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Ronald Wogaman

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AN ARCHEOLOGICAL SURVEY AND EVALUATION
OF THE HODGES TO WARE SHOALS ROUTE (U.S. 25)
IN GREENWOOD COUNTY, SOUTH CAROLINA

by

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Research Manuscript Series, No. 111

Prepared by the
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May, 1977

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MANAGEMENT SUMMARY

In February 1977 the Highway Archeology Program of the Institute of Archeology and Anthropology of the University of South Carolina conducted the reconnaissance and survey of a section of U.S. 25 in Greenwood County, South Carolina. This research was undertaken as part of a cooperative agreement between the South Carolina Highway Department and the Institute to meet the requirements for environmental protection outlined in the National Environmental Policy Act of 1969 and Executive Order 11593.

The zone of impact of this project is a seven mile section of U.S. 25 between the communities of Hodges and Ware Shoals. Most of this distance will undergo only minimal widening of several feet. A 1.8 mile section, however, is slated for extensive modification resulting from the construction of two new lanes on previously undisturbed land. It was in this area that the fieldwork of this project was conducted.

The fieldwork consisted of walking along the highway route within the area of major impact, and searching for surface material which would indicate the presence of prehistoric or early historic activity. Locational and environmental data were recorded for each site discovered, and this information was entered into the Statewide Archeological Inventory of the Institute of Archeology and Anthropology. Artifact collections were taken from two sites located by this survey in an effort to gain insight into their positioning in the culture-historical sequence and into cultural activities which took place there.

Six archeological sites were recorded by this reconnaissance-survey, representing both prehistoric and early historic activity. Artifacts were discovered which can be attributed to the Early and Late Archaic periods, the Woodland period, and the nineteenth century. A short section of a sunken roadbed, probably an abandoned nineteenth century road, was also located along the highway route.

The sites discovered by this environmental impact research are not sufficiently significant for nomination to the National Register of Historic Places but, nonetheless, are expected to contain valuable data for increasing our understanding of Piedmont prehistory. One problem domain of particular interest is the intrasite distribution and patterning of artifacts which may be the result of functionally or temporally different activities.

To discover any significant distribution of artifacts, a two-stage program of mitigation is proposed for 38GN43. The first stage would involve the excavation and screening of 25 five feet by five feet sampling units, the location of which is to be determined by a stratified unaligned sampling strategy. During the second stage contiguous areas of the site will be opened which, from analysis of data gathered from Stage One,

appear to contain spatial patterning representing different behavioral events.

The other five sites will receive a less intensive level of mitigation, consisting of making total surface collections from each site. A stratified unaligned surface circle collection is recommended for 38GN41 if conditions permit.

The recommended mitigation for these sites will require approximately four weeks of field time. A Research Assistant and two temporary hourly wage people will be needed to conduct the fieldwork. After completion of the excavation, a total of sixteen weeks will be required for analysis and completion of the report, involving the services of a Research Assistant for the entire period and a laboratory assistant for a period of four weeks. A budget of expected cost is not submitted at this time, as it is anticipated that by the time the Highway Department is at construction stage on this project such a budget would have become obsolete.

INTRODUCTION

In February 1977, archeologists at the Institute of Archeology and Anthropology of the University of South Carolina undertook preliminary reconnaissance of an area in Greenwood County scheduled to be impacted by proposed highway widening and improvement operations. This research was conducted as part of the cooperative agreement between the South Carolina Highway Department and the Institute and was funded by the 1977 highway budget in order to meet the requirements of cultural resource management outlined by the National Environmental Policy Act of 1969 and Executive Order 11593. The survey was concerned both with sites of prehistoric and early historic activity.

The highway modification proposed in this project involves a seven mile section of U.S. 25 between the communities of Hodges and Ware Shoals in Greenwood County, South Carolina. The southern boundary of the impact zone is the intersection of U.S. 25/178 and S.C. 185; while the northern edge of the route is 0.8 miles south of the Saluda River where Business Route 25 splits from the main route to enter Ware Shoals (Fig. 1). Much of this route will experience only minimal impact consisting of widening which will expand the current right-of-way by only three or four feet on either side. A 1.8 mile section from the intersection of U.S. 25 and S.C. 254 to a point just south of Mulberry Creek is scheduled for extensive modification resulting in two new lanes. This 1.8 mile section of highway, proceeding first along the western side and then along the eastern side of existing U.S. 25 (see Fig. 1), crosses land which is relatively undisturbed. These project conditions were taken into consideration in the formulation of a research design for this archeological investigation.

This reconnaissance was to be the initial step in the three-part highway program, consisting of reconnaissance, survey, and mitigation (Goodyear 1975a). Due to the size of the project area and the high degree of visibility encountered in much of that area, what was originally intended only as reconnaissance was expanded to meet the requirements of the site survey stage of research. It is possible from this research, therefore, to outline recommendations for the mitigation of the adverse impact which this highway project will have upon the archeological resources there. Further discussion of the general research design under which the highway archeology program operates can be found in Goodyear (1975a).

The goals of this research can be expressed in three parts: (1) determining the location of sites within the area to be impacted, (2) determining the significance of those sites, and (3) recommending necessary mitigation of adverse effect to the sites.

Locating sites along the route was accomplished by walking through the area and intensively examining the ground surface for evidence of prehistoric or early historic cultural material. Archeological sites,

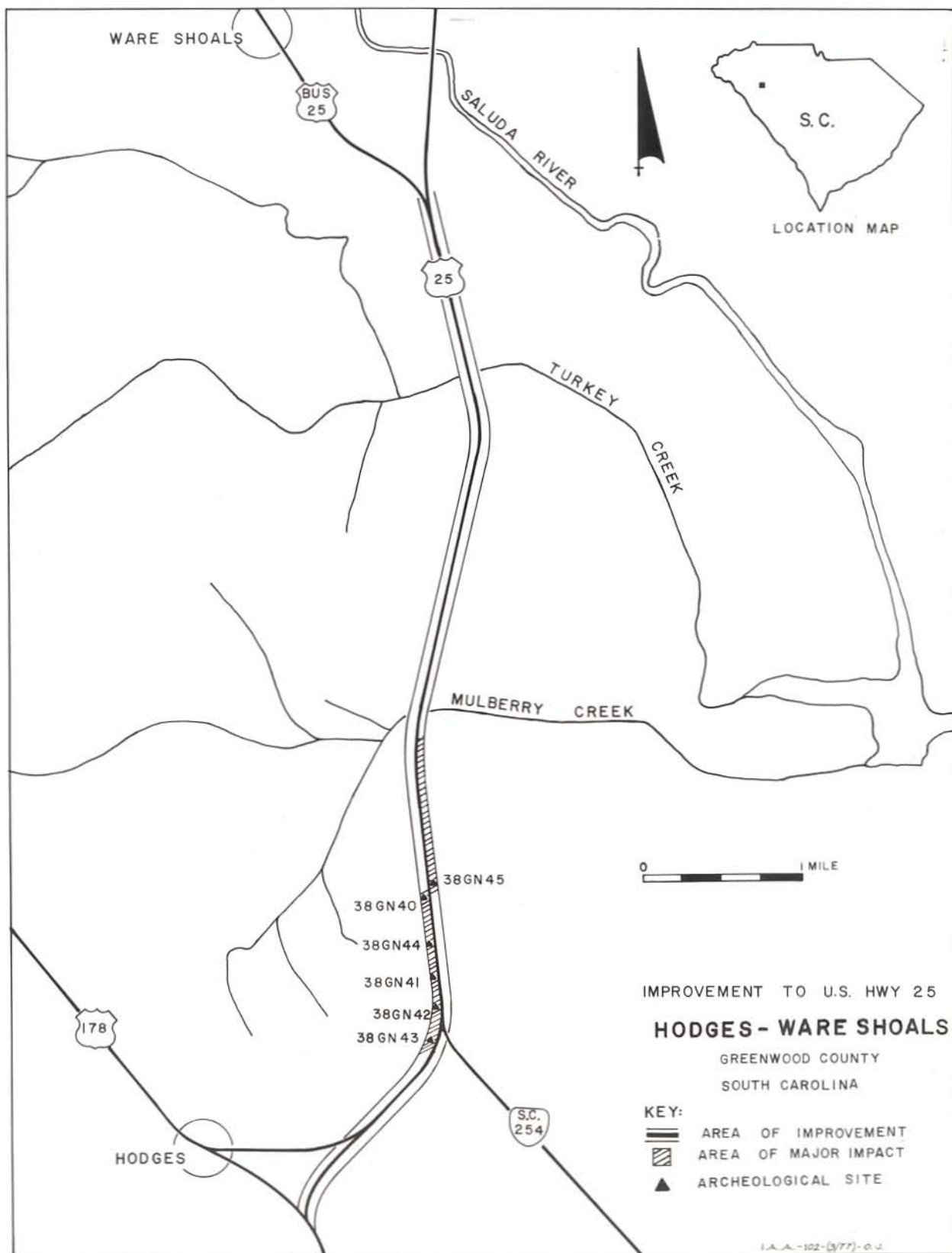


FIGURE 1

especially in cultivated and eroded areas of the Piedmont, are often detected by artifactual material found on the surface. Surface material can be considered in some situations to be reasonably representative of buried archeological material at a particular site (Redman and Watson 1970), especially when the surface represents a single cultural occupation or where several different occupations have been mixed by plowing. This on-foot reconnaissance of the highway route also serves to familiarize the researcher with any environmental variability which may occur in the area.

From consideration of data pertinent to the project, including in-the-field observations and analysis of the artifacts collected, the significance of individual sites and their eligibility for nomination to the National Register can be determined. Determining the significance of an archeological site is currently a much discussed issue (Scovill, Gordon and Anderson 1972; House and Schiffer 1975; Klinger and Raab 1976) that plays a vital role in making recommendations for further research and mitigation. Significance must be judged in terms of the potential a particular site has for providing data for the investigation of various scientific problems, as well as its historic merit, educational value and recreational potential.

It is only after assessment of the significance of archeological sites that an appropriate program of mitigation can be outlined. Adequate mitigation, either in the form of avoiding impact to the archeological resources or lessening that impact through further studies of systematic cultural resource management (cf. Lipe 1974; Schiffer and House 1977) is the final goal of the Institute's highway archeology program.

ENVIRONMENT

The section of U.S. 25 to be impacted passes through the northern portion of Greenwood County, South Carolina, placing it within the Piedmont physiographic province (Fenneman 1938). The Piedmont, stretching in a broad northeast-southwest band across roughly the upper half of the State, is characterized by rolling topography that is generally well drained by numerous south-southeastward flowing streams and rivers. This rolling landscape is the result of the downcutting action of stream erosion upon an uplifted peneplain. At least two separate environmental zones can be identified within the Piedmont: (1) dissected inter-riverine zones with broad, flat ridgetops often separated by deep ravines and small streams and (2) riverine zones (cf. Hemmings 1970; House and Ballenger 1976) that possess variable amounts of floodplain.

Braun (1950) places the South Carolina Piedmont within the oak-pine forest. Aboriginally, this was oak-hickory forest, but land has been cleared continually over the last 200 years for the cultivation of cotton and other crops, resulting in pine forest regrowth over much of the region. Very little oak-hickory stage vegetation can be found in the Piedmont today. Described by Shelford (1963) as Southern Temperate Deciduous Forest, the Piedmont hosts such fauna as white-tailed deer, turkey, squirrel, gray fox, raccoon, opossum, skunk, black bear, bobcat, and wolf.

The Hodges-Ware Shoals route runs along a broad ridgetop located just east of the ridge system which forms the major watershed divide between the Savannah and Saluda Rivers. The highest point in Greenwood County, 714 feet above sea level, lies in this area. Waters flowing down the western flank eventually find their way to the Savannah, approximately 30 miles from the highway corridor; while streams on the east drain into the Saluda, less than ten miles from any point along the highway route. The route crosses both Mulberry Creek, a rank 3 stream, and Turkey Creek, a rank 4 stream as determined by the Strahler system (cf. Weide and Weide 1973).

Much of the research area is presently in cultivated fields which in some localities have eroded in varying degrees down to red clay subsoils. This slope erosion can be attributed to cultivation, primarily the intensive cotton agriculture of the nineteenth century. Some fields have lain fallow for a number of years and now have a regrowth of pine and oak.

As most of the impact zone lies along an existing highway, a portion of the surveyed area is in residential (houses, yards, driveways) and commercial (stores, gasoline stations, parking lots) zones. These developments can be expected to have had adverse effects upon any archeological resources there and also hindered surface examination.

PREVIOUS RESEARCH

The South Carolina Piedmont has seen comparatively little scientifically conducted archeological research throughout the years (Stephenson 1975). Much of what is known about the prehistory of the South Carolina Piedmont has been extrapolated from work done in neighboring states, most notably Coe's (1964) work in North Carolina and Claflin's (1931) report on Stalling's Island, in the Savannah River. More recently the construction of dams and reservoirs along South Carolina's rivers has stimulated some archeological work in these Piedmont riverine zones (Caldwell and Miller 1948; Caldwell 1954; Hutto 1970; Hemmings 1970).

The inter-riverine regions of the Carolina Piedmont, such as the area of the Hodges-Ware Shoals project, have experienced even less archeological study. Two major highway projects recently undertaken by the Institute in the inter-riverine, Piedmont, I-77 (House and Ballenger 1976) and Laurens-Anderson (Goodyear, Ackerly, and House n.d.) survey, have contributed to our understanding of Piedmont prehistory. Based on analysis of the I-77 data, House and Ballenger (1976) propose a settlement model for the Middle and Late Archaic periods of winter-spring-summer habitation along larger streams and rivers of the Piedmont, with autumn movement into the uplands primarily to exploit deer and nuts, as well as other resources. On-going highway research is constantly adding to our knowledge and providing data with which to test proposed hypotheses.

PREHISTORY

The rough outline of prehistoric human occupation of the South Carolina Piedmont is slowly becoming better defined, primarily through recent highway surveys performed by the Institute of Archeology and Anthropology (see House and Ballenger 1976; Goodyear, Ackerly and House n.d.). The present survey and report constitute another contribution to the definition and study of this accumulating Piedmont data base since we are attempting to relate the smaller projects to larger, more regionally based studies. Conveniently, the Hodges-Ware Shoals project is in close proximity to the recently conducted Laurens-Anderson highway project which lies about 10 to 20 miles to the north (Goodyear, Ackerly, and House n.d.).

The earliest known occupation of the Piedmont is attributable to the Paleo-Indian period (9,500-8,500 B.C.) recognized on the basis of true fluted points. According to a study by Michie (1974) on the distribution of fluted points in South Carolina, very few examples have been found in the Piedmont. The majority of points have been found associated with major drainage systems rather than in areas between them. None of the highway surveys such as I-77, Laurens-Anderson and Hodges-Ware Shoals have recovered fluted points and it is unlikely that very many will be found in zones removed from larger streams.

Evidence of the Early Archaic period (8,500-6,000 B.C.) was recovered from two sites in the project right-of-way (38GN41 and 38GN43), conforming to the wider pattern of high Early Archaic site density for the Piedmont. These materials were one quartz Palmer point and another Palmer made of imported Coastal Plain chert. A quartz uniface was also found which is suggestive of an Early Archaic tool form. Although limited in number, the artifactual pattern of the Hodges-Ware Shoals sites is similar to the rather extensive Laurens-Anderson survey where quartz and Coastal Plain chert Palmer points and crudely made quartz unifaces represented a common form of remains. Judging from the inter-riverine site data produced in the nearby Laurens-Anderson corridor, Dalton points are rare away from major drainages, although they have been found along larger streams such as the Reedy River (Goodyear, Ackerly, and House n.d.).

Middle Archaic sites (6,000-3,000 B.C.) are doubtlessly the most abundant form of archeological remains in the Piedmont. These sites are recognized exclusively by the presence of Stanley, Morrow Mountain (I and II), and Guilford points (Coe 1964; House and Ballenger 1976). The Middle Archaic technologies which incorporated Morrow Mountain and Guilford points are the most common and were devoted almost completely to the use of quartz as a raw material. Quartz flakes and bifaces always seem to accompany the Morrow Mountain and Guilford sites, and in the absence of diagnostic projectile points on these sites, such debris is thought to result from the manufacture and resharpening of these points.

Late Archaic (3,000-1,000 B.C.) occupations of the major drainages in the South Carolina Piedmont have been known about for some time (Claflin 1931; Miller 1949; Hemmings 1970; Hutto 1970), however, the recent highway surveys are beginning to provide evidence that the inter-riverine zone was also used during this period (House and Ballenger 1976; Goodyear, Ackerly, and House n.d.). Perhaps the most common Late Archaic tool form is the large stemmed biface known as the Savannah River point (Coe 1964). Usually these points are made from indigenous Piedmont rocks such as andesite, phyllite, argillite, slate, and basalt in preference to quartz. One possible basalt Savannah River point was found at 38GN41 suggesting Late Archaic occupation of this ridge top. In addition to the sites which produce occasional Savannah River points, the Laurens-Anderson survey located a single site (38LU42) which seems to indicate a habitation site in the inter-riverine zone. This site was located on a small ridge overlooking a continuously flowing rank 2 stream.

The Woodland period (1,000 B.C. -A.D. 1,000) represents a block of time in the occupational history of the South Carolina Piedmont that is very poorly known. The Laurens-Anderson survey recovered data from a number of sites that indicates Woodland occupation of the inter-riverine zone. The earliest ceramics appear to be fabric marked, bearing similarities to the ceramics of the Kellogg focus of Georgia (Caldwell 1950; Wauchope 1966: 46-47), the Swannanoa series described by Keel (1976: 260-266) for the Appalachian Summit area of North Carolina, and the Badin and Yadkin ceramics of the North Carolina Piedmont (Coe 1964). It appears that large Yadkin-like triangular arrow points and Swannanoa stemmed points (see Keel 1976:196-198) are associated with Early Woodland sites in the South Carolina Piedmont (Goodyear, Ackerly, and House n.d.).

Evidence for a Middle Woodland complex was also found in the Laurens-Anderson survey, as indicated by fine sand tempered sherds which are "Connestee-like" with a simple stamped decoration. Little else can be said based on our present knowledge about the nature of Middle Woodland occupation in the inter-riverine or riverine zones, and the same applies for what tenuous evidence there is for a Late Woodland period. With the possible exception of a single broken, slate, stemmed Woodland point from 38GN43, no positive evidence of Woodland occupations was recovered from the Hodges-Ware Shoals route.

Some remains attributable to the Mississippian period (A.D. 1,000-1,700) have been found in the inter-riverine zone as determined by the Laurens-Anderson survey. The evidence consists primarily of occasional complicated stamped sherds and small arrow points, and an exotic black and grey flint which appears to have been imported from the Ridge and Valley Province (Goodyear, Ackerly, and House n.d.). Large ceramic bearing sites of Mississippian age have been mapped and collected within the major drainages of the western part of Piedmont South Carolina such as those in the Savannah River Valley (Hemmings 1970; Hutto 1970), and these are distinctly contrasted with the smaller, more limited, inter-riverine zone sites. No diagnostic examples of Mississippian artifacts were found in the Hodges-Ware Shoals corridor.

HISTORY

This region of the Carolina Piedmont was the scene of much early historic activity. The ridge system separating the drainages of the Savannah and Saluda Rivers appears to have been a main thoroughfare from the coastal regions northward into the mountains. Records from DeSoto's 1540 expedition indicate that he may have travelled along this inter-riverine route on his way to the mountains (DeSoto Expedition Commission 1936). Also during this early historic era, and no doubt earlier in prehistoric times, this was the route of the Cherokee Trail, providing a communication and trade network between the coast and the mountains. Indians, explorers, and traders funnelled through this passage and sections of the worn and sunken trail can still be seen in Greenwood County (Watson 1970).

Through a search of nineteenth century maps and records at the University of South Carolina Caroliniana Library and the South Carolina Department of Archives and History, it was possible to trace the approximate path of the Trail to the Cokesbury-Hodges area. Unfortunately early property records which may have provided more information were destroyed by fire in the late nineteenth century, and it was not possible to precisely pinpoint the location. It is possible that the Trail crosses U.S. 25 within the impact zone of this improvement project.

The early European settlers in this region encountered the Cherokee Indians, whose broad territory ranged over portions of South Carolina, North Carolina, Georgia, Alabama, Tennessee, Virginia, and Kentucky (Keel 1976). At this time the Cherokee were living in dispersed agricultural settlements in riverine zones (Bartram 1973). They remained a force in South Carolina until the late eighteenth and early nineteenth centuries when, after a series of treaties and warfare, they were forced westward over the Blue Ridge. The last Cherokee land was ceded to the state by the Cherokee Nation in 1816 (Milling 1940).

The first European outpost in the area appears to have occurred at Ninety Six. Here, in the 1730's, a trading concern was established. Early in the 1750's Robert Goudy, who is generally considered to have been the first permanent settler in the area, located another more permanent trading post at Ninety Six (Lesh 1929). From this time until 1800 a steady immigration into this part of the Piedmont continued from Pennsylvania, Maryland, Virginia, North Carolina, England, Germany, Scotland, and Ireland (Lesh 1929).

The first South Carolina battle of the American Revolution occurred at Ninety Six (Oliphant 1964). Here, in 1775, a group of South Carolina "Rangers" took the fort at Ninety Six from the loyalist Tories, but soon lost it back to the British forces. Later in the War, in 1781, Ninety Six was the scene of a siege against the newly constructed star-shaped

fort occupied by the British, who eventually destroyed the fort and retreated to Charleston.

As settlement of this upland area increased, so did the cultivation of corn, oats, rye, wheat, and livestock feed crops. Later, cash crops--indigo, flax, and cotton--were grown, but were economically unsuccessful due to the poor transportation to the Charleston market (Lesh 1929). The cotton boom did come to Greenwood County in the early nineteenth century, catapulting the area into a slave economy and eventually the Civil War era.

Nineteenth century maps (Tanner 1833; Lieber 1860; Stoeber 1873; Mills 1938) show that sections of present-day U.S. 25 follow the same general route as a nineteenth century road leading to the community of Scuffletown (which no longer appears on maps). The lower half of the route especially seems to coincide with U.S. 25. This may account for the continuous scatter of nineteenth century artifacts found to extend along the highway. An 1894 map (Bullock and Grier 1894) of Abbeville County indicated the existence of a cotton gin on the western side of this road northeast of Hodges. (Greenwood County was not carved out of this territory until 1897.) It is conceivable that the old roadbed located by our survey was related to this operation, but no other structural evidence or artifactual material was found in that context, and no further research into this was undertaken.

METHODS

Prior to an in-the-field survey of this area, a records check of the site files at the Institute of Archeology and Anthropology was conducted. It was found that no prehistoric or historic sites in the immediate vicinity of the route had been previously recorded.

The fieldwork at this reconnaissance-survey stage of research entailed both cursory and intensive examination of sections of the highway route. As much of the seven-mile route will suffer only minimal impact resulting from widening the current right-of-way by three to four feet within previously disturbed ground; these areas were not subjected to surface examination. The 1.8 mile stretch of highway that will cover new territory and cause major impact to the environment was the scene of intensive surface examination. This was accomplished by walking along the route, giving special attention to cultivated fields and other areas of increased visibility. Visibility in wooded and grassy areas along the route was extremely poor, and the possibility exists that sites occur in these areas but were not detected by this survey.

The presence of archeological sites was determined by the occurrence of prehistoric or early historic cultural debris -- lithic debitage, stone tools, early historic century ceramics, etc. -- on the ground surface. Upon the discovery of a site, the location was recorded and the surrounding land carefully searched in an effort to delineate its spatial extent and distribution, and to examine the material found there.

Artifacts were collected from two sites in the Hodges-Ware Shoals corridor in an effort to gain a better understanding of their culture-historical positioning and to make possible inference into activities occurring there. A collection was made of all cultural material found within a 75' x 125' area at 38GN41, and within a 125' x 300' area at 38GN43.

Analysis of this artifactual material was undertaken, using artifact categories outlined in the standard highway archeology analysis form (Appendix A). The results of this analysis will be discussed in later sections of this report.

ARCHEOLOGICAL SITE DATA

Six archeological sites were recorded during this survey (Fig. 1). Traces of a deeply worn roadbed were also seen along portions of the route. All of these archeological manifestations were found along the 1.8 mile portion of the route which will receive major impact. The prehistoric sites were characterized by low density scatters of quartz chunks and debitage, with small amounts of slate, Coastal Plain chert, and other lithic materials. In addition to the sites recorded, nineteenth century glass and ceramics occurred along much of the route. This is not surprising because as mentioned earlier, sections of U.S. 25 appear to follow the route of the nineteenth century Abbeville-Hodges-Scuffletown Road.

38GN40. As were all six sites, 38GN40 is located in a soybean field. The soil is reddish sandy clay, indicating some degree of slope erosion. Ground visibility was fair to good. The only cultural material found here was the midsection of a slate biface. The biface fragment was not temporally diagnostic, but indicates some off-site activity within the region since slate does not naturally occur on the site. The biface was not collected.

38GN41. Site 38GN41 is located within the same environmental conditions as 38GN40--reddish sandy clay in a soybean field. This field does not appear to be as severely eroded, however, as many in the Piedmont. Two small test pits were excavated at 38GN41. Test pit 1 was located on the north slope of the site. The top ten centimeters were found to be dark chocolate brown sandy soil; from ten centimeters to thirty centimeters below the surface was light tan sandy soil. Red clay was seen at a depth of thirty centimeters. Test pit 2, on top of a rise, revealed a more eroded profile. The top ten centimeters was composed of dark sandy soil, from ten to fifteen centimeters was light tan sand, and red clay occurred at fifteen centimeters.

An intensive surface collection was made of all cultural material found within a 75' x 125' rectangle. This collection indicated that both a prehistoric and an historic component are present. All stages of biface reduction were represented by the lithic debitage. Two quartz core fragments and a core tool, similar to one recorded by House and Ballenger (1976:100-101) from Fairfield County, were collected, as were several biface fragments including one Palmer, one ovate point, and a large biface base of basalt which appears to be a Savannah River point. Lithic raw materials were quartz, basalt, a tuffaceous material, and Coastal Plain chert. A large unmodified chunk of steatite was also found. A quartz biface preform was taken from 38GN41 outside the controlled surface collection area.

Several fragments of nineteenth century ironstone-whiteware (cf. South 1974), fragments of broken glass, and pieces of a broken Coca-Cola bottle were collected at 38GN41.

38GN42. Site 38GN42 lies in the southern end of the highway route, just north and east of the intersection of U.S. 25 and S.C. 254. Like all of the other sites, this site is in a beanfield with sandy soil and some signs of erosion. Quartz and argillite debitage was found scattered over a large area, along with large chunks of quartz. No collection was made here.

38GN43. This site is a low density scatter producing artifacts diagnostic of both prehistoric and historic activity. Two test pits were excavated here to determine the effects of erosion. Test pit 1 revealed an uppermost stratum six centimeters deep of light brown sandy soil, underlain by yellowish gray sand. At a depth of 25 centimeters this light sand begins to become mottled with red clay. This mottling increases, until, at about 40 centimeters the red clay predominates. A broken fragment of quartz, possibly fire-cracked, was discovered at a depth of twenty centimeters in this test pit. A second test pit showed a top layer nine centimeters thick of dark brown sandy soil underlain by lighter sand. Red clay mottling begins at sixteen centimeters, and red clay, with sand intrusions, occurs at a depth of twenty centimeters.

An intensive collection of all cultural material made within a 125' x 300' area of the site included quartz chunks (some suggestive of having been fire-cracked); various stage biface reduction flakes of quartz, slate, Coastal Plain chert, and a tuffaceous stone; and a bipolar flaked piece of quartz crystal, possibly what MacDonald (1968) has recorded as a "pièce esquillée" (also see Goodyear 1974: 61-63, Fig. 21). Two complete bifaces and three biface fragments were collected, including a Palmer of Coastal Plain chert (with tip apparently heat-treated), a badly weathered biface of a tuff, and the midsection of a Woodland-like point.

Historic artifacts gathered from 38GN43 are weathered brick fragments, glass, a marble, a porcelain button (nineteenth or early twentieth century), and nineteenth century ironstone-whiteware.

38GN44. A concentrated scatter of historic material was found on the western side of the highway and was given the site designation 38GN44. No collections were made here, but field records note the presence of a wine bottle fragment and nineteenth century ceramics, probably ironstone-whiteware. The presence of these artifacts in this locale may be related to the nineteenth century Abbeville-Hodges-Scuffletown road.

38GN45. Site 38GN45 is a scatter of broken quartz chunks which, for the most part, do not appear to have been modified by human activity. The occurrence, however, of several definite biface reduction flakes and two biface fragments (one possible Morrow Mountain II type; Coe 1964) led to its designation as a prehistoric site.

SIGNIFICANCE AND RECOMMENDATIONS

The primary resource value of the six sites lies in the scientific realm. These remains possess little potential information for enhancing the historical heritage of the State and Nation, nor were they apparently associated with any significant personages or events. While the Cherokee Trail was probably located very close to the present route of U.S. 25, it is not possible to definitely determine its location. Due to their rather inconspicuous and ephemeral nature, the six sites do not have any potential for exhibit in a recreational or educational display. Accordingly, none of these sites are considered eligible for nomination to the National Register of Historic Places.

From the standpoint of anthropology and archeology, these six sites definitely have analytical or research value. This is the case since they represent in various ways and places the cumulative result of the existence of aboriginal peoples in the South Carolina Piedmont for the past 9,000 years. Based on experience derived from surveys such as I-77 and Laurens-Anderson, it has been determined that sites similar to these are quite common in the Piedmont (House and Ballenger 1976; Goodyear, Ackerly, and House n.d.). In spite of their relative abundance, however, we are not yet able to adequately explain their existence in terms of prehistoric human behavior nor are we able to generalize about such sites in terms of broader patterns. It is known, however, that significant variation exists in the overall character of Piedmont sites which relates to different cultural systems and the functional variability within those systems (see House and Ballenger 1976). A scientific approach to the management of these nonrenewable resources would seek to understand their existence in terms of how patterning on an inter- or intrasite basis relates to similar patterns in the cultural system.

In an effort to develop models that will describe and explain archeological variability in the Piedmont, we are investigating site variability based upon a dichotomy between the riverine and inter-riverine zones. The recognition of the two major types of environments is predicated on significant differences in the types of biotic and abiotic resources and their seasonal availability for each zone (House and Ballenger 1976; Goodyear, Ackerly and House n.d.). Such a division is linked theoretically to our attempts to view settlement location and function throughout time and space in the Piedmont from a cultural-ecological framework (Goodyear 1975a; House and Ballenger 1976; House 1976).

The Hodges-Ware Shoals survey lies squarely in the inter-riverine zone. The sites along this corridor seem typical of the many scatters of lithic debris resulting from what is hypothesized to be the outputs of short-term extraction activities. Specifically, the argument has been advanced that much of the debitage and core bifaces observed on sites like these were deposited from deer hunting and quartz quarrying (House and Ballenger 1976:115-134). Although no doubt other activities were conducted throughout the Holocene in this zone, they are archeologically "invisible," in that they produced no durable remains. We know, for example, that some kinds of habitation sites began to appear in the Late Archaic and continued probably through Late Woodland times,

although such sites were not observed along the Hodges-Ware Shoals route.

By trying to explain these surface lithic scatters in behavioral terms such as "deer hunting" or "quartz quarrying," we are immediately beset with methodological problems. First, with only infrequent exceptions, the majority of prehistoric and historic sites in the Piedmont have been badly damaged by plowing and soil erosion. This has resulted in the probable loss in most sites of vertical or stratigraphic relationships among the artifacts. These sites as a class were probably shallow to begin with. Second, nearly all of the inter-riverine site data which has been collected thus far has been retrieved by surface collections under highly variable conditions of ground visibility. Finally, with the exception of a few sites, it has not been feasible to collect surface data using any intrasite spatial controls.

To make further headway with current hypotheses and attempts to build predictive regional models for the inter-riverine zone, it is necessary to gain better control of two important archeological variables for each individual site. These variables are (1) artifactual contents, and (2) intrasite spatial structure as defined by artifact distributions.

It is not certain just how well the presently-used procedures of intensive surface collection adequately characterizes the artifactual contents of an individual site. It is necessary to have some statistical controls on such collections. In particular, the variables of artifact size and diversity may not be well sampled. These problems could be remedied by sifting the soil of a site through a standard screen size and comparing the contents against surface derived samples. It is obvious that measuring site content is an extremely important activity by our current research practices. Through such samples we make cultural identifications, chronological estimates, and derive a notion of site function(s) (Goodyear 1975a).

Such collections as they are frequently made during E.I.S. phase studies do not accommodate intra-site provenience and therefore are not amenable to elucidating the spatial structure of the activities that formed these sites. This problem is exacerbated by the fact that due to our weak culture-historical controls for the Piedmont, we are often unsure about which artifacts are contemporary and functionally associated, especially since the typical inter-riverine site is not amenable to stratigraphic analysis. Furthermore, it seems to be the rule rather than the exception that many sites or topographic units in the Piedmont were reoccupied by different cultural groups through time as well as by the same group, thus spatially mixing to some degree what were originally discrete items. Experiments conducted with spatially controlled surface collections have revealed that at a finer level of spatial control, such as those provided by circles and grids, it is quite feasible to separate many spatially discrete occupational patterns at the intra-site level (see also Binford, et al. 1970; Redman and Watson 1970; Goodyear 1975b).

Some of the sites located within the impact zone would most certainly produce more valuable information if they were excavated with appropriate spatial techniques. Site 38GN43 would be especially worthy of further work due to its relatively good preservation and wide range in artifactual materials. This site still possesses approximately 25 cm of top soil which indicates that erosion has probably not badly damaged the spatial structure of the site. Surface collections indicate that artifacts are reasonably dense and represent more than one temporal period, thereby providing potential for examining intrasite variation. It is therefore recommended that 38GN43 be partially excavated as a means of mitigating its loss through destruction.

A two-stage program of excavation is proposed, whereby the first allows the discovery and identification of behaviorally significant patterning, and the second stage extensively investigates these patterns (see Goodyear 1975b; House and Ballenger 1976:156). To accomplish this excavation program, an area 125' x 300' inside the right-of-way will be defined as the sample area. Stage One will use a five foot square as the basic sampling unit dispersed spatially by the stratified unaligned sampling method (Redman and Watson 1970). All sediments will be screened through 1/4 inch mesh and vertical units within squares will be dug by either natural or arbitrary levels that will allow a study of any possible stratigraphic relationships which may survive in the site. Twenty-five five foot squares will be used in the Stage One sample. Given the planned spatial dispersion of sample units and recovery of artifacts by sifting, this should adequately reveal some approximation of intrasite patterning.

Based upon the patterns revealed from Stage One, a contiguous sample area measuring 30' x 30' composed of 36 five foot squares should be used to perform an intensive intrasite investigation. Identical digging procedures should be maintained for this 30' x 30' block to insure analytical comparability between the two stages. The second stage will allow the spatial and content definition of what is expected to represent a set of contemporaneous behavioral events, assuming of course, no major overlaps due to multicomponency.

The other five sites will receive a less intensive level of mitigation research. These sites should be revisited and surface collected, and in the case of 38GN41, a stratified unaligned surface-circle collection should be made if conditions permit. The additional collecting of these sites should reinforce or further refine information regarding their temporal positions and cultural occupations.

The research that has been outlined will require approximately 4 weeks of field time. The first week will be devoted to the Stage One sampling program and the last three weeks used to complete the investigation stage. A total of 16 weeks after completion of the excavation will be required for one Research Assistant with advisement from the Highway Archeologist to complete the report. A Research Assistant will excavate the site with help of two hourly wage people temporarily hired for the

4 week excavation. The Research Assistant will need one lab assistant to clean and catalog the materials for a period of about 4 weeks. These are the basic time and personnel requirements of the mitigation phase study. A budget for this minimal mitigation phase work will be proposed at the appropriate time when the Highway Department is ready to enter the construction stage.

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APPENDIX A.

CULTURAL MATERIAL COLLECTED FROM 38GN41 (LOCUS 1)

	Chunks	Other flakes	Thinning flakes	Flake tools	Core	Projectile points	Preforms
Quartz	3	18	8	2	2 frags.	2 frags. (1 stem) (1 Palmer)	1 frag.
Slate	-	-	-	-	-	-	-
Coastal Plain Chert	-	-	1*	-	-	-	-
Basalt	-	-	1	-	-	1 frag. (Sav. Riv.)	-
Tuffaceous	-	-	-	-	-	1 frag. (ovate)	-

OTHER:

- 1 large unmodified steatite chunk
- 4 fragments of nineteenth century ironstone-white ware (one possibly from a figurine)
- 2 pieces of broken glass (one purple)
- 5 fragments of broken Coca-Cola bottle

* heated, distal end possibly utilized

CULTURAL MATERIAL COLLECTED FROM 38GN43 (LOCUS 1)

	Chunks	Other flakes	Thinning flakes	Flake tools	Piece esquillé	Projectile points	Preforms
Quartz	9*	16	-	1**	1	3 frags.	-
Slate	-	-	2	-	-	1 frag. (Woodland stemmed?)	-
Coastal Plain Chert	-	1	1	-	-	1 Palmer	-
Basalt	-	-	-	-	-	-	-
Tuffaceous	-	-	2	-	-	1	-

OTHER:

5 weathered brick fragments
 1 marble
 1 porcelain button
 17 fragments of nineteenth century ironstone-whiteware

* several have angularity, possibly fire-cracked

** sidescraper

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