APPENDIX E CULTURAL, HISTORICAL, AND ARCHAEOLOGICAL RESOURCES

APPENDIX E-1 2023 STATE HISTORIC PRESERVATION OFFICE HISTORIC STRUCTURE SURVEY REPORT, KINGS MOUNTAIN MINING PROJECT, CLEVELAND COUNTY, ER 22-1248

North Carolina Department of Natural and Cultural Resources

State Historic Preservation Office

Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary D. Reid Wilson

Office of Archives and History
Deputy Secretary, Darin J. Waters, Ph.D.

September 27, 2023

Hannah Curry
SWCA Environmental Consultants
113 Edinburgh South Drive
Cary, NC 27511

hannah.curry@swca.com

Re: Historic Structure Survey Report, Kings Mountain mining project, Cleveland County, ER 22-1248

Dear Ms. Curry:

Thank you for your letter of July 27, 2023, transmitting the Historic Structure Survey Report (HSSR), "Historic Structures Survey for Kings Mountain, Cleveland County, North Carolina," prepared by SWCA for the Albemarle, U.S., Inc. We have reviewed the HSSR and offer the following comments.

While we concur that the following resources are eligible for listing in the National Register of Historic Places for the reasons listed in the HSSR, the report should be amended to provide clear boundary maps, descriptions, and justifications for both schools.

- CL0291, Park Grace School; eligible under Criterion A - education and Criterion C - architecture.
- CL0297, Compact School; eligible under Criterion A - education and Ethnic History.

Resources that appear to be eligible for the Register must be presented with a boundary map, boundary description, and boundary justification within their individual evaluation sections. The map at the end of the document showing tax parcels highlighted as "eligible" or "ineligible" is not a satisfactory proposed boundary map.

We also concur that the following forty-four properties are ineligible for listing.

SSN	Resource	SSN	Resource
• CL0242	Glass House	• CL1728	109 Timms Street
• CL1277	Falls-Dixon-Hambright House	• CL1732	127 Tin Mine Road
• CL1718	1321 S. Battleground Avenue	• CL1733	103 Beta Court
• CL1719	1325 S. Battleground Avenue	• CL1734	105 Beta Court
• CL1720	1327 S. Battleground Avenue	• CL1735	111 Beta Place
• CL1724	Albemarle Milling and Mining Complex	• CL1736	113 Beta Place
• CL1726	114 Raven Circle	• CL1737	115 Beta Place
• CL1727	109 School Street	• CL1738	119 Beta Place

SSN	Resource
• CL1739	107 Castlerock Road
• CL1740	131 Castlerock Road
• CL1741	311 Industrial Drive
• CL1743	323 Industrial Drive
• CL1746	106 Miracle Drive
• CL1747	107 Miracle Drive
• CL1748	106 Parkdale Court
• CL1749	203 Parkdale Circle
• CL1750	217 Parkdale Circle
• CL1752	221 Parkdale Circle
• CL1753	223 Parkdale Circle
• CL1755	227 Parkdale Circle
• CL1756	106 Parkgrace Road
• CL1757	1111 S. Battleground Avenue

SSN	Resource
• CL1758	124 Parkgrace Road
• CL1759	126 Parkgrace Road
• CL1760	128 Parkgrace Road
• CL1761	130 Parkgrace Road
• CL1762	132 Parkgrace Road
• CL1763	140 Parkgrace Road
• CL1764	142 Parkgrace Road
• CL1765	146 Parkgrace Road
• CL1766	114 Pennant Drive
• CL1767	117 Tin Mine Road
• CL1768	119 Tin Mine Road
• CL1770	139 Tin Mine Road
• CL1771	-- York Road
• CL1772	1050 York Road

We cannot concur that the following resources are eligible for the National Register because the report does not provide any substantive argument about the historic significance of these resources. Please address the concerns/recommended revisions discussed below.

- CL0240, Hostetler House
- CL1716, Commercial Building
- CL1728, House
- CL1729, House
- CL1742, House
- CL1751, House
- CL1754, House
- CL1769, House

For a resource to be eligible for the National Register, the resource must have historic integrity *and* historic significance. The investigator frequently assumes that because a resource retains good integrity, it is eligible for the National Register, without giving serious consideration to historic significance. This has resulted in numerous recommendations of eligibility based only on a property's having integrity.

In general, the report does not use comparable examples effectively. Comparable examples are guides or thresholds against which subject resources can be compared. The best comparable examples are resources that are already listed in the National Register or North Carolina's Study List. If no "like" resources in a related geographic area are designated in some way, then compare the subject resources to a selection of typical resources the investigator has seen throughout a related geographic area. Comparing a subject resource to other resources allows the investigator to place the subject resource on a scale, which should help facilitate the evaluation.

Furthermore, the investigator needs to compare subject resources to like resources: comparable examples are resources with historical uses, forms, styles, and/or materials that are like the subject resource. Comparing an auto repair shop to a church because they both have windows on the front elevation is not a useful comparison. That comparison does not tell the reviewer where the auto shop falls on the continuum of auto shops in Cleveland County. Comparing a Modernist church to a Modernist church that is listed in

the Register or the state Study List in the same county or region can be an effective way to demonstrate that the subject resource is or is not eligible.

Additionally, we cannot concur with the report's findings that the following churches are eligible for the National Register. Please address the concerns/recommended revisions discussed below.

- CL1717, Macedonia Baptist Church, which includes the parsonage and a baseball field
- CL1723, Galilee United Methodist Church
- CL1725, Adams Chapel AME Zion Church

The missing information includes an assessment of how each church meets or does not meet Criteria Consideration A regarding religious properties. The report also lacks the strong contextual arguments required to support the assertations that each of these churches has the historic significance necessary for National Register eligibility. Simply stating that a resource is the last of a type, particularly when the resource is something (a 1950s church) that occurs frequently in most North Carolian counties, is not solid footing for eligibility. The report's assertation that these churches represent post-war prosperity is not supported with a thorough examination of other post-war resources and a discussion of why or how a 1950s church's representation of post-war prosperity would rise to the level of significance necessary for National Register eligibility. Finally, declaring that a resource is the best example of a type or style without demonstrating that through comparison properties does not give the reviewer the information to concur with the investigator's conclusions.

Applying better comparable examples (CL1699 makes an excellent comparable example for Galilee United Methodist Church) will strengthen or undermine the report's argument, thus providing the necessary information to concur or not.

Finally, the two properties (CL1744 & CL1745) which could not be accessed due to ownership at the time of study, appear to be potentially accessible today. We recommend that staff make a second attempt to access and remove the previous owner's information from the report.

Please address the issues listed above and provide a revised digital copy of the revised HSSR to us for review and comment. Once approved, we will request a final hard copy of the report and any deliverables changed to reflect our recommended revisions. Contact Katie Harville, Environmental Review Specialist, with questions regarding deliverables.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-814-6579 or environmental.review@dncr.nc.gov. In all future communication concerning this project, please cite the above referenced tracking number.

Sincerely,

Renee Gledhill-Earley

for Ramona Bartos, Deputy
State Historic Preservation Officer

cc: Katie Harville, NC HPO katie.harville@dncr.nc.gov

APPENDIX E-2 PHASE I ARCHAEOLOGICAL SURVEY FOR THE PROPOSED KINGS MOUNTAIN MINING PROJECT, ARCHDALE TRACT, CLEVELAND COUNTY, NORTH CAROLINA

Phase I Archaeological Survey for the Proposed Kings Mountain Mining Project, Archdale Tract, Cleveland County, North Carolina

JANUARY 2024

PREPARED FOR

Albemarle, U.S., Inc.

PREPARED BY

SWCA Environmental Consultants

PHASE I ARCHAEOLOGICAL SURVEY FOR THE PROPOSED KINGS MOUNTAIN MINING PROJECT, ARCHDALE TRACT, CLEVELAND COUNTY, NORTH CAROLINA

ER-22-1248

Prepared for

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SWCA Project No. 70316

SWCA Cultural Resources Report No. 23-809

January 2024

ABSTRACT

Albemarle, U.S., Inc. (Albemarle), is proposing to resume and expand lithium mining activities for the Kings Mountain Mining Project on recently acquired private property in Cleveland County, North Carolina. The portion of the project discussed in this report will be referred to as the Archdale Tract.

Phase I archaeological survey activities were conducted in accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, found at 36 Code of Federal Regulations 800. The Phase I survey was also conducted in accordance with applicable federal and state guidelines and requirements, including the North Carolina Office of State Archaeology (OSA) *Archaeological Investigation Standards and Guidelines* (OSA 2023a).

SWCA Environmental Consultants (SWCA) conducted the Phase I archaeological fieldwork on September 18 and September 21, 2023. Fieldwork consisted of a visual inspection, pedestrian survey, and shovel testing of the project area. No previously recorded archaeological sites are located within the project area, and investigators did not identify any sites during the survey. SWCA has determined development of the Archdale Tract will have no adverse effect on historic properties, and no additional work is recommended for the current project area.

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CHAPTER 1. INTRODUCTION

SWCA Environmental Consultants (SWCA) conducted a Phase I archaeological investigation on behalf of Albemarle, U.S., Inc. (Albemarle), in support of the Kings Mountain Mining Project. Albemarle is proposing to resume and expand lithium mining activities on 131.2 acres (53.09 hectares), composed of one parcel recently acquired by Albemarle. The parcel is located in southeast Cleveland County, North Carolina, and is approximately 4.3 miles (6.9 kilometers [km]) southwest of the city of Kings Mountain, North Carolina (Figure 1-1 through Figure 1-3). The lead federal agency for the project is the U.S. Army Corps of Engineers. Due to federal involvement, the project must comply with Section 106 of the National Historic Preservation Act.

SWCA conducted the Phase I survey on September 18 and September 21, 2023. The goal of the Phase I survey was to identify any archaeological sites and high potential areas that may be affected by the proposed undertaking. Jeff Clarke (field director) conducted fieldwork with crew member Peyton Harrison. Dr. Kathryn Mohlenhoff also attended the first day of fieldwork for a site visit and meeting. Dr. Mohlenhoff oversaw report production, undertaken by herself as well as Jeff Clarke. During the survey, investigators identified no previously recorded or previously undocumented archaeological sites. Based on the results of the survey, SWCA determined no historic properties will be affected by the proposed undertaking, and no further work is recommended.

This report outlines the results of the Phase I survey for the project and is structured in accordance with the North Carolina Office of the State Archaeology (OSA) *Archaeological Investigations Standards and Guidelines* (Guidelines; OSA 2023a). The following sections summarize the environmental setting and archaeological and cultural background of the project area, followed by the methodology used during fieldwork, detailed results of the survey, and project management recommendations.

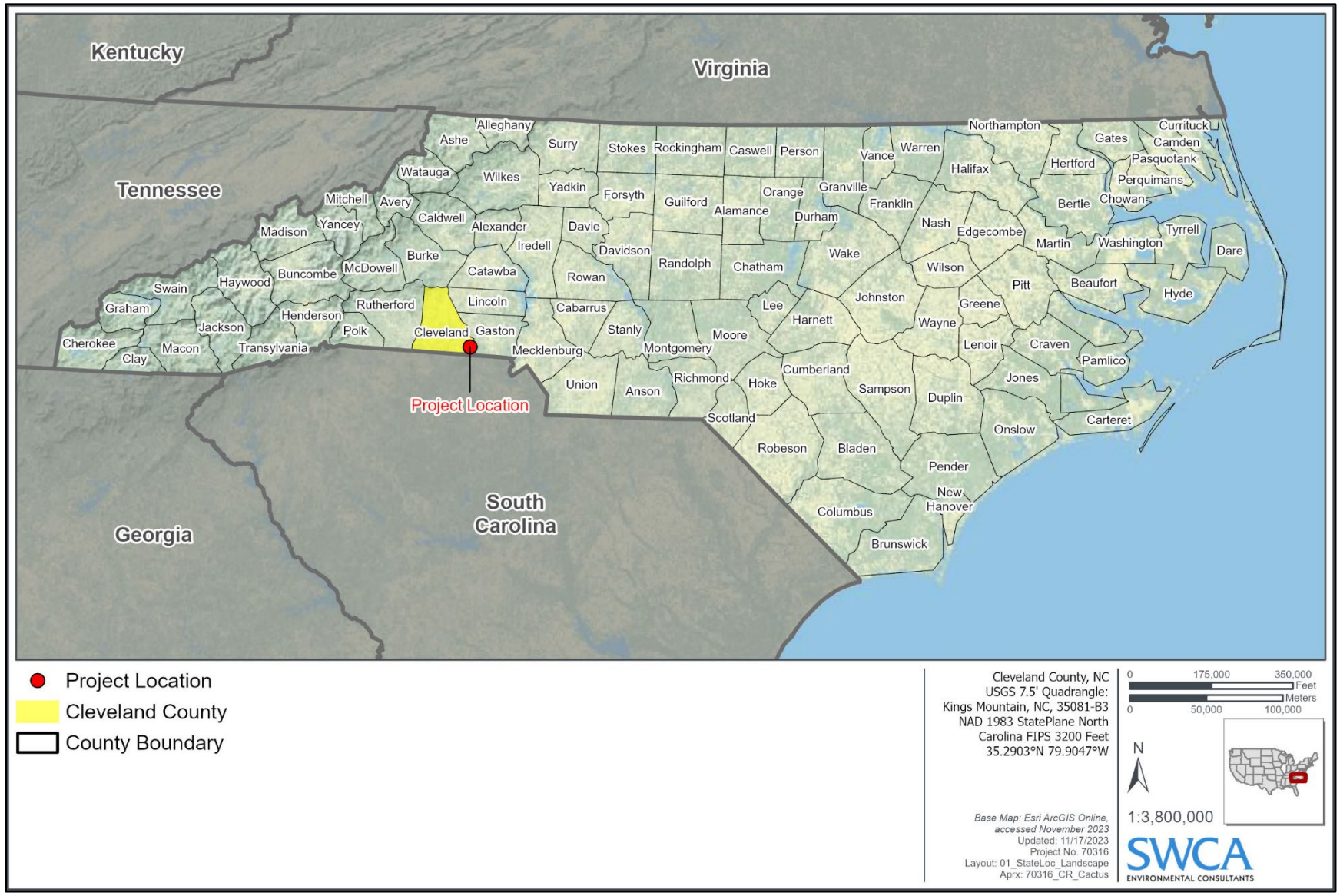

Figure 1-1. Proposed location of the project within Cleveland County, North Carolina.

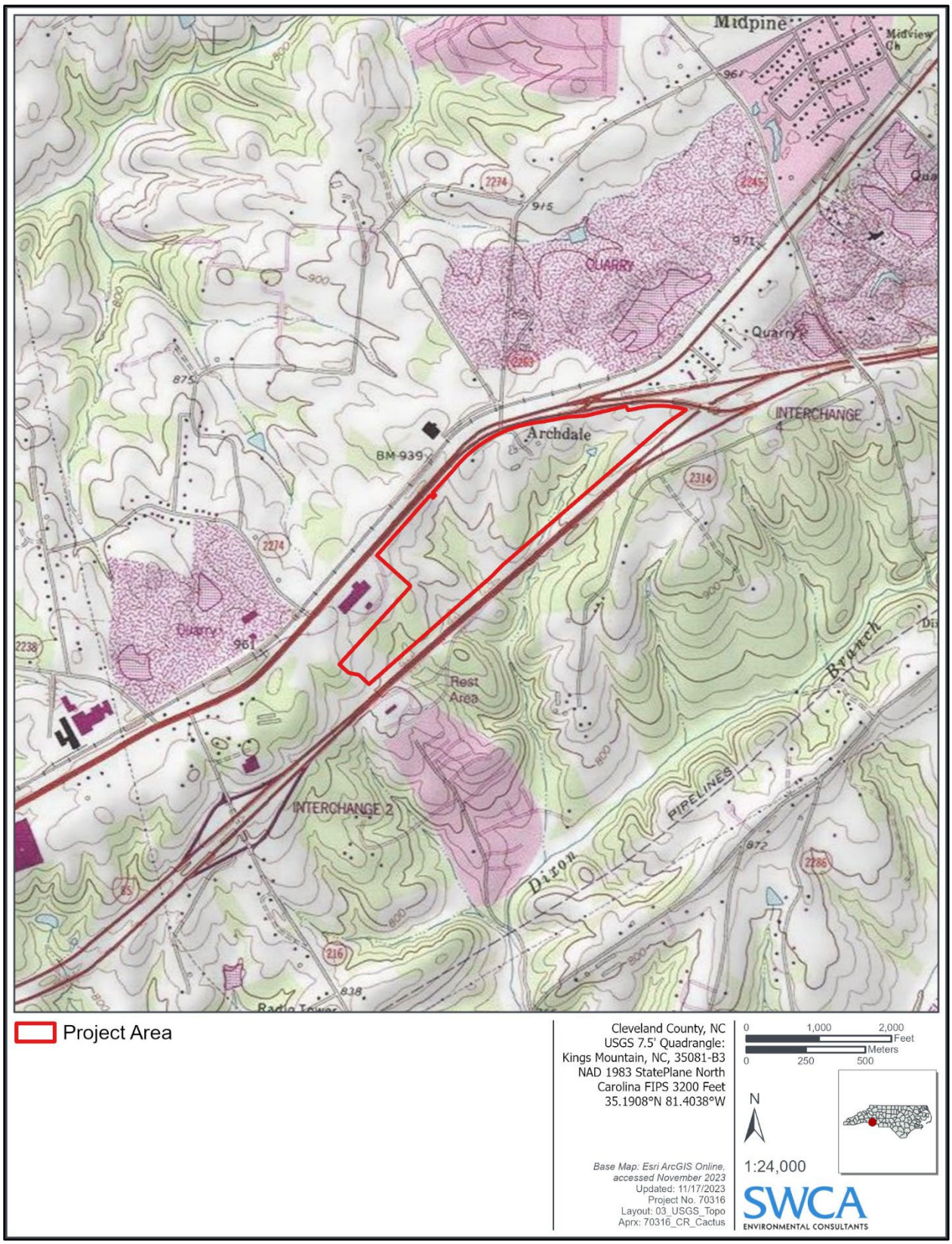

Figure 1-2. Project overview map, topographic base.

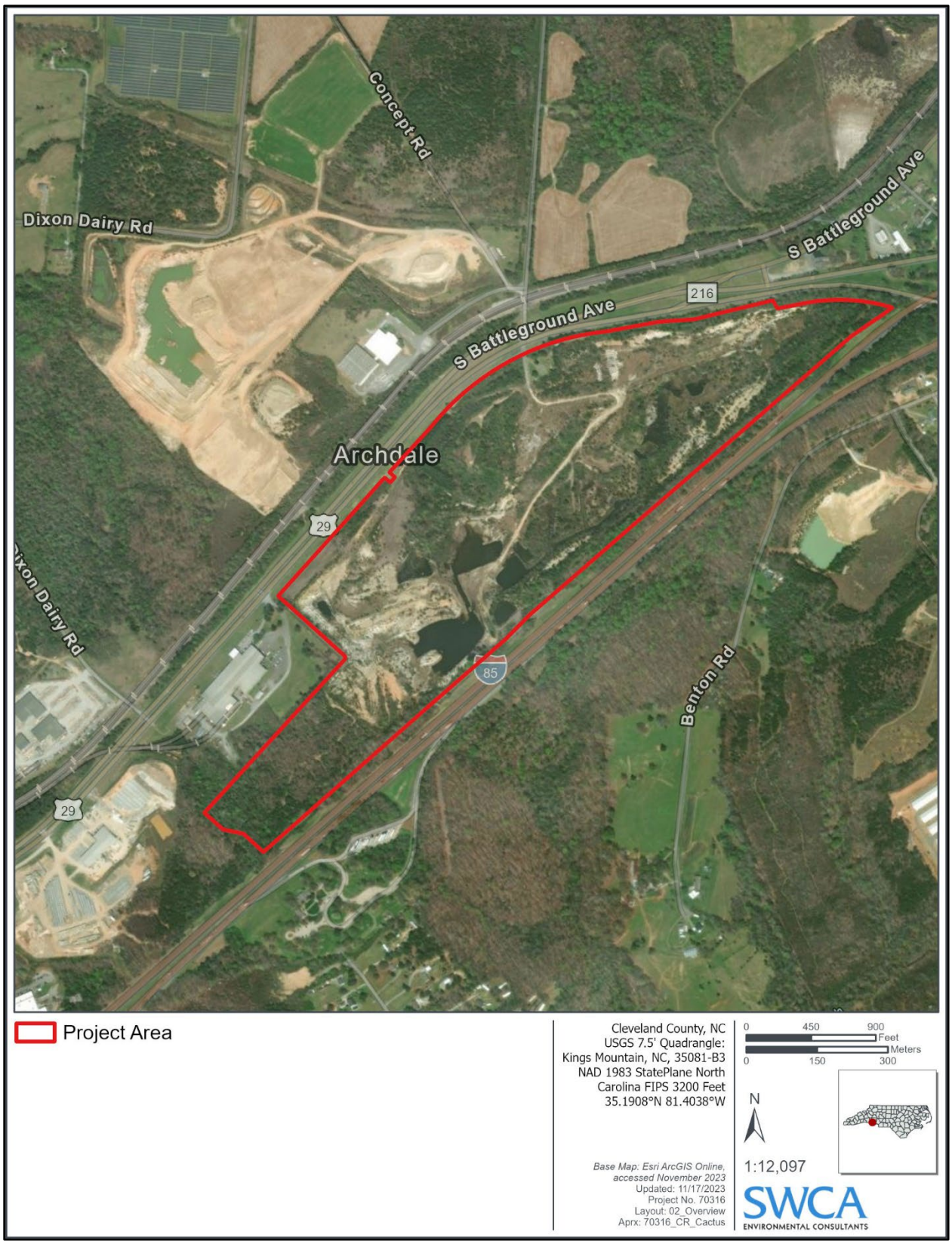

Figure 1-3. Project overview map, aerial imagery base.

CHAPTER 2. ENVIRONMENTAL SETTING

This section presents the environmental factors that have influenced the precontact and historical occupation of the project area. A discussion of relevant factors such as physiography, geology, soils, flora and fauna, hydrology, and current and past land use help provide an understanding of the local environment. This information is then synthesized with the literature review, which helped guide the development of probability areas within the project area and the methodology that was employed during the Phase I archaeological survey.

PHYSIOGRAPHY

The project area is within the Piedmont physiographic province between the Coastal Plain and the Blue Ridge Mountains. Elevations range from 300 to 600 feet above mean sea level (amsl) at the boundary with the Coastal Plain east of the project area, to approximately 1,500 feet amsl at the foot of the Blue Ridge Mountains (North Carolina Department of Environmental Quality 2023).

The Piedmont province is characterized by rolling to hilly upland with a well-defined drainage pattern. Streams have dissected the original plateau, leaving narrow to fairly broad upland ridgetops and short slopes adjacent to the major streams (Natural Resources Conservation Service [NRCS] 2006:439). The Piedmont province was a gently sloping plain until uplift raised the region to its present elevation and streams consequently incised into the bedrock to form the hilly terrain present today. The exposed bedrock of the Piedmont has been physically and chemically weathered so that a moderately deep zone of reddish soil and soft, decayed rock is characteristic of the region (Billingsley et al. 1957:3).

The landscape within the project area and its immediate vicinity is representative of the regional physiography. Gently rolling uplands predominate, interspersed with localized areas of more pronounced slope (i.e., greater than 15 percent). The majority of the project area has had the natural physiography altered by human activity. These areas present as large, pronounced depressions (e.g., the main mine pit), water impoundment (e.g., tailings ponds), large piles of waste rock, and areas of extreme slope (i.e., greater than 100 percent) where the most intensive deposition of mine tailings took place.

GEOLOGY AND LATE QUATERNARY EOLIAN-ALLUVIAL STRATIGRAPHIC SEQUENCES

The project area is on the narrow Kings Mountain Belt, between the Inner Piedmont Belt to the west and the Charlotte Belt to the east (North Carolina Geological Survey 1985). The Kings Mountain Belt is composed of metamorphic and sedimentary rock dating to 400 to 500 million years ago and contains lithium deposits. The Inner Piedmont Belt consists of older metamorphic rock that is 500 to 750 million years old and contains gneiss and schist. The Charlotte Belt is composed of younger igneous rock that is 300 to 500 million years old and includes granite, diorite, and gabbro. The region is mapped as being underlain mainly by metamorphic rock. Dominant types include biotite gneiss, schist, slate, quartzite, phyllite, and amphibolite (NRCS 2006:440).

Within drainage boundaries, overlying bedrock is a complex sequence of eolian and alluvial deposits dating back to at least to the Late Pleistocene and potentially to the Last Glacial Maximum or even earlier. Eolian dune and sand sheet deposits are widespread throughout the unglaciated Atlantic Coastal Plain and have been optically stimulated luminescence (OSL) dated to the Pleistocene, ca. 92,000 to 5,000 years ago, although most dates cluster in the Late Pleistocene, ca. 35,000 to 14,000 years ago (Swezey 2020). Sand sheets in the Piedmont have been recorded in central and northern Virginia and have been dated to the Late Pleistocene (Feldman et al. 2000; Swezey 2020).

The Carolina Sandhills are directly southeast of the project area, located in northern South Carolina. They are a likely source for these Late Pleistocene sediments, and it is likely that these eolian sediments correlate with the sand sheets observed in the Piedmont of Virginia. Deposition of regional sand sheets in this location would occur when the predominant winds originated from the southeast during winter months. Deposition occurs in cold, dry, sparsely vegetated, and windy environments that occurred during the Pleistocene. After deposition, sand sheets are stabilized by vegetation and resistant to erosional process as they are secured in place by complex root networks of overlying forests. These eolian deposits can thus also contain buried paleosols, although they would be weakly developed given the environmental conditions, which would have promoted a slow rate of pedogenesis.

During the Pleistocene-Holocene Transition and even into the early Holocene, drainage networks worldwide underwent massive shifts in their fluvial regimes. The drainages in the area became actively flowing streams, which began to deposit a thick sequence of very fine silty sediments through overbank flooding. Throughout the Holocene, a significant portion of this overbank flooding was likely enhanced by the construction of beaver dams, which were, and still are, common throughout the area. Recent studies of beaver ponds in the Piedmont and Coastal Plain of Virginia and North Carolina indicate that floodplain sediment accumulation rates due to beaver ponds average 15 to 20 millimeters (mm) per year (Kroes and Bason 2015). This rate of floodplain deposition from overbank flooding leads to the construction of very deep floodplain alluvial sequences along portions of these drainages where slope is relatively gradual.

SOILS

A review of the NRCS Web Soil Survey database (NRCS 2023) identified several soil types within the project area (Table 2-1). The majority of the project area is composed of upland soils that formed on saprolite or residuum on interfluves and hillslopes on ridges.

Table 2-1. Soils within the Project Area

Map Unit Symbol	Map Unit Name	Acres in Project Area	Percentage of Project Area	Landform	Parent Material
ApB	Appling sandy loam, 1 to 6 percent slopes	3.2	2.5	Interfluves	Saprolite derived from granite and gneiss and/or schist
HhB	Hulett gravelly sandy loam, 2 to 8 percent slopes	34.4	26.2	Interfluves	Residuum weathered from mica schist and/or other micaceous metamorphic rock
HtC	Hulett gravelly sandy loam, 8 to 15 percent slopes, stony	16.9	12.9	Hillslopes on ridges	Residuum weathered from mica schist and/or other micaceous metamorphic rock
MaB2	Madison gravelly sandy clay loam, 2 to 8 percent slopes, moderately eroded	27.7	21.1	Interfluves	Residuum weathered from mica schist and/or other micaceous metamorphic rock
MbB2	Madison-Bethlehem complex, 2 to 8 percent slopes, stony, moderately eroded	21.0	16	Interfluves	Residuum weathered from mica schist and/or other micaceous metamorphic rock
McC2	Madison-Bethlehem complex, 8 to 15 percent slopes, very stony, moderately eroded	26.2	20.0	Hillslopes on ridges	Residuum weathered from mica schist and/or other micaceous metamorphic rock

Map Unit Symbol	Map Unit Name	Acres in Project Area	Percentage of Project Area	Landform	Parent Material
UdC	Udorthents, loamy, 0 to 15 percent slopes	1.8	1.4	Interfluves	Loamy and clayey human-transported material derived from igneous, metamorphic, and sedimentary rock

Source: NRCS (2023)

HYDROLOGY

The project area is located within the 24,868-square-mile (64,408 km^2) Santee River Basin. This drainage network extends from portions of western North Carolina into South Carolina (Figure 2-1). Kings Creek flows southward into South Carolina, where it eventually joins the Broad River in Smyrna, South Carolina. The Broad River flows southeast and joins the Saluda River at Columbia, South Carolina. This confluence forms the Congaree River which then flows southeastward until it joins the Catawba-Wateree and forms the Santee River. The Santee River flows southeastward until it empties into the Atlantic Ocean roughly 186 miles to the southeast between the cities of Georgetown and Charleston, South Carolina.

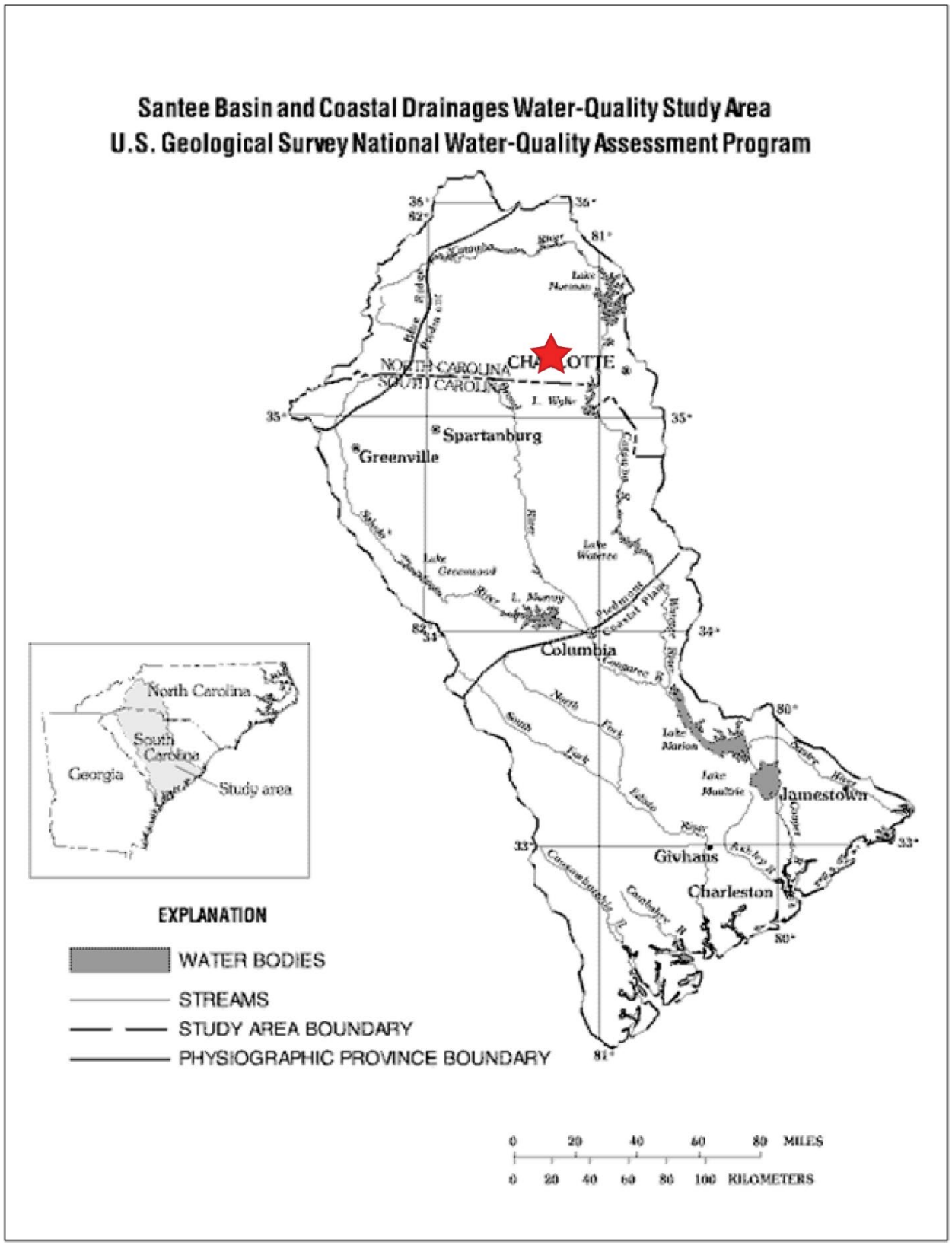

Figure 2-1. Project area drainage network, shown as part of the U.S. Geological Survey Santee Basin and Costal Drainages Water-Quality Study Area; red star denotes project location (Source: USGS 2022).

CLIMATE

The region receives between 40 and 70 inches (102–178 centimeters [cm]) of rain annually. This precipitation is relatively evenly distributed throughout the year, but occurs with the greatest intensity during the summer growing season in the form of thunderstorms; hurricanes can cause periods of intense rainfall throughout the fall and winter. Average annual temperatures vary within a relatively narrow range for a temperate climate, between 54 and 65 degrees Fahrenheit (12–18 degrees Celsius) (NRCS 2006:452). An average of 230 frost-free days can be expected per year, ranging between 185 and 275 days in any particular year. Latitude is the primary determinant of climate in this region, followed by elevation above mean sea level (NRCS 2006:452).

FLORA AND FAUNA

The region supports a combination of hardwood and pine forests, including loblolly pine (*Pinus taeda*), slash pine (*Pinus elliottii*), white oak (*Quercus alba*), northern red oak (*Quercus rubra*), sweetgum (*Liquidambar styraciflua*), tuliptree (*Liriodendron tulipifera*), and American sycamore (*Platanus occidentalis*) as the principal species. The most common wildlife species found in the region consist of white-tailed deer (*Odocoileus virginianus*), eastern cottontail rabbit (*Sylvilagus floridanus*), squirrel (*Sciuridae* spp.), northern bobwhite quail (*Colinus virginianus*), and mourning dove (*Zenaida macroura*) (NRCS 2006:453). Notably, the project area is home to a population of Carolina beavers (*Castor canadensis carolinensis,* a subspecies of the North American beaver). These large rodents are native to the North Carolina Piedmont. Although they were overhunted and locally eradicated, they were reintroduced to the area in the 1930s (Smith 2021). Their lengthy habitation in this area alongside precontact human populations provided a particularly good opportunity for human hunter-gatherers to take advantage not only of the beavers themselves for meat and furs, but also of the niche habitats they created in the form of beaver-dammed streams, which were excellent locations for fishing (e.g., *Seattle Times* 2009). Furthermore, these large, still pools created calm areas that were less subject to flooding, a further draw for human settlement.

PALEOENVIRONMENT

Large paleoenvironmental studies across much of the Southeast have provided detailed information on climate and vegetative communities in the Pleistocene and the early to mid-Holocene epochs (Anderson et al. 1996:4). Temperature trends from the Late Pleistocene into the Holocene followed global patterns, which reflected the end of a glacial period and transition into an interglacial period (the Holocene). Despite being part of a late glacial period, the region between the Southern Appalachian Mountains and the Atlantic Ocean in the Southeast has been described as a "warm thermal enclave" (Russell et al. 2009). This unique microenvironment would have resulted in much greater biodiversity than other regions in North America at the time. Southeastern forests and prairies were occupied by "Floridian" Ice Age biota. Mammoth (*Mammuthus* spp.), mastodon (*Mammut americanum*), bison (*Bison bison*), camel (*Camelops* spp.), horse (*Equus occidentalis*), giant ground sloth (*Megatherium* spp.), saber-toothed tiger (*Smilodon* spp.), bear (*Ursus* spp.), white-tailed deer, Virginia opossum (*Didelphis virginiana*), rabbit (*Oryctolagus* spp.), raccoon (*Procyon lotor*), and squirrel were all present during the Late Pleistocene (Anderson et al. 2015). By 12,850 years before present (B.P.), these Late Pleistocene fauna went extinct, coinciding with the beginning of the Younger Dryas.

Global temperatures and precipitation rates began to rise at the end of the Pleistocene and continued to increase until the Middle Holocene, when they reached their height. During the Holocene, average temperatures were affected by three events: 1) the Holocene Climatic Optimum (8900–5800 B.P.), when average temperatures stabilized at 1.6 degrees Celsius higher than modern temperatures (Kaufman et al.

2004); 2) the Medieval Climate Anomaly, when temperatures were near the modern average from about 1150 to 600 B.P., and 3) a temporary decrease in temperatures known as the Little Ice Age (500–100 B.P.) (Mann et al. 2009).

Precipitation rates throughout the Southeast also shifted during the Late Pleistocene and into the Holocene due to the global climatic trends discussed above. During the Late Pleistocene, annual precipitation in the project area averaged approximately 40 cm, which nearly tripled at the end of the Pleistocene to an annual average of 80 to 120 cm (Suther et al. 2018). Annual rates continued to increase until there were significant shifts during the Medieval Climate Anomaly followed by the Little Ice Age (Boyles et al. 2004; Willard et al. 2011).

During the Pleistocene, the project area was located close to the border of the full glacial boreal forest, which was dominated by jack pine and spruce (Delcourt and Delcourt 1983). Coniferous forests, during the late Pleistocene, were probably park-like and not as homogeneous as modern forests in the region. Around 12,500 B.P., modern plant communities started to develop, often creating complex ecosystems where modern flora and fauna interacted with extinct species (Delcourt 1978).

At the start of the Holocene, there was an increase in precipitation and the climate became warmer. This shift facilitated the establishment of modern plant communities and the extinction of numerous Pleistocene species. Homogeneous oak and hickory woodlands replaced the park-like spruce and jack pine forests (Bryson et al. 1970; Watts 1975). The warmer and wetter climate of the early Holocene came to an end with the hypsithermal. The hypsithermal lasted from 8000 to 5000 B.P., and is characterized by a decrease in precipitation. Overall, the project area would have been forested throughout the Holocene, which would have provided a diversity of resources for humans and fauna alike.

CURRENT LAND USE

There are two primary land uses within the project area: forested zones and mining zones. The native tree species in forested zones in many instances grow from a substrate that was heavily impacted by mining activities carried out during the late twentieth to early twenty-first century. Mining zones are those that are presently the location of a mine site that is currently in the reclamation process.

The majority of the project area is located within a mining zone, with only a small portion of the project area located within a forested zone. The forested zone is within the southwestern portion of the project area. The forested zone consists of a mix of deciduous and coniferous growth (Figure 2-2 and Figure 2-3), with overgrown dirt access paths throughout. The mining zone includes mining pits, ponds, access roads, and steep slopes (Figure 2-4 through Figure 2-8).

Figure 2-2. Overview of shovel testing area within the southwestern portion of the project area, facing northeast.

Figure 2-3. Overview of shovel testing area within the southwestern portion of the project area, facing northeast.

Figure 2-4. Overview of sloped, forested landscape within the northeastern portion of project area, facing southeast.

Figure 2-5. Overview of previous mining activity disturbance within the northeastern portion of the project area, facing northwest.

Figure 2-6. Overview of mining road within the northeastern portion of the project area, facing south.

Figure 2-7. Overview of previous mining activity disturbance within the northern portion of the project area, facing north.

Figure 2-8. Overview of previous mining activity disturbance within the western portion of the project area, facing east.

CHAPTER 3. CULTURAL AND ARCHAEOLOGICAL BACKGROUND

This section provides an overview of the precontact and historic period occupation of the project area. This cultural context will be used to understand the results of the survey and how they fit into what is known about the past. A summary of previous archaeological investigations is also provided. Building on what is known about the past research conducted in proximity to the project, a probability assessment for cultural resources being present in the project area follows.

CULTURAL CONTEXT

Pre-Clovis Occupations in the Southeast (ca. pre-13,500 B.P.)

For several decades, the Meadowcroft Rockshelter in Pennsylvania has been an anomalous site with intriguing evidence indicative of early human occupations predating the classic Clovis Paleoindian assemblages that have long been thought to be the first inhabitants of North America (Adovasio et al. 1999:427–428). However, within the past few decades, data from other sites along the Atlantic and Gulf coastal plains have begun to convince many archaeologists that there may have been a pre-Clovis occupation that predates 13,500 B.P. by several thousand years. The Topper Site in South Carolina (Chandler 2001; Goodyear and Sain 2018) and the Cactus Hill site in southern Virginia (McAvoy and McAvoy 1997) have produced well-documented pre-Clovis assemblages. Other sites in the Southeast such as Capps and Shelley (Ensor 2018) in southeastern Alabama, and Vero (Hemmings et al. 2018) in Florida have also produced artifacts that appear to pre-date classic Clovis occupations.

Currently, the earliest chronometric dates associated with pre-Clovis artifacts range between 14,500 and 15,500 years ago, which come from the Page-Ladson Site in Florida and the Debra L. Friedkin Site in Texas (Waters 2019). At the Page-Ladson Site, chronometric data come from a sinkhole context that contained a human-modified mastodon tusk and lithic artifacts. Seventy-one radiocarbon dates indicated an age of approximately 14,500 years ago for the assemblage (Halligan et al. 2016). Data from the Friedkin Site, obtained through OSL methods, indicate an age of approximately 15,500 years B.P. (Waters et al. 2018).

Although distinct diagnostic artifacts for these assemblages have not yet been thoroughly defined, typical artifact types include “small flake tools such as side and end scrapers, spokeshaves, utilized flakes, gravers, prismatic blades, and bend-breaks…and by larger artifacts such as cores, choppers, and planes” (Goodyear and Sain 2018:13–15). The Friedkin Site contained an enormous assemblage of lithic artifacts including complete and fragmentary projectile points, prismatic blades and bladelets, and debitage. There are indications that possibly pentagonal (Cactus Hill) and lanceolate (Meadowcroft) point forms may be associated with the early, pre-Clovis occupations.

Paleoindian Period (ca. 13,500–10,000 B.P.)

The first relatively well-documented inhabitants of eastern North America have been termed Paleoindians by archaeologists. This cultural period corresponds with the early postglacial period in eastern North America and is marked by the retreat of the Laurentide ice sheet. The end of the Paleoindian period coincides with the Pleistocene/Holocene epoch transition, which in most areas of the Southeast is estimated to be ca. 10,000 B.P.

The first widely accepted human presence in North Carolina was during the Paleoindian period. During the period, the project area underwent a massive environmental shift. The much colder climate of

the Pleistocene gave way to a warmer and wetter Holocene climate. Large megafauna were replaced with a variety of smaller mammals whose flexible diet and behavior were better suited to Holocene biotic communities. Traditionally, this period has been broken up into three subperiods: Early (12,500–10,900 B.P.), Middle (10,900–10,500 B.P.), and Late (10,500–10,000 B.P.) (Anderson et al. 1996:7). These subperiods are based on projectile point seriation. Throughout the Early Paleoindian period, projectile points were large with distinctive fluting. During the Middle and Late Paleoindian periods, projectile points were smaller, and the fluting of the Early Paleoindian period was replaced by basal thinning (McNett et al. 1977). This shift in lithic technology likely relates to the changing resources that Paleoindian groups were encountering, as megafauna slowly went extinct and human groups relied more heavily on small game and plant resources.

Daniel and Goodyear (2006), building on a wide-ranging survey of fluted points across the state, have developed a settlement system model based on patterns in the distribution of Paleoindian fluted points. They argue that fluted point densities show two Paleoindian settlement clusters. The first is centered on the eastern Piedmont and the high-quality sources of metavolcanic stone found at the Fall Line.

The second settlement cluster is focused on the mountains. Daniel and Goodyear (2006) argue that the settlement pattern and movement of Paleoindian groups was restricted by lithic sources, such that groups were logistically tethered to these resources. This mirrors Gardner's (1983) model of Paleoindian groups in the Northern Shenandoah Valley, in which he hypothesized that Paleoindian mobility was dictated by the groups' distance from lithic resources.

A few sites in the Piedmont region and the adjacent Coastal Plain region of North Carolina have yielded data relevant to the Paleoindian period. Researchers at the Pasquotank Site (31PK1) in the northeastern Coastal Plain region recovered a large lithic assemblage from the Paleoindian component of the site (Daniel et al. 2007). The framework for the culture history of the Paleoindian and Early Archaic periods in North Carolina is founded on the Hardaway Complex, which includes fluted projectile points that represent the Early and Middle Paleoindian periods. The Hardaway Complex was defined based on assemblages found in stratified deposits at the Hardaway Site, first reported by Coe (1964) and located in the Piedmont region. Discovered in the Uwharrie Mountain Range on the west bank of the Yadkin River, the Hardaway Site is one of the earliest sites in North Carolina. Hardaway-Dalton points, also recovered from the site, are thought to be associated with the Dalton complex of the midwestern United States and are diagnostic of the Late Paleoindian and Early Archaic periods (Ward and Davis 1999:42).

Archaic Period (10,000–3000 B.P.)

The Archaic period in the North Carolina Piedmont region reflects trends apparent throughout the Midsouth generally and is characterized by an increase in population from the Paleoindian period and novel cultural adaptations to new Holocene biotic communities. The Archaic period was a time of major climatic change. Holocene environments continued to expand until the start of the Hypsithermal Climatic period (8000 B.P.), at which point the modern environment of the Piedmont region was almost fully developed.

The Archaic period has traditionally been divided into three subperiods: the Early (10,000–8000 B.P.), the Middle (8000–5000 B.P.), and the Late (5000–3000 B.P.) (Ward and Davis 1999). These periods roughly correspond to changes in lithic technology, resource extraction, subsistence strategies, and settlement systems.

Many Paleoindian technological traits were used throughout the Early Archaic. The main identifiers of the subperiod are an increase in population and a shift to subsistence patterns that were better suited to the early Holocene environment. During this period, modern environmental conditions continued to develop,

and northern hardwoods replaced the full glacial boreal forests (Bryson et al. 1970; Watts 1975). The shift in climate provided favorable environmental conditions for groups to increase in size. In the context of growing population, new settlement strategies emerged.

Early Archaic settlement was focused on major river systems. The Fall Line was an especially important environmental zone, as evidenced by the number of sites located in this area. During the Early Archaic, populations were still relatively low, and groups were still highly mobile, spending most of their time in small, scattered bands. There was an apparent shift in hunting strategy favoring smaller game, although larger animals were continuing to be exploited. The Hardaway site demonstrates that, during this subperiod, groups adapted to the changing environment by establishing larger seasonal camps (Phelps 1983:23). Anderson and Sassaman (1996), in their band-macroband model, postulate that groups of 50 to 150 individuals used drainage systems by establishing base camps in the Piedmont or Upper Coastal Plain in the winter and then radiated out in smaller groups toward the coast during the late spring through the early fall. The Palmer projectile point type is considered the earliest projectile point to exhibit characteristics particular to the Early Archaic and is distinguished by a small corner-notched blade with pronounced serrations and a ground base. The earlier Kirk Corner Notched type represents the transition between the Paleoindian and Early Archaic periods (Coe 1964:81; Phelps 1983:23). Additionally, the use of hafted end scrapers and other formal tools such as perforators, drills, and gravers increased during the Early Archaic period (Coe 1964; Davis and Daniel 1990; Ward and Davis 1999).

The Middle Archaic period coincides with the warmer global temperatures that characterized the Hypsithermal climatic period. Archaeological evidence indicates a well-documented trend toward increased exploitation of freshwater shellfish throughout the Midsouth during the Middle Archaic, along with increasing population and social circumscription more generally. These processes no doubt heavily conditioned more complex means of within- and between-group identity formation, some of which were materialized in the form of gift-giving and are visible in the archaeological record (Anderson and Sassaman 2012:74). Two distinct site types become apparent during the Middle Archaic: base camps and temporary procurement camps (Ward and Davis 1999:73). Temporary procurement camps are found throughout the landscape, but base camps are usually located near stream confluences. The Middle Archaic toolkit is characterized by a reliance on mostly expedient lithic technology, a less formalized toolkit, and a greater prevalence of ground stone artifacts. Bifurcate projectile points are diagnostic of the change between the Early and Middle Archaic. Stanly Stemmed projectile points are diagnostic of the early Middle Archaic, whereas Morrow Mountain projectile points became more common during the middle and late portions (Davis and Daniel 1990).

During the Late Archaic period, site densities continued to increase. The highly mobile groups of earlier periods were replaced with more sedentary settlements at strategic locations on the landscape, which coincided with the emergence of pottery and horticulture (Ward 1983; Ward and Davis 1999). Indeed, many of the key settlement strategies practiced during the later Woodland period were established during the Late Archaic period. Groups focused on major drainages and abandoned many of the smaller tributary streams (Ward and Davis 1999:74). Continued focus on reliable, seasonally available gathered resources and the related increase in population densities resulted in more constrained mobility patterns, as evidenced by the appearance of sites that were seasonally reoccupied throughout the subperiod. This redundant land use is visible in the accumulation of dense middens along rivers (Anderson and Sassaman 2012:75). Regional population growth is attested to by a doubling in site density for the Late Archaic such that "virtually no major area of the Southeast was unoccupied" (Anderson and Sassaman 2012:91–92; see also Anderson 1996; Milner 2004). Functionally related to the intensification in subsistence strategies and growing populations of the Late Archaic was the development of more efficient food processing techniques. Most prominent among these innovations were thermally resilient containers such as soapstone vessels and early pottery, both of which first appear during this time.

Stallings Ware, one of the first pottery wares created in eastern North America, has been found in the Southern Coastal Plain of North Carolina as early as 4500 B.P. (Phelps 1983:26). Croaker Landing ware is an early ceramic type found in the northern Coastal Plain region and was most likely contemporary with Marcey Creek ware, the earliest pottery type in the Mid-Atlantic tidewater region (Ward and Davis 1999). Late Archaic pottery was not widely used and possibly does not represent a major technological shift in cooking practice (Herbert 2011). Late Archaic toolkits show a greater investment in the curation of tools and the expedient use of debitage and cores. Savannah River Stemmed, Halifax (Coe 1964), and Otarre Stemmed (Oliver 1985) projectile points are the most common diagnostic artifacts associated with Late Archaic sites.

Woodland Period (3000–1000 B.P.)

The Woodland period is defined by an increase in sedentism, improvements in pottery technology, increased use of ground stone tools, the development and growth of horticulture as a subsistence practice, and the further domestication of wild cultigens (Ward and Davis 1999:3-4). Groups also started to take on regional identities within the Piedmont region. In general terms, the Woodland cultures of the Piedmont region were only marginally influenced by other cultural traditions that evolved elsewhere in the eastern Woodlands (i.e., Hopewell, Swift Creek, Mississippian chiefdoms; Ward and Davis 1999:78). Woodland societies became more internally complex, developed elaborate mortuary rituals, on occasion constructed earthen mounds used as burial facilities and house platforms, and engaged in far-reaching trade and exchange of exotic items. However, the degree to which Woodland peoples engaged in these activities varies widely from the mountains to the coast (Ward and Davis 1999:3). Archaeologists have divided the Woodland period into three subperiods: Early (3000–2300 B.P.), Middle (2300–1800 B.P.), and Late (1800–350 B.P.).

The Early Woodland period is characterized by the continuation of Archaic cultural patterns across the Piedmont region but adding the widespread use of pottery. The majority of large precontact sites in the Piedmont region generally contain both Archaic remains and Woodland pottery (Ward 1983:70). While pottery production, semisedentary villages, and horticulture originated in the Late Archaic period, these innovations became the norm rather than the exception during the Early Woodland period (Ward and Davis 1999:76). The Badin ceramic series, as identified by Coe (1964:27–29), is associated with one of the earliest ceramic traditions in the Piedmont region. Badin pottery has characteristics of, and possible relationships with, southern coastal ware types such as Thom's Creek and northern ware types in Virginia such as Accokeek and Stony Creek (Ward and Davis 1999:97). The Badin series, first recognized at the Doerschuk Site, consists of well-made pottery tempered with sand and the occasional pebble. Badin pottery is usually finished with a cord-wrapped or fabric-wrapped paddle. In conjunction with the appearance of Badin pottery, coarsely flaked triangular Badin projectile points are also first observed in the archaeological record of this time. Badin projectile points represent a departure from the large, stemmed spear points identified in the preceding Late Archaic Savannah River phase and are thought to mark the beginning of a tradition of triangular points associated with the bow and arrow (Ward and Davis 1999:80). The subsequent Middle and Late Woodland periods are characterized by the acceleration of cultural trends widely adopted during the Early Woodland period.

During the Middle Woodland, horticulture assumed a greater importance than during the preceding periods. In addition to hunted and gathered resources, cultivated plant species including native cultigens and exogenous species such as maize (*Zea mays*) took on increased importance during this subperiod. Middle Woodland sites are generally larger than Early Woodland sites. Yadkin pottery is generally thought to temporally follow the Badin ceramic series based on evidence from the Doerschuk Site excavations. Yadkin pottery is similar to Badin pottery, with the exception that it is generally tempered with crushed quartz and exhibits new surface treatments, which consist of check stamping, linear check stamping, and simple stamping (Ward and Davis 1999:82). Projectile points associated with Yadkin

pottery are typically large triangular projectile points that resemble Badin projectile points but are more finely flaked (Ward and Davis 1999:84). Yadkin phase sites are identified more frequently than Early Woodland Badin phase sites, especially in the southern Piedmont and South Carolina Coastal Plain. While subsistence evidence relating to Yadkin phase lifestyles is rare, evidence of prolonged Yadkin site occupations was observed at the Town Creek Site (Ward and Davis 1999:85).

It is not clear what transpired during the waning centuries of the Woodland period in the Catawba River valley. By about 1000 B.P., Mississippian ideology was changing cultural material and lifeways. To the northeast in the northern and eastern Piedmont regions, groups never fully embraced the Mississippian cultural mores, maintaining a Late Woodland lifestyle until contact with European explorers and subsequent settlers. But in the Catawba and Yadkin/Pee Dee valleys, South Appalachian Mississippian cultural traits are observed perhaps as early as 1070 B.P. (Oliver 1992:40–47). Ward and Davis (1999:Figure 1.5) speculate that the Yadkin phase in the Southern Piedmont and Western Foothills lasted until the fluorescence of the Pee Dee and Catawba Valley Mississippian cultures.

Mississippian Period (1000–400 B.P.)

The Mississippian period is marked by a rise of ceremonialism, expansion of the construction of large public constructions, significant intensification of maize agriculture, and more rigid social organizations. These took the form of ranked societies. In some regions, settlement became securely permanent, and evidence of repeated structure rebuilding is noted. Site types include large mound centers with truncated pyramidal mounds fronting plazas, smaller non-mound villages, and dispersed farmsteads. There is increasing evidence that territorial boundaries between societies were closely maintained during the Mississippian period. For example, the Catawba Valley Mississippian is defined for the Catawba River region, to the east the Yadkin-Pee Dee region is marked by the presence of the Pee Dee culture, and to the west in the Appalachian Summit region is the Cherokee groups (Boudreaux 2007; Coe 1964; Keel 1976; Moore 2002).

Cultural groups in the Catawba River region after 1000 B.P. were a part of the cultural complex termed South Appalachian Mississippian (Caldwell 1958; Ferguson 1971). This is a large cultural complex that included South Carolina and Georgia as well as portions of North Carolina, Tennessee, Alabama, and Florida (Boudreaux 2007:Figure 1.3; Ferguson 1971:Map 1). In turn, South Appalachian Mississippian was a large regional variant on the generalized Southeastern Mississippian culture complex and is largely denoted from the latter by the presence of complicated stamped pottery that was not shell-tempered, as it was throughout much of the remainder of the Mississippian areas. In its most generalized subdivisions, the South Appalachian Mississippian has been divided into three subperiods: Etowah (1000–800 B.P.), Savannah (800–650 B.P.), and Lamar (650–450 B.P.).

Specifically, the cultural groups from the Catawba River Valley from ca. 800 to 300 B.P. are termed the Catawba Valley Mississippians (Moore 2002). The following discussion provides details about the Catawba Valley Mississippians, which is largely drawn from Moore (2002). Based on the archaeological evidence along the length of the Catawba River, Moore (2002) has divided the region both spatially as well as temporally. Geographically, Moore (2002) divides the region into the Upper Catawba Valley, the upper Yadkin Valley, and the Middle and Lower Catawba Valley. The project area is most proximate to the latter.

The definitions for the Middle and Lower Catawba Valley phases rely on the local ceramic series—the Cowans Ford series, as defined by Moore (2002:265–267). Although this series is largely similar to the Burke series to the north, one fundamental difference prompted Moore to define the new series—the presence of sand and fine crushed quartz temper (as opposed to the soapstone and other constituents used in the Burke series). In large part, the Cowans Ford series was defined based on ceramic assemblages

recovered during the Cowans Ford Reservoir Survey of 1960–1962. During this project, some 300 sites were identified and at least 10 were tested, although "there is no written project report and very little documentation of survey activities" (Moore 2002:128). Most of these sites are now underwater in Lake Norman following completion of the reservoir construction in 1963.

As mentioned, Cowans Ford series ceramics are identified by the presence of sand (fine, medium, and coarse) and fine crushed quartz (up to 2 mm) combined with a suite of surface treatments including complicated stamped (both curvilinear and rectilinear), plain/smoothed, burnished, incised, and corncob impressed (Moore 2002:265–267). Minority surface treatments discussed by Moore (2002:140) include brushed, cord marked, simple stamped, fabric impressed, and net impressed, but these minority types are very rare.

Only one phase has been defined for the Lower Catawba Valley region: the Belk Farm phase (ca. 320–275 B.P.), which is the early historic component at the Belk Farm site (31MK85) (Moore 2002:182). Cowans Ford Complicated Stamped, Plain/Smoothed, Burnished, and Corncob Impressed are present at the site, as is "fine cord-marked pottery." Further, glass trade beads have been recovered from the site.

Little else is known about the cultures of the middle and lower valley regions during the time post-dating 800 B.P. The similarities to both the neighboring Upper Catawba phases, and in turn, to the larger Lamar cultural complex throughout much of the Southeast are quite evident. Moore (2002:125) notes one significant difference—a general lack of mounds in the Middle and Lower Catawba Valley regions. "Without mounds to investigate, the region received none of the early attention accorded to the upper Catawba and Yadkin River valleys" (Moore 2002:125). From notes on the site map for 31CT30, tested during the Cowans Ford Archaeological Survey, bulldozer trenches "'started about center of mound.' This is the only reference I found to a mound" (Moore 2002:130).

During the fifteenth and sixteenth centuries, factors antecedent to, and coeval with, European conquest brought an end to the Mississippian lifestyle, although elements of the material culture, belief systems, place names, and social structure of classic Mississippian society lingered into the eighteenth century as viable social organizations, and elements of material culture remain a part of modern American lifeways.

Contact Period and Catawba Ethnogenesis (ca. 400–200 B.P.)

Work by Moore (2002) and research by archaeologists from the University of North Carolina's Research Laboratories of Archaeology (RLA) on the Catawba Project have made great strides in understanding of the contact and early historic periods in the Catawba River Valley (e.g., Davis and Riggs 2004; Fitts 2006; Harrington 2006; Heath 2004; McReynolds 2004; Plane 2004; Riggs et al. 2006). Moore (2002:Chapter 1) has compiled some details regarding the genesis of the historic Catawba and their movements during the eighteenth century. Davis and Riggs (2004:2–5) have formalized the time between the late seventeenth century and 1840 by defining six periods of the historic Catawba, "each characterized by distinctive political, economic, and social trends." The six periods defined by Davis and Riggs (2004:2–5) are:

- English Contact period (ca. 1675–1715)
- Coalescent period (1716–1759)
- Late Colonial period (1760–1775)
- Revolutionary period (1776–1781)
- Federal period (1781–1820)
- 1820–1840 (the sixth period is not named per se in Davis and Riggs 2004)

English Contact period (ca. 1675–1715). The English Contact period is marked by the presence of numerous and distinct Native populations in the region. Apparently, none were named "Catawba", and Lawson's reference to the "Katapau" is likely the closest. John Lawson's 1701 voyage through the Carolinas is one of the earliest accounts of the Katapau, or Catawba Indians (Lawson 2001:43–44 [1709]; Moore 2002:11). During his travels, Lawson provided great detail about the individual groups of Natives he met along the way. In general, Lawson found these Native groups to be individually distinct while also associated with one another. The Chickanee, Congeree, Esaws, Katapaus, Santee, Sugerees, Waxhaws, and others occupied the lower Catawba River region during this time in a confederation (Moore 2002:11). This coalition of Native groups was largely in control of trade with the Virginia and Carolina colonies in the late 1600s and early 1700s. "The English colonies quickly developed strong trade relations with the Catawba Nation and established a century-long military alliance that held firm until the American Revolution" (Davis and Riggs 2004:2).

Archaeological work pertaining to the Native American inhabitants of the Lower Catawba during the English Contact period is scant, and largely based on work at the Belk Farm site. Dates provided by Moore (2002:182) for the Belk Farm phase (see above) are largely the same for Davis and Riggs' (2004:2) English Contact period—1680 to 1725 for the former and 1675 to 1715 for the latter. Characteristics of the Belk Farm phase and the Coalescent period (see next) are rather similar, indicating some level of cultural continuity into the mid-eighteenth century.

Coalescent period (1716–1759). The Yamasee War of 1715–1716 drastically changed the political landscape in the region. The war decimated Native American groups in the region, precipitating many to seek refuge with the Catawba, thus "continuing the amalgamation of the Catawba confederation" (Moore 2002:12). The Yamasee War, largely carried out by the Yamasees, Creeks, Choctaws, and Cherokee, but with early support from the Catawbas, Cheraws, and Waterees, was conducted to push traders and settlers out of their lands (Moore 2002:11–12). After the Yamasee War, the Catawba were unable to maintain their importance, though. The remaining groups settled into a small area of several towns on the Catawba River about the present-day North Carolina–South Carolina border. Where Lawson described a rather populous region during his voyages, accounts in the early to mid-eighteenth century painted a different picture of a small group of Natives in a handful of towns (Moore 2002:13).

Excavations at Nassaw Town and Weyapee by the RLA have established the framework for the Coalescent period (Fitts et al. 2007). Nassaw Town—occupied from about 1721 to 1759, when a smallpox epidemic reduced the population by half—is located east of the Catawba River in York County near present-day Fort Mill, South Carolina. Work at the site produced an artifact assemblage that is extensive and varied. In general, the assemblage contains a mix of European trade goods and traditional South Appalachian Mississippian ceramics. European trade goods from the site consisted of weapons (primarily guns, but also knives and a sword), tools (scissors, awls, axe, hoes) and other functional metal items (thimbles, pins, horse tack, keys and padlock), containers (glass, brass kettle, and lead-glazed ceramics), and adornment items (glass beads and metal decorative items). Food remains also evidence a mixed use of Old World and New World sources including corn, hickory nuts, peaches, and deer (New World) as well as cattle and pigs (Old World) (Fitts et al. 2007:24). One of the more intriguing recoveries from Nassaw Town were the ceramics, which by and large, are similar to other assemblages documented from late prehistoric South Appalachian Mississippian sites such as Belk Farm (Brett H. Riggs and R. P. Steven Davis, Jr., personal communication 2009). This period marks the end of the continued production of traditional ceramics.

Late Colonial period (1760–1775). A smallpox epidemic in 1759 decimated approximately half of the remaining Catawba population. During the next 15 years, population decline and further consolidation of small groups was the norm. It is during the Late Colonial period that the individual group distinctions give way and "the survivors were now known simply as Catawbas" (Davis and Riggs 2004:3). In 1760,

the Catawbas moved south, down the river valley to Pine Tree Hill, which is near present-day Camden, South Carolina. The Pine Tree Hill treaty of 1760 established a 15-square-mile (39-km^2) reservation for the Catawba in South Carolina. The following year, though, without the treaty having truly been implemented, they would move back north to establish two towns that were only about 7 miles (11 km) south of their old towns.

Excavations at Old Town (Davis and Riggs 2004:8–13), a Catawba town occupied from about 1761–1780, shows sharp contrast to the excavations discussed above at Nassaw Town and Belk Farm. At least five cabin seats were identified at Old Town. The presence of rectangular cellar pits (likely located beneath cabin floors) and a lack of individually set post features, indicates that the Catawba adopted both rectangular cellars and cribbed log structures at this time, compared to the earlier use of earthfast structures and less-regular storage pits (e.g., round to oval). Numerous European trade goods were recovered at Old Town, indicating a relatively direct connection to European traders. Unlike the ceramics recovered from Nassaw Town, though, "Most of the Catawba vessels [from Old Town] are exceptionally well-made renditions of English ceramic forms. Plates, cups, bowls, and pans exhibit smudged and highly burnished or polished surfaces, and some vessels have hand-painted designs" (Davis and Riggs 2004:11). Given a 1759 end to Nassaw Town and a 1761 beginning of Old Town, it appears that almost overnight, the Catawba changed pottery styles, shifting from traditional South Appalachian Mississippian wares for use by themselves, to the production of English-style wares for both their own use as well as for sale to colonists in the region.

Revolutionary period (1776–1781). By the Revolutionary War, the Catawba Nation had been reduced to some 600 individuals and they lived in a single town near Twelve Mile Creek (Davis and Riggs 2004:3–4). In 1775, the nearly century-long alliance with the English was ended, and the Catawba sided with the Americans, serving with South Carolina troops during the war. Doing so secured the Catawba's position, with the post-Revolutionary government of South Carolina finally recognizing the reservation lands established in 1760.

Federal period (1781–1820). At the onset of the Federal period, the Catawba once again established a single town to live in, located in the uplands above the Waxhaw Old Fields (Davis and Riggs 2004:4–5). A combination of subsistence farming and hunting provided the Catawba's main needs; however, they also participated in cash transactions for supplement. By 1791, much of their 15-square-mile (39-km^2) reservation was leased out to Euro-American farmers. Also, by the early nineteenth century, Catawba potters were traveling as far as Charleston, South Carolina, to sell their wares, adding to their land-rental income.

Based on excavations at the New Town site in South Carolina, which dates from about the end of the Revolutionary war to about 1820, Riggs et al. (2006:65–77) have defined ceramic characteristics and a range of vessel forms related to post-Revolutionary Catawba pottery. New Town pottery sherds are described as generally temperless. Vessel surfaces are exclusively plain with most exhibiting burnished surfaces. Only one vessel (evidenced by 35 sherds) exhibited a non-plain surface (smoothed-over incised lines). In addition to these ceramic characteristics and vessel forms, work at the New Town and Bowers sites recovered a wide variety of post-Revolutionary Catawba material culture. This included Catawba pipes, English pearlware and creamware, glass vessels (bottle and stemware fragments), glass beads, brass buttons, lead shot, and numerous iron and other metal items (e.g., snaffle bits, kettle and Dutch oven fragments, forks, Jew's harps, thimbles, knife blades, padlock, hooks, buckle, coins, silver fasteners and ornaments, and fragments of a flintlock pistol). Catawba houses were of log crib construction, and if present, fireplaces were made of stone or logs with stick-and-clay chimneys.

1820–1840. The third and fourth decades of the nineteenth century saw continued decline of Catawba population, and yet another physical move from the settlement above the Waxhaw Old Fields on the east side of the Catawba River to the west side of the river (where the Catawba reservation is located today).

Post 1840. The Treaty of Nation Ford was signed in 1840, which was supposed to cede the original reservation to South Carolina in exchange for a new one in Haywood County, North Carolina. This original agreement never met full fruition on the part of South Carolina, although many Catawba did move to their Cherokee neighbors as expected, only to return to their homelands a short time later. Instead, to fulfill the terms of the treaty, South Carolina gave the Catawba approximately 630 acres (255 hectares) in their homeland in the late 1850s (Moore 2002:15).

The next 100 years saw the further erosion of the traditional Catawba culture as they struggled to maintain a self-identity within the social and political landscape of the early twentieth century (Moore 2002:15). In the late 1950s and early 1960s, a series of votes among the Catawba, coupled with negotiations between the Catawba and the Bureau of Indian Affairs, culminated in the formal dissolution of federal recognition in 1962. Hudson (1965) noted that 631 Catawbas were on the final tribal roll at their termination of federal recognition. In 1973, the Catawbas formed into a non-profit corporation, and subsequently regained federal recognition in 1994 (Moore 2002:15). Today, the Catawba Nation comprises over 2,000 individuals, most living in their traditional lands around Catawba and Rock Hill, South Carolina.

HISTORIC CONTEXT

The First Colony and Early European Settlement (1520–1750)

Europeans first arrived in North Carolina in the mid-1520s, when passing ships occasionally made landfall along the barrier islands of the Outer Banks to replenish supplies or get fresh water (Heath and Swindell 2011). In 1526, Luis Vasquez de Ayllon sailed up the Cape Fear River and established a colony for the Spanish Crown. The Spanish colony was soon abandoned and moved to the coast of South Carolina. In 1540, Hernando De Soto traversed a small portion of western North Carolina in the course of his expedition through a broad portion of the southeastern United States then known as “La Florida” (Ready 2005:18). English ambitions regarding the Americas were first realized by Sir Walter Raleigh, who sent two ships under the command of Arthur Barlowe and Philip Amadas to find a suitable place for an English colony (Ordahl Kupperman 1984:16). The expedition reached the Outer Banks on July 13, 1584. Returning to England, Barlowe and Amadas reported that the sheltered island of Roanoke would be an ideal location for a colony. Soon after their return, Raleigh sent out another expedition in the spring of 1585 (Ready 2005:21). This expedition was under the control of Ralph Lane and Sir Richard Grenville. The second expedition left 107 colonists under the direction of Ralph Lane to start a settlement. Grenville returned to England to gather additional supplies. The new settlement soon grew short on supplies and the colony was abandoned on June 19, 1586 (Ready 2005:24).

Raleigh attempted a third expedition with the explicit purpose of creating a colony. John White was appointed the governor of the proposed colony. White reached Roanoke Island on July 22, 1587 (Ordahl Kupperman 1984:107). Arriving too late to plant crops, the colonists soon ran out of supplies and White was forced to return to England. White was delayed in England by preparations to fight the Spanish Armada and could not return until August 16, 1590 (Ready 2005:27). White found the colony abandoned, surrounded by a log palisade, and the word “CROATOAN” carved into a tree, but did not locate the colonists. After the failure of Raleigh and the Roanoke Colony, no attempt at colonization was made in North Carolina until King Charles II gave the area to his supporters. The supporters, known as the Lords Proprietors, were given a royal charter for the lands between the Albemarle Sound and Florida (Powell 1989:53). The Lords Proprietors grant was largely unknown territory and was seen by the

English Crown as primarily a buffer between the Spanish in Florida and the English colonies in Virginia and New England (Ready 2005:40). In 1700, John Lawson was commissioned by the Lords Proprietors to survey the Carolina Lands. Starting in Charleston, South Carolina, Lawson visited much of the Piedmont and the Coastal Plain of North Carolina (Lawson 2001 [1709]).

The Lords Proprietors were given considerable latitude in governing their land. The government established by the Proprietors aimed to combine elements of monarchical, aristocratic, and democratic governments, but was mostly ignored by colonists. The chaotic nature of colonial North Carolina resulted in multiple rebellions (Ready 2005:43). By the first decade of the eighteenth century, the English disposition toward Native American as trading partners had changed to one that viewed Native American people as obstacles to westward European expansion (Ready 2005:32). Relationships further declined with the rapid increase in the Native slave trade. Through the mid-seventeenth and early eighteenth centuries, relations with Native American groups deteriorated rapidly, as evidenced by the Third Anglo-Powhatan War, Bacon's Rebellion, Chowanoke Wars, and Coree Wars (Heath and Swindell 2011:10–12). This undercurrent of resistance among Native American groups in North Carolina would ultimately manifest in the Tuscarora War.

During the early postcontact period, Tuscarora groups had begun to reorganize themselves into nascent chiefdoms (Heath and Swindell 2011:10–11). After a brief but fierce series of engagements, the Lower Tuscarora groups entered into diplomatic negotiations to halt hostilities, and the colonial government readily agreed. These agreements were broken repeatedly by the colonists, who launched devastating campaigns into the Lower Tuscarora territory. The Upper Tuscarora were largely spared from the violence and destruction associated with the Tuscarora War, but by 1802, virtually all of the Upper Tuscarora had migrated to lands under the control of the Five Nations of the Iroquoian Confederation in New York and eastern Canada.

European populations likewise adjusted to the increasingly bellicose, chaotic environment through migration and changes to sociopolitical organization. After living through the Tuscarora War, one colonist remarked that all of the colonists in North Carolina should be removed to the South and the region abandoned (Ready 2005:37). The Lords Proprietors divided the Carolina Lands into northern and southern portions, and Edward Hyde was appointed as the first governor of the former on January 24, 1712. Some 17 years later, in the culmination of a royal effort to acquire the land that had begun in 1689, the Lords Proprietors sold the majority of their shares in the colony to the Crown on July 25, 1729. North Carolina remained under royal governance until the American Revolutionary War (Powell 1989:84).

Revolutionary War and Federal Period (1750–1860)

The Federal period was a time of growth for North Carolina. The slave system developed more slowly in the Piedmont region compared to the Coastal Plain region; North Carolina's eastern counties consistently had larger populations of enslaved people. None of North Carolina's western counties ever had an enslaved population that was larger than the Euro-American population; the slave system in the western portion of North Carolina was primarily associated with small farms, rather than with large plantations (Connor et al. 1919:204).

The economy in North Carolina during the mid- to late eighteenth century was focused on land resources and slavery (Powell 1989:131). Naval stores and lumber products from the rich Carolina forests were key colonial industries (Margulies 2006:42). As large swaths of the colony were cleared, agriculture started to take on an increasingly important role in the economy. The vast majority of colonial North Carolina farmers were subsistence farmers, but export production of corn, tobacco, wheat, beef, and pork also increased. A general lack of robust roads suitable for high-volume trade and travel contributed to the development of settlement patterns focused on waterways during this period.

Slavery as a sociopolitical and economic institution and practice had existed since the early days of the colony and became widespread by the 1720s. Initially most prevalent in the Lower Cape Fear basin in the early eighteenth century, by the time of the American Revolution it was institutionalized and practiced throughout the North Carolina colony, as attested by census data. The 1790 census listed the white population as 288,204 and the enslaved population as 100,572 (Ready 2005:69). This was a consistent ratio of white to enslaved populations up until the Civil War. North Carolina did not develop a large slave plantation economy like those prevalent in other parts of the southeast United States during the early eighteenth century (Ready 2005:71).

In the decades following the Crown's assumption of North Carolina's governance, royal governors repeatedly clashed with local elected assemblies regarding authorities to tax, establish courts, and other fundamental matters of political order (Ready 2005:89–91). By the 1770s, the rift between representatives of the Crown and the elected colonial assembly had grown sufficiently deep to persuade leaders of the latter to align themselves and their constituents with Virginia and other colonies in opposition to British rule, which would result in the American Revolution (Ready 2005:105–106). North Carolina contributed just under 7,800 soldiers to the Continental Army, the smallest per-capita muster of the colonies. Perhaps more significant to the overall effort were the North Carolinians who operated as informal, unpaid militia unattached to regular military units. These largely ad hoc forces degraded British military capacity in decisive, although relatively unheralded, engagements compared to the better-known battles of the war (Ready 2005:120).

Such an engagement was fought just 5 miles (8 km) to the south of the project area discussed in this report. The Battle of Kings Mountain saw the defeat of a 1,200-strong British force by 900 frontiersmen known as "Overmountain Men," and was distinctive because it took place without the participation of a single officer of the Continental Army. The British commander, Patrick Ferguson, had been dispatched to the vicinity of present-day northern South Carolina by Lord Cornwallis, commander of the main British force making its way inland from Charles Town (Charleston). Charged with protecting Cornwallis's western flank, one of Ferguson's first acts was to send a paroled prisoner with a message to the "disorganized rabble" in the mountains of present-day western North Carolina threatening to "burn the whole country" if they did not swear allegiance to the King (Ready 2005:126). Though it is generally inferred that his purpose was to discourage opposition, Ferguson's threat evidently alarmed the local population sufficiently to inspire several hundred loosely organized frontiersmen to move against him. Ferguson's defensive position on the small ridge after which the battle was named was quickly overrun and his forces were dealt heavy casualties, one of which was Ferguson himself. After this relatively minor engagement, the British advance into North Carolina was blunted as Cornwallis had his forces abandon Charlotte and flee south (Powell 1989:199–200; Ready 2005:125–128).

Antebellum Period

During the Antebellum period, the region initially was in decline, but eventually many key institutions and practices were developed that would revolutionize life in North Carolina. At the start of the period, several factors led to a decline in the standard of living in North Carolina, including destructive agricultural practices resulting in depleted soils, the lack of educational opportunities, the need for transportation and communication networks, and the lack of strong commercial and industrial bases. These factors often fueled westward immigration. Between 1815 and 1850, approximately a third of the population of North Carolina left the state (Powell 1989:249). It was not until the mid-nineteenth century that local groups started to address these issues. A focus on better farming methods, the development of private schools, and the connection to the larger national railroad network helped improve the economic situation in North Carolina.

The Trail of Tears migration of Cherokee populations to Oklahoma from the western extremes of North Carolina, among other states, may be viewed in the overall context of early nineteenth-century population movement. It is distinguished, however, from contemporary migrations in that it was coerced by the U.S. Army, led by General Winfield Scott. From the late eighteenth century to 1828, populations drawn from several Indigenous groups had emigrated from western North Carolina in the face of steadily increasing numbers of settlers of European descent. By the time Scott and his forces moved into the southern Appalachians, perhaps hundreds of Cherokee and Creek had moved west. The broad consensus among historians is that the 1828 discovery of gold in north Georgia and the election of Andrew Jackson were the two most determinative circumstances that led to the Trail of Tears (Ready 2005:202). In practice, it involved an 1838 military campaign that swept through Cherokee settlements, whose inhabitants were obliged to pack their belongings in short order to be herded into stockades before they were sent west. Perhaps more than a quarter of the 12,000 people who began the trek died en route (Ready 2005:204). Those who survived, and their descendants, are today known as the Western Cherokee. The mountains of Western North Carolina were the home of a comparatively smaller contingent of Cherokee known to history as the Qualla, who successfully resisted the effort and formed the nucleus of the Eastern Cherokee (Ready 2005:205).

The land that now comprises Cleveland County, named for Colonel Benjamin Cleveland, a participant in the Revolutionary War battle of Kings Mountain, was inhabited by Indigenous Cherokee and Catawba groups until they were displaced by in-migrating European-descended populations. The county was formed from Rutherford and Lincoln Counties in 1841 during a period of vigorous settlement and population increase (Mazzocchi 2006).

During this period, gold mining was a major factor in the increasing settlement of the area. According to local newspaper accounts, gold mining began in 1834, when Mrs. Ben Briggs discovered gold in a spring on her property, referred to as Kings Mountain Gold Mine (Patterson 1935). Gold mining operations continued until 1913 and yielded approximately $750,000 to $1,000,000 in gold, most of which was minted in Charlotte, North Carolina (Patterson 1935). In 1936, the old Kings Mountain Gold Mine was leased to M. A. Hilford, who reopened the mine (*Durham Sun* 1936). In 1984, Texasgulf Minerals and Metals Inc. (Texasgulf) began taking core samples at the old Kings Mountain mine, in hopes of reopening the mine (Horan 1984). Texasgulf explored a 400-acre parcel of land approximately 1.5 miles south of Kings Mountain, North Carolina, along State Highway 161, where the old Kings Mountain Gold Mine was located. The area was described as heavily forested with abandoned mine shafts and mining prospect pits (Horan 1984). Based on review of historical documentation, the old Kings Mountain Gold Mine is likely located on the Eastern Property parcel portion of the project area.

The American Civil War and Reconstruction (1860–1900)

North Carolina was one of the last states to join the Confederacy at the outset of the Civil War. Culturally, North Carolina did not share many of the institutions that much of the South had in common, such as the plantation system and large enslaved populations. This caused a division among North Carolinians regarding secession. Wilmington and the Cape Fear region became a hotbed for secessionists, while areas in the western portion of the state favored remaining in the Union (Barrett 1963:7). North Carolina was neutral until Fort Sumter was taken by secessionists in South Carolina. A wave of allegiance to the southern cause swept across North Carolina. Shortly thereafter, on May 20, 1861, North Carolina overwhelmingly passed an ordinance of secession (Barrett 1963:15).

By population, North Carolina only made up one-ninth of the Confederacy, while one-sixth to one-seventh of all Confederate forces were made up of men from North Carolina (Barrett 1963:28). The Union Army soon saw North Carolina as a key objective. After establishing a foothold on the North Carolina coast, Union forces directed their attention to the Confederate supply routes connecting

Virginia and the Deep South. There is no evidence of any engagement or conflict of any size in Cleveland County or near the project area.

The Civil War caused major economic and cultural disruption throughout North Carolina. The occupation of the state by Union forces had left the landscape devastated (Hardy 2011:115). Union troops were stationed throughout North Carolina until the summer of 1866. On June 25, 1868, North Carolina was readmitted into the Union (Hardy 2011:124).

Reconstruction was a period of great disorganization and conflict for North Carolina, as it was for much of the South. The freeing of African-American enslaved people resulted in the disruption of many key labor-intensive industries. However, the destruction caused by the Civil War was eventually replaced with growth, prosperity, and wealth. This was partially due to the industrialization of much of the South with the advent of textile mills and ironworks. This industrialization caused the population in urban areas to grow by 5 million people between 1880 and 1910 (Ayers 1992:55).

As much of the South's economy grew and modernized, the marginalization and harassment of African-Americans remained stubbornly constant. Between the end of the Civil War and 1941, 168 African- Americans were lynched in North Carolina (Newkirk 2009:3). All social and political institutions were segregated by race, and African-Americans would remain politically, socially, and economically marginalized for much of the twentieth century (Berry 1978). It was not until the advent of the Civil Rights Movement and the struggle to desegregate the South during the mid-twentieth century that African-Americans would gain a voice in society.

Twentieth Century

North Carolina continued to grow and develop economically in the early twentieth century. During World War I, North Carolina was a major textile supplier to the U.S. Army (Rafle 2002). Beginning in the 1920s, the production of textiles, North Carolina's main industry, began to decline, foreshadowing the general economic decline of the U.S. economy in the 1930s. With changing styles brought on by the jazz culture of the 1920s, clothing changed rapidly. A woman's dress in 1910 took approximately 10 to 11 yards of fabric to produce. By 1920, a dress required only 2 yards (Davis 2003:4). North Carolina textile mills ignored the changing fashions, resulting in overproduction, layoffs, and the merging of mills. Agriculture, historically a major industry in Cleveland County, was heavily affected by the Great Depression, but like the textile mills, farmers started to feel the effects of the economic downturn in the 1920s with the plummeting price of agricultural goods (Davis 2003:10). By 1930, the economy of North Carolina was in the downward spiral that characterized the U.S. economy generally during the Great Depression.

The United States' entry into the World War II decisively ended the hardships of the 1930s in North Carolina as it did in the rest of the nation, although North Carolina had already begun to enjoy a modicum of economic resurgence before 1941 (Powell 1989:496). As massive increases in defense spending coursed through all states, the effects in North Carolina were felt most markedly in military installations and their supporting communities and industries. Expansion of existing facilities at Fort Bragg and Cherry Point Marine Air Station combined with newly constructed bases such as Camp Lejeune, Camp Davis, Seymour Johnson Air Base in Goldsboro, Camp Butner north of Durham, and the Overseas Replacement Depot in Greensboro helped to invigorate the statewide economy. North Carolina's textile industry, a state economy staple since Reconstruction, supplied the swelling military ranks with finished goods and raw material for sheets, towels, canvas, socks, parachutes, blankets, underwear, outer clothing, and shoelaces. By war's end, North Carolina military installations were responsible for training more U.S. servicemen than any other state (Powell 1989:500–502).

Against the backdrop of the Great Depression and world war, a nascent lithium mining industry began to emerge in western North Carolina during the 1930s and 1940s. Following the first commercial venture in the state to extract lithium (*Durham Sun* 1936), industrial interest in the rich spodumene deposits located near Kings Mountain began to manifest earnestly in the 1940s. The Solvay Process Company, at the time the nation's largest producer of alkali metals, established a lithium concentration facility in 1943 on a site within Albemarle's present holdings (*News and Observer* 1942).

The rapid urbanizing effects of the New Deal and the World War II felt in other states did not manifest in North Carolina during the postwar years, which saw a comparatively gradual shift from a rural, agricultural economy to an industrial-urban one (Ready 2005:369). State-funded initiatives aided the process. Governor W. Kerr Scott's 1949 "Go Forward" program funded school construction, port improvements in Wilmington and Morehead City, road construction paving farm-to-market roads, and rural electric and telephone lines. The "Nickels for Know-How" program funded agricultural research at North Carolina State College (Powell 1989:514–515).

By the time ownership of Solvay Process Company's lithium processing facilities and associated mine at Kings Mountain passed to Foote Mineral Company (Foote) in 1951, lithium's role as a key material for atomic weapons production resulted in lucrative government contracts to supply the Atomic Energy Commission (*Foote Prints* 1976). Expanded lithium applications in the aerospace industry intensified lithium production for use in more efficient batteries for space vehicles and, presaging twenty-first century developments, electric automobiles (*Foote Prints* 1967). Vigorous research efforts, supported substantially by Foote scientists, further broadened industrial applications in industries such as pharmaceuticals, artificial rubber, missile fuels, and welding that sustained lithium mining and processing throughout most of the second half of the twentieth century (*Foote Prints* 1976; Horan 1989).

The 1950s also saw the establishment and development of Research Triangle Park, today a nexus of research carried out through partnerships among government, higher education, and private industry (Powell 1989:530–532). Effects of its establishment were felt over the next two decades as ancillary technology-oriented ventures sprang up in the Raleigh-Durham and Charlotte areas (Ready 2005:371). Among the innovations emerging from the park itself were Astroturf and medications for the treatment of acquired immunodeficiency syndrome (AIDS) (Rafle 2002).

At Kings Mountain, Foote's enterprise remained one of the region's top employers through the 1970s and 1980s, growing until the early 1990s, when foreign lithium imports altered the market, resulting in reduced production (Henderson 2019). Thereafter, the facility changed hands in transactions among several concerns, the last of which was Albemarle's purchase of the property in 2014. Today, considerable optimism attends the reinvigoration of western North Carolina's lithium industry as the promise of lithium applications in electric automobile batteries stands to fulfill a longstanding expectation (*Foote Prints* 1967; Li 2022).

PREVIOUSLY RECORDED ARCHAEOLOGICAL SITES AND INVESTIGATIONS

A research request filed with the OSA on November 16, 2023, identified two archaeological sites (Table 3-1) and four archaeological investigations (Table 3-2) within 1 mile (1.6 km) of the project area (Figure 3-1). There are no previous investigations located within the project area. There are no previously recorded archaeological sites within or directly adjacent to the project area.

Table 3-1. Previously Documented Archaeological Resources within 1 mile (1.6 km) of the Project Area

Site Number	Site Type	NRHP Eligibility
31CL67	Historic	Not eligible
31CL140	Historic	Undetermined

Source: OSA (2023b)
NRHP = National Register of Historic Places

Table 3-2. Previous Archaeological Investigations within 1 mile (1.6 km) of the Project Area

Environmental Review No.	Survey Name	Conducted by, Date
ER 00-7689	Phase I Archaeological and Historic Architectural Survey of The Williams Gas Pipelines – Transco Proposed Sundance Expansion Project: Kings Mountain and Mooresville Loops Cleveland, Gaston, Iredell, and Rowan Counties, NC	New South Associates, 2000
	Addendum to the Phase I Archaeological and Historic Architectural Survey of The Williams Gas Pipelines – Transco Proposed Sundance Expansion Project: Two Proposed Contractor/Pipe Storage Yards Cleveland and Iredell Counties, North Carolina	New South Associates, 2001
ER 16-0551	Phase I Archaeological Survey Line T-001A, Phase II Pipeline Replacement Project Cleveland, Polk, and Rutherford Counties, North Carolina	S&ME, Inc., 2016
ER 17-1533	Phase I Archaeological Survey of the Proposed Transcontinental Gas Pipe Line, LLC Project in Cleveland County, North Carolina	Apogee, Inc., 2017

Source: OSA (2023b)

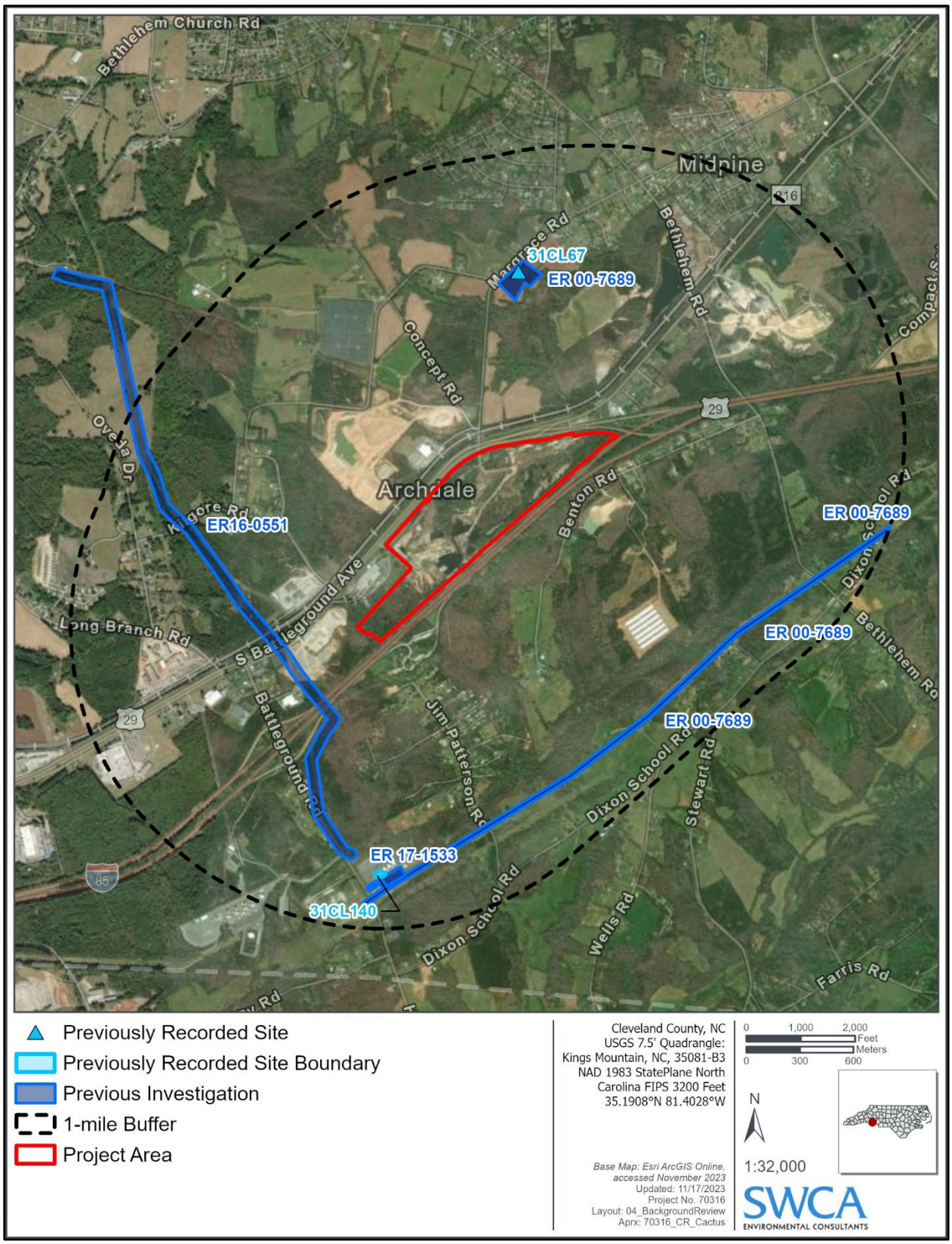

Figure 3-1. Previously recorded sites and investigations in the project area and a 1-mile buffer.

Previous Archaeological Investigations

Due to the limited amount of survey within the project area, further analysis of previous survey work in the general project region was undertaken to better understand the potential results of the current undertaking. A summary of research into previous survey work in the general region is provided below.

ER 00-7689

An archaeological and historic architectural survey of two sections of a gas pipeline, the southern section of which (called the Kings Mountain Loop) measured 8.85 miles (14.24 km) in length and 200 feet (61 meters [m]) in width (Joseph and Port 2000, 2001). The survey identified three archaeological sites, none of which are in or within 1 mile (1.6 km) of the current project area.

In 2001, an additional survey was conducted for this project for two proposed contractor/pipe laydown yards. The survey identified one archaeological site outside of but within 1 mile (1.6 km) of the current project area.

ER 16-0551

An archaeological survey for a proposed pipeline replacement project measuring 57 miles (92 km) in length and 100 feet (31 m) in width (Nagle 2016). The survey identified 23 archaeological sites, none of which are in or within 1 mile (1.6 km) of the current project area.

ER 17-1533

A survey was conducted for a 2-acre (0.8-hectare) area for Transcontinental Gas Pipe Line, LLC, located 0.3 mile (0.5 km) north of the intersection of Battleground Road (Route 216) and Dixon School Road (State Route 2283) (Winterhoff and Beverly 2017). One site was observed and recorded, however the project area changed which resulted in the site no longer being within the project area. No cultural material was observed in the final project area.

Previously Recorded Archaeological Sites

SWCA's archival research effort gathered information about previously recorded archaeological sites within a 1-mile (1.6-km) buffer of the project area. No previously recorded sites have been recorded within the project area. Archival research revealed that some of the previous archaeological investigations conducted within 1 mile (1.6 km) of the project area (discussed above) resulted in the discovery and recording of archaeological sites both within and beyond the 1-mile (1.6-km) buffer. The discussion below includes all previously recorded sites located within 1 mile (1.6 km) of the project area.

31CL67

This twentieth-century domestic site is located 0.6 mile (1 km) north of the present project area, approximately 263 feet (80 m) west of the intersection of Kings Mountain Boulevard and Phifer Road. It was recorded during a 2001 survey in support of two proposed contractor/pipe storage yards for pipeline construction (ER No. 00-7689; Joseph et al. 2000).

The site consisted of a sparse collection of historic-era artifacts, consisting largely of nails, glass, and non-diagnostic ceramics. The majority of the observed artifacts appear outside of the project's area of potential effects. The investigators recommended it not eligible for the National Register of Historic

Places (NRHP) and recommended no further work (Joseph et al. 2000). The OSA later determined the site not eligible for the NRHP (OSA 2023b).

31CL140

This historic-era domestic site is located 0.8 mile (1.3 km) south of the project area, approximately 363 feet (111 m) west of the intersection of Battleground Road and Transco Drive in Cleveland County. It was recorded during a 2017 survey in support of a compliance project (Winterhoff and Beverly 2017). After the site was recorded, the project area changed, which resulted in the site no longer being within the project area. The associated report did not include information on the site, however a site form was submitted.

Although Winterhoff and Beverly's 2017 report does not provide information on the site, the site form indicates the presence of nails and glass artifacts. The artifacts were observed within the plow zone. The investigators recommended the site not eligible for the NRHP and recommended no further work (OSA 2023b).

HISTORICAL DOCUMENTATION

A review of historical documentation using historic-era topographic maps and aerials depicts the project area as having been used primarily for agricultural activities until the late twentieth century. During the late twentieth century the project area transitioned from being used for agricultural activities to being used as an active mining site.

Historical topographic maps suggest that, by 1908, various structures were present along unnamed roads within and surrounding the project area, with three structures depicted in the project area at this time (U.S. Geological Survey [USGS] 1908). A railroad is also shown on the map, labeled "SOUTHERN RR ATLANTA LINE" along the northwestern boundary of the project area and running into the city of Kings Mountain (USGS 1908). The 1930 map of Cleveland County from the North Carolina County Road Survey (NCCRS) depicts a majority of the roads seen within the project area as "Unimproved County Highways" (NCCRS 1930), and the 1938 map of Cleveland County from the North Carolina State Highway and Public Works Commission (NCSHPWC) shows the project area as continuing to have various roads and structures within the boundaries, the majority of which are labeled as "Graded and Drained Roads". Various structures are seen labeled as "Farm Units" or "Non-Farm or Tenant House" (NCSHPWC 1938).

In a 1956 historical aerial photograph, the project area appears to be forested and agricultural land (National Environmental Title Research [NETR] 2023). The project area continues to appear to be used for agricultural purposes through the 1994 aerial imagery (NETR 2023). The aerial imagery in 1999 begins to show the large areas of ground disturbance due to the start of mine activities (NETR 2023). All of the structures originally depicted on the 1908 map no longer appear on the aerial imagery from 1999 (NETR 2023). The aerial imagery from 1999 to 2013 shows the mine site expanding throughout most of the project area, leaving only the southwestern portion untouched. Vegetation at the mine site appears to begin returning on the 2013 aerial imagery, which indicates the beginning of the mine reclamation process (NETR 2023).

The most recent aerial photograph of the project area from 2023 continues to show the southwestern portion of the project area to be largely undeveloped and forested, while the rest of the project area continues to be a mine reclamation site (NETR 2023).

In summary, the project area has gone through significant changes throughout the late twentieth century, where mining and mining-related activities, have been intensive and ongoing throughout the early twenty-first century. Many of the buildings depicted as being present in the early twentieth century have been demolished due to mining disturbances or are no longer present on the more recent USGS topographic map and modern aerial images.

ARCHAEOLOGICAL SITE POTENTIAL

PRECONTACT SITE POTENTIAL

Based on the results of the initial site visit and historical background review of the project area, the project area has a low probability of containing a significant number of intact buried archaeological sites. Moderate site potential exists in the uplands; any sites here would be at or very close to the surface, however, as a majority of the uplands consist of weathered bedrock. Due to previous mining activities, a large mining pit is located in most of the project area. This pit, in addition to the widespread presence of large rock piles resulting from mining activities, indicates exceedingly low potential for discovery of archaeological remains in these locations.

In addition to the factors mentioned above, a review of sites in proximity to the project area and general trends of precontact settlement systems in the Piedmont of North Carolina has identified several trends that can help identify probability areas within the project area. Environmental factors including proximity to water, the presence of well-drained soils, slope, general topography, and other such variables have been found to correlate strongly with the presence of precontact sites. Conditions within much of the project area are not ideal for precontact site preservation, and potential is generally low.

HISTORIC SITE POTENTIAL

There is a higher probability of historic sites and structures within the project area. Historic site location influences follow parameters similar to those of precontact sites, with some additional influences. Proximity to water sources in the early historic period would influence the locations for settlements, especially navigable water sources. The highest-probability areas for historic archaeological sites are those in proximity to the mapped locations of buildings depicted on the 1908 Kings Mountain, North Carolina, USGS quadrangle.

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CHAPTER 4. METHODOLOGY

The Phase I archaeological methodology used for this project has been developed in accordance with the OSA's Guidelines (OSA 2023), relevant federal regulations and guidelines, and the background research conducted for the project. In general, the methodology used was designed to identify and assess possible effects to potentially significant archaeological sites eligible for the NRHP that are present within the project area.

BACKGROUND RESEARCH

Background research was conducted in two parts: prior to fieldwork to determine the likelihood of encountering archaeological resources, and after fieldwork to further explore the context of the resources identified. This background research also determined areas of past disturbance and historical occupation in the project area and established a land use history of the project area. On November 16, 2023, SWCA visited the OSA in Raleigh, North Carolina, where OSA staff provided SWCA with information regarding previously recorded resources in the project area or within 1 mile (1.6 km) of the project area. SWCA also reviewed various online databases and historical cartographic sources to better understand the likelihood of encountering archaeological sites within the project area. Unique environmental conditions that may influence the preservation of archaeological deposits were also considered. SWCA performed a review of historical maps using online USGS archives.

Ongoing background research was conducted throughout the project to place the results of the survey in appropriate cultural and historical contexts. SWCA particularly focused on the history of mining activity in the vicinity of the project area using USGS archives and online periodical repositories to review mining trade publications, federal and state monographs and bulletins, and relevant local newspaper reports from 1915 to the present day. These latter included the *Charlotte Observer, Charlotte News, Rocky Mount Telegram* (North Carolina), *Gastonia Gazette, Durham Sun, News and Observer* (Raleigh), and the *Kings Mountain Herald*. A substantial amount of trade publication information came from *Foote Prints*, a newsletter-like quarterly published by the Foote Mineral Company, a former owner of the Kings Mountain lithium mine and associated processing facilities prior to Albemarle. The information compiled from these sources was integrated into the Historic Context section above, as well as relevant site contexts outlined below.

FIELD METHODOLOGY

Pedestrian survey provides a detailed investigation of the project area. SWCA conducted subsurface testing based on the probability model established for the project. In areas that were determined to have the potential to contain archaeological resources, the survey methodology was designed based on the degree and depth of disturbance anticipated during the construction of the project. For the localities where depth of ground disturbance will be limited to less than 1 m (3.3 feet), investigators excavated shovel tests at least 10 cm (4 inches) into culturally sterile subsoil or 1 m (3.3 feet) below ground surface, whichever was encountered first. As the majority of the project area was forested and presented ground surface visibility of less than 50 percent, the primary field method employed in the survey was systematic pedestrian survey with subsurface testing via shovel tests at 30- and 60-m (99- and 197-foot) intervals in areas inferred to have high and low/moderate probability of cultural material, respectively.

Altogether, 8.92 percent (14.7 acres or 0.02 square mile) of the project area was surveyed using the methods described below. Survey of the remainder was omitted due to various landscape conditions including excessive slope, inundation, and prior disturbance. Areas with higher probability of containing

precontact and historic archaeological sites were tested more thoroughly than areas unlikely to contain archaeological resources. Each area within the project area was classified as follows:

- **High Probability—3.18 acres (0.01 square mile):** investigated through pedestrian survey, including full visual inspection of the surface and shovel testing at the 30-m (100-foot) intervals.
- **Low/Moderate Probability Areas – 11.8 acres (0.02 square mile):** investigated through pedestrian survey, including full visual inspection of the surface and shovel testing. Per the 2023 OSA Guidelines, an expanded shovel testing interval of 60 m (200 feet) was applied to these areas.
- **Low to No Probability Areas – 116.4 acres (0.18 square mile):** visually inspected to confirm the results of the background research and initial field visit. Unless visual inspection reveals errors in prior assessments, pedestrian survey and shovel testing would not be performed in these areas.

Systematic Pedestrian Survey

SWCA archaeologists performed a systematic pedestrian survey throughout the project area. Per OSA Guidelines (OSA 2023), survey team members were spaced at intervals no greater than 10 m (33 feet) to ensure that surface manifestations of buried features, aboveground remains of historic-era structures, evidence of disturbance, etc., could be observed and recorded. Systematic pedestrian survey was conducted regardless of ground visibility. Archaeological remains encountered through this method were recorded using a tablet outfitted with a GPS receiver capable of submeter accuracy and supplemented by field notes and photography. Archaeologists also took overview photographs of representative locations to document the range of topography and vegetation found within the project area.

If artifacts were to be observed on the surface, collection would be carried out such that all artifacts bearing potentially temporally diagnostic attributes were recovered and a representative sample of the range of all present artifact types were obtained. At any sites that presented especially dense surface scatters, a sample of potentially diagnostic artifacts would be collected to represent the range and number of diagnostic types. Material that was not or could not be collected was described in field notes and documented with photographs while in the field. Systematic pedestrian survey was supplemented with subsurface testing in the form of shovel tests. When a site was identified, close-interval transects (approximately 1 m [3.3 feet] apart) were used to determine site boundaries, and shovel tests (see below) were systematically placed at close intervals to characterize the subsurface potential and extent of the site.

Shovel Testing

SWCA archaeologists excavated shovel tests at locations within the project area that presented less than 50 percent ground surface visibility and had been classified as having high or low/moderate probability of containing precontact or historic-era remains. Shovel tests were excavated along transects spaced 30 m (99 feet) apart from one another. In areas of low/moderate probability, transects were spaced 60 m (197 feet) apart and the standard interval between shovel tests was 60 m (197 feet). Transects in areas of low/moderate probability were placed in a staggered arrangement to reduce the size of sites that could potentially be missed by the survey.

Shovel tests had a minimum diameter of 30 cm (12 inches) and were excavated according to natural strata at least 10 cm (4 inches) into archaeologically sterile sediments or to a depth of 1 m (3.3 feet) below ground surface, whichever was encountered first. Excavated soils and sediments were screened using standard ¼-inch hardware cloth. Data regarding texture, depth, and color were recorded for the strata

observed in each shovel test, and profile maps were created and photographs taken of representative shovel tests.

Site Delineation

Per the 2023 OSA Guidelines, when cultural material was recovered from the surface through systematic pedestrian survey or from shovel test excavation, additional radial shovel tests would be excavated in proximity to the initial "positive" shovel test to locate and delineate the site boundaries and sample the material culture present. Radial shovel tests would be placed to the north, south, east, and west at an interval no greater than 15 m (49 feet)(i.e., half the standard interval) from the initial shovel test. The horizontal limits in each of the four directions were considered established when two shovel tests containing no cultural material ("negative" shovel tests) were excavated along those cardinal lines. Internal radial shovel tests to determine spatial organization of remains within site boundaries were not excavated.

LABORATORY METHODS

No artifacts were observed or collected during this survey. If encountered during the survey, they would have been returned to SWCA's Cary, North Carolina, archaeological laboratory, where they would have been processed, catalogued, and analyzed.

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CHAPTER 5. RESULTS

SWCA conducted a systematic pedestrian field survey on September 18 and September 21, 2023, with a crew of one field technician and one field director, totaling four person-days in the field. The entire project area was investigated. Due to the poor ground visibility within the project area, systematic pedestrian survey and shovel testing were the primary survey methods employed. The shovel testing area was located in a mixed deciduous and coniferous growth forest on an upland (Figure 5-1). During the survey, 40 shovel tests were excavated; all were negative for cultural materials (Figure 5-2 and Figure 5-3).

Figure 5-1. Overview of the shovel test area, facing north.

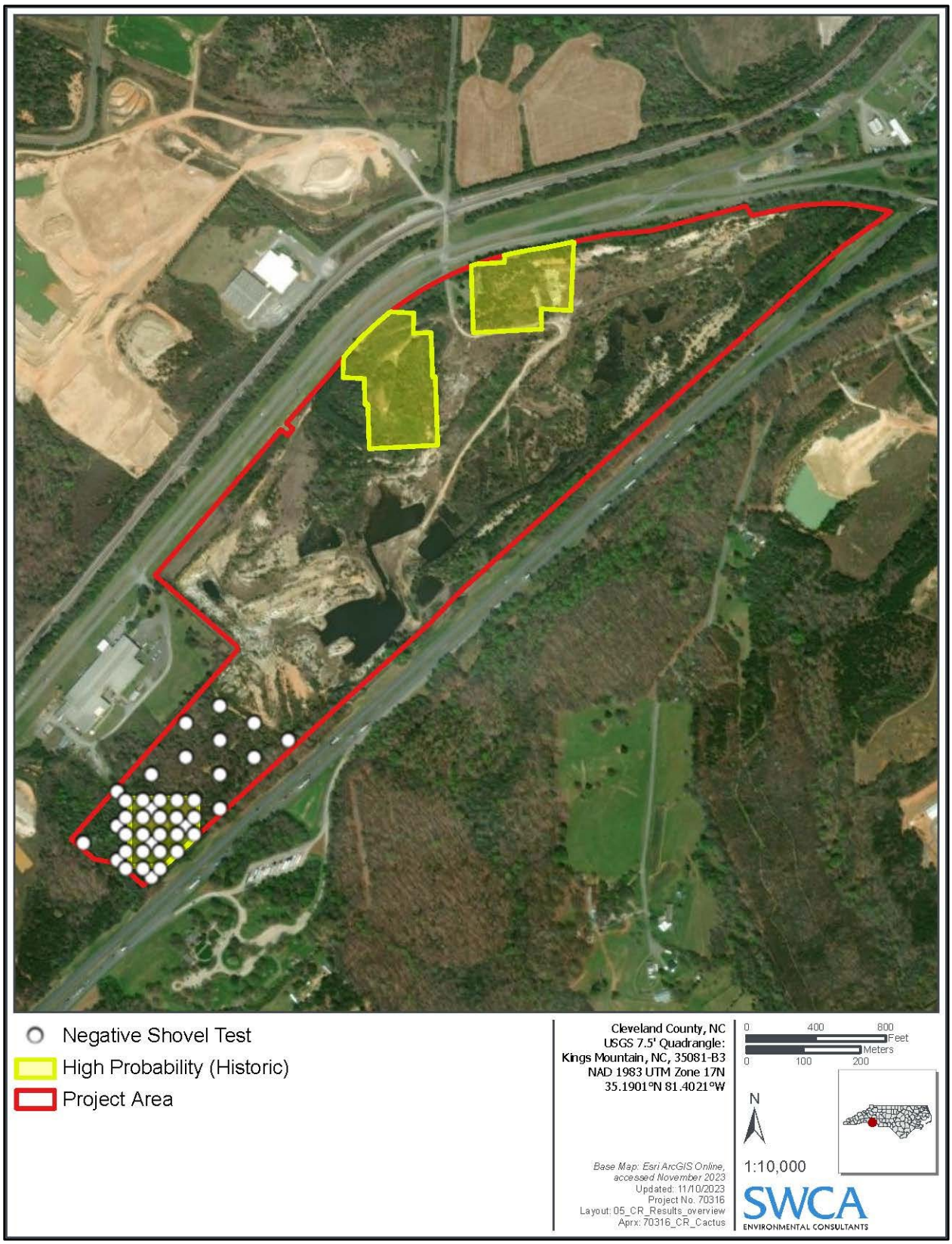

Figure 5-2. Overview of survey results.

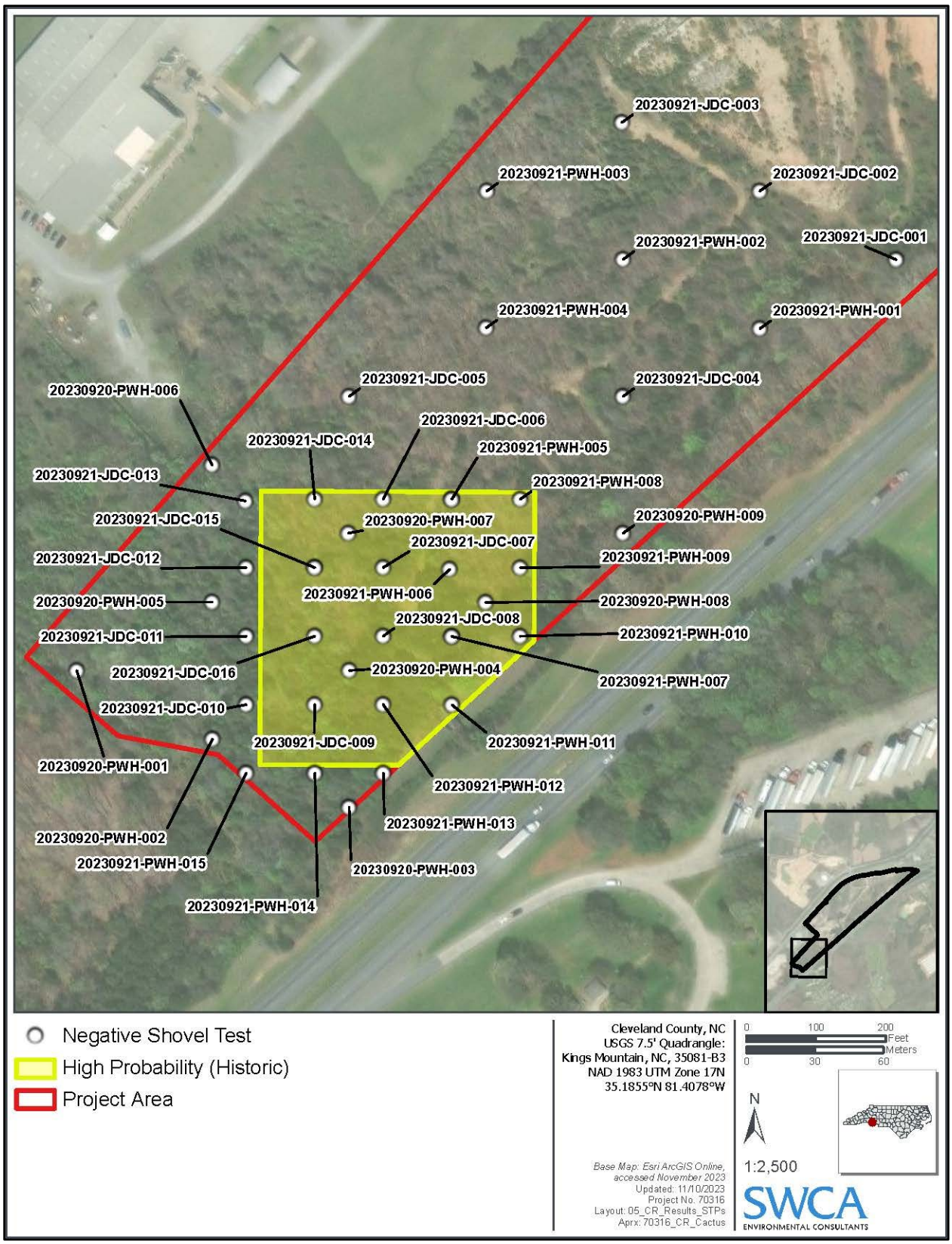

Figure 5-3. Overview of survey results, within the shovel testing area.

The typical soil profile in the uplands identified in the project area consists of one stratum overlying subsoil. Stratum I was an O/A horizon consisting of yellowish brown (10YR 5/4) sandy clay loam. Subsoil was a B horizon consisting of yellowish red (5YR 5/6) sandy clay, with small (approximately 2 to 7 cm [0.8–2.8 inch]) weathered bedrock gravels whose frequency increased with depth (Figure 5-4).

Figure 5-4. Representative soil profile from shovel test 20230920-PHW-005.

During review of historical topographic maps, three high probability areas for historic cultural materials were identified. After review of aerial imagery and on-the-ground visual inspection, two of the three high probability areas were not shovel tested due to previous mining disturbance. The majority of the project area is located within an abandoned mine. The areas that were previously disturbed due to past mining activities were not shovel tested. These areas were inspected by the field crew and documented with photographs. Aerial imagery from 2006, 2008, and 2012 shows the full extent of disturbance related to the past mining activities within the project area (Figure 5-5 through Figure 5-7). The survey did not result in the identification or documentation of any archaeological sites.

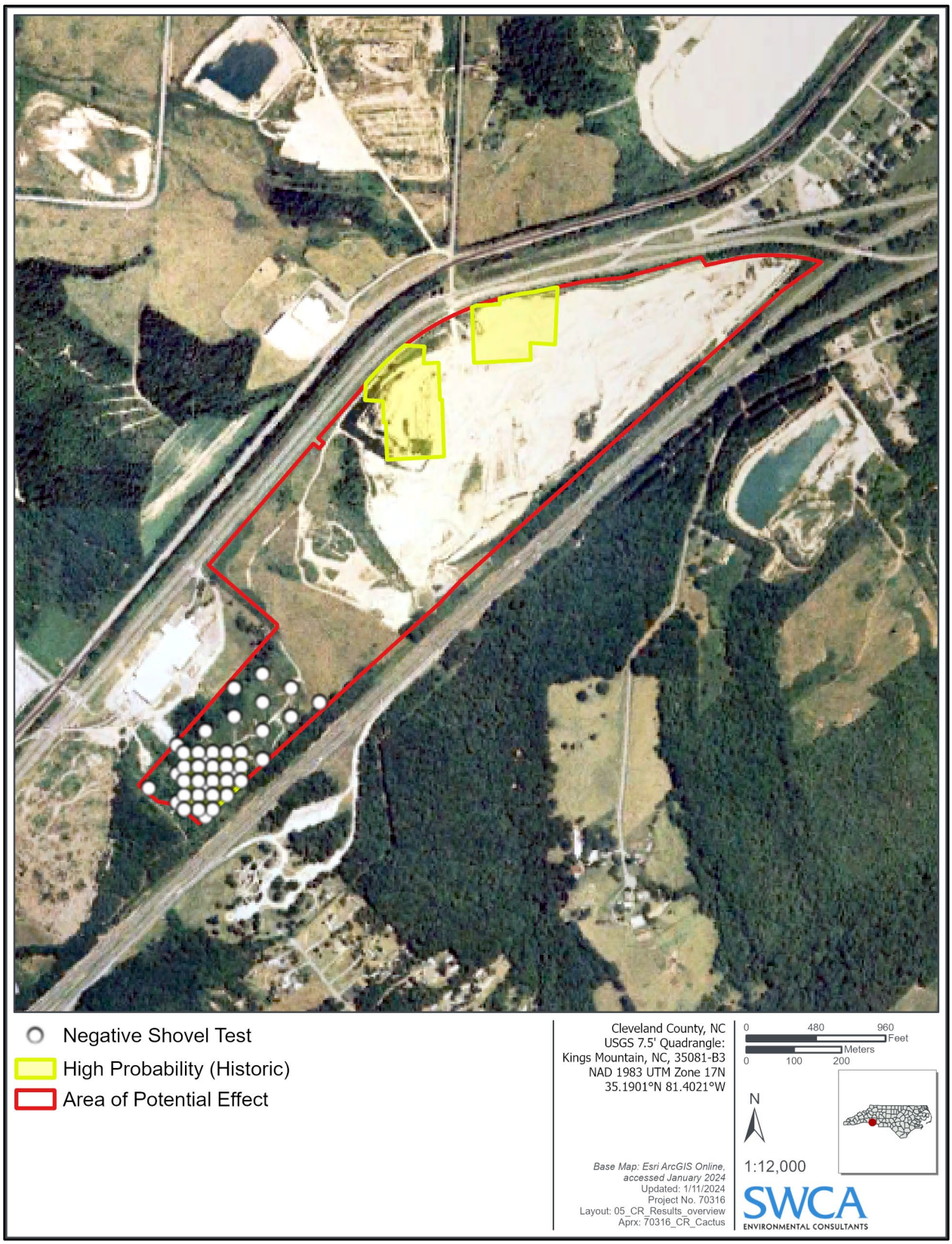

Figure 5-5. Overview of survey results with aerial imagery from 2006.

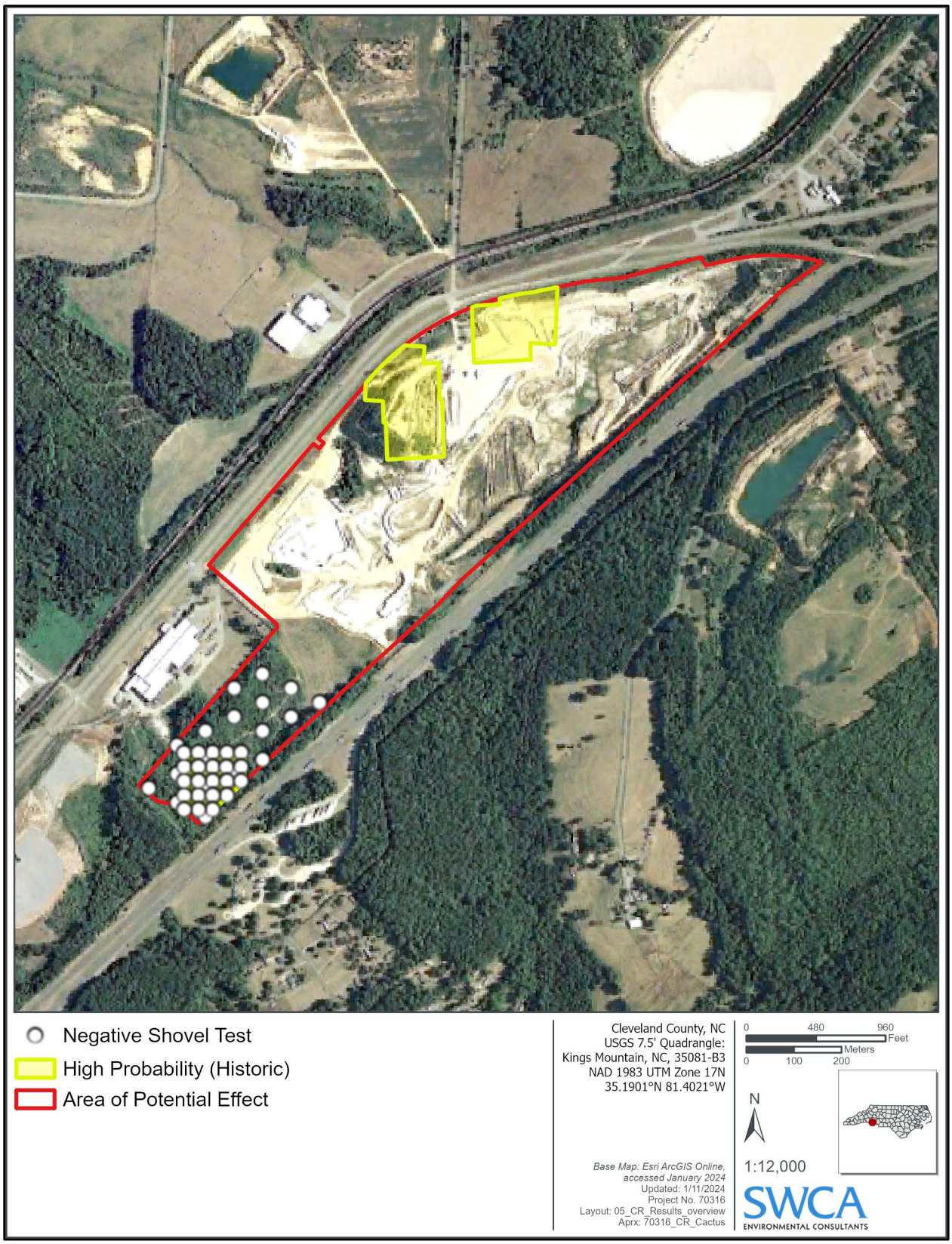

Figure 5-6. Overview of survey results with aerial imagery from 2008.

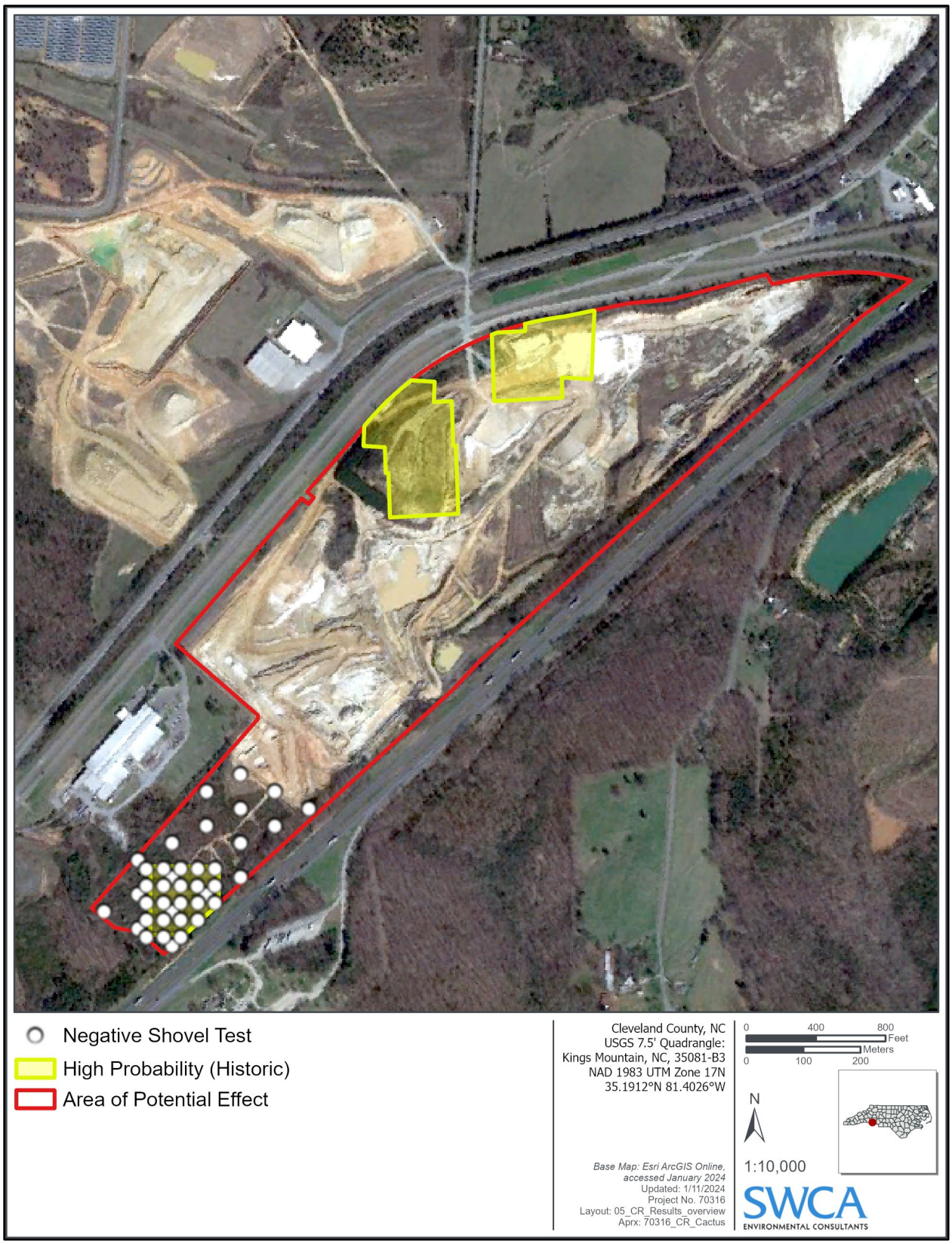

Figure 5-7. Overview of survey results with aerial imagery from 2012.

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CHAPTER 6. CONCLUSION

This report details the background research, methodology, and results of the Phase I archaeological survey and geoarchaeological investigation conducted on behalf of Albemarle in support of the Kings Mountain Mining Project.

The project area was surveyed using a combination of shovel testing and pedestrian survey. In total, 40 shovel tests were excavated. The majority of the project area has been previously disturbed due to past mining activities. Shovel testing was limited to the southwestern portion of the project area where no past mining activities occurred, and all were negative for cultural materials.

During the survey, investigators identified no previously identified or previously undocumented archaeological sites. Based on the results of the survey, SWCA determined no historic properties will be affected by the proposed undertaking, and no further work is recommended.

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APPENDIX E-3 2024 STATE HISTORIC PRESERVATION OFFICE KINGS MOUNTAIN MINING PROJECT, KINGS MOUNTAIN, CLEVELAND COUNTY, ER 22-1248

North Carolina Department of Natural and Cultural Resources
State Historic Preservation Office
Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary D. Reid Wilson

Office of Archives and History
Deputy Secretary, Darin J. Waters, Ph.D.

October 11, 2024

Matthew Jorgenson
SWCA Environmental Consultants
113 Edinburgh South Drive, Suite 120
Cary, NC 27511

Matthew.Jorgenson@SWCA.com

Re: Kings Mountain Mining Project, Kings Mountain, Cleveland County, ER 22-1248

Dear Mr. Jorgenson:

Thank you for your email of September 20, 2024, regarding the above-referenced undertaking. We have reviewed the submission and offer the following comments:

We previously recommended further testing, including deed research and subsurface testing of cultural features, at sites 31CL180 and 31CL185 within the Kings Mountain Mining Project Area if avoidance was not possible. The submitted avoidance plans indicate that the property containing both sites will not be impacted by any mining-related activities as part of the proposed undertaking and both sites will be avoided. SWCA recommends that no further work at 31CL180 and 31CL185 be required as part of the proposed undertaking. We concur with this recommendation.

Additionally, construction plans in areas previously identified as floodplains have been modified and reassessed. The proposed rock storage facility will be situated in an area that was previously utilized as a mid-20th century tailings pond and will not have an impact on intact archaeological resources. The other areas with proposed impacts have also been previously heavily disturbed and/or are not in alluvial settings but in areas of steep slope which have a low potential for intact archaeological resources. SWCA recommends that there will be no adverse effect for significant archaeological resources in these areas. We concur with this recommendation.

We also note that the submitted avoidance plans pertain to archaeological resources only and that consultation concerning historic structures is ongoing.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-814-6579 or environmental.review@dncr.nc.gov. In all future communication concerning this project, please cite the above referenced tracking number.

Sincerely,

Renee Gledhill-Earley

for Ramona Bartos, Deputy
State Historic Preservation Officer

cc: John Kuhn John.Kuhn@albemarle.com
Andrew Harley Andrew.Harley@swca.com
Heath Anderson heath.anderson@swca.com

APPENDIX E-4 2024 STATE HISTORIC PRESERVATION OFFICE KINGS MOUNTAIN MINING PROJECT, CLEVELAND COUNTY, ER 22-1248, DEPARTMENT OF ENERGY CONSULTATION

North Carolina Department of Natural and Cultural Resources

State Historic Preservation Office

Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary D. Reid Wilson

Office of Archives and History
Deputy Secretary, Darin J. Waters, Ph.D.

May 22, 2024

Harry E. Taylor harry.taylor@netl.doe.gov
U.S. Department of Energy
National Energy Technology Laboratory
3610 Collins Ferry Road
Morganton, WV 26505

Re: Kings Mountain mining project, Cleveland County, ER 22-1248

Dear Mr. Taylor:

Thank you for your email of May 6, 2024, regarding the above-referenced undertaking. We have reviewed the submittal and offer the following comments.

We are interested in reviewing the draft environmental assessment and providing comments. The environmental assessment may be submitted to our email address at environmental.review@dncr.nc.gov.

If the environmental assessment documentation is a large file size, please use the share file service of your choice.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-814-6579 or environmental.review@dncr.nc.gov. In all future communication concerning this project, please cite the above referenced tracking number.

Sincerely,

Renee Gledhill-Earley

for Ramona Bartos, Deputy
State Historic Preservation Officer

cc: Matthew Jorgenson, SWCA matthew.jorgenson@swca.com

APPENDIX E-5 2024 STATE HISTORIC PRESERVATION OFFICE HISTORIC STRUCTURE SURVEY REPORT, KINGS MOUNTAIN MINING PROJECT, CLEVELAND COUNTY, ER 22-1248, FINAL CONCURRENCE

North Carolina Department of Natural and Cultural Resources

State Historic Preservation Office

Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary D. Reid Wilson

Office of Archives and History
Deputy Secretary, Darin J. Waters, Ph.D.

February 27, 2024

Hannah Curry hannah.curry@swca.com
SWCA Environmental Consultants
113 Edinburgh South Drive
Cary, NC 27511

Re: Historic Structure Survey Report, Kings Mountain mining project, Cleveland County, ER 22-1248

Dear Ms. Curry:

Thank you for your email of December 7, 2023, transmitting the revised Historic Structure Survey Report (HSSR), "Historic Structures Survey for Kings Mountain, Cleveland County, North Carolina," prepared by SWCA for the Albemarle, U.S., Inc. We accepted the revised draft via an email of December 11, 2023, and all remaining revised deliverables were received on January 18, 2024. We have reviewed the revised HSSR and offer the following comments.

We note that our recommended revisions have been addressed. All eligible property boundary maps and periods of significance are appropriate. We do not recommend additional changes to the HSSR and accept this version as final. This survey resulted in a final total of four (4) eligible and fifty-five (55) ineligible properties.

In addition to the determinations of our September 27, 2023 letter, we concur that the following properties are eligible for listing in the National Register of Historic Places for the reasons listed in the report.

- CL1717, Macedonia Baptist Church – Property is eligible under Criterion C and meets Criterion Consideration A as an individual resource; also eligible as a complex or district under Criteria A and C and meets Criterion Consideration A.
- CL1723, Galilee United Methodist Church – Property is eligible under Criterion C and meets Criterion Consideration A

Additionally, we concur that the following properties are not eligible for listing in the National Register.

- CL0240, Hostetler House
- CL1716, Commercial Building
- CL1725, Adams Chapel AME Zion Church
- CL1728, House
- CL1729, House
- CL1742, House

- CL1751, House
- CL1754, House
- CL1769, House
- CL1744, House
- CL1745, House

The proposed mine expansion has the potential to adversely affect the four National Register-eligible properties identified by this survey as well as the Margrace Mill Historic District (CL0350). Additional consultation is required to determine the level of impact and to discuss alternatives that may avoid or minimize the effects. Please contact Katie Harville, katie.harville@dncr.nc.gov, to schedule a formal consultation meeting.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-814-6579 or environmental.review@dncr.nc.gov. In all future communication concerning this project, please cite the above referenced tracking number.

Sincerely,

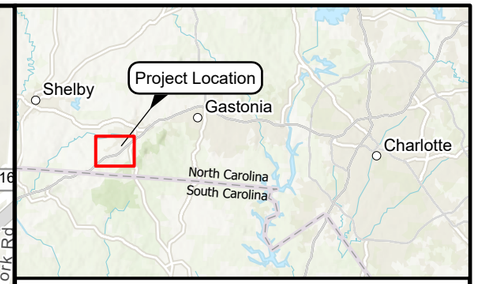
Renee Gledhill-Earley

for Ramona Bartos, Deputy
State Historic Preservation Officer

cc Katie Harville, NC HPO katie.harville@dncr.nc.gov
Hannah Beckman-Black, NC HPO/WO hannah.beckman@dncr.nc.gov

APPENDIX E-6 CULTURAL, HISTORICAL, AND ARCHAEOLOGICAL RESOURCES

DRAFT: 12/20/2023



- Project Boundary
- Archeological Survey Locations (SWCA)

Cultural Heritage and Historic Sites

- Blockface
- Surveyed Only
- Surveyed, Gone
- Surveyed in NRHD
- Surveyed in NRHD, Gone
- NR Historic District center point
- Site Boundary

Notes:
- Note 1: Project Features are provisional and incomplete at this time.
- Note 2: Cultural Data Source: NC SHPO - October 2022

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Miles

1 inch = 0.3 mi when printed 11x17

Cultural, Historical, and Archaeological Resources

Kings Mountain Lithium Mine

Albemarle
Kings Mountain
Cleveland County,
North Carolina

APPENDIX E-7 2024 STATE HISTORIC PRESERVATION OFFICE KINGS MOUNTAIN MINING PROJECT, SWCA PROJECT NO. 70316, CLEVELAND COUNTY, ER 22-1248

North Carolina Department of Natural and Cultural Resources

State Historic Preservation Office

Ramona M. Bartos, Administrator

Governor Roy Cooper | Secretary D. Reid Wilson

May 1, 2024

Matthew Jorgenson matthew.jorgenson@swca.com
SWCA Environmental Consultants
113 Edinburgh South Drive, Suite 120
Cary, NC 27511

Re: Kings Mountain mining project, SWCA Project No. 70316, Cleveland County, ER 22-1248

Dear Mr. Jorgenson:

Thank you for your letter of April 11, 2024, transmitting the hard copy of the archaeological addendum report for the above-referenced undertaking.

We concur that the following properties are not eligible for the National Register of Historic Places for the reasons outlined in the report:

Sites 31CL199 and 31CL204 do not have the potential to contain information pertinent to prehistoric or historic research questions.

We have accepted the submitted document as the final compliance report for the archaeological survey of these additional areas.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

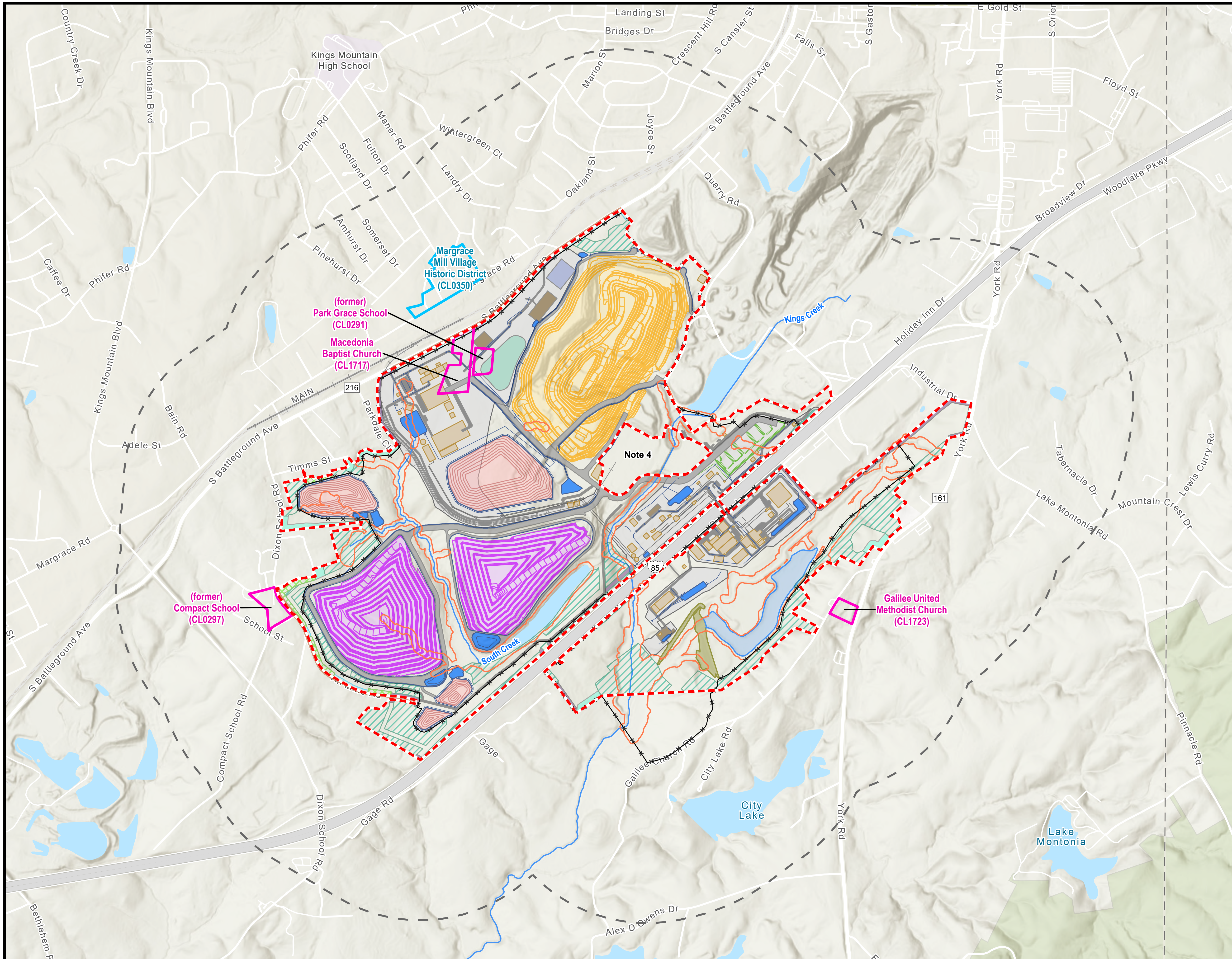
Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-814-6579 or environmental.review@ncdcr.gov. In all future communication concerning this project, please cite the above referenced tracking number.

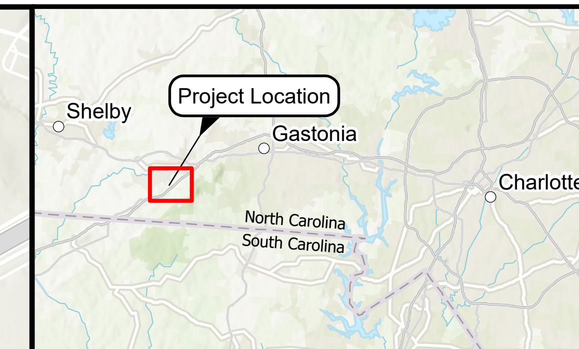
Sincerely,

Renee Gledhill-Earley

for Ramona Bartos, Deputy
State Historic Preservation Officer

APPENDIX E-8 NRHP LISTED OR ELIGIBLE SITES





- Project Boundary
- Area of Potential Effects (0.5 Mile Buffer)
- National Register Historic District
- Determined Eligible Historic District
- NC Jurisdictional Waters 50 Foot Buffer

Property Setback

- No Buffer
- Proposed Walking Path
- Undisturbed Enhanced Evergreen Buffer
- Undisturbed Naturally Vegetated Property Buffer
- Undisturbed Planted Vegetated Buffer
- Vegetated Berm

Mine Design Feature

- Open Pit Contour
- Overburden Storage Facility Contour
- Rock Storage Facility Contour
- Open Pit
- Overburden Storage Facility
- Rock Storage Facility

Mine Stockpile Area

- Run-of-Mine Pad
- Dewatering Storage
- Growth Media Storage
- Laydown Area

Infrastructure

- Fence Line
- Processing Features and Infrastructure
- Proposed Building
- Proposed Dam
- Ground Disturbance Areas and Pads

Transportation

- Railroad
- Haul Road
- Site Road

Hydrology

- Drainage
- Named Flowline
- Pond
- Water Storage Basin 1

Notes:
- Note 1: Project Boundary updated by ERM on September 3 2024.
- Note 2: Project Features are based on Draft Site Layout Rev K provided by Hatch on July 18 2024.
- Note 3: Historic district data downloaded from the NC Historic Preservation Office on August 1 2024.
- Note 4: Area excluded from the permit boundary, existing facilities are not related to mining activity in North Carolina.

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Miles

1 inch = 0.3 mile when printed at 11"x17"

NRHP Listed or Eligible Sites
Kings Mountain Lithium Mine

Albemarle
Kings Mountain
Cleveland County,
North Carolina