AN ARCHAEOLOGICAL SURVEY AND ASSESSMENT OF THE PROPOSED GREAT ALAMANCE CREEK SEWER LINE ROUTE, ALAMANCE COUNTY, NORTH CAROLINA

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I. Randolph Daniel, Jr.

Technical Report No. 22

Research Laboratories of Anthropology
University of North Carolina
Chapel Hill

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MANAGEMENT SUMMARY

An archaeological survey and cultural resource assessment was carried out along the proposed Big Alamance Creek Sewer Line route in Alamance County, North Carolina. The proposed corridor will run about 11 miles along the north side of Big Alamance and Back creeks with two additional corridor segments that will run northward for about one mile each along two tributaries of Big Alamance Creek. Field survey consisted of a combination of surface reconnaissance and shovel testing.

As a result of this investigation, four new archaeological sites (designated 31Am364 to 31Am367) were located and assessed. One of these (31Am364) is a prehistoric site located just outside the proposed corridor. This site consists solely of a light surface scatter of stone flaking debris, probably dating to the Archaic period, and does not meet the minimum standards to be considered significant by National Register of Historic Places criteria. Therefore, no further archaeological work is recommended.

The other three sites contain historic remains. Two of these sites, a dam (31Am366) and a mill race (31Am367), are nineteenth-century facilities, while the third site (31Am365) represents the remains of an early twentieth-century structure. Site 31Am366 appears to be the only one of these historic remains that will be directly impacted by the proposed sewer line. This impact is considered minimal, however, as it will only affect a small portion of the dam. In any case, no further archaeological work is recommended as it is unlikely to yield any significant information about the dam. Site 31Am367 lies just outside the proposed right-of-way and will probably not be impacted by sewer-line construction. Nevertheless, given the nature of the site, no further archaeological work is necessary. Similarly, the potential impact to site 31Am365 appears to be negligible. That is, the structure itself lies outside the proposed corridor, but the corridor will apparently impact a surface scatter of historic artifacts associated with the structure. Nevertheless, given the relatively recent date of the site and dilapidated condition of the historic structure, this site appears to offer no significant research potential and no further work is warranted here.

The potential impact of the proposed sewer line on several previously recorded sites was also evaluated. Two late prehistoric sites (31Am293 and 31Am241) were identified that lie within some portion of the right-of-way. Previous excavations in the area suggest that these two sites are likely to contain intact cultural deposits and are potentially eligible for nomination to the National Register of Historic Places. Therefore, additional archaeological work is recommended at both of these sites prior to sewer-line construction. Minimally, this work should include systematic soil augering and the excavation of limited test pits.

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INTRODUCTION

Intermittently during July and August, 1995, an archaeological survey was done of the proposed Big Alamance Creek Sewer Line route. The project was performed for the city of Burlington at the request of Finkbeiner, Pettis, and Strout, Inc., the engineering firm responsible for designing the sewer line. The proposed route will run about 11 miles along the north side of Big Alamance Creek in Alamance County (Figure 1). The right-of-way begins where NC 87 crosses Big Alamance Creek just south of Graham and proceeds westerly to the confluence of Back Creek and then continues along Back Creek until it crosses US 70 at Elon College. Two additional segments of the corridor will run northward for about one mile each along two tributaries of Big Alamance Creek. Since the proposed corridor rarely extends more than 50-100 ft beyond the creek bank, the vast majority of proposed sewer line right-of-way is located within a floodplain. Maximum corridor width will be 60 ft; sewer pipe diameters will vary from 12 in to 42 in along the corridor.

The objectives of the survey were to locate and evaluate the potential significance of archaeological resources located within the proposed sewer-line corridor. The evaluation of a site's potential or significance was guided by criteria of the National Register of Historic Places which states that archaeological resources are considered significant or potentially eligible for inclusion in the National Register if they have "yielded, or may be likely to yield, information important to prehistory or history" (36 CFR, Part 60). Although somewhat general, this guideline suggests that, minimally, a site should contain data sufficient to allow behavioral interpretation beyond just temporal placement.

ENVIRONMENTAL CONTEXT

Much of past human settlement was influenced by the natural environment. Therefore, any study of past cultural systems must consider land use in relationship to the distribution of natural resources. And while much of the modern environment of the study area represents an altered ecosystem compared to prehistoric conditions, it is still possible, if not necessary, to refer to the modern environment to provide some basis for discussing the recent historic environment. Thus, in the following review, certain aspects of the environment are considered that are presumed to have some relevance for human settlement in the study area.

The proposed right-of-way borders Big Alamance Creek in Alamance County. As such, it lies in the physiographic province known as the Piedmont. The topography of the area is relatively flat to gently rolling. But along Big Alamance Creek, as with the other large creeks and rivers in the county, the relief is more rugged. Elevations range within the county ranges about 350 ft to 1,000 ft above sea level. This extreme elevation range in the county is due to Cane Creek Mountains just south of Big Alamance Creek. Big Alamance Creek drains the central portion of the county and flows into Haw River, the county's primary waterway (Kaster 1960).

Geologically, Alamance County lies near the eastern edge of the Carolina Slate Belt, which is made up of metavolcanic and metasedimentary rocks extending over 350 miles from Virginia to Georgia. It has a maximum width of about 90 miles in central North Carolina (Butler and Secor 1991:66). Originally, the Alamance region was part of an eroded, low-lying plain with the exception of a few monadnocks. Subsequently, the plain was uplifted and tilted to the southeast. Streams which had previously meandered slowly across the plain, began to cut down rapidly, forming narrow, steep-sided valleys (Mundroff 1948:4).

Both igneous and metavolcanic rocks occur in the county. The bedding in these rocks generally strikes northeast-southwest (Mundroff 1948:4). The proposed right-of-way traverse three rock units. The eastern and middle third of the right-or-way contains intrusive igneous

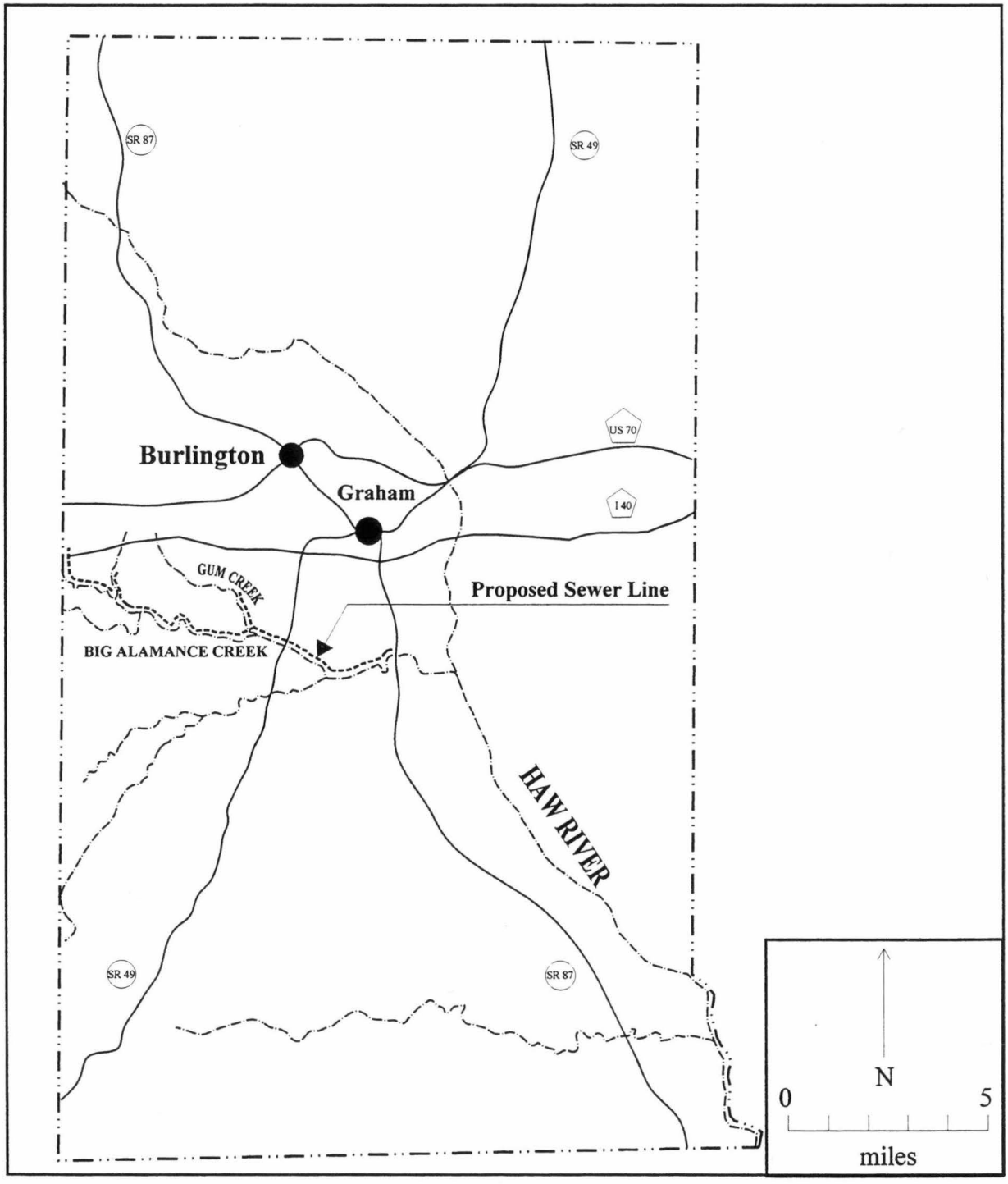

Figure 1. Project location.

rock. A felsic intrusive complex of rocks such as granite, granodiorite, and quartz diorite are present along the eastern third of the right-of-way (from NC 87 to near Gum Creek). A series of intermediate intrusive rocks, including medium- to coarse-grained diorite and gabbro, occupy the middle third of the right-of-way (from Gum Creek to Back Creek). The final portion of the proposed corridor (along Back Creek) includes mafic volcanic rocks of fine- to medium-grained andesitic-to-basaltic tuffs, crystal tuffs, crystal-lithic tuffs, tuff breccia, and flows (Carpenter 1982).

Of particular relevance to this geologic discussion is the potential use of local stone types as raw material for the manufacture of chipped-stone tools. Given the local geology of the proposed corridor, only the Back Creek portion would appear to contain potentially knapable stone. No evidence was seen, however, of any prehistoric quarrying activity along either Back or Alamance creeks. Moreover, given the nature of its geology, it is unlikely that any large metavolcanic quarries such as those in the Uwharrie Mountains of Montgomery and Stanly counties (Daniel and Butler 1994) ever existed in Alamance County. The probable absence of large metavolcanic stone quarries in this area, however, does not mean that no local stone sources were ever used as raw material for tools. In fact, quartz quarries are recorded in the county (Woodall 1976a:41-42). Furthermore, the presence of ground-stone tools such as celts or crudely chipped hoes recovered from local late prehistoric sites have been described as being made from various types of tuffs or unidentified metavolcanic stone (e.g., Ward and Davis 1993:71-72). Given the widespread presence of tuffs in the area, these stone tools probably were made from stone that was locally acquired, although a sourcing study is needed to demonstrate this assertion. Finally, while local stone may not have been exploited intensively prehistorically, such stone was certainly used to a great extent historically. The dams, dwelling foundations, and chimney remains on nineteenth- and early twentieth-century sites in the area were almost certainly constructed from locally acquired fieldstone.

Not surprisingly, the distribution of general soil associations in the county reflects the bedrock geology of the region. A mosaic of 10 soil associations are found in Alamance County (Kaster 1960:1-3). With the exception of a few minor corridor segments, virtually all of the surveyed right-of-way belongs to the Enon-Lloyd-Cecil series. Within this series are stretches of two general types of alluvial soils bordering both Big Alamance and Back creeks: local alluvial soils and alluvial plain soils. These soils consist of various combinations of sand, silt, or clay, some of which have no pedogenically modified soil horizons. While both these alluvial groups represent deposits that were washed from residual soils occurring in the county, a distinction is made between the alluvium source. Local alluvial soils, transported from nearby soils, are found on footslopes near stream heads. Floodplain alluvial soils, on the other hand, occur along stream bottomlands accumulate from transported upland sediments elsewhere around the county.

The presence of alluvial soils along the right-of-way raises the question of the existence of deeply buried cultural deposits. Although no such sites have been recorded along Alamance Creek, deeply stratified sites are known from the Haw River in nearby Chatham County (Claggett and Cable 1992). Two multicomponent sites, 31Ch8 and 31Ch29, contained over a 6-ft thick floodplain accumulation containing Early Archaic to Late Woodland cultural remains. Whether similar stratified sites exist along Alamance Creek is debatable, since the existence of such sites along the Haw may be due to the unique depositional (i.e., geological) setting (Larsen and Schuldenrein 1990). This question is further addressed below in the methodology section.

Many of the county's soil types are well-suited for agricultural and dairy farms. Moreover, farming is enhanced by a temperate climate with a long, moderately hot summer and a relatively mild winter. Rainfall is ample and distributed evenly throughout the year. Poor agricultural practices during the eighteenth and nineteenth centuries, however, resulted in soil erosion or nutrient depletion requiring frequent field abandonment and clearing of new

land. Additional land disturbances in the form of logging operations, which began during the nineteenth century, cut prime trees for lumber (Oosting 1942:3-5). Consequently, very little remains of the original Piedmont vegetation, considered to have been climax oak-hickory forests, at the time of white settlement (Oosting 1942:89). Today, Piedmont vegetation now exists as a hodgepodge of fields and forested areas of various sizes. Some relic forest stands exist only in small scattered locations such as rocky areas, bluffs, and flooded areas of poor crop quality or in areas inaccessible for timbering.

Prehistorically, oak-hickory forests were important economically for their mast production. Nuts provided an important dietary staple during much of prehistory. In Alamance County, preserved wild plant-food remains recovered from several late prehistoric sites suggest that hickory, acorn, and walnut were used from at least AD 1000 (Ward and Davis 1993). Other local food resources include over 20 species of mammals, reptiles, fish, and birds that have been recovered archaeologically and are commonly found in the county today (Ward and Davis 1993).

ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

Archaeological and historical sites have been recorded in Orange County for over 50 years. Approximately 350 sites were known prior to this survey. Some of the earliest known archaeological survey work was done in the 1940s by C.B. Phillips who conducted an archaeological reconnaissance in Alamance County. Over 80 landowners and collectors were contacted during this work. Unfortunately, only a portion of the areas he surveyed can be identified today (see Eastman and Long 1986:27). More recently, cultural resource surveys such as this one have been the most common type of archaeological work in the county (e.g., Mountjoy 1976, 1978; Padgett 1982, 1983; Woodall 1976a, 1976b). Some of the projects involving large tracts of county land include a survey of the Alamance County wastewater treatment plant that recorded 45 archaeological sites (Woodall 1976); a survey of the Big Alamance Creek water supply project area which recorded 80 archaeological sites (Woodall 1976b); and the Glen Raven sewer line which recorded two sites (Woodall 1977).

Recently, systematic archaeological surveys have been conducted in the area by the Research Laboratories of Anthropology at the University of North Carolina. This work includes an archaeological survey of selected areas in Alamance County to provide an overview of its archaeological resources and thus aid local planning (Eastman and Long 1986). A total of 65 archaeological sites were recorded during this project. In addition, surveys have been undertaken in Alamance and adjacent counties along the Haw, Eno, and Dan River drainages to understand Late Prehistoric settlement (Simpkins and Petherick 1985). Within Alamance County, approximately 155 acres were surveyed and 28 archaeological sites were located.

Site locations identified in the above projects primarily included hills and ridgetops, particularly near water sources. Large bottomlands were also identified as likely site locations, as well as terraces or ridges adjacent to floodplains. Moreover, artifacts recovered from these sites indicated that portions of Alamance County were occupied relatively continuously throughout the state's known prehistory. In particular, one period of the state's prehistory, is relatively well known through excavation as well as survey work. Several sites dating to the Late Prehistoric period (circa AD 1000-1600) have at least been partially excavated (Cantley 1990; Ward and Davis 1993). Some of these sites occur in the immediate vicinity of Alamance Creek and are of particular relevance to this project. Thus, they are discussed in some detail below along with a more general overview of the area's prehistory.

The prehistoric cultural sequence of the area is similar to that of the greater Southeast. This sequence is divided into four major temporal divisions which include the Paleoindian, Archaic, Woodland, and Late Prehistoric periods.

PALEOINDIAN PERIOD

The Paleoindian period is generally believed to mark the earliest clear presence of humans in North Carolina and North America in general. Technologically, this period is characterized by a lanceolate shaped fluted projectile point--generally called Clovis--that dates from about 9,500 BC to 9,000 BC (Haynes et al. 1984). The dates for this period, however, come from sites located in the Southwest since no fluted-point sites have yet been radiocarbon dated in the Southeast. Although some eastern fluted points may date as early as their Southwestern counterparts, this determination remains unverified (Haynes et al. 1984). Moreover, there is sufficient stylistic variability in eastern fluted points to suggest spatial and temporal differences greater than in the Southwest (Meltzer 1988).

No in-situ archaeological remains of these earliest inhabitants have ever been found in Alamance County, or elsewhere in the state. What evidence that does exist, consists of isolated examples of fluted points recovered as surface finds. Some attempts have been made to compile fluted-point distributions across the state. The first effort was made some 20 years ago by Perkinson (1971; 1973), while the second occurred more recently at a larger regional level by Anderson (1990a, 1990b). Based upon these two studies, site location and attribute data have been recorded on some 400 fluted points in the state.

At least three fluted points have been recorded in Alamance County (Perkinson 1971:20-25), although others undoubtedly exist in private collections (e.g., Eastman and Long 1986:55). A characteristic of the Alamance County specimens, typical of fluted points elsewhere, is that they were made of highly siliceous stone (see Goodyear 1979). Two of the points were made from clear quartz, while the third was made from chalcedony. While the quartz may or may not have been obtained locally, it is unlikely that the chalcedony had local origins. With respect to raw material use, it has been argued that the presence of "exotic" stone in Paleoindian assemblages reflects the geographic mobility of these early groups (Goodyear 1979). That is, in the absence of any evidence of significant exchange networks during the Paleoindian period (see Meltzer 1989), these early groups probably acquired their tool stone directly as part of their annual settlement round. If true, then the recovery of at least the chalcedony point suggests that Alamance County may have formed only a small part of a much larger hunting and gathering range for the earliest inhabitants of the area.

ARCHAIC PERIOD

Far more numerous in the state are spear points dating to the Archaic period (circa 8500 BC to 500 BC) when societies were undergoing adaptational changes coinciding with the onset of post glacial climatic amelioration. The Archaic is divided into three periods: Early Archaic (8500-6000 BC), Middle Archaic (6000-3000 BC), and Late Archaic (3000-500 BC). While Early Archaic stone technologies shared many characteristics with earlier Paleoindian assemblages, an increased regionalism emerged in point types during the Early Archaic (Goodyear 1982, 1991).

Much of the Archaic sequence in the state was defined as a result of archaeological work done at three sites in the Carolina Piedmont: Hardaway, Doerschuk, and Lowders Ferry (Coe 1964). As in the case of the Paleoindian period, the various Archaic periods are recognized archaeologically by diagnostic point types. The earliest of these is the Hardaway com-

plex. This complex includes lanceolate-shaped points with eared bases and serrated blades known as Hardaway-Daltons, and a smaller side-notched Hardaway point with a recurved "horned" base. The lanceolate Hardaway-Dalton is believed to be a part of the Dalton phase that closely follows the Paleoindian period. The Hardaway Side-Notched point closely followed lanceolate Daltons in time. Side-notched types were replaced by corner-notched point styles referred to as Palmer Corner-Notched and Kirk Corner-Notched points. These points typically have serrated triangular blades, notched corners, with straight to slightly excurvate bases that exhibit varying degrees of basal grinding.

In addition to projectile points, Early Archaic technologies included several unifacial tool types represented by a variety of end and side scrapers. Some of these unifacial tools are fairly distinctive including drop shaped end scraper types which share technological similarities with Paleoindian assemblages. This presumably hafted tool was particularly well represented at the Hardaway site (Coe 1964; Daniel 1994).

Although evidence is not abundant, Early Archaic hunter-gatherers probably utilized a broad "species-rich" (Meltzer and Smith:1986) subsistence strategy to exploit the early Holocene forested woodlands. Within the Carolinas, however, there is some debate about the nature of Early Archaic settlement. While some scholars suggest that individual bands moved seasonally between the Piedmont and Coastal Plain along major drainages (Anderson and Hanson 1988), others have proposed that group movement was not confined to drainages and was more variable across the Piedmont and upper Coastal Plain (Daniel 1994).

The subsequent Middle Archaic period is identified primarily by the appearance of a series of square-stemmed and contracting-stemmed points referred to as Kirk Stemmed, Stanly Stemmed, Morrow Mountain Stemmed, and Guilford Lanceolate (Coe 1964). Each of these point types has also been associated with a phase within the tradition of stemmed points during the Middle Archaic (e.g., Chapman 1976; 1977:161-167). Locally, the earliest stemmed types are Kirk Stemmed and the closely related Kirk Serrated point. Relatively more common in the Piedmont are Stanly points. This type is distinguished by its broad "Christmas tree" shaped blade and its small squared stem that exhibits a shallow notch (Coe 1964:35). The Morrow Mountain phase follows the Stanly phase. The distinguishing feature of this point is its contracting stem. Initially, two point types (Morrow Mountain I and II) were defined based upon shoulder shape and stem length (Coe 1964). The Guilford phase, which marks the terminal part of the Middle Archaic in the region, is represented by a spike-like point virtually lacking a shoulder leaving little break in point outline between its blade and stem. Moreover, Guilford stems are concave, rounded, or straight (Coe 1964:43).

Beyond the changes in point types during the Middle Archaic, some changes also appear in other aspects of Middle Archaic assemblages. Well-made unifacial tools which were part of Early Archaic assemblages were replaced by less formalized flake tools (Coe 1964). For example, by Stanly times, the Type I End Scraper no longer appears in Middle Archaic assemblages. Some new tool forms also appear during the Middle Archaic such as semilunar atlatl weights (Coe 1964:52-53). Large and roughly made chipped-stone axes were also associated with the Guilford complex (Coe 1964:113).

At about 3000 BC, the Late Archaic in the Piedmont is marked technologically by the presence of a large, broad-bladed and stemmed points, steatite bowls, and full-grooved axes (Coe 1964:119). Compared to elsewhere in the Southeast, relatively little is known about the Late Archaic in the Piedmont (Ward 1983). Increased regionalism becomes apparent in Late Archaic adaptations with increased sedentism and a focus on riverine and coastal resources in most areas of the Southeast (Steponaitis 1986). While the Carolina Piedmont exhibited some

of the lifeway changes noted for the Late Archaic (e.g., stone vessels), other trends such as the presence of dense middens and evidence of the intensification of long-distance exchange remain unknown (cf. Steponaitis 1986:372-378). One apparent technological trend in projectile point technology that has been noted, however, is that of decreasing size (Oliver 1981; South 1959).

WOODLAND PERIOD

Building on the trends that emerged during the Late Archaic, the Woodland period is characterized by the first widespread use of ceramic pots and the presence of horticulture (Steponaitis 1986). Accordingly, the beginning of the Woodland period is somewhat arbitrarily placed in the few centuries after 1000 BC and continued to about AD 1000. By convention the period is divided into three intervals: Early Woodland (500 BC-AD 1), Middle Woodland (AD 1-AD 500), and Late Woodland (AD 500-1000). Comparatively little research has been conducted on the Woodland Period in the Piedmont. And, the work that has been done has been concerned with chronology building. Within the Alamance County area, the Early Woodland is represented by the Badin complex. Badin pottery is well made, sand tempered, and either cord or fabric marked (Coe 1964:27). The Middle Woodland Yadkin ceramic series closely followed Badin. It too included cord- and fabric-marked pottery which was tempered with crushed quartz (Coe 1964:30).

Associated with the Badin and Yadkin pottery series are some significant changes in point form marked by the presence of triangular, stemless points referred to as Badin Crude Triangular and Yadkin Large Triangular (Coe 1964:45). The Badin type, as the name implies, is a large, crudely made triangular point while the Yadkin is a more finely made and thinner point with a concave base. "Eared" varieties of the Yadkin have also been described (Coe 1964:47). While it has been argued that the Badin type predates the Yadkin type (Coe 1964:45), Badin may simply be a preform for Yadkin (Sassaman et al. 1990:164). The only Late Woodland phase in the Piedmont is known as Uwharrie. Uwharrie phase pottery is net impressed, tempered with crushed quartz, and has scraped interiors (Coe 1952).

LATE PREHISTORIC THROUGH THE CONTACT PERIOD

While we have essentially only survey data to understand much of Alamance County prehistory prior to AD 1000, that is not the case after that date. As a result of recent excavations along the Haw and its local tributaries, as well as work along the Eno River near Hillsborough, we now have a wealth of information concerning the late prehistoric and historic Indian groups for this portion of the Piedmont (Davis and Ward 1991; Dickens et al. 1987; Ward and Davis 1988).

These drainages were the focus of local native settlement from about AD 1000 until the early eighteenth century. Several phases during this time period have been identified, the earliest of which is called the Haw River and date from AD 1000 to 1400. The Haw River phase is defined by two ceramic series. The first is considered a late manifestation of the Uwharrie series (AD 1000-1200), primarily represented by net impressed exteriors, scraped interiors, and crushed quartz or coarse sand temper. Some brushed, cordmarked, and plain surface treatments are also included. The second ceramic series--the Haw River series--marks the latter half of the phase (AD 1200-1400), and is also characterized by net impressed exteriors but is distinguished from the Uwharrie series by the presence of lip and neck decoration and in vessel form. Moreover, net impressing was the dominant surface treatment, while other surface treatments such as cordmarked, brushed, and plain were rarely used. Stone tool assemblages during this time included small triangular points, other bifaces, chipped-stone hoes, and a few flake tools. Large chipped-stone choppers, ground-stone celts,

grinding stones, and hammerstones are also found in Late Prehistoric sites. In fact, this lithic assemblage does not significantly change into historic times (Ward and Davis 1993).

Over 20 sites are known for this time period, five of which have been excavated. Most of these sites can be characterized as small settlements with widely scattered households and associated storage pits, hearths, and burials. Occupations were probably relatively brief, by small populations. The Holt site, just south of Big Alamance Creek, is an example of an early Haw River phase occupation (Ward and Davis 1993).

The Haw River phase is followed by the Hillsboro phase lasting from AD 1400 to 1600. This phase includes that period when the first contacts were made between Europeans and natives in the Southeast, although there is no evidence that this contact actually took place locally. This phase is recognized by the presence of Hillsboro series pottery which is markedly different than earlier Haw River pottery (Coe 1952; Davis 1987). For example, simple stamping and check stamping replaced net impressing as the common surface treatment. Given such contrasts, it has been argued that these two traditions materially reflect two distinct peoples (Davis and Ward 1991; Ward and Davis 1993:410-413). Stone-tool assemblages from the Hillsboro phase, however, are very similar to those from the Haw River phase (Ward and Davis 1993).

Two settlement types are recognized for the Hillsboro phase. During the early part of the phase, some sites occur as compact nucleated villages. A good example of this settlement type is the Wall site located in the same horseshoe bend of the Eno River as the earlier Hogue site. Over one-quarter of an estimated 1 acre of the site has been excavated, exposing multiple palisade lines, several circular houses, and an extensive midden (Davis and Ward 1991; Dickens et al. 1987). Later Hillsboro phase sites, in contrast, are small and situated along valley margins or nearby uplands of small tributary streams. Moreover, sites occur as scattered communities made up of a few families. Examples of two late Hillsboro phase settlements include the George Rogers site excavated along Big Alamance Creek just north of the proposed right-of-way discussed here, and the Edgar Rogers site excavated to the south along Cane Creek. These sites contained clusters of postholes and trash-filled pits.

The following Mitchum phase (AD 1600-1670) assigned to the contact period, is distinguished by the presence of historic trade artifacts. The Mitchum phase is attributed to the historic Sissipahaw tribe and is defined based on excavations at the Mitchum site along the Haw River. Pottery of the Mitchum phase is attributed to the Jenrette series and exhibits plain or roughly smoothed exteriors with fine crushed quartz temper; some simple stamping also occurs. Brushed and cob impressed surface treatments are also present but rare. Historic trade goods found at Mitchum included brass bells, rolled brass or copper beads, and mostly white and blue, small glass beads.

The aboriginal demand for trade goods, of course, was sustained by the European demand for deerskins. European contact with natives was made via an Indian trail that became known as the Great Trading Path. The path, which led from the Great Falls of the Appomattox River in Virginia to the Catawba territory in South Carolina passed through Alamance County. The path entered Alamance County near Mebane and crossed the Haw River near present-day Swepsonville. The path split at the Haw with the upper trail crossing Big Alamance Creek near Bellemont and the lower trail leading south through the communities of Cane Creek and Snow Camp.

With the deerskin trade came disease, slavery, and war that marked the beginning of the massive depopulation of native Piedmont groups. The tribal remnants that survived were forced to move and form new social and political entities as more traders and settlers moved further into the Piedmont from Virginia. By the early 1700s, most of the Carolina Piedmont was vacated by native populations.

HISTORY

By the time of the first significant white settlement in the area in the 1720s, Native American culture was virtually extinct. By the middle part of the century, small farmsteads had been established along the present-day county's major waterways by emigrants from the northern colonies. Pennsylvania Quakers of Irish or English origin settled near Cane Creek; Scotch-Irish Presbyterians settled east and north of the Haw River; and several German families settled along the western part of Alamance Creek and Stinking Quarter Creek (Euliss 1984:7-8).

As elsewhere in the Piedmont, these early settlers were largely self-sufficient subsistence farmers. Despite their self-sufficiency, farmers in present-day Alamance County were troubled by governmental corruption and inefficiency. Among other problems, settlers often found it difficult to acquire title to land. In addition, backcountry residents complained of unfair tax burdens. Sheriffs would appear unannounced to collect payments, and if a farmer could not pay, his livestock or personal property could be confiscated (Euliss 1984:8). Consequently, local residents formed the Regulator movement to protest these unfair practices. Ultimately, their political grievances resulted in armed resistance that culminated in the Battle of Alamance in the spring of 1771. The battle was short-lived. In a two hour skirmish, the colonial militia easily dispersed the unorganized Regulators, essentially ending government resistance. The scene of this battle--which is now a state historic site--took place near the survey area, a few miles west of Alamance Creek.

Shortly following the Regulator collapse came the outbreak of the American Revolution. Military leaders who had served at the Battle of Alamance were the vanguard of the British forces as the Piedmont was divided between Whigs and Tories. Once again the Alamance area was the scene of several battles such as "Pyles Massacre" and the battle of Lindley's Mill that typified the divided loyalties of the Revolution (Euliss 1948:9-10).

After winning their independence, the long periods of civil strife ceased for Piedmont residents who devoted their time and energy to farm and family. Several farm products were produced during the decades following the Revolution, including cotton, small grains, tobacco, pork, and beef. A lack of reliable transportation, however, prevented access to eastern ports and deterred economic development based upon large-scale crop production. Similarly, imported manufactured goods, if available, were expensive. Therefore, it was local craftsmen such as blacksmiths, tanners, shoemakers, and gunsmiths that satisfied the farmers' daily needs (Euliss 1984:10).

Despite the fact that farm life became somewhat entrenched in the latter eighteenth and early nineteenth centuries, the population west of Haw River continued to grow. Feeling for dividing the county also developed as present-day Alamance County was originally part of a much larger area. (For instance, in 1771 it was part of Orange County which included present Orange, Alamance, and Durham counties.) The large size made travel difficult to Hillsborough (the county seat) for those living in the western part of the county. Therefore, Alamance County was created in 1849 and Graham became the first incorporated town in 1851. Soon thereafter, Graham became the commercial center for the county and in 1856 completion of the North Carolina Railroad, which ran one mile north of the courthouse, allowed the county seat to become a center of trade (Euliss 1984:12).

By the mid-nineteenth century, the transition from an agriculturally based economy to one based both on agriculture and industry was underway. This transition was sparked by the county's waterways which not only provided rich bottomlands for growing crops, but also provided a power source for numerous textile, grist, and saw mills. By the latter part of the nineteenth century at least 40 grist mills and 24 saw mills were operating in the county (Whi-

taker 1949:87). Of course, it is the cotton mills for which the county is most noted. Five of the approximately 50 textile mills in the state at the beginning of the Civil War were in Alamance County (Euliss 1984:12). These mills included the Trollinger mill on the Haw River in 1832, the Newlin mill also on the Haw River in 1844, and the most successful textile operation of all, the Holt mill on Alamance Creek in 1837 (Euliss 1984:12).

The next significant economic boon to the county was the completion of the North Carolina Railroad from Goldsboro to Charlotte. Besides providing mill owners and farmers with a means to get their goods to eastern markets, the railroad's presence in the county fostered further growth of small towns and industries (Euliss 1984:13). The Railroad also proved vital to the Confederacy during the Civil War as it, along with local farmers and mill workers, provided much needed foodstuffs and goods.

The latter part of the nineteenth and the beginning of the twentieth centuries saw the continued growth of industry and business in Alamance County. Concomitantly, urbanization has characterized some portions of the county with the growth of several cities. Burlington, which had its beginnings in the 1850s, saw several manufacturing plants begin operations in the 1890s. Elon College was founded in 1889 and the town of the same name, originally known as Mill Point, grew up around the institution. Mebane was settled in 1854, and now is known for its manufacturing of furniture, bedding, and textiles.

SURVEY METHODOLOGY

Fieldwork consisted of walking and inspecting the corridor for prehistoric and historic remains. Walking the right-of-way was facilitated by the use of a detailed topographic map identifying the proposed route. The centerline also had been staked or flagged with red tape and labeled at regular intervals. Thus, it was relatively easy to identify one's location in the field.

Archaeological survey was accomplished by a combination of visually inspecting the ground surface along the proposed corridor and the selective use of shovel testing. That is, based upon previous experience in the region (e.g., Daniel 1994; McManus 1986; Simpkins and Petherick 1985, 1986), it was felt that the potential for the presence of archaeological remains varied greatly along the corridor, and the intensity of field examination varied to reflect this prior knowledge. Therefore, while the length of the right-of-way received at least a visual inspection for archaeological remains, shovel testing was conducted in selected areas that were judged to have a greater chance for having archaeological remains and where surface exposure was insufficient for surface reconnaissance.

Land cover along the corridor contained a mix of bottomland hardwoods with a scattering of pine, crop land, and pasture. Some forested land along stretches of Alamance Creek appeared to include wooded stands that were the result of abandoned field succession. Surface exposure varied along the route. Planted fields and some fallow fields offered the greatest degree of surface exposure for visual inspection. Much of the route was forested or in pasture, but some surface exposure usually existed in these locations as a result of disturbances such as cow paths, erosional gullies, or exposed areas due to the presence of fence lines, foot paths, and land clearing activities.

As previously noted, most of the proposed sewer line lies within a floodplain. Relatively wide floodplains or bottomlands are a well-known topographic setting for prehistoric sites. An examination of topographic maps revealed only one stretch of obviously inhabitable bottomland along the proposed route. In fact, this stretch occurs at the very eastern portion of the route and, as discussed earlier, contains several previously recorded prehistoric sites. Moreover, fieldwork during this project confirmed that no similar expanse of bottomland was identi-

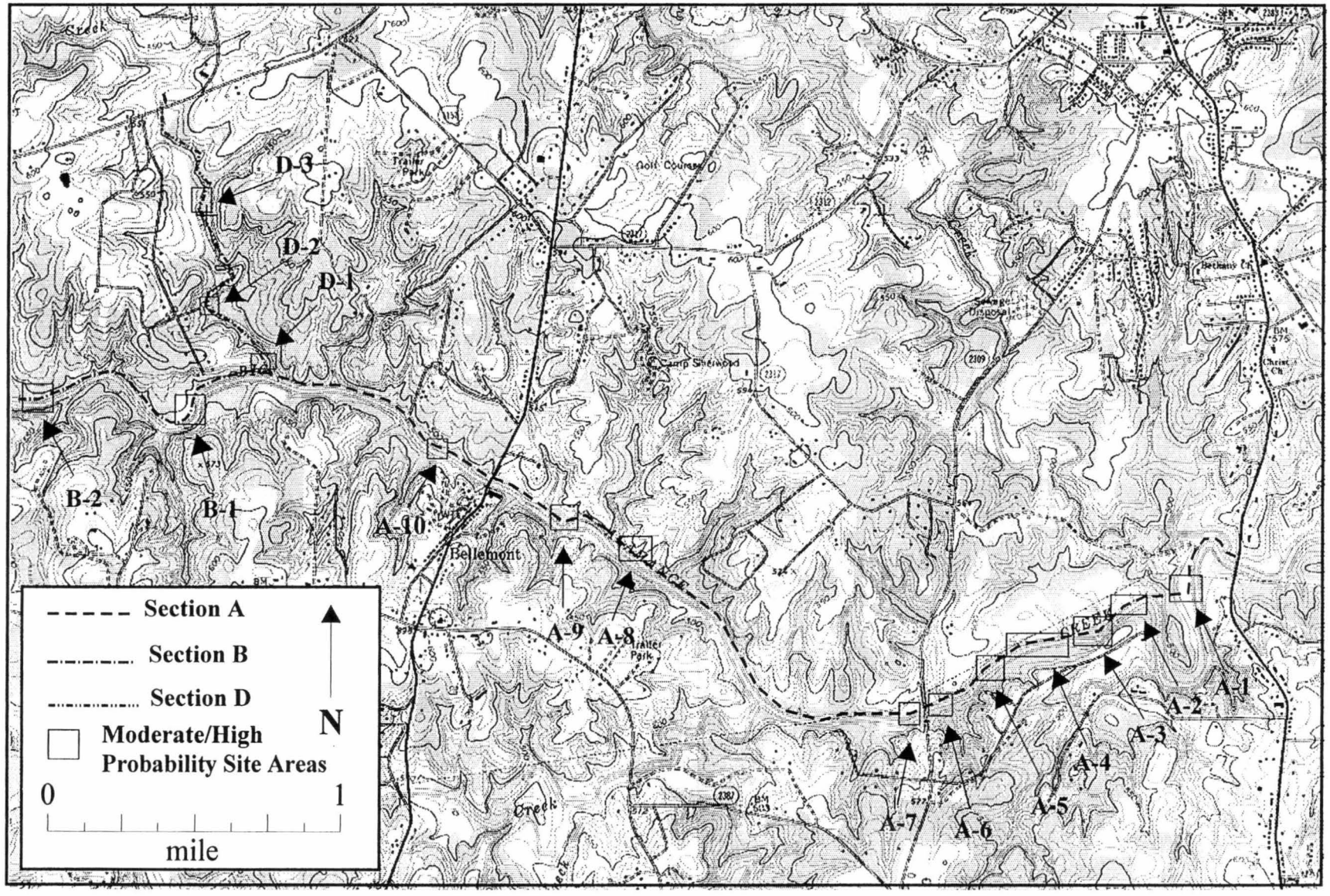

Figure 2. Moderate to high probability site areas along proposed right-of-way (Sections A, B and D).

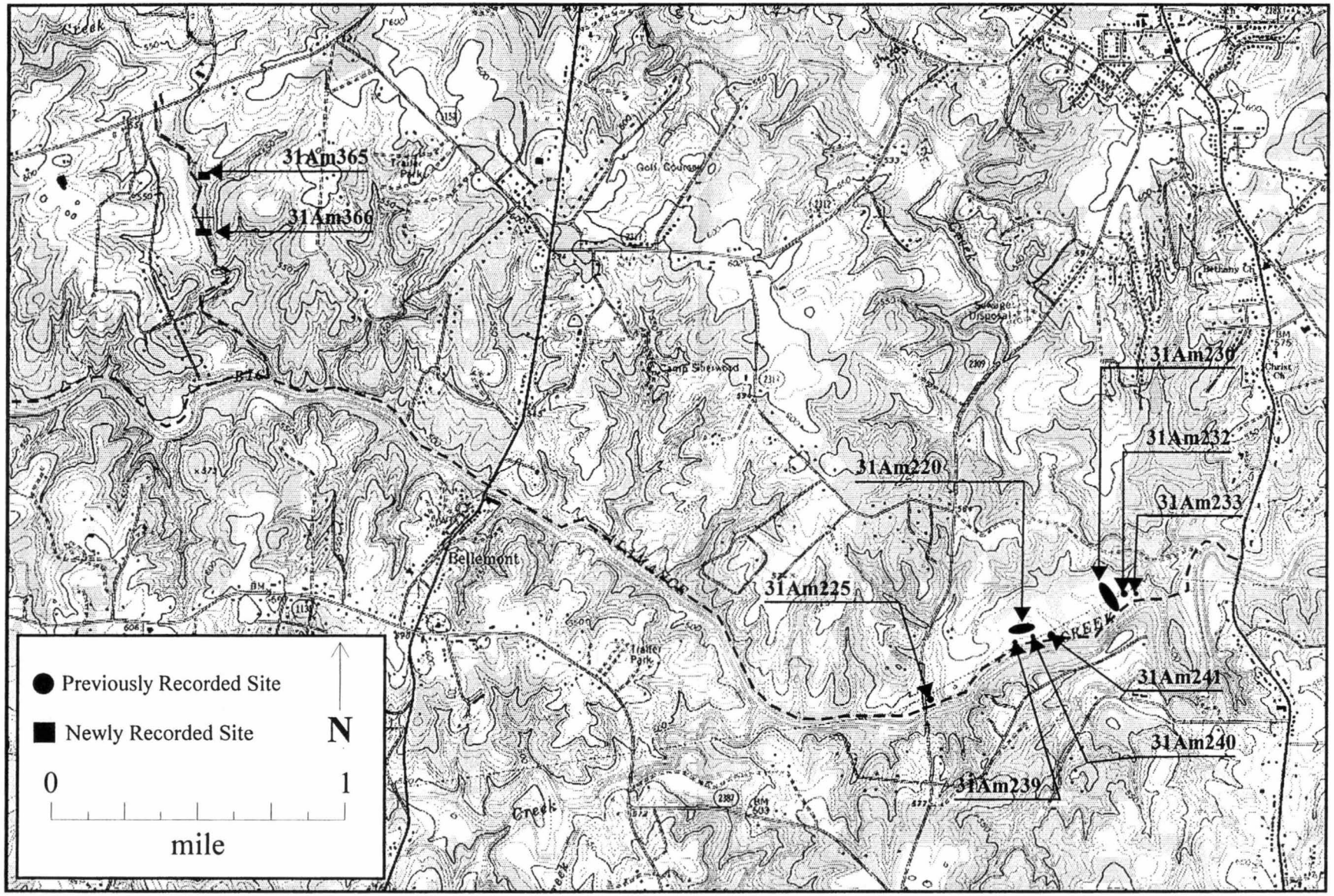

Figure 3. Previously recorded and newly recorded sites near proposed right-of-way (eastern half).

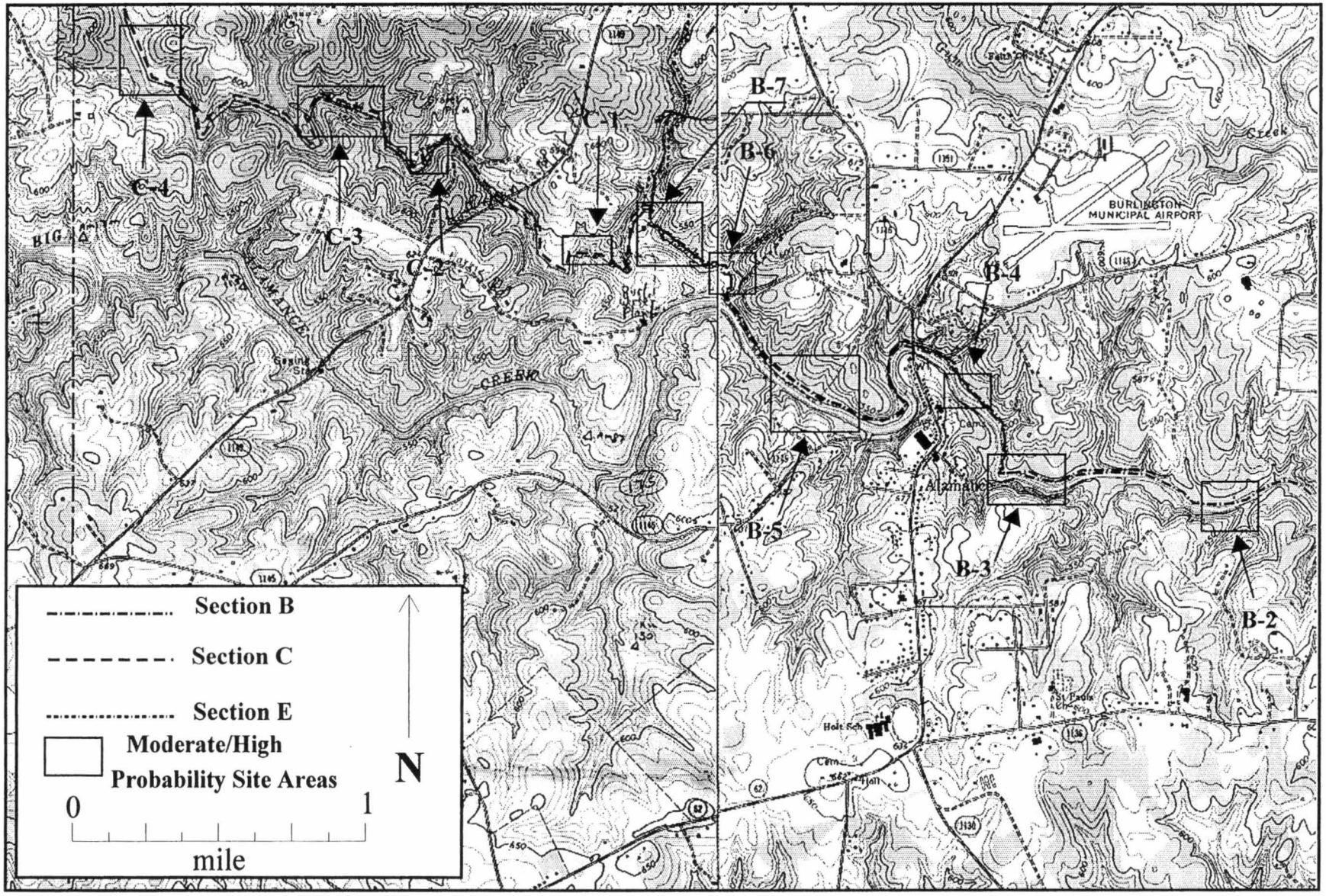

Figure 4. Moderate to high probability site areas along proposed right-of-way (Sections B,C, and E).

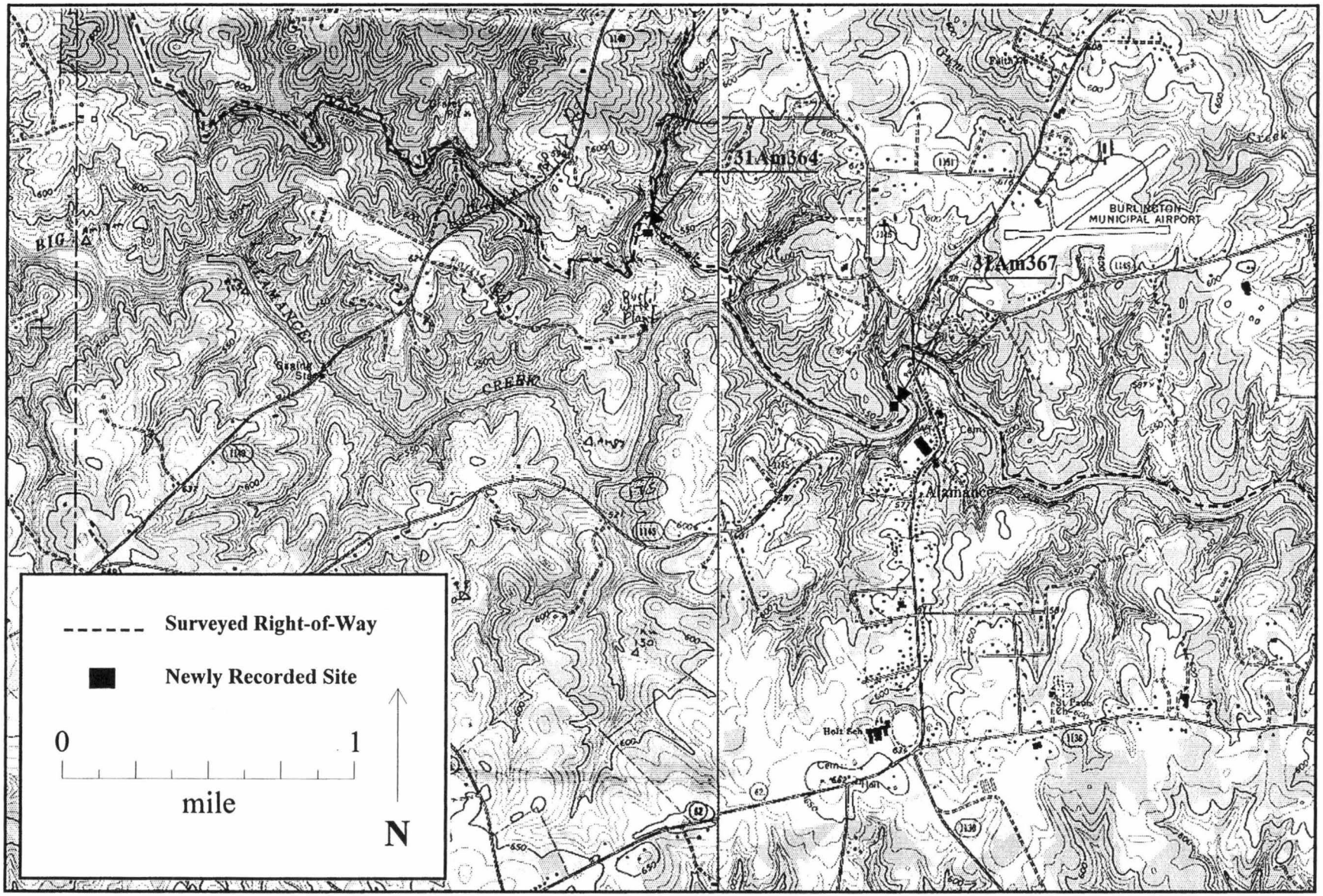

Figure 5. Newly recorded sites along near proposed right-of-way (western half).

fied elsewhere along the right-of-way. Rather, with few exceptions, narrow bottomlands and steep slopes characterized the remaining portion of the corridor. In contrast to the relatively wider floodplains, narrow or lowlying floodplains are less likely locations for prehistoric sites. The locations of historic mills and their associated features, however, did not require the relatively wider bottomlands that prehistoric settlements needed. Rather they would have been located at points along river segments with enough of a gradient to develop a "head" or fall of water, enough exposed rock in the stream bed for a solid dam foundation, and enough rock for dam construction (Heron 1979).

Some bottomland stretches (discussed below) were felt to exhibit a moderate potential for archaeological sites. These locations were smaller in extent than the large expanse noted above, and contained only moderately well-drained soils. Furthermore, some of these locations appeared to be abandoned fields in various stages of forest succession. In any event, these locations were more closely examined for cultural remains by shovel testing. Shovel tests were approximately 1 ft in diameter and all soil was screened through 1/4" mesh. All shovel tests were excavated either to subsoil or approximately .5 ft into subsoil, since this soil zone represented alluvial deposits. In most cases, subsoil was so firm that it was extremely difficult to dig. In essence, these subsoil alluvial deposits were the same consistency as clay subsoils common on Piedmont hilltops. No artifacts were recovered in any of these tests and, in fact, no sites were recorded in any of these locations.

The possibility of deeply buried cultural deposits being present along Big Alamance Creek is hard to evaluate. While Archaic remains have been recovered from the floodplain surface of Big Alamance Creek, they have been associated with and in lesser densities than late Prehistoric remains (Eastman 1986). Whether this pattern reflects the fact that Archaic remains are deeply buried and less likely to be represented on the surface than later deposits, or whether it simply represents a more limited Archaic presence on a land surface that received little deposition throughout the Holocene, is unknown. In any case, if deep deposits are present along the corridor, they are most likely located in the vicinity of 31AM239, 31AM240, and 31AM241 (RLA-Am257-Am259). As discussed in the conclusions, two of these sites are recommended for further work; such work will allow the question of the presence of deeply buried remains along Big Alamance Creek to be more properly addressed.

Survey Areas

Project engineers divided the right-of-way into five sections which provide a convenient way to discuss its variable survey conditions. In brief, Section A, B, and C each divide the right-of-way along Big Alamance Creek and Back Creek into sections between three and four miles long. Section D and E parallel two tributaries that enter into Big Alamance Creek from the north, each about one mile long. Each of these sections is described below. In particular, the following discussion identifies those right-of-way segments within each section that either contained previously recorded archaeological sites or were deemed to have a moderate to high potential for archaeological sites.

Section A. Section A begins just south of Graham where NC 87 crosses Big Alamance Creek and proceeds for about four miles westerly along the north side of the creek to its confluence with Gum Creek (Figure 2). Most of this section (2.7 miles) is heavily wooded; the remaining corridor portions include approximately .8 mi of pasture and about .4 mi of planted or fallow fields.

Corridor segments that passed through cultivated fields and pasture lands were situated in relatively wide bottomland expanses or on ridge slopes just outside of the floodplain. These corridor portions were judged as likely site locations and, in fact, four corridor segments (A-2, A-4, A-6, A-7) passed through or very near to several previously recorded prehistoric sites

(Figures 2-3). Segment A-2, for example, runs for about 600 ft along the edge of a planted field containing three sites (31Am230, 31Am232, 31Am233) (RLA-Am248, Am250, Am251). Similarly, Segment A-4 essentially runs the length (1100 ft) of a narrow corn field containing three previously recorded sites (31Am239, 31Am240, 31Am241) (RLA-Am257, Am258, Am259). Finally, Segments A-6 and A-7 cover 200 ft and 300 ft of corridor, respectively. The former segment is located along the edge of a fallow field containing 31Am225 (RLA-Am243). The latter segment occurs along a gentle ridge slope in a pasture just above the floodplain. In instances where the proposed corridor apparently passed through or near known sites, survey efforts were directed towards assessing the potential impact of the proposed sewer line on these sites.

Three other corridor segments (A-1, A-3, A-5) are located in topographically similar conditions to those areas described above but, unlike those areas, have never been archaeologically surveyed (Figure 2). Consequently, these corridor segments received close inspection. Segment A-1 was an L-shaped 450-ft section of right-of-way that crossed a 500-ft wide expanse of floodplain. The northern portion of the corridor traversed a fallow field while the southern portion crossed planted corn. Three shovel tests were excavated along this segment. Two shovel tests were placed within the fallow field and one on the edge of the corn field. With one exception, shovel tests revealed two soil zones: a brown sandy loam plow zone that varied from 5-12 inches in depth and a mottled grayish-orange compact somewhat loamy clay subsoil. The one exception included a shovel test containing a soil profile exhibiting an approximate 6 inch dark gray silty loam deposit between the plowzone and subsoil. At first glance, this gray soil zone resembled a midden, but further examination indicated it to be a natural rather than a cultural deposit. That is, it contained no artifacts or exhibited any other midden characteristics such as charcoal, calcined bone, or burned clay. Moreover, soil augering around the shovel test indicated that the dark zone extended only a few feet in either direction of the shovel test. Interestingly, this same soil phenomenon was observed at the Holt #2 site less than 2 miles to the west. There, upon closer examination a similar "midden" deposit actually turned out to be colluvium that had eroded from the slope of a nearby ridge. Given that the soil zone uncovered in the shovel test here is also situated near the base of a tall ridge, a similar natural explanation for its origin seems warranted.

No cultural materials were encountered in any of the shovel tests, but one rhyolite flake was observed along the cornfield edge near the right-of-way. Despite being located in a planted field, surface visibility was good (circa 60%) along the approximate 150-ft portion of the corridor. Furthermore, despite relatively good surface visibility no other artifacts were seen. Thus, as an isolated find, no attempt was made to assign this artifact to a site; however, its occurrence suggests the possibility that a site might exist elsewhere in the cornfield which extends for several hundred feet to the south of the right-of-way.

Segment A-3 consisted of about a 800-ft stretch of forested bottomland. Two shovel tests were judgementally placed along the corridor revealing about 12 inches of dark brown clay loam that graded into a grayish-brown clayey loam subsoil. In addition, several eroded areas provided opportunity for visual inspection of the ground surface. Neither the shovel tests nor the surface inspection revealed any archaeological remains. What appeared to be the remnants of an old road bed that paralleled the creek was noted, however. This presumed road was several feet wide and cut a foot or two into the ground surface in some places. In fact, discontinuous segments of this road were noted in forested sections all along Big Alamance Creek.

Segment A-5 is a 400-ft length of corridor bordering the southern edge of a pasture that appears to lie just outside of the floodplain on a very gradual ridge slope. Several cleared areas along the right-of-way allowed for surface inspection. Two shovel tests were also placed along elevated areas that revealed an eroded soil profile of perhaps an inch or two of topsoil over an orangish-gray clay subsoil. No archaeological remains were encountered along this

portion of the corridor and given the heavy soil erosion that has taken place, it is unlikely that any intact cultural deposits would be recovered here.

Three other segments (A-8, A-9, A-10), in the central and western portion of Section A, were identified as having moderate site potential. These segments were located in relatively wide (circa 200-300 ft) floodplains or on gently sloping ridges above floodplains. Segments A-8 and A-9 traversed the edges of pasture. The former appeared to occur just outside the creek floodplain while the latter occurred within the floodplain itself. Segment A-8 is about a 700-ft length of corridor that appears to be located just above the floodplain on the gentle slopes of a ridge. Two shovel tests within the corridor reveal about 10 inches of brown sandy loam over a brownish-gray clay subsoil. No archaeological remains were encountered in either shovel test, nor were any remains observed in several eroded areas along the pasture edge. Segment A-9 is located only .3 miles to the west of Segment A-8. It is a 500-ft length of corridor that crosses the middle of small expanse of bottomland that has suffered from soil erosion. Two shovel tests revealed only about 5 inches of brown sandy loam overlying a clay loam subsoil. No evidence of any archaeological sites was encountered here.

Segment A-10 extends for about 600 ft along a wooded stretch of bottomland. Foot paths and other eroded areas were inspected for archaeological remains. In addition, two shovel tests were judgementally placed in elevated areas along the corridor. These shovel tests revealed only about 4 inches of topsoil over a clayey loam subsoil. No evidence of cultural remains were located. Given the clayey character of the floodplain soils and consequently poorer drainage characteristics relative to other nearby areas along the creek, it seems likely that this location was poorly suited for prehistoric habitation.

Finally, the remainder of Section A consisted of forested stretches that were characterized by either steep (and often rocky) slopes or narrow (circa 100 ft or less) bottomlands. These corridor portions were judged poorly suited for prehistoric habitation and received only a visual inspection. This inspection failed to reveal any evidence of archaeological sites.

Section B. Section B covers about 4 mi, beginning at the confluence of Gum Creek and Big Alamance Creek and continuing westerly along Big Alamance Creek to the confluence of Back Creek, while continuing westerly along Back Creek approximately 3,500 ft to the confluence of Segment D (Figures 2 and 4). The vast majority of this section (3.3 mi) traverses heavily wooded forests; the remaining corridor segments (.4 mi) cross pasture.

No wide floodplain expanses like those that exist along the eastern edge of Section A were present along this portion of the right-of-way. Rather, seven moderately wide (circa 150-200 ft) bottomland stretches received particular attention (Figures 2 and 4). These stretches varied from less than 1000 ft long (B-1, B-2, B-4) to just over 1000 ft in length (B-3, B-6, B-7). One particularly long parcel (B-5) of bottom land measured 2600 ft. At least two of these bottomland segments (B-1 and B-5) appeared to have been farmed at one time. In addition to close inspection of surface exposures, two to three shovel tests were placed within each corridor segment. Soil profiles were generally uniform, consisting of 4 to 6 inches of brown sandy loam overlying an orangish-brown and very compact clay loam. No artifacts were recovered in any of these tests. However, two archaeological sites were discovered by surface inspection: one prehistoric site, 31Am364 (RLA-Am186) consisting of a small scatter of stone artifacts, and one historic site, 31Am367 (RLA-Am189) represented by the remains of a mill race.

Section C. Segment C starts at the end of Segment B and follows Back Creek for about two miles, criss-crossing it in about a dozen places and ending at the Gibsonville Pumping Station just south of Elon College (Figures 3-4). The vast majority (1.5 mi) of the corridor along this section traverses bottomland forests. The remaining portion of the right-of-way crosses either pasture (.2 mi) or cropland (.2 mi); a few hundred feet of right-of-way also crosses disturbed property along a road on gravel mine property and under Interstate 85.

No previously recorded sites were present along this section. In fact, only four segments (C-1, C-2, C-3, C-4) along this section were noted that had any potential for archaeological sites (Figure 3). Three of these segments (C-1, C-2, C-4) occurred on narrow bottomlands (75-100 ft wide) less than 700 ft in length. Segment C-4 was a much wider bottomland expanse some 800 ft long. In addition to surface inspection, each of these segments received from one to three judgmentally placed shovel tests along the right-of-way. Soil profiles were generally similar: two to four inches of brown sandy loam underlain by a compact orangish-brown clay loam to a depth of 16 inches. A clay substratum was present below 16 inches. No evidence of any archaeological remains was noted along this section. Given the narrow low-lying nature of the bottomlands and the poorly drained character of the soils, this section of the right-of-way appeared poorly suited for prehistoric habitation.

Section D. Section D covers about 1 mile, beginning on the west side of Gum Creek at its confluence with Big Alamance Creek, continuing northward for about .5 miles until it crosses to the east side of Gum Creek and terminating at the Gum Creek Pumping Station just north of Anthony Road (Figures 1-2). Most of the right-of-way (1.2 miles) passes through forested slopes, although some bottomland is present. A small segment of the corridor (.1 mi) passes through a planted field. Three segments (D-1, D-2, D-3) of the right-of-way were identified that had moderate archaeological potential (Figure 1). These segments were bottomlands 150-200 ft wide and 300-600 ft long. One of these segments (D-3) appeared to be an old field. Two to three shovel tests were excavated along each segment. Soil profiles revealed two to eight inches of a dark brown loam underlain by a compact orangish brown sandy loam. Shovel tests in segment D-3, however, revealed virtually no topsoil, presumably the result of field erosion. No artifacts were recovered in any shovel tests. Two historic sites designated 31Am187 and 31Am188 were located along this section. The first is a late nineteenth or early twentieth century homestead while the second is a dam. Presumably, the narrow bottomlands and poorly drained nature of the soils also made this section of the right-of-way poorly suited for prehistoric habitation.

Section E. This section is also about 1 mile long and runs from the confluence of Back Creek along an unnamed intermittent stream east of and parallel to SR 1149 until it enters the new hospital and medical facility (Figure 3). The vast majority of the corridor (.8 miles) traverses wooded, steep, and often rocky slopes. The remaining corridor portion (.1 miles) crosses the eroded slopes of a fallow field. No high probability areas were identified along this small stream and, in fact, no archaeological remains were identified along this portion of the corridor. Due to its topographical conditions this segment was judged to have a low potential for containing archaeological sites.

SURVEY RESULTS

Four archaeological sites (designated 31Am364 to 31Am367) were recorded as a result of the survey. In addition, the potential impact of the proposed sewer-line on seven previously recorded sites was also assessed (31Am225, 31Am230, 31Am232, 31Am233, 31Am239. 31Am240, 31Am241). None of the newly recorded sites meets the minimum criteria for significance established by the National Register of Historic Places. Two of the previously recorded sites (31Am239, 31Am241), however, will be impacted by the present corridor and are judged to be potentially eligible for listing in the National Register of Historic Places.

Previously Recorded Sites

All of the following sites were recorded as a result of the Alamance County survey project conducted almost ten years ago (McManus and Long 1986). At that time we had only a general understanding of the ceramic chronology of the region such that the pottery recovered from these sites were placed in a Late Woodland context. Today, a more refined ceramic

chronology exists (Ward and Davis 1993) and the temporal placements of the sites discussed below now reflect this understanding.

31Am230, 31Am232, 31Am233 (RLA-Am248, Am250, Am251). These three sites lie in three adjacent fields near the eastern end of the proposed corridor (Figure 4). Specifically, the proposed corridor runs along the southern edge of the three fields (Segment A-2) which are approximately 1, 2, and 5 ac in size and contain Am233, Am232, and Am230, respectively. When originally surveyed, the fields were plowed and exhibited excellent surface visibility (90-100%). The sites were defined based upon relatively small surface scatters of ceramic and stone artifacts. The pottery recovered from these sites predominantly had net impressed surface treatments and were tempered with crushed quartz, crushed feldspar, or coarse sand. This pottery suggests a Haw River phase occupation (AD 1000-1400); isolated examples of stemmed points from two sites indicate some limited Middle to Late Archaic activity as well (McManus and Long 1986:89-92).

Two of the sites (31Am230 and 31Am232) were located along slightly higher elevations, within the center of their respective fields, at least 200 ft north of right-of-way. Thus, an initially assessment suggested that these sites would not be impacted by the planned construction. This conclusion was verified during the fieldwork. Despite being planted, field edges along the right-of-way afforded good-to-excellent surface visibility. Field edges and adjacent areas of the field were closely inspected for archaeological remains. No evidence of any cultural remains was located along the portion of the corridor south of 31Am232, and only a single triangular point was recovered from the right-of-way south of 31Am233. In fact, with the exception of the one point, no evidence of archaeological remains were noted for at least 100 ft north of the right-of-way in both fields. Thus, it appears that none of site 31Am232, and little, if any, of 31Am233 will be impacted by the proposed construction.

An initial assessment of the right-of-way impact on site 31Am233, however, was more ambiguous. Since the field containing site 31Am233 was only one acre in size and the site was described as being located in the southern three-quarters of the field, an initial assessment suggested that the proposed corridor could impact about as much as 200 ft along the southern edge of the site. And while the original survey of this field was done under 100% surface visibility, the field was heavily overgrown at the time of this survey. Therefore, two shovel tests were excavated along the corridor. Soil profiles consisted of about 1 ft of brown sandy loam over a orangish-gray subsoil. No artifacts were recovered from either shovel test. Given the absence of subsurface remains and the very low density of the surface scatter as originally surveyed (approximately two dozen artifacts), the site would not appear to be adversely impacted by the sewer-line construction.

31Am225. Site 31Am225 is another low density (12 stone artifacts) surface scatter located in a 1.5 acre plowed field just west of the above three sites (McManus and Long 1986:85-86). The field in which the site is located includes a very narrow floodplain--which the proposed corridor traverses--and adjacent hill slope. An initial assessment of the site indicated that the proposed corridor might impact an as much as 200 ft along the southern edge of the site. A reexamination of the same field during this survey, however, suggested that the corridor will have no significant impact on the site. Surface inspection of the proposed right-of-way and adjacent hilltop and slope revealed no artifacts, although the field was fallow with little ground surface visibility. Three shovel tests were excavated within the proposed corridor. Soil profiles consisted of about 3 inches of a dark brown sandy loam that graded into a 12 in deposit of brown clay loam with orange clay chunks. Presumably, the clay chunks are subsoil pieces washed from the nearby hilltop. No artifacts were recovered in any of the shovel tests. Overall, then, the site appears to be rather diffuse with no apparent remains within the proposed corridor. Rather, it is more likely that the site would be present on the hilltop, outside the right-of-way, rather than along the narrow floodplain. Therefore, no additional work on this site is needed with respect to the sewer-line construction.

31Am239, 31Am240, 31Am241 (RLA-Am257, Am258, Am259). These three sites are located in a 1.6 ac field just below the George Rogers site (31Am220) mentioned earlier. When originally surveyed, the field exhibited only 30% surface visibility but three fairly well-defined artifact concentrations of sherds and stone flakes were identified that varied in area from 50 by 50 ft to 50 by 200 ft (McManus and Long 1986:95-97).

The proposed corridor runs for about 1200 ft down the middle of the field and then along its southern edge and will impact each of the three sites (Segment A-4; Figures 2-3). The most direct impact will be to site 31Am241 at the eastern edge of the field. Here the right-of-way runs through the southern half of the narrow field for at least 400 ft directly across the site. When first discovered, this site exhibited the largest of the three artifact scatters with 145 potsherds and 25 stone artifacts. The recovered pottery included sherds with simple-stamped, check-stamped, and net-impressed surfaces with crushed feldspar, crushed quartz, or coarse sand temper, indicating both Haw River and Hillsboro phase occupations. Of particular interest was the presence of two kaolin pipestems suggestive of a Contact period occupation as well. Finally, an isolated example of a Guilford point was also recovered indicative of an Archaic component (McManus and Long 1986:97-98).

When revisited during this survey, the field was in corn and only a few artifacts were recovered along its southern edge within the right-of-way. These artifacts included one Haw River Net Impressed sherd, one Dan River Net Impressed sherd, and one Caraway Plain sherd, one Hillsboro Plain sherd, one historic earthenware sherd, and two unidentified sand-tempered sherds. Stone artifacts include one metavolcanic core, one quartz flake, one metavolcanic flake, and a quartz cobble fragment. In sum, the artifacts recovered from both surveys suggest Late Prehistoric to Protohistoric (AD 1000-1600) period occupations and more limited Archaic and Historic period activity as well. Given its location on the floodplain and its proximity to the George Rogers site just uphill, site 31Am241 probably contains intact subsurface deposits such as roasting pits, storage pits, and possibly structural remains. Thus, it is probably eligible for nomination to the National Register of Historic Places. Further work is warranted to assess this possibility.

The remaining two sites--31Am239 and 31Am240--primarily have Late Prehistoric to Protohistoric components, although a limited Archaic presence is represented as well at 31Am240. Both sites will be less affected by the proposed sewer-line construction than site 31Am241. Just east of 31Am241, the proposed right-of-way angles out of the field turning slightly to the southwest into a narrow (75 ft wide) wooded strip that lies between the field and Alamance Creek. Here the corridor remains primarily in the wooded strip that borders the remaining 800 ft of the field; although the corridor slightly emerges from the woods at the western edge of the field where it straddles both the field and wooded strip. As it exists, then, the corridor will pass south of 31Am240 and it will not be impacted by sewer-line construction. The potential impact on site 31Am239, however, is less clear. For a distance of at least 200 ft, the northern half of the proposed right-of-way extends into the western portion of the field where 31Am239 is located. Unfortunately, the exact location of the site with respect to the right-of-way was not determined during this survey. But given the presence of crops, the site's small size, and low artifact density, this is not surprising. Nevertheless, given its location on the floodplain and its proximity to the George Rogers site, intact subsurface deposits may be present within the corridor. Limited, additional work is recommended to assess this possibility.

Newly Recorded Sites

31Am364 (RLA-Am186). This site is located on a low ridgetop just west of the right-of-way in Section B along Back Creek. The site was defined by a very light scatter of chipping debris (four metavolcanic flakes) recovered from the eroded ridgetop. It is worth noting that at

least one of the flakes is made of a plagioclase porphyritic rhyolite that probably had its origins in the Uwharrie Mountains some 60 mi to the south. Given that Middle and Late Archaic points were commonly made from this material, plus the fact that no pottery was recovered at the site, it would suggest that the site probably dates to the Archaic period. Since the site is located outside the proposed corridor, it will not be impacted by the sewer-line construction. Nevertheless, given its eroded condition, the site has a low potential for intact cultural deposits and has minimal research potential. In any case, no further investigation of this site is warranted.

31Am365 (RLA-Am187). This site includes the dilapidated remains of a small three-room, one-and-a-half-story, wood-frame residence located along the central portion of Gum Creek. It is situated on a rocky slope some 50 ft east of the right-of-way; a few modern-looking glass and ceramic artifacts were scattered around the house in the vicinity of the right-of-way.

The house floors have mostly rotted away, leaving a shell of a house on stone piers. A stone and brick chimney is associated with the largest room and a brick chimney stack, presumably accommodating a woodburning stove, is present outside a second room. Wire nails were apparently used throughout the structure. This structure probably dates no earlier than the twentieth century. No other outbuildings or associated facilities were observed in the immediate vicinity of the house. The house, of course, lies outside the right-of-way and will not be directly impacted by the sewer-line construction. Nevertheless, given the relatively recent date of the site and the structure's apparent lack of architectural significance, the site does not appear to offer any important research potential. Therefore, no further work is recommended.

31Am366 (RLA-Am188). The proposed corridor also intersects the remains of a linear earthwork located approximately 1000 ft south of the house mentioned above. This earthwork is tentatively interpreted to represent the partial remains of an earth-and-rock dam. It is at least eight feet tall and extends approximately 100 ft down the slope of a steep ridge adjoining the eastern bank of Gum Creek. A large pile of field stone lay scattered across the creek immediately adjacent to the earthwork, apparently the disarticulated remains of the rock portion of the dam. Presumably, the dam was associated with a mill, but no such remains were observed anywhere along the surveyed portion of the creek. An examination of W.L. Spoon's 1893 map of Alamance County, however, does locate a dam near this area but it appears to be placed on the western bank of Gum Creek. In any case, while a portion of the earthwork will be impacted by the proposed construction, this impact is considered to be minimal. Moreover, the dam does not appear to offer any important research potential and no further investigation is warranted.

31Am367 (RLA-Am189). This site apparently represents the remains of a mill race and rock dam located near the community of Alamance on the west side of the horseshoe bend of Big Alamance Creek. The ditch is at least 10 ft deep and 40 ft wide. Within the ditch are the remains of a rock wall, about 5 ft tall and 36 ft wide. This wall is located near the creek bank at the mouth of the race; a rock dam that crosses Big Alamance Creek is also located near the mouth of the race. Again, this facility probably dates to the late nineteenth century. Spoon's map depicts a cotton mill near this location but it appears to be situated on the south side of the creek; the map also notes that this mill was built in 1887. The proposed corridor passes within a few feet of the race and run parallels to it for several hundred feet along the creek. As such, it will probably have minimal impact on the race and no further archaeological work is necessary.

RECOMMENDATIONS

Four archaeological sites were located and assessed. One of these was a prehistoric site and three were historic sites. The prehistoric site (31Am364) was a surface scatter of a few stone flakes. Although it was located just outside the proposed corridor and technically is not of concern to this project, the site probably never contained any significant archaeological deposits. In any case, the site lacks sufficient archaeological data to meet the minimum significance standards of the National Register of Historic Places.

Three historic sites also were located that date to the late nineteenth and early twentieth centuries. Two of these sites include a dam (31Am366) and mill race (31Am367), while the third represents a partially standing structure (31Am365). Although the dam appears to be the only historic site that will be impacted by the proposed construction, it is unlikely to yield any further important information by additional archaeological investigation. And while the other two historic sites will not be impacted by the proposed construction, it is unlikely that they would yield any additional significant information either. Consequently, none of these sites meets the minimum standards to be considered significant by National Register of Historic Places criteria. Thus, the proposed project will have no adverse impact upon these sites and no further cultural resource assessment is warranted.

The impact of the proposed sewer line on several previously recorded sites was also considered. Two late prehistoric sites (31Am239 and 31Am241) were identified that lie within at least some portion of the proposed right-of-way. Given the possibility that they might contain intact cultural deposits, these two sites may be eligible for nomination to the National Register of Historic Places. Therefore, additional archaeological work is warranted at both sites. It is recommended that this additional work include both systematic soil augering (at 2.5 ft intervals) within the right-of-way encompassing both sites, followed by the excavation of a limited number of test pits. The purpose of soil augering would be to locate any intact features such as trash pits or burials. If soil augering detected features, then test pits would be placed in their locations and the features excavated. Moreover, the excavation of these test pits would also assess the possibility of the existence of cultural remains more deeply buried by alluvium. That is, even if the auger testing proves negative, test pits are necessary to address the issue of the possible presence of more deeply buried Archaic remains along Big Alamance Creek.

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