridge Memorial Cemetery maintenance area, and numerous parking lots), for recreation (e.g., Three Rivers Greenway), and as part of a residential setting (e.g., backyards, gardens, subdivisions). This broad range of activities within the SCE&G easement has exacerbated erosion, leaving deeply dissected land throughout much of the corridor. Elevations along the project route range from 160-170 feet (49-52 meters) above mean sea level (amsl) along the Saluda and Broad rivers to 380 feet (116 meters) amsl along the ridge tops between Lee Kleckley and Corely Mill roads. Topography along the project route is typically comprised of rolling, dissected hills of the Piedmont and Sandhills regions. The route spans the Broad and Saluda Rivers, The Broad and Saluda Rivers converge approximately one mile south of the eastern project terminus to form the Congaree River, which in turn drains southeast and eventually forms the Santee River.

2.2.2 Eco-regions
According to Griffith et al. (2002), "An ecoregion denotes areas of general similarity in ecosystems and in the type, quality, and quantity of environmental resources." The project route extends across two of five Level III (Piedmont and Southeastern Plains) and three of 12 Level IV ecoregions (Southern Outer Piedmont, Carolina Slate belt, and Sand Hills) found in South Carolina. Griffith et al. (2002) provides a summary of the five Level IV eco-regions through which the project corridor passes. These regions are described below; Figure 2.5 also shows the location of the project on a map showing Level IV eco-regions in South Carolina:
Figure 2.1 General view of the SCE&G easement in Lexington County looking west across Royal Oaks Lane, showing impounded stream (unnamed tributary of the Saluda River) in the foreground.

Figure 2.2 General view of the SCE&G easement in Lexington County showing landscaped lawns and fields east of Lee Kleckley Road.
Figure 2.3 General view of the SCE&G easement in Richland County looking west from project terminus towards Columbia Canal along the Broad River; the Three Rivers Greenway River Trail can be seen in the foreground.

Figure 2.4 General view of the SCE&G easement within SCE&G McMeekin Station solid waste landfill. View is north towards the Saluda River.
**Piedmont: the Southern Outer Piedmont.** The Southern Outer Piedmont ecoregion has lower elevations, less relief, and less precipitation than other portions of the Piedmont in South Carolina. The landform class is mostly irregular plains rather than the plains with hills. Pine (mostly loblolly and shortleaf) dominates on old field sites and pine plantations, while mixed oak forest is found in less heavily altered areas. Gneiss, schist, and granite are typical rock types, covered with deep saprolite and mostly red, clayey subsoils. Kanhaapludults are common soils, such as the Cecil, Appling, and Madison series. Some areas within this region have more alkaline soils, such as the Iredell series, formed over diabase, diorite, or gabbro, and may be associated with areas once known as blackjack oak prairies.

**Piedmont: the Carolina Slate Belt.** The Carolina Slate Belt extends from southern Virginia, across the Carolinas, and into Georgia. The mineral-rich metavolcanic and metasedimentary rocks with slaty cleavage are finer-grained and less metamorphosed than most Piedmont regions. Some parts are rugged, such as the Uwharrie Mountains, and many areas are distinguished by trellised drainage patterns. Silty and silty clay soils, such as the Georgeville and Herndon series, are typical. Streams tend to dry up and water yields to wells are low as this region contains some of the lowest water-yielding rock units in the Carolinas.

**Southeastern Plains: the Sand Hills.** Richland County is located within the Sandhills region of South Carolina, along the Fall Line. The Fall Line separates the Piedmont and Coastal Plain. Kovacik and Winberry (1987:18) define the Sandhills as a narrow, discontinuous band of rolling hills, with moderate relief. In some stretches of the Sandhills, however, the relief can reach as great as 61 meters. The Sand Hills are composed primarily of Cretaceous-age marine sands and clays, capped in places with Tertiary sands, deposited over the crystalline and metamorphic rocks of the Piedmont. Bedrock within the project area is primarily composed of coarse grained granite, gneiss, and schist of Precambrian age (Lawrence 1978). Many of the droughty, low-nutrient soils formed in thick beds of sand, although some soils contain more loamy and clayey horizons. Some upland areas are underlain by plinthite, and sideslopes tend to have fragipans that perch water and cause lateral flow and seepage. Stream flow is consistent; streams seldom flood or dry up because of the large infiltration capacity of the sandy soil and the great ground-water storage capability of the sand aquifer. On drier sites, turkey oak and blackjack oak grow with longleaf pine and a wiregrass ground cover. Shortleaf-loblolly pine forests and other oak-pine forests are now more widespread due to fire suppression and logging. The Sand Hills are a center of rare plant diversity in the Carolinas. The region is also known for its peach orchards, golf courses, and horse farms. Richland County is located within the Sandhills region of South Carolina, along the Fall Line.

The Fall Line separates the Piedmont and Coastal Plain. The "fall line" is so named as a result of the waterfalls caused by the first exposure of crystalline rocks encountered when traveling upstream in rivers of the coastal Plain. Waterfalls and rapids formed in the region where the rocky Piedmont uplands met the flat sandy topography characteristic of this coastal Plain. These falls represent a barrier to navigation. Topography north of the fall line is hilly with narrow river valleys and clayey soils, whereas the coastal Plain to the south is characterized by broad, flat expanses of sandy floodplains and meandering drainages. Historically, cities like Columbia were built near the fall line at the point where the waterways were no longer navigable further inland.
Figure 2.5 Map of Level IV Ecoregions showing the Location of the Project Corridor.
2.2.3 Soils

Soil and water are South Carolina's most important natural resources. Brockington encountered numerous soil types along the 7.8-mile project. These soils range greatly across the project area (Figure 2.6), but are typically characterized by well drained sandy loams. Major differences between soil types are based on parent material. Table 2.1 lists named soil types for each segment. Soils information is derived from both the current Web Soil Survey data (United States Department of Agriculture [USDA] 2013) as well as older county soil survey volumes (Lawrence 1976, 1978).

The majority of Segment 1 is composed of Georgeville series soils, a typical slate derived formation of the Piedmont uplands. The similar Cecil series soils, derived from granite are also typical of the Piedmont uplands in Segment 1, along with lesser amounts of Herndon silt loam. Steep Tatum and Nason (to a lesser extent) silt loams define the slopes of these landforms. Terraces are typically Orangeburg series soils more typical of the Coastal Plain. Several fluvial and alluvial sediments make up the narrow floodplains of the streams and Saluda River. A significant portion of the ROW along Lake Murray is composed of landfill material, defined by USDA (2013) as Borrow pit (Bp); the associated channel extending from the dam along Old Ridge Road is classified as Dreher shoals (Saluda) dam (DAM).

Segment 3, comprised largely of the point of land between the Broad and Saluda Rivers is a mix of soils typical of both the Piedmont and Coastal plain. This area is dominated by Wedowee series soils typical of the Piedmont uplands and formed from material weathered from the Carolinas slate belt. Also common within this segment are Dothan and Orangeburg soils, marine sediments typical of the Coastal Plain. However much of this segment is classified as Urban land, for which specific soil attributes cannot be distinguished due to development. Stream terraces and floodplains along the rivers are comprised of a mix of alluvium and fluvium derived from both the Coastal plain and Piedmont.

However, overall much of the natural soil column has been greatly eroded throughout the entire corridor and often subsoil is evident directly beneath the humus and leaf litter. Trimble's (1974) study of soil erosion in the Southern Piedmont illustrates the extent to which soils in the region have been altered over the many years of human habitation and use. Focusing particularly on the late nineteenth and early twentieth century, for example, Trimble identifies an average depth of between 7 to 12.3 inches of soil loss to erosion for all periods in the project area (Trimble 1974) (Figures 2.7 and 2.8). In the South Carolina Piedmont this was predominantly through upland cotton agriculture. Trimble identifies the period from 1890 to 1920 as that of greatest erosive land use (Trimble 1974:69-94). By 1920, the project area was very near the heart of both the most concentrated cotton agriculture and the most intensive erosion in the Piedmont, with erosive land use accounting for 35-55 percent of the region (Trimble 1974: Figures 17 and 18). After 1920, when cotton agriculture was devastated by the Boll Weevil, erosive land use declined and farm fields became increasingly abandoned. However, much of the region continued to be modified through the switch to silviculture, logging cuts, the creation of access roads, and replanting. These activities tended to have fewer drastic erosive effects because of shaded ground cover and tree-root systems. Many areas of the project corridor exhibited red clay subsoil at the ground surface, due to severe erosion, likely from years of agricultural and timbering activities, followed by more recent residential, commercial and industrial developments and associated roads and utility corridors.
Figure 2.6 USDA (2013) soil series within the project ROW.
Figure 2.7 View of erosion and exposed subsoil within the transmission corridor east of Corley Mill Road. View is east from Woodridge Memorial Cemetery.

Figure 2.8 View of eroded and exposed bank above the Dreher shoals dam channel. View is west from Old Rapids Road.
Table 2.1 Named soil types throughout the project ROW (USDA 2013; Lawrence 1976, 1978).

<table>
<thead>
<tr>
<th>Segment (County)</th>
<th>Soil Type</th>
<th>Symbol</th>
<th>Drainage</th>
<th>Landform</th>
<th>Parent Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Segment 1 (Lexington County)</td>
<td>Cecil fine sandy loam, 6 to 10 percent slopes</td>
<td>CeC</td>
<td>Deep, Well- drained</td>
<td>Uplands</td>
<td>Granitic rock</td>
</tr>
<tr>
<td></td>
<td>Cecil fine sandy loam, 2 to 6 percent slopes</td>
<td>CeB</td>
<td>Deep, Well- drained</td>
<td>Uplands</td>
<td>Granitic rock</td>
</tr>
<tr>
<td></td>
<td>Cecil fine sandy loam, 10 to 15 percent slopes</td>
<td>CeD</td>
<td>Deep, Well- drained</td>
<td>Uplands</td>
<td>Granitic rock</td>
</tr>
<tr>
<td></td>
<td>Chenneby silty clay loam</td>
<td>Ch</td>
<td>Deep, Somewhat poorly-drained</td>
<td>Floodplains</td>
<td>Silty alluvium</td>
</tr>
<tr>
<td></td>
<td>Chenneby soils</td>
<td>Ck</td>
<td>Deep, Poorly-drained</td>
<td>Floodplains</td>
<td>Loamy alluvium</td>
</tr>
<tr>
<td></td>
<td>Congaree silt loam</td>
<td>Co</td>
<td>Deep, Well- drained</td>
<td>Floodplains</td>
<td>Loamy alluvium</td>
</tr>
<tr>
<td></td>
<td>Enoree soils</td>
<td>Eo</td>
<td>Deep, Poorly-drained</td>
<td>Floodplains</td>
<td>Loamy and sandy alluvium</td>
</tr>
<tr>
<td></td>
<td>Georgeville very fine sandy loam, 2 to 6 percent slopes</td>
<td>GeB</td>
<td>Deep, Well- drained</td>
<td>Uplands</td>
<td>Slate</td>
</tr>
<tr>
<td></td>
<td>Georgeville very fine sandy loam, 6 to 10 percent slopes</td>
<td>GeC</td>
<td>Deep, Well- drained</td>
<td>Uplands</td>
<td>Slate</td>
</tr>
<tr>
<td></td>
<td>Georgeville very fine sandy loam, 10 to 15 percent slopes</td>
<td>GeD</td>
<td>Deep, Well- drained</td>
<td>Uplands</td>
<td>Slate</td>
</tr>
<tr>
<td></td>
<td>Herndon silt loam, 2 to 6 percent slopes</td>
<td>HrB</td>
<td>Deep, Well- drained</td>
<td>Uplands</td>
<td>Acidic and Basic rock</td>
</tr>
<tr>
<td></td>
<td>Johnston soils</td>
<td>JO</td>
<td>Deep, Very poorly-drained</td>
<td>Floodplains</td>
<td>Marine and fluvial sediments</td>
</tr>
<tr>
<td></td>
<td>Nason silt loam, 6 to 15 percent slopes</td>
<td>NaD</td>
<td>Moderately deep, Well-drained</td>
<td>Ridgeslopes</td>
<td>Weathered slate</td>
</tr>
<tr>
<td></td>
<td>Orangeburg loamy sand, 2 to 6 percent slopes</td>
<td>OrB</td>
<td>Deep, Well- drained</td>
<td>Interfluvial ridges; terraces</td>
<td>Loamy marine sediment</td>
</tr>
<tr>
<td></td>
<td>Tatum silt loam, 15 to 25 percent slopes</td>
<td>TaE</td>
<td>Moderately deep, Well-drained</td>
<td>Ridgeslopes</td>
<td>Weathered slate</td>
</tr>
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<td></td>
<td>Tocos fine sandy loam</td>
<td>To</td>
<td>Deep, Well- drained</td>
<td>Flood plains</td>
<td>Loamy alluvium</td>
</tr>
<tr>
<td>Segment 3 (Richland County)</td>
<td>Chastain silty clay loam</td>
<td>Cd</td>
<td>Deep, Poorly-drained</td>
<td>Floodplains</td>
<td>Clayey alluvial sediment</td>
</tr>
<tr>
<td></td>
<td>Dothan loamy sand, 2 to 6 percent slopes</td>
<td>DoB</td>
<td>Deep, Well- drained</td>
<td>Ridgetops</td>
<td>Loamy marine sediment</td>
</tr>
<tr>
<td></td>
<td>Orangeburg-Urban land complex, 2 to 6 percent slopes</td>
<td>OgB</td>
<td>Deep, Well- drained</td>
<td>Interfluvial ridges; terraces</td>
<td>Loamy marine sediment</td>
</tr>
</tbody>
</table>
The primary ground disturbances observed involved the construction and maintenance of dirt roads. The project corridor has also had been clear cut, which has accelerated erosional effects in recent years. Virtually all of the landforms within the APE have been extensively plowed, logged, or cultivated, as evidenced by exposed subsoil observed in many portions of the project tract. It appears that as a result of these differing land management practices, erosion in the project APE has been rapid and appears to have significantly affected the land.

2.2.4 Water Resources
As stated above, the major drainages within the corridor are tributaries of the Santee River. The Broad River drains south from the mountains of North Carolina, forming portions of the Fairfield and Richland county boundaries. The Saluda River drains southeast from northwestern South Carolina through Lexington and Richland Counties and forms two large reservoirs (Lakes Greenwood and Murray), before joining with the Broad River in Columbia to form the Congaree River. Both of these rivers are extremely important to the South Carolina Midlands, not only for their freshwater but also for their hydroelectric capacities. The Congaree River flows southeast and joins with the Wateree River to form the Santee River, which flows into the Atlantic Ocean.

Other than the Saluda River, the ROW in Segment 1 crosses Twelvemile and Fourteenmile creeks, major tributaries of the Saluda River as well as several minor, unnamed streams flow directly into the river, which flows generally west-east to the north of the transmission line. The Richland county portion of the ROW crosses the point of land between the Broad and Saluda Rivers with small streams flowing into either channel.

2.2.5 Climate
United States Department of Agriculture (USDA) soil surveys provide climatic data for Lexington and Richland Counties (Lawrence 1976, 1978). The climate of the region is temperate, characterized by cold, short winters and hot, humid summers. Average temperatures vary from 25-58° F (minimum-maximum) in December to 71-91° F in July; however, the average annual maximum temperature for the year is 102° F. The annual precipitation is approximately 115 centimeters (45 inches), principally rain, and about 60 percent of the precipitation occurs during the growing season in July to September (Lawrence 1978). A prevailing southwesterly wind brings occasional severe weather in the form of thunderstorms, which can devastate agriculture with heavy rain, wind, and hail. Occasionally, the region experiences more severe weather in the form of tropical storms, hurricanes, and tornadoes.
2.2.6 Fauna

The region supports several avian, amphibian, mammalian, and reptilian species. Some of the more common bird species include blackbirds, bluebirds, blue jays, bobwhites, cardinals, Carolina wrens, chickadees, crows, mallard and wood ducks, mourning doves, piliated woodpeckers, pine siskins, red-tailed hawks, sparrows, turkey buzzards, warblers, and wild turkeys. Amphibians include frogs, toads, and salamanders. Common reptiles include various snake and lizard species. The most common large mammal is the white-tail deer. Other common mammals include beaver, bobcats, chipmunks, foxes (red and gray), gray squirrels, mice, opossum, rabbit, raccoon, and shrews.

2.3 Past Environment

Regional research in palynology, historic biogeography, and coastal geomorphology allows a general reconstruction of the Holocene changes in the environment of the region. Data from Florida, Georgia, North Carolina, and Virginia indicate that the Late Pleistocene (10,000–15,000 years before the present [BP]) was a time of transition from full glacial to Holocene environmental conditions (Watts 1980; Whitehead 1965, 1973). Upper Coastal Plain forests of the Late Pleistocene, as reflected in the White Pond pollen record, were dominated by oak, hickory, beech, and ironwood (Watts 1980:192). This deciduous forest occurred in a cooler, moister climate than exists in the region today (Braun 1950). The Early Holocene also was a period of extinction for many large Pleistocene mammals. These conditions are associated with the first documented human occupation of the region.

The general warming trend at the onset of the Holocene is reflected in sea level changes. Beginning approximately 17,000 BP, sea level began to rise from its Late Pleistocene low of approximately 330 feet below modern mean sea level (Brooks et al. 1989). By 7,000 BP, sea level had risen dramatically to within 25 feet of present levels. The rise in sea level affected the gradients and flow patterns of the large streams that cross the region. Changes in weather patterns, resulting from the closer proximity of ocean waters and the concomitant increased opportunity for evaporation and precipitation, probably helped shape the region through increased rainfall and opportunities for erosion.

As drier and still warmer conditions became prevalent during the Early Holocene, pines and other species suited to more xeric conditions thrived. The southern forest at 7,000 BP was beginning to resemble that of modern times (Watts 1980:193.6). Delcourt and Delcourt (1987:254) suggest that over 60 percent of the Coastal Plain forests were represented by pine species by 6,000 BP.

On a regional level, vegetation and climate appear to have remained effectively static since the Early Holocene; however, pollen data are not available after approximately 5,000 BP. Apparently, forests similar to the modern Southern Mixed Hardwood Forests (after Quartermar and Keever 1962) were established by this time, with their associated modern faunal communities. These biota would remain in place until the modern cultural modifications of the landscape during the eighteenth and nineteenth centuries created the patchy forest communities common in the region today.

In general, today's temperature and rainfall ranges are quite close to those of the Middle to Late Archaic past. However, we would expect there to have been slightly warmer average temperatures; perhaps only on the order of a degree or two. But rainfall may have been less abundant or to some degree, less seasonal.
3.0 CULTURAL SETTING
The following overview serves as a basic map of cultural trends in South Carolina for the project region. The 7.8-mile long project route extends west-east through Lexington and Richland Counties, over two major rivers (Saluda and Broad) within the Santee River watershed and across two Level III eco-regions (the Piedmont and the Atlantic Coastal Plain).

3.1 The Pre-Contact Era
In South Carolina, the Pre-Contact era is divided into four stages (after Willey and Phillips 1958). These include the Paleoindian, Archaic, Woodland, and Mississippian stages. Specific technologies and strategies for procuring resources define each of these stages, with approximate temporal limits also in place. Major cultural trends and their effect on the archaeological record are also discussed. Within each stage, with the exception of the Paleoindian, there are temporal periods that are defined on technological bases as well. A brief description of each stage follows, including discussions of the temporal periods within each stage. Readers are directed to Benson (2006), Goodyear and Hanson (1989), and Sassaman et al. (1990) for more detailed discussions of particular aspects of these periods and subperiods in South Carolina.

The Paleoindian Stage (11,500-8000 BC). Archaeologists call the beginning of the human occupation of North America the Paleoindian period. Initial human occupation of the Southeast is currently unknown but is assumed to be before 11,500 BC (Anderson 2005:1). The first widespread evidence of human occupation is associated with Clovis and related fluted point assemblages, which are inferred to occur between roughly 11,500 and 10,000 BC. Terminal Paleoindian occupations are associated with the onset of the Holocene, dating from roughly 10,000 to 8000 BC. These intervals have elsewhere been formalized into a new chronology for the period, consisting of Early, Middle, and Terminal Paleoindian subperiods (Anderson 2005). Anderson and Sassaman (1996) and Anderson et al. (2005) authored studies that provide valuable insight into the Paleoindian period in the Southeast. The following discussion briefly summarizes our current understanding of the Paleoindian period.

For most of the twentieth century, archaeologists believed that humans arrived on the continent near the end of the last Pleistocene glaciation, termed the Wisconsinan in North America, prior to 10,000 BC. The distinctive fluted projectile points and blade tool technology of the Middle Paleoindian subperiod (described below) occurs throughout North America by this time. During the last few decades of the twentieth century, researchers began to encounter artifacts and deposits that predate the classic Middle Paleoindian subperiod at a number of sites in North and South America. To date, these sites are few in number. The most notable are Meadowcroft Rock Shelter in Pennsylvania (Adovasio et al. 1990; Carlisle and Adovasio 1982), Monte Verde in Chile (Dillehay 1989, 1997; Meltzer et al. 1997), Cactus Hill in Virginia (McAvoy and McAvoy 1997), and most recently, the Topper/Big Pine Tree site in Allendale County, South Carolina (Goodyear 1999). All of these sites contain artifacts in stratigraphic locales below Middle Paleoindian subperiod deposits. Radiocarbon dates indicate occupations at the Meadowcroft and Topper/Big Pine Tree sites that are 10,000 to 20,000 years earlier than the earliest Clovis occupations. Cactus Hill produced evidence of a blade technology that predates Middle Paleoindian sites by 2,000 to 3,000 years. Monte Verde produced radiocarbon dates comparable to those at North and South American Paleoindian sites but reflects a very different lithic technology than that evidenced at Middle and Late Paleoindian sites. Similarly, the lithic
artifacts associated with the other Early Paleoindian deposits discovered to date do not display the blade technology so evident during the succeeding period.

Unfortunately, the numbers of artifacts recovered from these sites are too small at present to determine if they reflect a single technology or multiple approaches to lithic tool manufacture. Additional research at these and other sites will be necessary to determine how they relate to the better-known sites of the succeeding Middle Paleoindian, and how these early sites reflect the peopling of the Americas.

The Middle and Late Paleoindian subperiods correspond with the terminal Pleistocene, approximately 11,500 to 8000 BC, when the climate was generally much colder than today and when sea level was over 200 feet below present levels. Another notable feature of the terminal Pleistocene was the declining populations of megafauna. The patterns of human adaptation for these subperiods are reconstructed from data from other areas of the country and from distributional data on the diagnostic fluted projectile points (e.g., Clovis, Hardaway, Dalton) within the Southeast. Very few Paleoindian sites have been excavated in the Southeast, and only recently have South Carolina sites received attention (Goodyear et al. 1989). However, the data from surface finds of Paleoindian points seem to indicate that cultures of this period were focused along major river drainages, especially in terrace locations (Anderson and Logan 1981:10; Goodyear 1979). Similarly, Anderson et al. (1990:39-40) suggest an emphasis on floodplain locales in the Oconee River Valley of Georgia, with a shift to an increased use of upland areas through time. Work in the Oconee Valley by O'Steen et al. (1986) also demonstrated the presence of specific Paleoindian site types associated with particular settings within the valley.

If the pattern from other areas of the country holds true in South Carolina, then the adaptation was one of broad-range, high-mobility hunting and gathering with a possible focus on megafauna exploitation (Gardner 1974). Evidence to suggest a more generalized approach, with small game and plant foods providing the bulk of Paleoindian subsistence, also has been collected for the eastern United States (Meltzer 1988; Meltzer and Smith 1986). The limited association of megafauna remains with cultural artifacts in the Southeast may support this contention.

Although few sites dating to the Paleoindian period are recorded in the Piedmont, the Sand Hills, and Coastal Plain of South Carolina, this may be partially attributed to the low densities of artifacts that Paleoindian habitations produce. Paleoindian populations used the best available materials for tool manufacture. The mobile nature of most Paleoindian groups indicates that these groups preferred highly curated tools. As such, tools were sharpened and resharpened numerous times, and available raw material was used to the fullest extent possible. In many instances, lithic reduction locales dating to the Paleoindian period will contain no diagnostic artifacts, often making it impossible to discern a Paleoindian site from one of a later period. Most of the temporally diagnostic Paleoindian artifacts that have been found in South Carolina were recovered from the surface.

**Archaic Stage: Early Archaic Period (8000–6000 BC).** The Early Archaic corresponds to the adaptation of native groups to Holocene conditions. The environment in central South Carolina during this subperiod was still cooler and moister than at present, and an oak-hickory forest was establishing itself on the Coastal Plain (Watts 1980; Whitehead 1965, 1973). The megafauna of the Pleistocene had disappeared, and more typical woodland flora and fauna were established. Numerous sites in the region have produced Early Archaic remains (Goodyear et al. 1989; Wetmore et al. 1986:17-19). Early Archaic finds in the region typically are side- or corner-
notched projectile points (e.g., Dalton, Palmer, Kirk), determined to be Early Archaic through the excavation of sites in other areas of the Southeast (Claggett and Cable 1982; Coe 1964).

Early Archaic sites generally are small, suggesting a high degree of mobility. Diagnostic projectile points have been recovered from all portions of the lower Piedmont and Upper Coastal Plain, suggesting a shift from the riverine emphasis of the earlier Paleoindian period (Goodyear et al. 1989:38; Wetmore et al. 1986:18). This is particularly true for the earliest Dalton and Palmer points. Interestingly, these types display a technological continuation of the earlier Paleoindian lithic tradition not found in the later corner-notched or bifurcated types (Goodyear et al. 1989:39; Oliver 1985:200) and often are defined as Late Paleoindian or Transitional-Paleoindian types.

Anderson and Hanson (1988) propose a model for Early Archaic subsistence/settlement on the South Atlantic Slope. Their band-macroband Early Archaic settlement system model has been widely cited by South Carolina archaeologists. This model suggests the implementation of high residential mobility throughout most of the season, with aggregation in the winter when resources are less widely distributed within the region. Further, population aggregates are associated with specific drainages. Annual population movements include use of the Piedmont and Upper Coastal Plain within each drainage. Sand Hills areas presumably were visited in the fall, probably due to the densities of oak masts and concentrations of mast-consuming deer (Sassaman et al. 1990:50-52). Also, Anderson and Hanson (1988:271) suggest the presence of “macrobands” associated with the larger drainages that cross the region. Interaction between these larger population aggregates permitted the flow of extralocal raw materials, information, and mates between the groups occupying each drainage. Presumably the aggregation of populations within drainages near the Fall Line in the late fall and early winter and movement of populations between drainages at the same time would contribute to the diversity of lithic raw materials recovered from Early Archaic sites in the Sand Hills/Fall Line region.

Anderson and Hanson (1988:267-271) define two principal occupation types in the band-macroband model: collector and forager sites. The difference between these two types of sites relates to the degree of residential mobility. Collector occupations are long-term, winter base camps located in the Coastal Plain. Forager occupations represent shorter-term, resource extraction loci located throughout the watershed during the remaining parts of the year.

Anderson and Hanson’s (1988) model provides an excellent framework for current research but is not universally accepted. Several studies have been conducted in the Carolinas and Georgia that offer differing settlement models. Two such studies are O’Steen (1983) and Daniel (1998, 2001). O’Steen’s (1983) study is centered on the Oconee Valley of the Georgia Piedmont. O’Steen’s (1983) model of Early Archaic settlement suggests fairly restricted occupation during this subperiod. Recurring occupation of base camps within the valley, at locales that provided access to the greatest density and diversity of resources, was suggested, with lithic exchange networks that extended across the territorial boundaries of particular groups.

Archaic Stage: Middle Archaic Period (6000–3000 BC). The trends initiated during the Early Archaic (i.e., increased population and adaptation to local environments) continued through the Middle Archaic subperiod. Climatically, the study area was still warming, and an oak-hickory forest dominated the region until circa 3000 BC, when pines became more prevalent (Watts 1980). Stemmed projectile points (e.g., Stanly, Morrow Mountain, Benton, and Halifax), lanceolate Guilford points, and ground stone artifacts dominate this subperiod. Sassaman and Anderson’s (1996) Archaeology of the Mid-Holocene Southeast provides excellent insight into current research issues regarding the Middle and Late Archaic in the Southeast. Sassaman and Anderson (1994) delve more deeply into specific issues of the Middle Archaic in South Carolina.

On the Piedmont to the west, site densities apparently increase during this subperiod, suggesting more intensive implementation of foraging strategies; no specific locales appear to be favored for occupation (Blanton 1983; Blanton and Sassaman 1989:59-60). On the Coastal Plain, Middle Archaic sites occur with less frequency but show evidence of more intensive occupation and large-scale tool production. This suggests an increased “patchiness” in resources on the Coastal Plain compared with other subperiods or the contemporary Piedmont (Sassaman et al. 1990:10). Thus, a different pattern of settlement is suggested for this subperiod in the lower portions of South Carolina and the project area.

Sand Hills Middle Archaic sites appear to relate more to the Coastal Plain settlement pattern than the pattern evidenced on the Piedmont. Anderson’s (1979:236) excavation of Middle Archaic components at 38LX5 and 38LX64, on the western side of the Congaree River, suggest use of river floodplain locales (e.g., 38LX64) as long-term residential sites, similar to logistical base camps, and use of nearby upland settings (e.g., 38LX5) as more specialized resource extraction loci. Extensive examinations of interriverine settings in the region also have been undertaken in the immediate area. Examination of the distribution and nature of Middle Archaic sites at the Department of Energy’s Savannah River Site on the Savannah River immediately below Augusta, Georgia, suggests a pattern similar to that described for the Piedmont (Sassaman et al. 1990:310). Gunn and Wilson’s (1993) excavations at 38CT58 produced evidence of repeatedly visited camps occupied during the Middle Archaic Morrow Mountain and Guilford phases. Presumably these camps were occupied during the collection of resources along Lynches River and in the surrounding uplands.

Archaic Stage: Late Archaic Subperiod (3000–1000 BC). The Late Archaic subperiod apparently relates to a time of population expansion and increased local adaptations (Caldwell 1958). It is during this time that the first pottery appears on the South Carolina coast and in the Fall Line region. This pottery is the sand-tempered or untempered Thoms Creek series and the fiber-tempered Stallings series; both were decorated by punctation, incising, finger pinching, and, for Thoms Creek, possibly simple stamping and dentate stamping. Because of the close association in some areas between Thoms Creek and fiber-tempered ceramics, the authors consider Thoms Creek to be Ceramic Late Archaic. However, it should be noted that some researchers choose to consider Thoms Creek an Early Woodland manifestation.

Large, stemmed bifaces (e.g., Savannah River) are the most common lithic artifacts in the earlier preceramic Late Archaic assemblages. Smaller, stemmed points (Small Savannah River, Otarre, Bare Island) appear in association with the ceramic wares, apparently representing a transition between the Ceramic Late Archaic and subsequent Early Woodland cultural manifestations of the region.

Late Archaic sites throughout the southeastern Atlantic seaboard suggest that intensive exploitation of specific aquatic resources was common throughout the subperiod. Large sites,
presumably representing long periods of occupation by a large population aggregate, occur along the major drainages and the coastal estuaries. Several researchers suggest that Late Archaic population groups emphasized anadromous fishes (at the Fall Line and on the Piedmont) and shellfish (along the coast) to explain the presence of these large sites (Claggett and Cable 1982:40; Taylor and Smith 1978). However, the distinctive large, stemmed projectile points generally associated with Late Archaic occupations have been recovered from sites in almost all environmental settings from the mountains to the coast throughout South Carolina (Wetmore et al. 1986:21). Thus, Late Archaic sites can be expected throughout the interriverine uplands of the Sand Hills, the Lower Piedmont, and the upper Coastal Plain.

Sassaman et al. (1990:312-314) propose a model for Late Archaic settlement on the Savannah River Site that includes large population aggregations in the river valley during the spring and summer, with a dispersal of smaller family groups into tributary drainages during the fall and winter of each year. This would result in the development of large, dense sites with very diverse artifact assemblages in the river floodplain, and smaller and less diverse sites along smaller drainages and in the interriverine areas. Cantley and Cable (2002:341) observe greater frequencies of Late Archaic settlements at Big Bay, a large Carolina bay located in Sumter County. Anderson’s (1979:236-237) excavations at four sites in the Congaree Valley in Lexington County tend to support such a model, with two sites located in upland settings adjacent to the floodplain containing remains suggestive of limited activity animal processing, and two sites on the floodplain containing evidence of intensive occupation suggestive of long-term residence and a wide range of activities. Presumably, Late Archaic sites in the project area would relate to the resource extraction sites noted by Anderson (1979) and hypothesized to represent small family groups taking advantage of upland Sand Hills resources during the late fall or winter (after Sassaman et al. 1990). Late Archaic components often are identified by the presence of Savannah River points.

**Woodland Stage: Early Woodland Period (500 BC–AD 200).** The first Woodland manifestations in the region are characterized by a significant increase in stamp-decorated pottery. Following Espenshade and Brockington (1989), definitive markers of the Early Woodland are considered to be Deptford Check Stamped (linear and bold), Deptford Simple Stamped (including possible Refuge Simple Stamped), and coarse-tempered, fabric-impressed pottery. In the Early Woodland, the region apparently represented an area of interaction between widespread ceramic traditions, with the paddle-stamping tradition dominant to the south, and the fabric-impressing and cord-marking tradition dominant to the north and west (Blanton et al. 1986; Caldwell 1958; Espenshade 1986; Espenshade and Brockington 1989).

The subsistence and settlement pattern of the Early Woodland period suggests population expansion and the movement of groups into areas used less intensively in earlier periods. Hanson (1982) suggests that this dispersal reflects the collapse of a previously stable resource base (e.g., drowned estuaries on the coast [Trinkley 1989a:78]) and the attempt of Early Woodland populations to replace a focused subsistence strategy with a more diffuse one (after Cleland 1976). Anderson and Joseph (1988:218) note a similar diffusion of population and reduced regional interaction during the Early Woodland period in the Middle Savannah River Valley of South Carolina as well. Similar dispersals are noted for the Savannah River Site, with an occupational shift from the floodplains to the uplands along the many tributaries of the Savannah River (Sassaman et al. 1990:315). Anderson (1979:237) suggests a general shift away from the Congaree floodplain as well. Presumably, single-family residences were established in the upland locales that were inhabited throughout the year. Additional resources were procured
through exchange with neighbors or collected from specialized sites scattered throughout the immediate area surrounding a household.

Thus, Early Woodland sites most common in the region generally consist of small ceramic and lithic scatters in a variety of environmental zones. Some represent residential locations of single-family units, while other sites represent resource extraction loci. Lower artifact frequencies and diversity as well as reduced site size can be expected at the resource extraction sites.

**Woodland Stage: Middle and Late Woodland Periods (AD 200-1000).** The typological manifestations of the Middle and Late Woodland periods in the region are somewhat unclear. The check-stamping tradition of the Early Woodland Deptford series continues through most of the Middle Woodland, and check stamping reappears late in the Late Woodland period. Cord-marked and fabric-impressed ceramics continue to be produced through the Middle and Late Woodland periods, as do simple-stamped wares. There is no single decorative mode that can be associated with this period, and recent research has only begun to sort out the confusion (Anderson et al. 1982; Blanton et al. 1986; Trinkley 1983a, 1983b).

Middle and Late Woodland settlement patterns appear to continue the diffused distributions noted for the Early Woodland (Trinkley 1989a:83-84). Interior Coastal Plain sites of the period tend to occur adjacent to the large swampy floodplains of the many rivers crossing the Coastal Plain, with numerous small scatters of Middle/Late Woodland artifacts occurring on the interriverine uplands.

**Mississippian Stage (AD 1000-1550s).** Pre-Contact Mississippian societies represent the most complex Pre-Contact cultural development in the southern United States. The diagnostic complicated-stamped ceramics and small triangular projectile points of this period mark the transition of groups in the region into a complex system of social organization that lasted until first European contact. In most areas of the Southeast, the Mississippian period is characterized by an emphasis on agriculture and by the development of complex public works and ceremonial centers occupied by a highly stratified society. Mounds are known on the Wateree River to the east (Ferguson 1971, 1975) and on the Savannah to the west (Taylor and Smith 1978), but no large mounds have been identified in the Columbia area to date.

Mississippian groups apparently were aligned along major drainages (i.e., those with extensive floodplains, Anderson 1989:114). A wide range of site types has been identified for Piedmont Mississippian occupations throughout South Carolina, North Carolina, and Georgia. Larger villages tend to be associated with specific mound sites. Smaller habitation sites are scattered along the surrounding drainages, to the extent that single-family compounds may be present on secondary drainages with adequate floodplains to support the agricultural production of foodstuffs (Ferguson and Green 1984; Poplin 1990). Ferguson and Green (1984) also note that Mississippian centers generally display a symmetric distribution above and below the Fall Line, with few large sites in the immediate location of the distinctive rapids of the local rivers. Thus, major Mississippian sites tend to be located along the major drainages of South Carolina that possess extensive floodplains; however, they occur either on the lower Piedmont (above the Fall Line) or on the upper Coastal Plain (below the Fall Line), rather than at the transition between these two major physiographic regions of the state.

One of the principal Mississippian centers of South Carolina is located to the east of Columbia on the Wateree River. Mulberry Mound group, presumably representing the protohistoric town of Cofitachequi, is considered to represent the regional "center" of Mississippian settlement throughout central South Carolina. Anderson (1989:119) suggests that
an extensive buffer existed between the province associated with Cofitachequi and the neighboring province of Oacute, presumably centered on the Oconee River in Georgia. Much of the Savannah River Valley appears to have been abandoned during the later Pre-Contact and Contact periods. Extensive research has not been conducted in the drainages between the Savannah and Wateree, but large Mississippian settlements have not been positively identified in these drainages to date. Thus, the Wateree River east of Columbia may represent the extreme margin of Mississippian settlement associated with Cofitachequi.

In addition to the large central mound villages, many small scatters of Mississippian artifacts are found in diverse environmental settings throughout the surrounding region. These sites probably represent resource extraction loci, since an amalgam of agricultural produce and hunted-and-gathered remains provided subsistence for Mississippian groups throughout the Southeast (Smith 1975). As an example, Goodyear (1976:11-12) notes extensive Mississippian sites along the Congaree River below Columbia. These sites are interpreted as base camps located near prime agricultural lands, from which interriverine locales were visited to collect resources not available on the floodplain.

3.2 Contact Era
The Contact era begins 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 lived in a manner quite similar to the late Pre-Contact Mississippian groups identified in archaeological sites throughout the Southeast. Indeed, the highly structured society of Cofitachequi, formerly located in central South Carolina and visited by De Soto in 1540 and Pardo in 1565, is an excellent example of the Mississippian social organizations present throughout southeastern North America during the late Pre-Contact era (Anderson 1985, 1994). The small initial European forays that encountered these Mississippian groups, however, marked the beginning of a massive colonizing project involving three of Europe’s most powerful countries. By the time the English colony was founded at Charles Town in 1670, the French had already established and lost a colony in the region, and the Spanish were successfully managing an extensive network of missions throughout northern Florida and along the Georgia coast (Crane 2004; DePratter and South 1990; McEwan 1993; Worth 1995). During the late sixteenth and seventeenth centuries, disease, warfare, and the trade in Indian slaves all contributed to the rapid decline of the regional Indian populations (Dobyns 1983; Gallay 2002; Ramenofsky 1982; Smith 1987). According to one researcher’s estimates, between the years 1685 and 1715, the Indian population in the Southeast declined from 199,400 to 90,100, a reduction of nearly 55 percent (Wood 1989).

The dramatic effects of European diseases on native groups across North America are well known (e.g., Dobyns 1983; Smith 1987). When Europeans came to the New World, they brought infectious diseases such as smallpox, measles, yellow fever, typhus, whooping cough, influenza, and plague to New World populations. Because native North American populations had never been exposed to these diseases, outbreaks of sickness grew to epidemics that spread quickly throughout villages and towns, killing many. The seventeenth century witnessed many of these so-called “virgin soil epidemics,” the results of which were large-scale regional depopulation; social, economic, and political instability; and mass population movements.

The economic and strategic ambitions associated with empire building naturally generated strife among the fragile colonial beachheads of England, Spain, and France (Gallay 2002). England and France pursued essentially the same colonial strategy in the Southeast, one
founded on the expansionist principles of mercantilism. As is well known, the Spanish expressed relatively little interest in extracting economic resources from their Southeastern colonies; instead, as early as 1565, King Phillip II of Spain declared that the dual missions of Spanish colonies in the Southeast were to protect Caribbean shipping lanes and to propagate the Catholic faith among Southeastern Indian groups (Oatis 2004). Regardless of similarities and differences in colonial strategy, it was a fait accompli that the colonies of the three kingdoms would not coexist peacefully in the Southeast. Spain and France were, after all, eternal rivals of England, and violent conflicts among the three colonial “superpowers” (or more often among their Indian allies) punctuated this period in the Southeast.

Whether it desired the position or not, by virtue of geography South Carolina would be the English colonial vanguard against any Southeastern invasion from Spanish or French forces. It was not long before South Carolina would be called to fulfill this role, for immediately after the founding of Charles Town, the Spanish began plotting attacks (Crane 2004). In August and again in December 1686, the Spanish finally acted on their plans and mounted attacks that destroyed Staarts Town, a settlement located at Port Royal, south of Charles Town (Gallay 2002). This attack so close to their main settlement doubtless gave the South Carolina proprietors and their appointed officials good reason to implement a proactive defensive strategy that featured the use of allied Indian groups to create a buffer zone that would protect the colony from the Spanish and French and their Indian allies.

The buffer zone that was to protect South Carolina needed to be strongest to the south in order to check raids by the Spanish and their Indian allies. The Savannah River was the most appropriate location for a border because it was a very defensible obstacle as well as a major route of ingress into the interior Southeast (Gallay 2002). South Carolina obviously did not have the manpower to construct or man garrisons along the river; thus, it had to rely on Indian allies to guard its frontiers. Beginning in the 1680s, colonial officials set about encouraging allied Indian groups to settle along the Savannah River with the construction of a trading post at Savannah Town. By the turn of the eighteenth century, the trading post had accomplished its mission by attracting numerous allied groups including the Westo, Savannah, Yamassee, Apalachicola, Yuchi, and Chickasaw. It is clear that the South Carolina architects of this strategy never intended for the buffer zone of Indian allies to be a passive deterrent to their European rivals. From their earliest overtures to Indian groups, South Carolina officials intended to create an armed militia of Indians who could be persuaded to promote the colony’s interests internally and abroad.

The use of Indian allies was a potent tool in promoting South Carolina’s interests against its European rivals. This strategy was employed in two ways. First, small yet frequent slave raids consisting of parties of two to 10 men continually harangued enemy-allied Indians groups such as the Timucau, Apalachee, Guale, Arkansas, and Tunica along South Carolina’s borders (Gallay 2002). In addition, the first 15 years of the eighteenth century witnessed the use of Indian allies on a much larger scale, in major colonist-led Indian military forays that cumulatively resulted in the deaths and enslavement of thousands of Indians who were allied with the Spanish and French. These forays included Colonel James Moore’s invasions of Spanish Florida as part of Queen Anne’s War, first against St. Augustine in 1702 and later against the Apalachee missions in 1704. These operations, which resulted in the destruction of the Spanish-allied Apalachee Indians, included 370 Yamassee Indians and 1,000 Muskogee-speaking Indians, respectively (Crane 2004; Gallay 2002; Oatis 2004). A third major assault against the Spanish settlement of Pensacola, launched in 1707, involved a few hundred Muskogean warriors. Against French
colonial interests, South Carolina traders and allied Indians conducted an attack on Tomeh and Mobile Indians around the colony of Mobile in 1709 and two attacks on French-allied Choctaw towns in 1705 and 1711. Period accounts reported that the attacks on the Choctaw involved English-allied Chickasaw and Muskogee forces numbering between 2,000 and 4,000.

During the Contact era, the success or failure of any strategy enacted by the European colonial powers was ultimately tied to successful trade with Indian groups. Sustained exchange relations between Southeastern Indian groups and Europeans had existed for nearly a century when Charleston was founded in 1670. Indeed, Smith (1987) and Waselkov (1989) have garnered ethnohistorical and archaeological evidence to demonstrate that small-scale yet substantial trade in deerskins existed between Spanish Florida and interior Indian groups during the late sixteenth and seventeenth centuries. The founding of English colonies in the Southeast in the 1600s, however, brought major changes to the existing exchange system. Unlike Spanish colonies, the economic structures of South Carolina and Virginia were geared toward generating large profits by producing mass quantities of goods and resources for export. Along with tobacco and rice plantations, Indian trade figured prominently in the economic structure of Southeastern English colonies, much more so in South Carolina than Virginia (Martin 1994). It was the scale of Indian trade, needed to satisfy the labor and capital demands of both the local plantation economy and the Atlantic trade economy that marked the departure of the English Contact-period trading system from the previous Spanish system (Ramsey 2003). The sheer scale of slavery and deer hunting in this system produced profound sociopolitical disruptions that were variably felt by every Indian group across the Southeast.

Historians William Ramsey (2001, 2003) and Alan Gallay (2002) have done much to quantify the scale of Indian slavery by consulting the colonial records of South Carolina. Ramsey (2001) sketched the historic demography of Indian slavery in South Carolina during the period. Surveying period wills and census records, he found that Indian slaves comprised only six percent of all slaves during the 1680s and 1690s, but that this number rose to 10 percent after Colonel James Moore’s raids of 1702 and 1704. By the outbreak of the Yamassee War in 1715, approximately 25 percent of all slaves held by South Carolinians were Indians, a total population of 1,400 individuals. Gallay’s research (2002) furthered the argument that most slaves sold in Charleston markets were later traded to other colonies. He argued that the population estimated by Ramsey was but a small fraction of the total number of slaves taken during this period. Based on transport records following major military campaigns (described above) and trader accounts, Gallay (2002) estimated the total number of Indian slaves that were taken between 1670 and 1715 to be between 24,000 and 51,000 individuals.

The other commodity that circulated within the flourishing colonial trading system was deerskins. Virginians began trading in deerskins with nearby tribes shortly after the colony’s founding in 1607, but trade with Indian groups beyond the Carolina Piedmont at this time was insignificant, possibly because the routes to more distant groups were controlled by “middlemen” such as the Occaneechee, Catawba, and Tuscarora (Martin 1994). With the founding of South Carolina in 1670, the dynamics of this fledgling trading system changed dramatically. First, the scale of the trade increased greatly with the influx of dozens of new traders with aspirations of amassing great riches. Second, the geographic position of Charleston allowed these South Carolina traders to trade directly with interior groups using new routes that did not pass through the territory of the Piedmont middlemen. Lastly, the establishment of trade with South Carolina added an alternative source of trade for southeastern Indian groups. This led
to competition for the Indian trade, not only among the European colonial powers, but also (and more intensely) between South Carolina and Virginia (Gallay 2002; Martin 1994).

On Good Friday, April 15, 1715, the protective buffer surrounding South Carolina was ruptured and chaos invaded the lives of European colonists living in and around Charleston. The Yamasssee War began that day when a number of South Carolina trade officials were murdered in the Yamasssee town of Pocotaligo. The murders took South Carolinians completely by surprise, as the Yamasssee were thought to be one of the colony’s closest allies. Indeed, the murdered Englishmen had only been sent to Pocotaligo in order to arrange talks with another Indian group, the Ochese Muskogean, who were rumored to be planning attacks against South Carolina traders and settlers (Crane 2004). These initial murders were quickly followed by major Yamasssee attacks on plantations around Port Royal, south of Charleston. In these attacks, the Yamasssee killed over 100 colonists and set the rest of the settlement’s population to flight. In the following weeks, news began to filter into Charleston that most of the English traders in the Tallapoosa, Abiehka, Alabama, Ochese, Coweta, Choctaw, Chicksaw, Catawba, and Cherokee towns had either been killed or chased off (Oatis 2004). Adding to the fears of a pan-Indian assault, news emerged that the Catawba and a small group of Cherokee had made raids on plantations north of Charleston and even managed to capture a South Carolina militia garrison (Crane 2004). Facing this apparent “invasion,” colonists across South Carolina fled to Charleston, where the effects of overcrowding, fear, and tension, exacerbated by the summer heat, took its toll on the physical and mental health of many residents (Oatis 2004).

Traditionally, historians have written about the Yamasssee War as a united Indian revolt against the abuses of English traders, but recent attention has turned to exploring the different motivations and strategies of the Indian groups who participated in the attacks (e.g., Gallay 2002; Oatis 2004; Ramsey 2003). To various extents, these authors agree that, while some of the Indian participants were in collusion, the Yamasssee War was not a pan-Indian conspiracy that was carried out with the aid of a “master plan” (Oatis 2004). Instead, they hold that each group acted according to its own strategy and toward its own “diplomatic” goals. Abuse by traders, mounting debts, and the fear of enslavement were important factors in some groups’ decision to join the war against South Carolina, but these three “classic” causes were as far from universal as the actions of the participating groups. The classic causes apply most to the Yamasssee, but even their decision to attack South Carolina settlements was also likely influenced by the encroachment of Europeans on their “treaty-protected” lands as well as a breakdown in diplomacy with colonial officials (Gallay 2002; Ramsey 2003).

South Carolina’s military response to the Yamasssee and Catawba raids was swift. Only a week after the murders at Pocotaligo, the governor of South Carolina personally led militia forces to decisive victories against the Yamasssee towns, forcing them to retreat southward to the Altamaha River (Oatis 2004). Also, days after the assaults north of Charleston, South Carolina militia Captain George Chicken managed to rout the invading Catawba force in an ambush that came to be known as the Battle of the Ponds (Crane 2004). While these were the only major military engagements, the Yamasssee War officially carried on for almost two years (along with the anxiety and fear felt by the colonists in Charleston) until a peace with the Lower Creek was brokered in 1717. The end result for the study area was that, by 1718, the Carolina militia had annihilated or driven off most of the native groups that had inhabited the coastal areas of South Carolina, including the Congaree who lived in the project area. All were sold into slavery in the West Indies or fled north and merged with the Catawba. After the Yamasssee War, a militia post was established on Congaree Creek to provide a strong presence in backcountry and to monitor
trade with the Catawba and Cherokee farther inland. Fort Congaree operated until 1722 although some Indian traders remained in the area after the garrison disbanded. The remnants of Fort Congaree lie within 38LX30/319, possible Contact era components have been identified within the site and in the nearby sites with Mississippian occupations (38LX68, 38LX69, and 38LX80). A second fort was built to the north in 1749 and the location of the original fort was forgotten until discovered in the 1970s by archaeologists.

The years following the Yamasee War (circa 1718–1780) were generally a much more settled time in which Indian groups and colonists were beginning to adjust to the disruptions and chaos of the previous 45 years. While Indian groups continued to suffer from epidemics during the period, increased resistance to diseases and the abatement of Indian slavery significantly reduced the rate of population loss affecting Indian towns. The postwar years also featured the gradual cessation of frenetic population movement across the landscape as Indian populations consolidated and settled into particular areas such as the Chattahoochee River valley, the Coosa and Tallapoosa River valleys, the Catawba and Wateree River valleys, and the Hiwassee and Little Tennessee River valleys. South Carolina officials renewed diplomacy and trade with Indian groups amid a landscape inhabited by their reinvigorated European rivals. South Carolina’s diplomatic strategies included numerous unsuccessful attempts to consolidate political power among Indian groups. Its strategies also included encouraging Indian conflicts that benefited England’s imperial struggle against Spain and France (e.g., Creeks vs. Spanish-allied Yamasee, Cherokee vs. French-allied Illinois) while discouraging conflicts that involved English-allied groups (e.g., Creek vs. Cherokee). Rather than settling down, the deerskin trade experienced a significant expansion during the postwar years of the Contact era. The Congaree, the area around the abandoned fort, remained an important location due to its location near the center of the state and the convergence of the major Indian trading paths at this locale.

### 3.3 Post-Contact Era

**Colonial Period.** The region that became Richland and Lexington Counties during the last years of the eighteenth century was in many ways an atypical frontier. For years the area was a string of small farms and plantations along the banks of the Congaree and Wateree rivers. Protected by sand hills to the north and water on the south, east, and west, the area enjoyed no real nucleus or marketplace of its own. The early settlers, largely former Virginians, grew tobacco and other crops on unspoiled land. In 1785, the area was little more than a region of pine forests and a few cleared fields. However, by the beginning of the nineteenth century, Richland became an independent county on the east bank of the Congaree River and contained the capital of the state, Columbia, with Lexington County on the west bank (Moore 1993:3).

During the colonial period, explorers, fur traders, and cattlemen were followed by pioneers seeking cheap land and prosperity in South Carolina. In 1730, Royal Governor Robert Johnson proposed a plan to encourage further settlement of the colony’s interior. Johnson planned a system of frontier settlements that would be laid out 80 to 100 miles from Charles Town and occupied by European settlers. To encourage settlement, the colony would pay the settlers’ passage, grant them lands without obligation to pay quitrents for 10 years, and establish a fund to provide for provisions. Between 1733 and 1735, eight townships were laid out to help defend colonists from Native Americans and the Spanish (Kovacik and Winberry 1987:78-79). The region contained two of these early townships, Saxe Gotha on the Congaree River and Fredericksburg on the Wateree River, to the north and east.
Saxe Gotha grew slowly and never really developed an urban center. Many of the original settlers acquired land on the opposite bank of the river and moved out of the township. By the second half of the eighteenth century, small farmsteads were scattered along the river on both banks.

According to Robert Mills, permanent settlement in the greater project area began about 1740 (Mills 1979:693). Attracted by the rich bottomland around the waters of the Congaree, settlers cleared trees to establish their homesteads, raised cattle, and farmed their own vegetables. About the middle of the eighteenth century, German and Swiss immigrants from Orangeburg settled along the Broad River at the junction of Little River, Cane Creek, and Kinslers Creek, while Scots-Irish settlers migrated to the region from Virginia and other northern colonies (Martin et al. 2002:12).

Four counties were established in South Carolina in 1682 as units of local government. Due to the small population and limited legal needs of the government, most recordkeeping and judicial activity was confined to the municipal limits of Charleston, rather than the four counties. As the colony's population began to grow, there was a push to establish county and precinct courts, and in 1769 the General Assembly passed an act dividing the province into seven judicial districts. The area that is now Lexington County lay within the Orangeburg District. Following the American Revolution, South Carolina's government was decentralized. In 1785, the General Assembly passed legislation that laid out counties in each judiciary district and established county courts to handle small claims. Lexington became a county of Orangeburg District at this time. A year later, the county courts were authorized to carry out many of the duties that previously only the government in Charleston had conducted (Stauffer 1998:1-3). In 1804, the Districts were restructured and Lexington County became an independent district and has remained a district or county since that time.

Despite its small population and limited political power, the region would witness constant action during the later years of the Revolutionary War. Following the fall of Charleston in May 1780, the British moved to solidify their hold on the interior or backcountry of South Carolina. They occupied and fortified the store of Chestnut and Kershaw (Camden factors), creating Fort Granby upstream from the old Saxe Gotha settlement at Friday's Ferry. In February 1781, Thomas Sumter and his militia army laid siege to the British outpost, but portions of Lord Rawdon's army soon marched from Camden, and Sumter withdrew his forces southward along Old State Road. Sumter returned to Fort Granby at the end of April 1781 and again besieged the fort. While off to Orangeburg which Sumter captured after a short siege, Harry Lee arrived with a small force of Continental cavalry dispatched from the Continental Army of General Nathaniel Greene, and took command of the siege. Lee negotiated the surrender of Fort Granby by May 13. The British garrison withdrew to the south along the Old State Road, joining Lord Rawdon's army. Sumter returned to Fort Granby, and after much discussion with General Greene concerning his service, destroyed most of the fortification although he left the former store building intact. The militia forces then crossed to the east bank of the Congaree and joined Greene's army. Greene then moved to capture Ninety-Six to the northwest. Rawdon's army soon marched to the relief of the beleaguered garrison, forcing Greene to withdraw. After a failed pursuit of the rebels, the British withdrew and reoccupied Granby and its destroyed fort. Greene's army pursued the British, who withdrew to Orangeburg (along the Old State Road) before Greene arrived, and the Patriots reoccupied Granby on July 4, 1781. They soon departed for Orangeburg, taking the Old State Road south toward that outpost. Greene's forces would be joined by the militia forces of Sumter and Francis Marion on his march south. Greene's
reinforced army would participate in the Battle of Eutaw Springs in September 1781. Although driven from the field, the Patriot forces halted the British effort to send a strong force north through the Carolinas to reinforce Lord Cornwallis’ army besieged at Yorktown, Virginia. Cornwallis surrendered his forces in October 1781, ending the principal military activities of the Revolutionary War.

Granby became the seat of Lexington County upon its founding in 1785, and continued to grow due to its location at the principal ferry across the Congaree and its connection with the Old State Road. Following repeated flooding during the late eighteenth and early nineteenth centuries and the rapid growth of the new state capitol on the opposite bank of the river, the town was abandoned by the 1820s and the county seat moved west to the newly created town of Lexington.

Antebellum Period. Originally home to a small group of government officials, hundreds of farm-plantation households, and a few shops and stores, Lexington and Richland Counties experienced steady growth during the antebellum period. The emergence of cotton as a market crop at the turn of the nineteenth century encouraged the widespread use of slaves on area plantations and farms. While the county’s largest slaveholders lived on plantations along the Wateree and Congaree Rivers, many of the region’s slaveholders owned fewer than five slaves. In 1790, a third of Richland County’s population was black; however, within the next 10 years a black majority emerged as the new cotton culture expanded. Measures to control the growing population of enslaved and free blacks increased in the years prior to the Civil War. In 1823, Richland County established a patrol to ensure that slaves found off their plantations had permission to move throughout the area (Martin et al. 2002:16).

Although the region relied heavily on cotton production at the onset of the antebellum period, the 1860 agricultural census reveals that Richland County’s production of cotton decreased in the years leading up to the Civil War. While the production of vegetables such as corn, sweet potatoes, and beans remained high, the county produced fewer than 10,000 bales of ginned cotton in 1860, nearly 1,500 bales fewer than the 1850 crop (Martin et al. 2002:18).

While eighteenth-century transportation in the region relied on rivers and creeks, the development of a railroad network in the nineteenth century linked the new capitol Columbia and the surrounding area to the rest of the state. Chartered in 1833, the Columbia Railroad Company sought to establish a line to connect Branchville to Columbia, with the first trains reaching the capital city in 1842. In 1852, the Charlotte and South Carolina Railroad was complete, while workers finished the Greenville and Columbia Railroad the following year. By 1860, the network of Columbia’s three railroads spread across the state, linking the capital city to the port city of Charleston and the Piedmont cities of Greenville, Charlotte, Spartanburg, and Anderson (Martin et al. 2002:19).

On the eve of the Civil War, Richland County had become a powerful force in the region due largely to its central geographic position, prominence as the home of the state capital, and the expansion of railroad transportation. By the fall of 1860, the air of excitement for growth and change was replaced by the high drama of political rhetoric and secession.

The Civil War. Although South Carolina was the first state to secede from the Union and the first to open fire on Federal forces in Charleston Harbor, the capitol and the surrounding region saw no military action until 1865. Throughout most of the first four years of the war, Columbia served as the principal administrative center of the state, an industrial and transportation center, and a source of materiel employed to prosecute the war. After the fall of Atlanta and the Federal capture of Savannah by the Army of Tennessee under Major General William T. Sherman, cries for the defense of Columbia began in earnest. Sherman crossed the
Savannah River in early 1865 and confused the Confederate defenders as to his intentions. The Confederates maintained the bulk of their defenders in Charleston and spread their forces outside Charleston between Augusta and Columbia in an effort to defend all of the major cities threatened by Sherman’s move into the state. Sherman sent a force up the Port Royal to Charleston Road to demonstrate against that city, fixing many Confederate troops in defense of the port, but moved his main forces overland to Branchville and then along the rail lines toward Columbia. The feint to Charleston rejoined the main force after skirmishing at the Combahee River.

After much delay and the completion of needed surveys, Confederate and South Carolina militia engineers began the construction of the fortifications to defend the City of Columbia on January 9, 1865. Major John R. Niernsee, state military engineer, oversaw the project. Niernsee, born and educated in Austria, had been the chief engineer overseeing the construction of the new state house but had joined the South Carolina militia as its chief engineer in 1862. Niernsee intended to encircle the city with earthen fortifications, beginning with works on both sides of the Congaree River south of the city, in anticipation of a riverborne assault. An outer line and inner line of works were planned. Work began on the inner line of works on the Lexington County side, planned to extend seven miles from Cayce’s Mill to the Saluda Factory; the easternmost four miles of these fortifications were completed by February 12, 1865 when work was halted in anticipation of the arrival of Sherman’s army. The western outer line extended along Congaree Creek and then Six Mile Creek to join with the inner line near Double Branch; only the easternmost mile along Congaree Creek was completed. Approximately two miles of fortifications were completed on the east bank of the Congaree River, fronting on Gills Creek and sweeping northeast to Bluff Road, but originally planned to continue on to Wade Hampton’s Millwood Plantation.

Confederate commanders General P. G. T. Beauregard and Major General Wade Hampton began gathering Confederate forces to man the Congaree Creek fortifications as word of the approaching Union columns arrived in Columbia. Beauregard, Confederate commander of all South Carolina, had dispatched his troops across the Midlands from Columbia to Augusta (Georgia) in response to Sherman’s feints as he entered the state. Beauregard quickly called in his units as soon as he knew that Columbia was the target of Sherman’s advance. Unfortunately, most of the dispersed troops would not reach the capitol before it fell. Hampton was in Columbia gathering new horses and men for the Army of Northern Virginia, along with one division of the Army’s cavalry, commanded by Major General Matthew Butler, and portions of the Confederate Army of Tennessee’s Cavalry Corps, commanded by Major General Joseph Wheeler; Wheeler’s horsemen harassed Sherman’s Army throughout the Atlanta campaign, the March to the Sea, and continued its harassment as Sherman moved into South Carolina in January 1865. Beauregard placed Hampton in command of the defense of Columbia. By February 14, Confederate forces assigned to the Congaree Creek lines numbered about 2,500 men, including portions of Butler’s division and Brigadier General George Dibrell’s division of Williamson’s Brigade of Wheeler’s corps, as well as some infantry units and at least three pieces of artillery. Units in Dibrell’s division included the 9th Kentucky Cavalry, 4th and 13th Tennessee Cavalry, and Shaw’s Tennessee Battalion of Cavalry.

The morning of February 15, 1865, was rainy and foggy as the right wing of Sherman’s Army of Tennessee advanced up the Old State Road toward Columbia, with the intention of capturing the bridge into the city at Gervais Street and advancing into the capitol. Rain had been frequent and the rivers, creeks, and swamps were full or overflowing their banks; adjoining fields
were very soft preventing the movement of wagons or guns except along the roads. Sherman's right wing consisted of the XV Corps under the command of Major General John Logan. Logan's troops were organized into four divisions, with three brigades in each division. The division had bivouacked the night before approximately five miles below Congaree Creek. Logan's 1st Division, commanded by Brevet Major General Charles Woods, led the advance with his 2nd Brigade (Colonel Robert Catterson commanding) in the van, followed by his 3rd (Colonel George Stone commanding) and 1st Brigades (Brevet Major General William Woods [the Division commander's elder brother] commanding). The 2nd and 4th Divisions moved north along Old State Road as well, spaced about two miles apart. The 3rd Division was sent to capture the western end of the ferry crossing near Sandy Run, and demonstrate as if it intended to cross the Congaree River to hold Confederate troops away from the primary crossings at Columbia.

As the division began moving up the Old State Road, they encountered Confederate skirmishers, 9th Kentucky Cavalry troops deployed along the road to harass and slow the Union advance. The Union troops drove the Confederate horsemen before them and soon arrived at Congaree Creek. They immediately recognized that the Confederates had established a strong position on the creek, with the obvious intention of preventing further advance. The Union officers observed a curving wooden breastworks (rails and felled trees piled into a barricade) across the road before the bridge with its ends tied into the woods along the south bank of the creek. Strong earthworks were present on the north bank of the creek, with a formidable salient near the bridge. The bridge itself had piles of rails and timbers on it to fuel a fire should the Confederates wish to destroy the bridge.

Confederate artillery opened fire on the Federal column and the regiments of the 2nd Brigade (26th, 40th, and 103rd Illinois; 97th and 109th Indiana; 6th Iowa; 46th Ohio) deployed in front of the Confederate defenses, primarily to the east of Old State Road with the 46th Ohio on the right flank of the brigade along Congaree Creek. The 3rd Brigade (containing the 4th, 9th, 25th Iowa Regiments) deployed to the west side of Old State Road while the 1st Brigade remained out of contact along Old State Road, serving as the division reserve. A strong skirmish line was established to the Federal front and the infantrymen began to advance on the Confederate positions. The Federals hoped to hold most of the Confederate defenders in the center of their positions through their advance while the far wings of the Federal line moved to outflank the strong Confederate defenses on the north bank. Both sides engaged in intense exchanges of musketry with the Confederate artillery joining in.

On the Federal center and right, the regiments advanced to within 100 yards of the Confederate tete-de-pont (the breastwork defending the south end of the bridge over Congaree Creek) and began firing at the Confederate troops who were sheltering behind the wooden barricade. The Confederates returned fire over their barricade and from their positions on the north bank of the creek. On the far right, the 46th Ohio Regiment moved forward along the steep slope of the creek bank, in defilade to Confederate fire from their left. When they reached a point opposite the east end of the tete-de-pont, they emerged and began receiving fire from their front/left as well as from their right/rear, having failed to by-pass the easternmost Confederate positions as they had hoped.

On the left, the 3rd Brigade moved forward with the 4th and 9th Iowa regiments to the front, and the 25th Iowa following. They encountered a tributary of Congaree Creek that was flooded but waded across the swampy channel where they began to receive fire from the Confederates on the north bank of the creek. They continued moving northwest until they found a place where they could fell trees across Congaree Creek and effect a crossing. Much of the area
traversed by the 3rd Brigade was flooded with deep mud in many places. The infantrymen struggled as much with the ground to gain the north bank of the creek as with the Confederate defenders.

As the morning progressed and Federal pressure against the *tete-de-pont* continued to build, Brigadier Dibrell, who was personallycommanding the Confederate forces on the south side of the creek, requested permission to withdraw his dismounted cavalry forces to the north side of the creek and fire the bridge. The artillery initially placed south of the creek had already displaced to the north side and continued to fire on the Federals. Dibrell’s commander, General Butler, refused this request, asserting that the positions were strong enough to repulse an assault of any size with the forces on hand. Possibly, he hoped to keep the bridge available for maneuver or counterattack.

The fighting continued with little forward movement by the Federal troops except on their left where the 3rd Brigade was slipping its men across Congaree Creek beyond the western end of the Confederate positions and on the far right where the 46th Ohio Regiment decided to abandoned their enfiladed position and make a grab for the south end of the bridge. By this time, the Confederate forces south of the creek had begun to withdraw and they attempted to fire the bridge as they moved into the earthworks on the north bank of the creek. Although the rails and timbers piled on the bridge ignited, the bridge itself was slow to catch fire. The wooden bridge was saturated with water from the recent heavy rains and flooding of the creek; it was also covered with mud left by the since receding flood waters that had covered the bridge at some time prior to the battle. The Confederates even attempted to add more fuel to the bridge deck but had no more success in firing the bridge itself. Dibrell reported later that he would have been able to cut down the bridge had his request to withdraw been granted when first submitted. By the time his forces reached the north bank of the creek the Federals were near the south end of the bridge and he could do little more than attempt to throw more fuel on the smoldering bridge.

The Federal pressure on the *tete-de-pont* reached a climax when the 46th Ohio made a concerted effort to capture the bridge. They moved quickly across the front of both forces, firing as they went (apparently they were equipped with Spencer repeating rifles rather than muzzle-loading rifles like most of the Federal units), and successfully captured the Confederate breastworks. The other regiments also moved forwarded and supported their assault. They attempted to extinguish the fires on the bridge but were met with concerted rifle fire and canister from the Confederate artillery.

Meanwhile on the Federal left, Colonel Stone had instructed his 3rd Brigade troops on the north bank of the creek to remain quiet and concealed until the entire brigade had crossed in order to encircle the Confederates with a strong force. However, the first regiment across assembled and engaged the Confederates in their earthworks to the east while their compatriots were still struggling to cross the creek. Alerted to the presence of enemy troops on their flank in unknown strength, the Confederates began to withdraw from the Congaree Creek earthworks. First, their artillery displaced up the Old State Road and took up new firing positions to cover the withdrawal. Then, the cavalymen began a strong effort to cover their infantry comrades as these troops marched quickly up the road to avoid the Federal flank attack and encircling attempt. By this time as well, some Federal troops had felled trees across the creek at the eastern end of the Confederate position and were beginning to move across the creek and into the Confederate line. With the guns and infantry retreating in good order, the remaining cavalymen mounted their horses and dashed north. All of the Confederate forces fell back to the inner line of fortifications where they bivouacked for the night.
The Federal troops were now in possession of the Congaree Creek earthworks and the bridge over the creek. They succeeded in extinguishing the blazes on the bridge but still had to wait for their engineers to assess and repair the bridge so that their artillery could safely cross over. Once repaired, the remainder of the XV Corps (minus the 3rd Division demonstrating on the Congaree River to the south) moved approximately two miles up the Old State Road and also went into bivouac for the night. During the evening, the Federal camp was shelled ineffectively by Confederate artillery emplaced on the east of the Congaree River, presumably in the defenses constructed on that side of the river. This artillery fire did little more than harass the soldiers as they tried to get some sleep before their push to the Confederate positions between them and the Congaree River bridge.

On the morning of February 16, Federal troops quickly moved up to the inner line of Confederate fortifications. During the evening, they had observed a strong Confederate cavalry force moving in column to the west; this force had deployed as if to engage the Federals but then withdrew into the night. When the Federal forces arrived at the inner works, they found these abandoned and the bridge completely destroyed. Apparently, the Confederates decided to abandon their positions west of the Congaree River and destroyed the bridge as they withdrew. Logan’s engineers determined that their bridging equipment (pontoons and decking used to build floating bridges) were not sufficient to cross the Congaree at this point. By this time as well, Sherman’s left wing was arriving on the Saluda River near the Saluda Factory adjacent to the project corridor where a bridge offered an easier crossing of this river above the City proper. The XV Corps, now intact with the arrival of its 3rd Division, moved northwest as well to assist in the crossing of the Saluda River. They did position artillery along the west bank of the river and began to fire into the City, where they observed the Confederates making efforts to withdraw or destroy the many stores and military materiel that was warehoused in the Columbia.

As the Federal Army of Tennessee crossed the Saluda and then the Broad River north of Columbia, fires broke out in the city and destroyed much of the area north of the State House, along with many records, stores, and equipment in rail cars awaiting transshipment to other Confederate depots. The Confederate Army of Tennessee withdrew northeast, harassing Sherman’s pursuing forces as much as possible. Some Federal troops entered Columbia as the armies moved north, and the Civil War effectively ended for Columbia. The Confederates would continue to withdraw northward, engaging and harassing the ever-advancing Federal forces until their surrender at Bennett Place, near Durham, North Carolina, on April 26, 1865. Richmond, Virginia, the Confederate capitol, fell on April 3, 1865, and the Civil War in the east came to an end.

**Reconstruction to 1900.** The conclusion of the Civil War and the ensuing Reconstruction era transformed the region’s economic, social, and cultural landscapes in monumental ways. The war left behind devastated crops, livestock, and farms, while tenant farming and sharecropping replaced the culture of slavery. While the region experienced a decrease in agricultural productivity and economic expansion, the post–Civil War period also introduced reform and improvements in transportation and education.

During Reconstruction, agriculture in the rural part of the area had to adjust to changes in labor and the poor conditions of crops following the war. Cotton production fell dramatically and the livestock population decreased. The cultivation of corn and sweet potatoes, however, remained high.

While the Civil War disrupted rail traffic, the late nineteenth century proved to be a transformative time for the region’s railroads. In 1883, a new depot opened in Columbia. After a
merger with a rail line that extended to Augusta, Georgia, the Charlotte and South Carolina Railroad became the Charlotte, Columbia, and Augusta Railroad. During the last decade of the nineteenth century, three lines running through Columbia – the Charlotte, Columbia, and Augusta; the Columbia, Greenville, and Richmond; and the Spartanburg, Union, and Columbia – became part of the Richmond and Danville system, which would later become Southern Railways (Martin et al. 2002:28). The renewed railroad activity transformed Columbia into a major transportation hub, with small communities developing along the rail corridors.

The education system in the region also underwent great change during Reconstruction. The state established a formal education system that required free universal public education for all children, black or white. While the constitution did not mandate segregation by race, the nature of settlement patterns in the region led to a segregated school system. In 1895, white Democrats gained control over local school boards and began sanctioning school segregation by controlling funding for all public schools, devastating any goal of equal and fair education (Martin et al. 2002:27).

Twentieth Century. The region’s twentieth-century history mirrors that of many others in South Carolina. The area embraced railroads, textiles, and a variety of commercial ventures. In May 1917, General Douglas MacArthur announced that a major training center for the US Army would be built just east of Columbia. Encompassing thousands of acres, the camp was officially named Camp Jackson in honor of Andrew Jackson. Construction was completed by January 1918, and the camp was renamed Fort Jackson on the eve of World War II (Martin et al 2002:31).

The stock market crash and the Great Depression had a devastating effect on the region. Many farmers lost their land, and unemployment rates increased 30 percent. Banks failed, cotton prices plummeted, and businesses closed. President Franklin Roosevelt’s New Deal helped put hundreds of county residents to work building parks and roads, making improvements to buildings, and preserving historical documents and oral histories (Martin et al. 2002:32-34).

After World War II, the region underwent significant changes. The once-rural landscape transformed into widespread urban developments. Many rural residents abandoned farming for more lucrative opportunities in larger cities. By 1950, the region was dependent on Fort Jackson, the state government, and the University of South Carolina to pump millions of dollars into the local economy. These three enterprises attracted and fostered many related activities in the area, and continue to influence the growth and prosperity of the region (Edgar 2006:801).
4.0 PREVIOUS INVESTIGATIONS
To develop a context for evaluation purposes, background research focused on all archaeological resources located within a 0.5-mile radius of Segments 1 and 3 of the Lake Murray-Lytes 230 kV Line Transmission Line ROW corridor. A review of cultural resources within the Segment 3 APE had been previously completed (Moore 2013). Although 37 archaeological sites are located within this search radius, based on results of the background research conducted at SCIAA, in Columbia, South Carolina, Brockington has concluded that no known eligible or listed NRHP archaeological sites will be directly or indirectly impacted by proposed improvements within the existing transmission line corridor.

The investigators consulted the SCDAH, the state site files at the SCIAA, and the ArchSite program (sponsored by SCDAH and SCIAA) to obtain information regarding previous cultural resources investigations and to determine the locations of eligible or potentially eligible archaeological sites located within the APE. The APE includes the entire 7.8-mile, 100-ft (30-m) wide project corridor, which follows an existing SCE&G easement. Table 4.1 summarizes the cultural resources investigations that have occurred adjacent to the APE. Table 4.2 summarizes the previously identified archaeological sites located in or near the APE. Figure 4.1 shows the locations of previously identified archaeological sites within the APE.

4.1 Previous Investigations in the APE
Brockington reviewed records at SCDAH and SCIAA and on ArchSite to determine what cultural resources investigations have been conducted in the project area. More than 15 cultural resource investigations have occurred within 0.5-mile of the project, several of which have been conducted by Brockington (see Table 4.1). Pike Energy Solutions, LLC, sponsored four recent studies conducted by Brockington (Pappas and Bailey 2011; Baluha and Kitchens 2012; Pappas 2012; and Baluha and Bailey 2013). Additionally, SCE&G sponsored other archaeological investigations at or near the Saluda Dam Complex (Green et al. 2007 and Trinkley and Southerland 2001). Most of these investigations are archaeological surveys, but also include geophysical surveys and archaeological testing projects. Many of these projects are related to highway or utilities improvements projects and have narrow study corridors.

The VC Summer-St. George 230 kV Lines 1 and 2 ROW considered by Baluha and Bailey (2013) contains Segment 2 of the Lake Murray-Lytes 230 kV Line; as a result this area was not re-surveyed during the current investigations. Baluha and Bailey (2013) did not identify any new archaeological sites within Segment 2; however, two previously recorded sites (38LX7 and 38LX238) were found to extend into the corridor. Baluha and Kitchens (2012) also recently surveyed the 50-acre Saluda substation associated with this line. Pappas (2012) surveyed an extension of this line, originating at the western end of Segment 3; several sites (38RD21, 38RD22, 38RD23, and 38RD140) had been included within this ROW but were not relocated by Pappas (2012) and were presumed destroyed by the construction of I-126 in the area. This includes Site 38RD22, near Segment 3.

The ROW west of Meadowbrook Lane is included in Trinkley and Southerland’s (2001) report. Site 38LX455, ineligible for the NRHP, was identified near the ROW and presumed destroyed by the current landfill.

Portions of the ROW in Richland County (Segment 3) are also discussed in Harvey and Poplin’s (2000) overview of the then proposed Three Rivers Greenway; the ROW crosses the now existing greenway along the Columbia Canal. Harvey and Poplin (2000) discuss site
Table 4.1 Previous Investigations within 0.5 miles of the APE. Brockington investigations are indicated with an asterisk (*).

<table>
<thead>
<tr>
<th>Reference</th>
<th>Date</th>
<th>Project</th>
<th>Archaeological Sites near APE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carillo</td>
<td>1976</td>
<td><em>An Archaeological Survey of Rawls and Kinley Creeks, Lexington County</em></td>
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<td>Drucker</td>
<td>1977</td>
<td><em>Archaeological Survey of the Proposed Twelve Mile Creek Interceptor</em></td>
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<td>Trinkley</td>
<td>1980</td>
<td><em>Archaeological Survey of the Interchange for I-20 and I-26, Lexington and Richland Counties</em></td>
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<tr>
<td>Harmon; Canouts and Harmon</td>
<td>1981</td>
<td><em>Archaeological Reconnaissance for Columbia Riverfront Park</em></td>
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<td>Tippitt</td>
<td>1982</td>
<td><em>An Archaeological Survey of the Kinley-Rawls Creek Alternative Revision: Saluda River Sewerline Segment</em></td>
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<td>Caballero</td>
<td>1983</td>
<td><em>Relocation of Ramps and Frontage Rds. at the I-20/ US 378 Intersection</em></td>
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<tr>
<td>Trinkley</td>
<td>1985</td>
<td><em>Archaeological Survey of the I-126/ Greystone Blvd. Interchange Improvements</em></td>
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<td>Jordan and Butler*</td>
<td>1997</td>
<td><em>Archaeological Reconnaissance and Architectural Survey of the SC 6 Road Improvements Project, Lake Murray, Lexington County</em></td>
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<td>Harvey and Poplin*</td>
<td>2000</td>
<td><em>A Cultural Resources Overview of the Three Rivers Greenway Project, Lexington and Richland County</em></td>
<td>38RD226</td>
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<td>Bridgman and Harvey*</td>
<td>2001</td>
<td><em>Intensive Archaeological Survey of SC Route 60 Improvements Project, Lexington County</em></td>
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<td>Trinkley and Southerland</td>
<td>2001</td>
<td><em>Cultural Resource Survey of the SCE&amp;G Saluda Dam Complex, Lexington County</em></td>
<td>38LX455</td>
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<tr>
<td>Fletcher and Salo*</td>
<td>2004</td>
<td><em>Cultural Resource Survey of the Lucius Road CMRTA Tract</em></td>
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<td>Green et al.</td>
<td>2007</td>
<td><em>Stage II Archaeological Investigations of the Saluda Hydroelectric Project Area, Lexington, Newberry, Richland, and Saluda Counties,</em></td>
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<td>Norris and Grunden</td>
<td>2009</td>
<td><em>Phase I Archaeological Survey of Approximately 125 Acres on Corley Mill Road, Lexington County</em></td>
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<tr>
<td>Pappas and Bailey*</td>
<td>2011</td>
<td><em>Phase I Archaeological Resources Survey of VCS2-Lake Murray 230 kV Line No. 2/ St. George 230 kV Line No. 1 Corridor, Fairfield, Lexington, Newberry, and Richland Counties</em></td>
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<td>Baluha and Kitchens*</td>
<td>2012</td>
<td><em>Cultural Resources Survey of the Saluda 230/115 kV Substation Property, Lexington County</em></td>
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<tr>
<td>Pappas*</td>
<td>2012</td>
<td><em>Technical Memorandum for Record of No Significant Cultural Findings; Phase I Archaeological Resources Survey of the SCE&amp;G VCS2-St. George 1 and 2 Line 1-Mile Extension, Richland County</em></td>
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<td>Baluha and Bailey*</td>
<td>2013</td>
<td><em>An Archaeological Resources Survey of SCE&amp;G’s VC Summer St. George 230 kV Lines 1 and 2</em></td>
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Table 4.2 Previously Identified Archaeological Resources within 0.5 miles of the APE. Sites near the APE are italicized.

<table>
<thead>
<tr>
<th>Site</th>
<th>Cultural Affiliation</th>
<th>Description</th>
<th>NRHP Recommendation</th>
<th>Reference</th>
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<td>38LX7 (Hook Site)</td>
<td>Early to Middle Archaic; Woodland</td>
<td>Artifact scatter</td>
<td>Not Eligible/Further Work Not Evaluated/Further Work</td>
<td>Stephenson (1972); Baluha and Bailey (2013)</td>
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<td>38LX25</td>
<td>Archaic</td>
<td>Lithic scatter</td>
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<td>Trinkley (1980)</td>
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<td>38LX147</td>
<td>Early Archaic; General Prehistoric</td>
<td>Lithic scatter</td>
<td>Not Eligible/Further Work Not Evaluated/Further Work</td>
<td>Drucker (1977)</td>
</tr>
<tr>
<td>38LX148</td>
<td>General Prehistoric</td>
<td>Artifact scatter</td>
<td>Not Eligible</td>
<td>Drucker (1977)</td>
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<tr>
<td>38LX212</td>
<td>Middle Archaic; Early Woodland, General Prehistoric; 20th c.</td>
<td>Lithic scatter</td>
<td>Not Eligible/Possible Further Work Not Eligible</td>
<td>Trinkley (1980); Baluha and Bailey (2013)</td>
</tr>
<tr>
<td>38LX238</td>
<td>General Prehistoric</td>
<td>Artifact scatter</td>
<td>Not Eligible</td>
<td>Caballero (1983)</td>
</tr>
<tr>
<td>38LX256</td>
<td>General Prehistoric</td>
<td>Artifact scatter</td>
<td>Potentially Eligible</td>
<td>Caballero (1983)</td>
</tr>
<tr>
<td>38LX279</td>
<td>Archaic</td>
<td>Lithic scatter</td>
<td>Potentially Eligible</td>
<td>Jordan and Butler (1997); Bridgman and Harvey (2001); Trinkley and Southerland (2001)</td>
</tr>
<tr>
<td>38LX410</td>
<td>19th-20th c.</td>
<td>Cemetery</td>
<td>Recommended Eligible</td>
<td>Bridgman and Harvey (2001); Trinkley and Southerland (2001)</td>
</tr>
<tr>
<td>38LX434</td>
<td>20th c.</td>
<td>Artifact scatter</td>
<td>Not Eligible</td>
<td>Bridgman and Harvey (2001); Trinkley and Southerland (2001)</td>
</tr>
<tr>
<td>38LX435</td>
<td>General Prehistoric</td>
<td>Lithic scatter</td>
<td>Not Eligible</td>
<td>Bridgman and Harvey (2001); Trinkley and Southerland (2001)</td>
</tr>
<tr>
<td>38LX436</td>
<td>General Prehistoric; 20th c.</td>
<td>Artifact scatter</td>
<td>Not Eligible</td>
<td>Bridgman and Harvey (2001); Trinkley and Southerland (2001)</td>
</tr>
<tr>
<td>38LX437</td>
<td>General Prehistoric</td>
<td>Lithic scatter</td>
<td>Not Eligible</td>
<td>Bridgman and Harvey (2001); Trinkley and Southerland (2001)</td>
</tr>
<tr>
<td>38LX438</td>
<td>General Prehistoric</td>
<td>Lithic scatter</td>
<td>Not Eligible</td>
<td>Bridgman and Harvey (2001); Trinkley and Southerland (2001)</td>
</tr>
<tr>
<td>38LX0439</td>
<td>General Prehistoric</td>
<td>Lithic scatter</td>
<td>Not Eligible</td>
<td>Bridgman and Harvey (2001); Trinkley and Southerland (2001)</td>
</tr>
<tr>
<td>38LX0440</td>
<td>20th c.</td>
<td>Refuse dump</td>
<td>Not Eligible</td>
<td>Bridgman and Harvey (2001); Trinkley and Southerland (2001)</td>
</tr>
<tr>
<td>38LX0452</td>
<td>Unknown</td>
<td>Unknown</td>
<td>Unknown</td>
<td>Bridgman and Harvey (2001); Trinkley and Southerland (2001)</td>
</tr>
<tr>
<td>38LX0453</td>
<td>Middle-Late Archaic</td>
<td>Lithic scatter</td>
<td>Not Eligible</td>
<td>Trinkley and Southerland (2001)</td>
</tr>
<tr>
<td>38LX0455</td>
<td>General Historic</td>
<td>Well</td>
<td>Not Eligible</td>
<td>Norris and Grunden (2009)</td>
</tr>
<tr>
<td>38LX0599</td>
<td>20th c.</td>
<td>Ceramic scatter</td>
<td>Not Eligible</td>
<td>Norris and Grunden (2009)</td>
</tr>
<tr>
<td>38RD20</td>
<td>General Historic</td>
<td>Artifact scatter</td>
<td>Not Eligible</td>
<td>Canouts and Harmon (1981)</td>
</tr>
<tr>
<td>38RD21</td>
<td>General Prehistoric</td>
<td>Lithic scatter</td>
<td>Not Evaluated</td>
<td>Pappas (2012)</td>
</tr>
<tr>
<td><strong>38RD22</strong></td>
<td>General Prehistoric</td>
<td><strong>Lithic scatter</strong></td>
<td><strong>Not Evaluated</strong></td>
<td><strong>Pappas (2012)</strong></td>
</tr>
<tr>
<td>38RD23</td>
<td>General Prehistoric</td>
<td>Lithic scatter</td>
<td>Not Evaluated</td>
<td>Pappas (2012)</td>
</tr>
<tr>
<td>38RD100</td>
<td>Paleoindian; Middle Archaic; General Prehistoric</td>
<td>Lithic scatter</td>
<td>Not Evaluated</td>
<td>Carillo (1976);</td>
</tr>
<tr>
<td>38RD140</td>
<td>Middle Archaic/General Prehistoric</td>
<td>Artifact scatter</td>
<td>Not Eligible</td>
<td>Carillo (1976); Tippett (1982); Pappas 2012</td>
</tr>
<tr>
<td>38RD141</td>
<td>General Prehistoric</td>
<td>Lithic scatter</td>
<td>Not Eligible</td>
<td>Carillo (1976)</td>
</tr>
<tr>
<td>38RD142</td>
<td>Possible Archaic</td>
<td>Lithic scatter</td>
<td>Not Eligible</td>
<td>Carillo (1976)</td>
</tr>
<tr>
<td>38RD200</td>
<td>General Prehistoric</td>
<td>Artifact scatter</td>
<td>Not Evaluated</td>
<td>Canouts and Harmon (1981)</td>
</tr>
<tr>
<td>38RD225</td>
<td>Late Archaic</td>
<td>Lithic scatter</td>
<td>Not Evaluated</td>
<td>Canouts and Harmon (1981)</td>
</tr>
<tr>
<td><strong>38RD226</strong></td>
<td>Late Archaic/Woodland</td>
<td><strong>Lithic scatter</strong></td>
<td><strong>Not Evaluated</strong></td>
<td><strong>Canouts and Harmon (1981)</strong></td>
</tr>
<tr>
<td>38RD228</td>
<td>General Prehistoric; 19th-20th c.</td>
<td>Artifact scatter; Tenant house</td>
<td>Not Evaluated</td>
<td>Canouts and Harmon (1981)</td>
</tr>
<tr>
<td>38RD276</td>
<td>Early Archaic/General Prehistoric</td>
<td>Lithic scatter</td>
<td>Not Eligible</td>
<td>Tippitt (1982)</td>
</tr>
<tr>
<td>38RD1185</td>
<td>19th-20th c.</td>
<td>Cemetery</td>
<td>Potentially Eligible</td>
<td>Trinkley and Hacker (2001)</td>
</tr>
<tr>
<td>(Elmwood Cemetery)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>38RD1277</td>
<td>20th c.</td>
<td>Artifact scatter</td>
<td>Not Eligible</td>
<td>Fletcher and Salo (2004)</td>
</tr>
<tr>
<td>38RD1278</td>
<td>20th c.</td>
<td>Artifact scatter</td>
<td>Not Eligible</td>
<td>Fletcher and Salo (2004)</td>
</tr>
</tbody>
</table>
Figure 4.1 Previously recorded archaeological sites within 0.5 miles of the APE (Irmo and Columbia North South, Carolina, ArcGIS 2009 United States Geological Survey [USGS] resolution 7.5 minute topographic quadrangles).
38RD226, located near the Segment 3 ROW; it was not relocated during the current survey and is presumed to have been destroyed or obscured by the construction of the river trail.

4.2 Previously Identified Cultural Resources in or near the APE
We examined records of all recorded archaeological sites located in or near the survey area (see Table 4.2). During the archaeological reconnaissance, we identified 37 archaeological sites, within 0.5-mile of the project corridor. Of these, only the aforementioned 38LX455; 38RD22 and 38RD226 are located in close proximity to the APE (cf. Moore 2013), but were not considered likely to be relocated in the field due to recent development within the corridor (i.e., the SCE&G landfill, I-126, and the Three Rivers Greenway River Trail, respectively).

Of the 37 sites in the vicinity:

- Twenty-one sites (56.8 percent) have been recommended ineligible for the NRHP and generally require no further management. This includes 38LX455 within the project ROW within (and presumably destroyed by) the SCE&G McMeekin Station landfill. Two other sites, 38LX7 and 38LX212 have also been recommended for further investigation. Site 38LX7, investigated recently by Baluha and Bailey (2013) has been cleared for cultural resources management within the SCE&G Segment 2 ROW (see below).

- Eleven sites (29.7 percent) have not been formally evaluated. However, several of these (e.g., 38DR21-23), have been recently assessed and have likely been destroyed by modern developments (see below). These include sites 38RD22 and 38RD226 which are located near the project APE. In many cases little is known about unevaluated sites outside of the information contained on the SCIAA site form. These sites were mostly registered over 30 years ago and some may have been registered by amateur archaeologists or local informants. Of note, sites 38LX25 and 38LX147 have been recommended to warrant further investigations in order to determine NRHP status.

- Three sites (8.1 percent) have been recommended potentially eligible, along with one (2.7 percent) site recommended eligible. The eligible site, 38LX410, is a historic cemetery located along SC Route 6, though this determination has been debated by investigators and not confirmed by SHPO (see below). The potentially eligible sites also include the Elmwood Cemetery, 38RD1185, registered as an archaeological site in 2001. The cemetery had already been listed as a NRHP site (96000984) as an architectural resource in 1996, but was considered by Trinkley and Hacker (2001) to be a “very large storehouse of bioarchaeological data.” Other NRHP listed properties in the vicinity include the Columbia Canal (79002392) which the ROW crosses, the Saluda Factory Historic District (73001718; Lee 1972; Trinkley 1996; 2001) to the south of Segment 3; these historic resources will be discussed in the historic architectural review report, submitted separately. Of note, the Saluda Dam and Power House (2430127), built in 1930, has been determined eligible for the NRHP but is not yet listed.

- Finally, one site (2.7 percent), 38LX452 is of unknown NRHP status; the site is of unknown type and function but was likely included in Trinkley and Southerland’s (2001) Saluda Dam investigations.

The nature of the proposed development will include soil disruption at previously specified pole locations along a currently cleared and graded route adjacent to an existing
transmission line. Direct impacts (pole location exaction) and indirect effects (existing transmission line) will be minimal in regard to all previously recorded sites in the region. It is expected that no previously recorded sites will be negatively affected either directly or indirectly by development.

Several sites near the project ROW have been recently assessed by Brockington. Site 38LX410 was investigated by Brockington during surveys along SC Route 6 (Jordan and Butler 1997; Bridgman and Harvey 2001). Pappas and Bailey (2011) revisited 38LX439 during a survey along the VCS2-Lake Murray 230 kV Line No. 2/St. George 230 kV Line No.1 Corridor. Pappas (2012) also revisited the locations of four previously identified archaeological sites (38RD21, 38RD22, 38RD23, and 38RD140) within an extension corridor of the VC Summer-St. George 230 kV. Sites 38LX7 and 38LX238 were re-located by Baluha and Bailey (2013) and found to extend into the Segment 2 ROW. In addition to numerous site revisits and assessments, Brockington has also registered Sites 38RD1277 and 1278 (Fletcher and Salo 2004) within 0.5 miles of the project: APE. These sites, and other notable archaeological resources, are described below.

Site 38LX410 was investigated as both an archaeological and an historic architectural (2430304) resource by Jordan and Butler (1997) and later by Bridgman and Harvey (2001) during a survey along SC Route 6. Site 38LX410/2430304 is an historic cemetery. Nine marked graves were identified by Jordan and Butler (1997), with dates of death ranging from 1877 to 1924. Identified individuals include Rebecca Monts, Julia Ann Corley, and John and Frances Gable Yninger. These surnames are affiliated with original Dutch Fork settlers. Although Jordan and Butler (1997) recommended 38LX410/2430304 not eligible for the NRHP, human remains and grave markers are protected under Code of Laws of South Carolina, Sections 16-17-590 and 16-17-600. Trinkley and Southerland (2001) revisited the historic cemetery as part of their Saluda Dam investigations and conversely recommended the site eligible for the NRHP. There has been no known concurrence with either recommendation.

Sites 38LX434 through 440 were also recorded by Trinkley and Southerland (2001) within 0.5 miles of the project ROW. Site 38LX434 is a light surface scatter of twentieth-century refuse, including whiteware, porcelain, and bottle glass. Site 38LX435 is a surface and subsurface scatter of seven quartz artifacts, including five flakes, one biface, and one biface fragment. Site 38LX436 is a surface and subsurface scatter of lithics and twentieth-century artifacts. Trinkley and Southerland (2001) recovered 11 artifacts from a very disturbed context. Site 38LX437 is a surface lithic scatter. Trinkley and Southerland (2001) recovered one rhyolite flake, one utilized chert flake, eight quartz flakes, and one quartz biface fragment. Site 38LX438 is a surface scatter of one chert flake and nine quartz flakes. Site 38LX439 is a surface scatter of one rhyolite flake, five quartz flakes, and two whiteware sherds. Site 38LX440 is a twentieth-century refuse dump. Trinkley and Southerland (2001) date the site to the 1980s. Trinkley and Southerland (2001) recommend these seven sites not eligible for the NRHP. Site 38LX439 was not relocated during a survey by Pappas and Bailey in 2011; the researchers note the area had been heavily disturbed.

Sites 38RD21-38RD23 were identified by the late Dr. Robert Wauchope during the early twentieth century; little or no information is known about these sites, and no NRHP recommendation was made. Wauchope reported the non-diagnostic lithic scatters to Dr. Robert Stephenson, former director and state archaeologist of the SCIAA. These sites were not evaluated for the NRHP. Lindsay (1971) submitted the state site form for the sites, but the sites were not assessed for the NRHP. As noted, 38RD22 is located near the western end of Segment
3. During field survey revisits to each of the above sites, Pappas (2012) recovered no cultural material or other evidence of the sites. Pappas (2102) determined it was likely the sites were razed due to clearing and roadway construction.

Site 38RD140-38RD142 are non-diagnostic lithic scatters identified by Carillo (1976) during an archaeological survey of proposed sewer lines along Rawls and Kinley Creeks, on the north bank of the Saluda River. Carillo (1976) recorded the three sites along the Saluda River immediately upstream from the Columbia Zoo. One of these sites (38RD140) is a low density scatter of chipped stone artifacts. This site was originally listed as not eligible when first recorded. Upon revisit by Pappas (2012), site 38RD140 could not be located; no cultural material or material otherwise related to the site could be found. It is likely this site has been destroyed either by clearing, grading, or roadway construction. The other sites identified by Carillo, 38RD141 and 38RD142, are located along the northern banks of the Saluda River. Sites 38RD141 and 38RD142 also consist of a chipped stone artifact scatter and were recommended not eligible for the NRHP.

Site 38RD276 was identified by Tippitt (1982) during a survey for a proposed sewer line ROW. Site 38RD276 is an Early Archaic lithic scatter recommended not eligible for the NRHP. Pappas (2012) recovered no artifacts from ground surface or ST proveniences in or near this site, approximately 30 m northeast of the VC Summer-St. George 230 kV survey segment.

Sites 38LX25 and 38LX212 were identified by Trinkley (1980) in an archaeological survey prior to the construction of the I-20 and I-26 Interchange. This investigation focused on the area located northeast of the northern limits of the project corridor. Site 38LX25 is a large Archaic occupation in the vicinity of the Saluda River and Robb Senn Branch (Trinkley 1980:5). The site was first recorded in 1970; Trinkley revisited it but did not find any evidence of prehistoric occupation. No cultural material was recovered. Trinkley noted considerable erosion and suspected the site to not have been accurately recorded, and, therefore, did not propose an evaluation. Trinkley suggested further survey work was necessary to ascertain Site 38LX25's location. Site 38LX212 is located on a hilltop overlooking the southern bank of the Saluda River. The site consists of lithic flakes, some lithic tool fragments, and sherd. During his investigations, Trinkley recorded a great deal of pithunt activities throughout the site. The site has been heavily damaged by erosion and cultivation. Trinkley recommended this site not eligible for the NRHP, though further work should be considered.

Site 38LX238 was also initially identified by Trinkley (1980) as a non-diagnostic artifact scatter (50-by-30 m) located just northeast of the Segment 2 project corridor and consists of a Pre-Contact lithic scatter located on a ridge top 375 meters west of the Saluda River, adjacent to McSwain Drive. Trinkley provides little information in his write-up of the site except the onsite conditions. At the time of survey, Trinkley recommended the site as not eligible for the NRHP based on the observation of severe topsoil erosion and the lack of intact features. He asserts that collection efforts performed during survey had adequately mitigated the site. Baluha and Bailey (2013) found materials attributed to this site during their survey of the VC Summer-St. George 230 kV corridor. Baluha and Bailey (2013) excavated ten STs at 7.5- and 15-meter intervals, and one 50-by-50-cm unit in and around the SCE&G easement at 38LX238; six of these STs produced artifacts. Investigators recovered 133 artifacts from 38LX238. These include 132 Pre-Contact lithic artifacts and one Post-Contact clear machine-made bottle glass fragment. Site 38LX238 displays a broad range of lithic artifact types, indicative of lithic tool production and maintenance activities. Investigators recovered no tools or temporally diagnostic artifacts. These factors suggest that 38LX238 functioned primarily as a lithic tool production site. The high
number of translucent quartz suggests that visitors to the site were exploiting locally available quartz cobbles. It is likely that 38LX238 was visited on numerous occasions during an indeterminate Pre-Contact period. In and around 38LX238, however, road construction, landscaping, and powerline construction and maintenance activities have disturbed the archaeological deposits and exacerbated erosion. Additional investigation of 38LX238 is unlikely to generate information beyond the period of use and the presumed function(s) presented above. Therefore, Baluha and Bailey (2013) recommended additional management of this portion of 38LX238 is not warranted.

Site 38LX7, the Hook Site, is located approximately 0.25 mile northwest of the project corridor on a ridge top overlooking the southern bank of the Saluda River east of McSwain Drive in Lexington County (Stephenson 1972:111). The site is recorded as an Archaic lithic scatter. The site was visited on numerous occasions in the 1960s and 1970s and has produced sherds, stone artifacts, and one large polished carved conch shell. Local informants suggest that the site has been looted for many years. The site is listed as having a not eligible NRHP evaluation. Baluha and Bailey (2013) found materials attributed to this site during their survey of the VC Summer-St. George 230 kV corridor. Baluha and Bailey’s (2013) revised site boundaries measure 90-by-30 meters, with excellent surface visibility (76–100 percent) in the SCE&G easement and poor (1–25 percent) in the wooded areas at the time of the field investigations. At 38LX7 the SCE&G easement is partially eroded and there is recently dumped modern refuse and an abandoned vehicle in and around the site. Brockington (Baluha and Bailey 2013) excavated 14 STs at 15-meter intervals in and around 38LX7; eight of these STs produced artifacts. In addition, one 50-by-50 cm ST was excavated in the SCE&G easement which exposed disturbed soils and bedrock within 20 cm of the surface. Investigators recovered artifacts from the ground surface and 0–65 cm. None of the STs exposed subsurface cultural features. Ninety-two Pre-Contact artifacts were recovered from 38LX7. Site 38LX7 displays a broad range of lithic artifact types, indicative of lithic tool production and maintenance activities. The plain, coarse sand-tempered sherd indicates an indeterminate Woodland period occupation. A Morrow Mountain I hafted biface indicates a Middle Archaic period occupation. It is likely that 38LX7 was visited on numerous occasions during the Middle Archaic, most likely to exploit the resource availed in the Lower Saluda River. These resources probably include river cobbles as well riverine flora and fauna. However, within the SCE&G easement the artifacts do not occur in concentrations sufficient to interpret activities that occurred at the site. Within the SCE&G easement, the site has been disturbed by powerline corridor maintenance and recreational activities, which have exacerbated erosion. Given the disturbance and prior looting 38LX7 does not have the potential to contain a substantial artifact assemblage and/or intact cultural features. Therefore, Baluha and Bailey (2013) recommended that additional management of this portion of 38LX7 is not warranted.

Sites 38RD1277 and 1278 were registered by Fletcher and Salo (2004) during a survey of a Central Midlands Regional Transit Authority (CMRTA) property along Lucius Road near the eastern project terminus. These sites were both scatters of twentieth-century artifacts and were recommended ineligible for the NRHP.
5.0 RESULTS AND RECOMMENDATIONS

5.1 Introduction
During archaeological survey of the 7.8-mile long Lake Murray-Lyles 230 kV Line (Segments 1 and 3) corridor, Brockington examined 373 survey ST locations (Figure 5.1). Additional excavations were conducted within 38LX636, the new archaeological site identified during the survey. STs were not placed within the SCE&G McMeekin Station landfill or within heavily disturbed or inundated areas, particularly near the existing electrical stations at the project’s east and west termini. However, where ST locations were not excavated, a thorough visual inspection of the area was completed to search for surface artifacts or cultural features.

Three previously identified archaeological sites (38LX455, 38RD22 and 38RD226) located in or near the project easement, were not re-located in the field. These have likely been destroyed by modern developments within the corridor:

Site 38LX455 is currently located within the SCE&G McMeekin Station landfill. The site is a quartzite well dating to the twentieth century. When recorded by Trinkley and Southerland (2001), the soil in this area had already been excavated, truncating the top three feet of the shaft. The remaining feature was isolated and without associated artifacts. Due to the extensive disturbance this area was not shovel tested during the current survey. This site, which was recommended ineligible by Trinkley and Southerland (2001), has been presumably destroyed by the construction of the landfill. No further cultural resources management for this site is required.

Site 38RD22 is located near the western end of Segment 2. Pappas (2012) attempted to relocate evidence of this prehistoric lithic scatter during a survey in advance of the VCS-2 St. George 1 and 2 230 kV transmission line corridor. Archaeologists during the current investigations also failed to identify any cultural material in this area. Pappas (2012) assumed 38RD22 had been obscured or destroyed by modern development in this area such as construction of the I-126 road corridor and associated utilities. Although this site has not been formally evaluated for the NRHP, any evidence of this site, should it still exist, would have been heavily disturbed by these developments. Brockington therefore recommend this site be considered ineligible for the NRHP, and that no further management is required.

Site 38RD226 is located on east bank of the island created by the Columbia Canal, near the transmission ROW that crosses over the Broad River. This area was shovel tested during the current investigations but no evidence was found for this Late Archaic/Woodland lithic scatter. Any portions of this site that possibly extended into the project area would have been destroyed or obscured by the construction of the Three River Greenway’s River Trail, which dominates the island in this area. Although, this site has not been formally evaluated for the NRHP, any evidence of this site, should it still exist would have been heavily disturbed by these developments. Brockington therefore recommends this site also be considered ineligible for the NRHP, and that no further management is required.

Also notable within the project corridor are portions of the Woodridge Memorial Cemetery identified just east of the easternmost of two Corley Mill Road ROW crossings (north of Riverchase Drive). Although the cemetery property is within the ROW, no interments are located with the APE. However, maintenance facilities associated with the cemetery are within the ROW (Figure 5.2); this cemetery dates to 1976 and is not of historic age. It is therefore not
Figure 5.1e Location of ST locations examined within the transmission line ROW (2005 USGS 1 m Resolution Digital Orthographic Quadrangle Imagery).
considered NRHP-eligible. However, cemeteries are protected from disturbance and desecration by South Carolina laws,

- Code of Laws of South Carolina, Section 16-17-590. Mutilation of monument or tombstone, and
- Code of Laws of South Carolina, Section 16-17-600. Destruction of graves and graveyards.

Regardless, the current proposed undertaking for improvement of the Lake Murray-Lyles 230 kV Line (Segments 1 and 3) corridor is not anticipated to effect human burials associated with this cemetery.

Below Brockington describes and provides NRHP assessments for 38LX636, the newly identified archaeological site.
Site 38LX636 is a surface scatter of Pre-Contact ceramic and lithic artifacts located on a small terrace that overlooks a minor creek (approximately 25 m to the west) that drains north into the Saluda River one-half mile to the north (Figures 5.3-5.6). South of the transmission line, this stream has been impounded to form a small pond. Residential houses along Sunbury Loop, about 100 m to the southeast, have recently been constructed. The site is accessed from the ROW’s Davega Road crossing 200 m to the west. The site measures 15-by-25 meters, oriented east-west. Surface visibility at the site was poor(<25 percent), due to the moderate primary growth of briars, weeds and wetland grasses that have encroached on the previously clear-cut corridor.

The site was identified via a positive ST located approximately 10 m south of the project center line, placed in the center of the terrace. This ST produced 14 pieces of stone tool making debitage (13 quartz; one chert), and two residual, eroded sherd of pottery. Using the original positive ST as a datum (N500/E500), additional STs were excavated in cardinal directions surrounding the artifact find spot to delineate site boundaries. Twelve additional STs were excavated, of which three were positive for 21 additional pieces of debitage (two quartzite; 19 quartz). Two consecutive negative shovel tests at 7.5-meter intervals define the northern, western, and eastern site boundaries; the site extends south to the fenced property line of the new subdivision houses, which approximate the southern edge of the ROW. The site boundaries were not pursued into these private backyards and may extend outside the project ROW. An additional 50-by-50 cm test was excavated near the center of the site, between N500/E500 and N507.5/E500. A total of 92 artifacts, including an isolated historic whiteware ceramic and a quartzite projectile point and a quartz core, from the first level of topsoil (0-10 cm). Two pieces of possible FCR (10-30 cm), and 87 pieces of debitage (0-30 cm) were also recovered.

Soils across 38LX636 are defined by the USDA (2013; Lawrence 1976) as Georgeville very fine sandy loam, 6 to 10 percent slopes (GeC). Soils profiles identified within the site are comparable to this pedon. The topsoil (Ap horizon) typically is an olive brown (2.5Y 4/4) fine sandy loam extending 15-30 cm below the surface. This is underlain by a compact yellowish red (5YR 4/6) clay loam subsoil (Bt1 horizon) typically extending through the maximum depth of excavation, 50 cm below the surface. Artifact finds were restricted to the upper topsoil stratum. Minor disturbances to the site have been caused primarily by landscaping, powerline construction and maintenance activities within the corridor including guy wires staked within the
Figure 5.3 Location of Site 38LX636 (Irmo, South, Carolina, ArcGIS 2009 USGS resolution 7.5 minute topographic quadrangles).
Figure 5.4 Plan of 38LX636.
Figure 5.5 General view across Site 38LX636, looking east along transmission line corridor.

Figure 5.6 General view from center of 38LX636 west towards unnamed creek and Davega Road. Sunbury Loop subdivision is to the left.
site boundaries (see Figure 5.4). Soils beyond the limits of the defined site are comprised of mixed Ap/Bt1 deposits overlying truncated subsoil, indicating soils that have been likely graded and redeposited with the construction of the transmission line and possibly the nearby earthen dam, as well.

A total of 129 artifacts were recovered from 38LX636; no artifacts were recovered from surface proveniences. Table 5.1 summarizes the artifacts recovered from all proveniences at 38LX636. Artifacts include two (1.6 percent) prehistoric ceramics, one (0.8 percent) historic ceramic (whiteware), and two (1.6 percent) pieces of FCR along with and 124 (96 percent) lithic artifacts. Both prehistoric ceramics are residual (frangible and unidentifiable) sherds. Neither of the ceramic artifacts is temporally diagnostic. Lithic artifacts include a multidirectional quartz core and a distal un-typed quartzite projectile point fragment.

The 122 pieces of flaked stone debitage include several material types: translucent quartz (n=107; 88 percent); quartzite (n=10; 8.2 percent); Coastal Plain chert (n=3; 2.6 percent); milky quartz (n=1; 0.8 percent) and unidentified chert (n=1; 0.8 percent). The quartz debitage is largely made up of flake fragments (63 percent; n=77) or shatter (29 percent; n=35) for which a reduction platform or other diagnostic features cannot be defined. The fragmentary nature of the assemblage may be in part due to post-depositional impacts to the topsoil. A quarter (25 percent, n=20) of these fragments can be minimally identified as bifacial reduction flakes. Shatter is typically reflective of initial raw material reduction into a usable or more portable form; as a whole only one (.8 percent) piece of debitage (translucent quartz flake fragment) has remaining cortex indicating early stage reduction. Ten (8.2 percent) whole flakes (one Coastal Plain chert; nine translucent quartz) can be identified and are also a product of bifacial reduction. There are no pressure or thinning flakes indicative of late stage tool production or resharping. Discounting the un-typable flake fragments the debitage is slightly weighted to early stage reduction (n=36 [35 shatter; one cortical flake fragment]; 55 percent) compared to later stages of tool production (n=30 [10 non-cortical bifacial reduction flakes; 20 non-cortical bifacial reduction flake fragments]; 45 percent).

Brockington assessed the NRHP eligibility of 38LX636 with respect to NRHP Criterion D, its ability to add significantly to our understanding of the regional prehistory of central South Carolina and the Santee River drainage. Site 38LX636's artifact assemblage consists primarily of lithic debitage, dominated by flake fragments and shatter with small amounts of residual pottery sherds. No temporally diagnostic artifacts were recovered, although given the minimal evidence of pottery, the site presumable dates to after the Middle Archaic subperiod (3000+ BC). At best, the site may represent a short term campsite or a small resource procurement locus, such as to take advantage of plant and animal sources in the wetlands surrounding the stream, or perhaps extract lithic raw materials from the creek bed. However the significant amount (n=30; 45 percent) of non-cortical flakes or flake fragments indicate later stages of tool production and not initial reduction (n=36; 55 percent) as at a raw material procurement site.

Regardless, while this small landform containing the site appears largely intact, in and around 38LX636, modern development landscaping, and powerline construction and maintenance activities have likely truncated the site deposits both horizontally and vertically. Though site deposits show a moderate density of material, Site 38LX636 is limited in horizontal extent by these disturbances and is confined to a shallow topsoil horizon. Given the unstratified, non-diagnostic nature of the deposits, additional investigation of 38LX636 is unlikely to generate information beyond the period of use and the presumed function presented above. Therefore,
Table 5.1 Summary of artifacts from site 38LX636.

<table>
<thead>
<tr>
<th>Class</th>
<th>Type</th>
<th>Description</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prehistoric</td>
<td>Unknown Temper</td>
<td>Residual Sherd</td>
<td>2</td>
</tr>
<tr>
<td>Ceramics</td>
<td></td>
<td>3/4 inch Flake Fragment</td>
<td>1</td>
</tr>
<tr>
<td>Coastal Plain</td>
<td>Chert</td>
<td>Non-Cortical Bifacial Reduction 1/2 inch</td>
<td>1</td>
</tr>
<tr>
<td>Chert</td>
<td></td>
<td>Flake</td>
<td></td>
</tr>
<tr>
<td>Milky Quartz</td>
<td></td>
<td>Non-Cortical Bifacial Reduction 1/2 inch</td>
<td>1</td>
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<tr>
<td></td>
<td></td>
<td>Flake Fragment</td>
<td></td>
</tr>
<tr>
<td>Quartzite</td>
<td></td>
<td>1 inch Shatter</td>
<td>2</td>
</tr>
<tr>
<td>Prehistoric</td>
<td></td>
<td>1/2 inch Flake Fragment</td>
<td>1</td>
</tr>
<tr>
<td>Flaked Stone</td>
<td></td>
<td>3/4 inch Flake Fragment</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Non-Cortical 1/2 inch Flake Fragment</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Non-Cortical 1/4 inch Flake Fragment</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Projectile Point</td>
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</tr>
<tr>
<td>Translucent</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Quartz</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>1/4 inch Flake Fragment</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1/4 inch Shatter</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3/4 inch Flake Fragment</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Core Fragment</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cortical Bifacial Reduction 3/4 inch Flake Fragment</td>
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<tr>
<td></td>
<td></td>
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<td>Non-Cortical 1/2 inch Flake Fragment</td>
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<td></td>
<td></td>
<td>Non-Cortical 1/4 inch Flake Fragment</td>
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<td></td>
<td>Non-Cortical 3/4 inch Flake Fragment</td>
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<tr>
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<td>Non-Cortical Bifacial Reduction 1/2 inch</td>
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<td>Non-Cortical Bifacial Reduction 1/2 inch</td>
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<td>Non-Cortical Bifacial Reduction 3/4 inch</td>
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<td>Flake</td>
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<td></td>
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<tr>
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<td></td>
<td>Non-Cortical Bifacial Reduction 1/4 inch</td>
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<tr>
<td></td>
<td></td>
<td>Flake Fragment</td>
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</tr>
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<td>Historic</td>
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<tr>
<td>Total</td>
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<td></td>
<td>129</td>
</tr>
</tbody>
</table>
Brockington recommends Site 38LX636 ineligible for the NRHP; additional management of this portion of 38LX238 is not warranted.

5.2 Project Summary
The week of September 9, 2013, Brockington completed archaeological resources survey of the 7.8-mile Lake Murray-Lyles 230 kV Line (Segments 1 and 3) corridor in Lexington and Richland Counties, South Carolina. The archaeological survey of the transmission line ROW identified no significant cultural resources within the APE.

These investigations identified one previously unknown archaeological resource, Site 38LX636, a small prehistoric artifact scatter of indeterminate age. Brockington recommends this site is not eligible for the NRHP.

Three previously identified archaeological sites (38LX455, 38RD22 and 38RD226) located in or near the project easement, were not relocated in the field. These have likely been destroyed by modern developments within the corridor, and, as such, Brockington recommends they are also considered not eligible for the NRHP.

Given these recommendations, there are no historic archaeological properties within the Lake Murray-Lyles 230 kV Line (Segments 1 and 3) corridor which require further cultural resources management. Further, given the level of effort undertaken in the subsurface survey and the previous disturbance to the ROW additional, undiscovered archaeological resources, should they exist within the APE, are likely to be small (<30 m diameter), NRHP ineligible scatters which would not require additional management actions. Based on the absence of cultural resources from the survey area, Brockington and Associates recommends clearance in regards to cultural resources and no further cultural resource work is required.

However, Brockington recommends that care be taken not to disturb the Woodridge Memorial Cemetery, portions of which extend into the ROW. While this cemetery is not of sufficient historic age (>50 years) to be considered eligible under NHPA, cemeteries are protected from disturbance and desecration by South Carolina law (Sections 16-17-590 and 600). However, no interments are located within the ROW and project actions are not anticipated to affect human burials.
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1707–1989 Unpublished papers of the Waring family of South Carolina. Originals at the South Carolina Historical Society, Call No. 0300.00.

Waring, John (compiler)

Watts, W.A.
1980 Late Quaternary Vegetation History at White Pond on the Inner Coastal Plain of South Carolina. Quaternary Research 10.

Whitehead, Donald R.


Whitehead, Ruth Holmes, and Carmelita A.M. Robertson

Widmer, Randolph J.
1976 Archaeological Investigation at the Palm Tree Site, Berkeley County, South Carolina. South Carolina Institute of Archaeology and Anthropology Research Manuscript Series 103. Columbia.

Willey, Gordon R., and Philip Phillips

Williams, Frances Leigh
Williams, George Walton

Williams, Mark, and Gary Shapiro (editors)

Zahniser, Marvin R.

Zierden, Martha, Jeanne Calhoun, and Debi Hacker Norton
Artifact Catalog

Brockingtons and Associates, Inc. uses the following provenancing system. Provenience 1 designates general surface collections. Numbers after the decimal point designates subsequent surface collections, or tranche. Provenience 2 to 200 designates shovel units. Controlled surface collections and 20 by 25 cm units are also designated by this provenance system. Provenience 201 to 600 designates 1 m unit data for testing purposes. Provenience 601 to 600 designates excavation units (1 by 2 m, 2 by 2 m, or larger). Provenience numbers over 600 designates features. For all provenience numbers except 1, the numbers after the decimal point designates 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, 601.2 is Excavation Unit 601, level 2. Feature samples are designated by a 01 added after the level. For example, 601.201 is the feature material from Excavation Unit 601, level 2.

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</table>

Page 3 of 3
APPENDIX B- 38LX636 SITE FORM
A. GENERAL INFORMATION
1. Site name: Site 1
2. USGS quadrangle: 77 maps
3. UTM: Zone 17 Easting 548702 Northing 2064012
4. Other map references:
5. Descriptive site type: Late scatter
   Prehistoric
   Historic
6. Archaeological survey
   Testing
   Excavation
7. Property owner:
8. Address:
9. Other site designations:
10. National Register of Historic Places status:
    Potentially eligible
    Probably not
    Additional work

B. ENVIRONMENT AND LOCATION
1. General physiographic province:
   Lower Coastal Plain
   Middle Coastal Plain
   Upper Coastal Plain
   Piedmont
   Blue Ridge Mountains
2. Landform location: stream terrace
3. On site soil type: sandy loam
4. Major river system: Pee Dee
5. Nearest river/stream: unnamed tributary to Saluda River 25 m W
6. Current vegetation:
   Grass/pasture
   Agricultural/crops
   Wetland/fresh water
   Wetlands/salt water
7. Description of groundcover:
   Absent
   Light
   Moderate
   Heavy

C. SITE CHARACTERISTICS
1. Estimated site dimensions: 15 meters N/S by 25 meters E/W
2. Site depth: 20 cm
3. Cultural features (type and number):
4. Presence of (circle):
   Midden
   Floral remains
   Faunal remains
   Shell
   Charcoal
5. Human skeletal remains: present
   Preservation: good
   Absent
6. General site description:

(Use in conjunction with handbook)
The following information should be provided on the site map: site boundaries, nearby topographic features, associated streams, modern cultural features, different land use types in site area, collection loci, test excavation loci, archaeological features and means of access (include north arrow and scale).

**MAP KEY**

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<tr>
<th>Map Key Description</th>
<th>Verbal Description of Location</th>
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<td>The site is located on SCE&amp;G transmission line east of Davega Road, North of Sunbury Loop.</td>
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### D. ARCHAEOLOGICAL COMPONENTS

| Paleo Indian | Middle Woodland | 17th century |
| Early Archaic | Late Woodland | 18th century |
| Middle Archaic | Mississippian | 19th century |
| Late Archaic | Unknown prehistoric | 20th century |
| Early Woodland | | Unknown historic |

### E. DATA RECOVERED

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<th>List material recovered</th>
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<td>2 residual sherds</td>
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(Attach additional artifact inventory sheets if needed)

### F. DATA RECOVERY METHODS

1. Ground surface: 0%
2. Number of person hours spent collecting (total hours X total people): 0
3. Description of surface collection methods:
   - grid collection
   - grab collection
   - controlled sampling
   - other (specify)
   - Extent: complete
   - Type: shovel tests at 7.6 m intervals

### G. MANAGEMENT INFORMATION

1. Present land use:
   - Agricultural
   - Forest
   - Fallow
   - Residential, low density
   - Commercial
   - Industrial
   - Other (specify)
G. MANAGEMENT INFORMATION (Continued)

2. Present condition/integrity of site:
   Intact
   Damaged
   ✓ Extent
   ✓ light
   of
   Moderate
   of
   Heavy
   Nature
   ✓ erosion
   Cultivation
   ✓ logging
   Construction/development
   ✓ vandalism
   Inundation
   Other (specify)

3. Potential impacts and threats to site:
   Potential threat
   ✓ none
   ✓ low
   Moderate
   ✓ high
   Nature of threat
   ✓ erosion
   Cultivation
   ✓ logging
   Construction/development
   ✓ vandalism
   Inundation
   Other (specify)

4. Recommendations for further work:
   ✓ survey
   ✓ testing
   ✓ excavation
   ✓ archival
   ✓ none
   Other

5. Reference:
   Historic/archival documentation
   ✓ Yes
   No
   Not Known
   Archaeological documentation
   ✓ Yes
   No
   Not Known

6. Additional management information/comments:

7. Location of existing collections:
   Brackington and Associates, Mount Pleasant, SC. Eventually to be archived with SCAAA.

8. Locations of photographs:
   Brackington and Associates, Mount Pleasant, SC. Eventually to be archived with SCAAA.

9. Location of special samples:
   Type of special samples:

Signature of observer: 
David M. Franz
Date: September 10, 2015
Subsequent visits:
Observer
Date
Observer
Date
Observer
Date
Newly Recorded Archaeological Site
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DAVID M. FRANZ, R.P.A.
PROJECT MANAGER

EDUCATION
2003 M.S. in Communication/Sociology, University of Louisiana at Lafayette
1997 B.S. in Anthropology/Archaeology, Mercyhurst College

CERTIFICATIONS
2012 Identification and Management of Traditional Cultural Places, National Preservation Institute
2012 Plan Development Process-Lite, Georgia Department of Transportation
2009 Applying the NEPA Process, Shipley Group
2008 Section 106 Essentials, Advisory Council on Historic Preservation
2008 Advanced Section 106 Training, Piedmont Institute

AREAS OF SPECIALIZATION
Historical/Colonial Archaeology
Human Remains Recovery
Video and Graphic Production

PROFESSIONAL SOCIETY MEMBERSHIP
Register of Professional Archaeologists
Society for Georgia Archaeology
Georgia Council of Professional Archaeologists

PROFESSIONAL POSITIONS
Project Manager, Brockington and Associates (2007-present)
Field Director, Circa, Inc. (2007)
Field Director, Institute for Long Island Archaeology (2004-2005)
Archaeologist, Center for American Archeology (1997)
Archaeological Technician, Mercyhurst Archaeological Institute (1993-1997)

ACADEMIC EXPERIENCE
Graduate Teaching Assistant – University of Louisiana at Lafayette, Dept. of Communication/Broadcasting (1999-2002)
Research Assistant - University of Louisiana at Lafayette, Dept. of Anthropology/Sociology (2000-2002)

PROFESSIONAL PRESENTATIONS
2006 Council for Maryland Archaeology, End of the Year Presentations, University of Maryland at College Park. Data Recovery Excavations at Site 18ST659, VXX Presidential Helicopter Facility, Naval Air Station Patuxent River, St. Mary's County, Maryland.
SELECT PROJECT EXPERIENCE

2013 Project manager and author of *Phase II Testing of Sites 1MA854, 1MA864, and 1MA1211 at U.S. Army Garrison Redstone Arsenal*, Madison County, Alabama. Prepared USAG Redstone Arsenal Directorate of Public Works (DPW) under a task order contract with the US Army Contracting Command, Aviation and Missile Contracting Center, Huntsville, Alabama.


2013 Principal Investigator for Phase I Cultural Resources Survey of the SML and SM Loop Class Change, Muscogee County, Georgia. Prepared by J. Futch and J. Corcoran for Eco-Systems, Inc., Atlanta, Georgia.


2011 Project manager and author of *Phase I Cultural Resources Survey for Stream and Wetland Mitigation Bank at Old Norcross Road, Gwinnett County, Georgia*. Prepared for Gwinnett County Department of Water Resources, Lawrenceville, Georgia and CH2M HILL, Atlanta, Georgia.


2010 Project manager and author of *Phase I Archaeological Survey of the Bonaire Substation Modifications, Houston County, Georgia*. Prepared for Georgia Transmission Corporation, Tucker, Georgia.


2009 Project manager and author of *Phases I Cultural Resources Survey of the 500-acre Initial Facilities Area for Chattahoochee State Park, Coweta County, Georgia.* Prepared for Georgia Department of Natural Resources.

2009 Project manager and author of *Phases I Archaeological Survey for the Proposed Chickamauga Sidewalk Improvements, Walker County, Georgia.* Prepared for Aquatera Engineering, LLC, Chattanooga, Tennessee and Georgia Department of Transportation.


2008 Project manager and author of Phase I Archaeological Survey of the Shoal Creek-Spool Springs 230kV - Oxford #4 Substation Loop, Gwinnett and Hall County, Georgia. Prepared for the Georgia Transmission Commission, Tucker, Georgia.
2007 Project manager and author of Archaeological Survey of the Proposed Clairmont Road Sidewalk Improvements, Dekalb County, Georgia. Report prepared for the Georgia Department of Transportation, Atlanta.
2006 Project archaeologist and principal author of National Register Eligibility Evaluations of Sites 18ST659 and 18ST754 and Data Recovery Excavations at Site 18ST659, VXX Presidential Helicopter Facility, Naval Air Station Patuxent River, St. Mary's County, Maryland. Submitted to U.S. Naval Air Station Patuxent River and NAVFAC Washington. DC. (Geo-Marine, Inc.)
2004 Project archaeologist and principal author of A Phase I Cultural Resource Survey of Spring Road Water Main Extension, Winchow Township, Camden County, New Jersey. Submitted to the New Jersey Pinelands Commission, New London. (Gannett-Fleming, Inc.)
2003 Project archaeologist and principal author of A Stage I Site Recognition Survey of the Old Bridge Municipal Utilities Authority, Genoa Sewer Installation/ Pump Station in Old Bridge Township, Middlesex County, New Jersey. Submitted to the New Jersey Department of Environmental Protection, Trenton. (Gannett-Fleming, Inc.)
December 10, 2013

Mr. Ralph Miller
Pike Energy Solutions, LLC
10101 Claude Freeman Dr.
Suite 100-W
Charlotte, North Carolina 28262
October 2013

RE: Cultural Resources Literature Review and Windshield Reconnaissance for the Proposed Lyles-Saluda River-Lake Murray 230 kV Line Lexington and Richland Counties, SC

Dear Ralph:

In August 2013, Brockington and Associates, Inc. contracted with Pike Energy Solutions, LLC to conduct a cultural resources literature review and an architectural windshield reconnaissance for the proposed Lyles-Saluda River-Lake Murray 230 kV Line Relocation, Lexington and Richland Counties, South Carolina (hereafter called Lyles-Saluda River-Lake Murray Study). Per the terms of the contract dated August 29, 2013 (Lake Murray-Lyles 230 kV Line Segments 1 and 3 (06757-000), the data collected during the earlier VCS2-St. George Line 1&2 effort was combined with data collected during the literature review and Phase I archaeological survey of the proposed Lake Murray-Lyles 230 kV Line (Franz 2013, forthcoming). The proposed Lyles-Saluda River-Lake Murray Study Areas are located in Lexington and Richland Counties, South Carolina in the vicinity of Columbia and consist of approximately 8.3 square miles. Segment 1, located to the west of previously investigated Segment 2, is 5.7 miles long, with a 100-foot wide right-of-way (ROW). Segment 3, located to the east of previously surveyed Segment 2, is 2.1 miles long with a 100-foot wide ROW. Both segments also include wider "flared" areas at the approach to existing substations. The research results outlined in this letter report provide information for planning purposes only and are not meant to serve as compliance with Section 106 of the National Historic Preservation Act or other state and/or federal legislation.

Literature Review, Architecture
We conducted a literature review for the Lyles-Saluda River-Lake Murray Study Areas to determine if any properties or sites had been recorded within the 2 kilometer data collection area. This research included a review of all previously recorded architectural resources located within the study area boundary on file at the South Carolina Department of Archives and History (SCDAH) in Columbia. The data, digitized on computer, include:

1. All aboveground resources recorded after 1989, including their National Register of Historic Places (NRHP) eligibility;
2. All cultural resources studies conducted since 1989;
3. All archaeological sites, structures, and districts that are listed on the NRHP.
We also conducted a search of the SCDAH Survey Finding Aid. The Survey Finding Aid is an electronic index that lists all cultural resources projects that have occurred in a given county. We reviewed the document for studies that took place before 1990. There are a few pre-1990 aboveground resources surveys in the study area; however, the data contained in these early studies were not collected using current survey methods and standards. Furthermore, the surveys are not comprehensive or reliable because the condition of many of the buildings surveyed likely has changed and many buildings not surveyed at that time because of age may now meet the minimum 50-year age requirement for survey. Structures recorded during these surveys were rarely assessed for NRHP eligibility and followed by a formal Determination of Eligibility (DOE) by the SCDAH. We did not include in the GIS database every structure surveyed prior to 1990. Structures and districts that were recorded prior to 1990 and that are listed on the NRHP would be included in our data.

As requested, for the literature review, we combined the Lyles-Saluda River-Lake Murray Study Area data with the data previously collected for the overlapping VCS2-St. George Line 1&2 Study Area. Together, that comprehensive study area encompasses approximately 29.3 square miles within Lexington and Richland Counties, SC. According to ArchSite, South Carolina’s online cultural resources GIS database, there are 15 site or district resources within the comprehensive Study Area (data from NRHP Polygons and Previously Recorded Architectural Polygons). SCDAH classifies these district resources as follows: 7 NRHP-listed resources (Elmwood Park Historic District, Columbia Historic District 1, Saluda Factory Historic District, Columbia Canal, Bellevue Historic District, Randolph Cemetery, and Elmwood Cemetery), 5 resources determined NRHP eligible (including 1 cemetery), and 3 determined not eligible. Where possible, NRHP-listed, eligible or potentially eligible resources should be avoided and visual effects evaluated during project planning.

In addition to district resources, Archsite reports that there are 27 previously recorded aboveground individual resources within the Study Area (data from NRHP Listed Resources and Previously Recorded Architectural Resources). SCDAH classifies these resources as follows: 3 NRHP-listed properties (Logan School, Wardlaw Junior High School, and North Columbia Fire Station No. 7), 2 properties determined NRHP-eligible, 3 properties determined potentially eligible (including 1 cemetery), and 19 properties have been determined not eligible (including 2 cemeteries). It should be noted that two of the individual resources listed on Archsite have duplicate site numbers (243-0281). Where possible, NRHP-listed, NRHP-contributing, eligible or potentially eligible resources should be avoided and visual effects evaluated during project planning. Please note that cemeteries, even if they are determined as ineligible for the NRHP, are afforded protection from direct disturbances by local ordinances and South Carolina state law.
Table 1. Classifications of Previously Recorded Multi-Property or District Architectural Resources (GIS data from shapefiles entitled NRHP Polygon and Previously Recorded Architectural Polygon)

<table>
<thead>
<tr>
<th>District Resource Classifications</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>NRHP-Listed</td>
<td>7</td>
</tr>
<tr>
<td>NRHP-Eligible</td>
<td>5 (including 1 cemetery)</td>
</tr>
<tr>
<td>Not Eligible</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

Table 2. Classifications of Previously Recorded Individual Architectural Resources (GIS point data from shapefiles entitled NRHP Listed Resources and Previously Recorded Architectural Resource)

<table>
<thead>
<tr>
<th>Individual Resource Classifications</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>NRHP-Listed</td>
<td>3</td>
</tr>
<tr>
<td>NRHP-Eligible</td>
<td>2</td>
</tr>
<tr>
<td>Potentially Eligible</td>
<td>3 (including 1 cemetery)</td>
</tr>
<tr>
<td>Not Eligible</td>
<td>19 (including 2 cemeteries)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>27</strong></td>
</tr>
</tbody>
</table>

**Literature Review, Archaeology**
As requested, for the literature review, we combined the Lyles-Saluda River-Lake Murray Study Area data with the data previously collected for the overlapping VCS2-St. George Line 1&2 Study Area. We conducted our archaeological site search using ArchSite. The ArchSite database provides information on cultural resources surveys as well as previously recorded archaeological sites. We updated the applicable VCS2-St. George Line 1&2 Study area data eligibility determinations where needed based on ArchSite information. Eighty-six previously recorded archaeological sites fall within the comprehensive study area boundary. Of the 86 previously recorded sites, 3 sites are eligible for the NRHP (including 1 cemetery), 18 were determined potentially eligible for the NRHP (including 7 cemeteries), 45 are not eligible for the NRHP (including 2 cemeteries), and 20 sites are listed as not assessed. Sites listed on the NRHP and sites determined eligible, potentially eligible, or not assessed for the NRHP should be avoided for physical impacts during project planning whenever possible. Not eligible sites need no further consideration.

Table 2. Classifications of Previously Recorded Archaeological Resources (GIS polygon data from shapefile entitled Previously Recorded Archaeological Sites)

<table>
<thead>
<tr>
<th>Archaeological Resource Classifications</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>NRHP-Eligible</td>
<td>3 (including 1 cemetery)</td>
</tr>
<tr>
<td>Potentially Eligible</td>
<td>18 (including 7 cemeteries)</td>
</tr>
<tr>
<td>Not Assessed</td>
<td>20</td>
</tr>
<tr>
<td>Not Eligible</td>
<td>45 (including 2 cemeteries)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>86</strong></td>
</tr>
</tbody>
</table>
**Windshield Reconnaissance**

On September 25-27, 2013, the project historian conducted a windshield reconnaissance of the Lyles-Saluda River-Lake Murray 230 kV (Segments 1 and 3) Study Areas. As outlined in National Register Bulletin #24, a windshield reconnaissance-level survey is useful in ascertaining “a general picture of the distribution of different types and styles [of architectural resources], and of the character of different neighborhoods” (Parker 1985:35-36). Windshield surveys are also useful for making preliminary assessments of eligibility based on the architectural integrity of properties, but not in ascertaining the historical associations a property might possess.

The Lyles-Saluda River-Lake Murray (Segments 1 and 3) Study Areas are located in Lexington and Richland Counties, South Carolina in the vicinity of Columbia and combined consist of approximately 8.3 square miles. The Segment 1 Study Area is located around one mile south of the Saluda River, and is approximately 4.7 square miles. The west end of the Segment 1 Study Area lies within Lake Murray, and extends east, across I-20 into West Columbia, SC. The Segment 3 Study Area is located primarily along the east side of the Congaree River, and is approximately 3.6 square miles. The Segment 3 Study Area is generally defined by Laurel Street in the south, Bull Street on the east, and Duke Avenue to the north. A small portion of the Segment 3 Study Area crosses the Congaree River north of Broad River Road (US Highway 176), and extends west, nearly to I-20. Much of the study area was traditionally used for agriculture, which continues in some of the more remote areas. Much of the building stock in the Study Areas consists of mid-twentieth century middle income housing and late-twentieth century modular homes, with a heavy concentration of suburban development servicing the west side of the City of Columbia. There is also substantial development along the Lake Murray shoreline. The Study Area is characterized by a variety of architectural types and styles and there is no one particular architectural theme or style.

The Lyles-Saluda River-Lake Murray 230 kV reconnaissance consisted of a vehicular inspection of architectural resources visible from all publicly accessible roads within the Study Areas. It is important to note that topographic and aerial maps often indicate properties located along private roads as well as abandoned and existing field roads. If a previously recorded property is found to be inaccessible, we reference current aerials to determine whether a building is extant. The purpose of our windshield reconnaissance was to:

1. Evaluate all previously recorded architectural resources (if any);
2. Locate architectural resources not previously recorded and that appear to meet the minimum fifty year age requirement for the NRHP, and
3. Identify potentially eligible NRHP properties.

The literature reviews for the Lyles-Saluda River-Lake Murray 230 kV Study Areas and the relevant section of the earlier VCS2-St. George Line 1&2 effort identified a total of 42 previously recorded above-ground resources (individual resources and districts) in the approximately 29.3 square mile comprehensive Study Area. These resources are indicated by both point data and polygons in the associated GIS data set (NRHP Listed Resource, NRHP Polygon, Previously Recorded Architectural Resource and Previously Recorded Architectural Polygon). The SCDAH classifies these resources as follows: 10 NRHP-listed resources, 7 resources have been determined NRHP eligible (including 1 cemetery), 3 resources that are potentially eligible for the
NRHP (including 1 cemetery), and 22 resources (including 2 cemeteries) that have been determined not eligible. During the windshield survey, we determined that 6 of the 42 previously recorded aboveground resources have been destroyed or are not extant. These include 2 that were classified as eligible (Samuel T. Lorick House and Leaphart-Harman House) and 4 that were classified as not eligible. We also determined that one resource classified as eligible (F.B. Schumpert Lumber Company) is now not eligible because the majority of the buildings are either not extant or are in a highly deteriorated state. During the windshield survey, we identified two previously recorded individual resources that have the incorrect addresses listed on Archsite. These evaluations are noted in the GIS data set. Whenever possible, it is recommended that NRHP listed, NRHP-eligible or potentially eligible properties should be avoided and visual effects evaluated during project planning.

During the windshield reconnaissance, we also recorded an additional 22 resources that appear to retain sufficient architectural integrity to be considered eligible or potentially eligible for inclusion in the NRHP. We also delineated a larger boundary, recognized by the City of Columbia, for the Earlwood District, which was previously recorded as eligible for the NRHP. We observed numerous other properties that appear to be 50 years old (thus, meeting the minimal standard for NRHP eligibility consideration) distributed throughout the study area; these are properties that would be recorded by an architectural historian during a standard Section 106 survey. Due to significant alterations or modifications, these properties appear to have lost their architectural integrity and may not meet the criteria of eligibility for listing on the NRHP under Criterion C. However, these properties might possess historical significance which could only be determined through archival research such as would be required for a Section 106 cultural resources survey. We did not attempt to plot each of these resources in our GIS dataset.

Table 3. Classifications of All Architectural Resources Within the Study Area Reflecting Evaluation of Previously Recorded Resources and Newly Recorded Resources Documented During Windshield Survey (GIS point and polygon shapefiles entitled NRHP Listed Resource, NRHP Polygon, Previously Recorded Architectural Resource, Previously Recorded Architectural Polygon, Windshield Survey Resource, and Windshield Survey Polygon)

<table>
<thead>
<tr>
<th>Resource Classifications Reflecting Findings of Windshield Survey*</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>NRHP-Listed</td>
<td>10</td>
</tr>
<tr>
<td>NRHP-Eligible</td>
<td>6</td>
</tr>
<tr>
<td>Potentially Eligible</td>
<td>23</td>
</tr>
<tr>
<td>Not Eligible</td>
<td>19**</td>
</tr>
<tr>
<td>Total</td>
<td>58</td>
</tr>
</tbody>
</table>

*Note: Previously recorded resources that are not extant have been excluded from this table.
**Note: Includes one resource that was previously recorded as eligible but was determined not eligible by windshield survey.
The index and detail maps (Figures 1-3) provided below detail the findings from both the comprehensive literature review and comprehensive windshield reconnaissance. The projection used to develop the map and shapefiles was NAD 1927 UTM Zone 17.

Should you have any questions regarding the GIS data or require any additional information on a particular property, please do not hesitate to send me an email (sheldonowens@brockington.org) or call (843) 881-3128.

With Best Regards,

Sheldon B. Owens, M.H.P.
Architectural Historian

References

Parker, Patricia L.