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Appendix M - Cultural Resources Report and MOA

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Cultural Resources Survey of the US 21 Harbor River Bridge Replacement Project

Beaufort County, South Carolina



May 2016

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Final Report

May 2016

Prepared for:

South Carolina Department of Transportation
Columbia, South Carolina

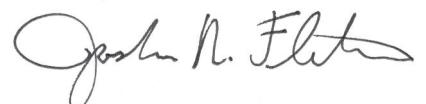
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Abstract

Brockington and Associates, Inc. (Brockington) conducted an intensive cultural resources survey of the US 21 Harbor River Bridge Replacement Project in June and September 2015. This work was conducted for the South Carolina Department of Transportation (SCDOT) and HDR Inc. to determine whether any known or previously unknown historic properties (i.e., sites, buildings, structures, objects, or districts listed on or eligible for the National Register of Historic Places [NRHP]) may be affected by the construction and use of the roadway. This survey provides partial compliance with Section 4(f) of the US Department of Transportation Act of 1966, as amended (49 USC 303), and Section 106 of the National Historic Preservation Act of 1966, as amended (16 USC 470).

The SCDOT has considered location and design alternatives in the process of developing the currently proposed “build” alternatives. The “no-build” alternative, which consists of the SCDOT making no improvements, was considered as a baseline for comparison. Five build alignments, consisting of alternatives to the north and south of the existing route, have been considered as part of this study. The Area of Potential Effect (APE) for the proposed project consists of a corridor measuring two miles long and 1,200 feet wide, centered on existing US 21 between St. Helena Island and Harbor Island, where the five build alignments are proposed. The cultural resources survey involved the excavation of 25 shovel tests in areas determined to be natural and relatively undisturbed or the locations of previously recorded archaeological sites. The survey resulted in the revisit of two previously recorded archaeological sites (Sites 38BU113 and 38BU147), the recording of one newly recorded architectural resource (Resource 5071), and the revisit of one previously identified architectural resource (Resource 5070) within the project Area of Potential Effect (APE).

Site 38BU147 likely results from road construction and is recommended not eligible for the NRHP. Further management consideration of this resource is not warranted. If current proposed road plans change, additional survey may be necessary.

We recommend Site 38BU113 eligible for the NRHP. As currently designed, none of the proposed

alternatives will impact the site. Therefore, the project will have no effect on the site.

The bridge that would be replaced in the proposed project, the Harbor River Bridge (Resource 5070), was previously determined eligible for listing on the NRHP (Clemson University 1981). The bridge no longer meets the State’s safety and design requirements for its transportation system. Rehabilitating the existing swing span bridge was considered. Rehabilitation includes measures that address the structural condition of the bridge in order to maintain the carrying capacity rating. This would require extensive inspections, maintenance, and repairs to allow the bridge to be structurally sufficient without posting a vehicle weight limit. Rehabilitation would likely require temporary closures of the bridge, which is not feasible since the bridge provides the only link between mainland Beaufort County and the islands. The rehabilitation measures would also not address the substandard geometry of the bridge deck, including the width of travel lanes and shoulders. In light of the age of and structural condition of the bridge, rehabilitation was eliminated from further review. Replacement of the existing bridge is deemed the only feasible and prudent alternative to continue providing a safe and efficient transportation network. The proposed bridge replacement project would result in an adverse effect to Resource 5070. A Programmatic Section 4(f) Evaluation will be prepared in accordance to 23 CFR 771.135(i). All proposed mitigation of adverse effects to Resource 5070 will be developed in consultation with the SCDOT and the South Carolina Department of Archives and History (SCDAH).

We recommend Resource 5071 (Gay Fish Company) eligible for the NRHP. Again, the SCDOT has considered location and design alternatives in the process of developing the currently proposed “build” alternatives. Five “build” alignments, alternatives to the north and south side of the existing route, have been considered as part of this study. As currently designed, none of the proposed alternatives will begin in close proximity to Resource 5071. While the existing truss swing span Harbor River Bridge (Resource 5070) is proposed to be replaced with a 65-foot fixed span bridge, the setting of Gay

Fish Company as it relates to St. Helena Island and Ward Creek will remain unchanged and any possible viewshed effects will be minimal due to distance and tree cover. Therefore, the proposed US 21 Harbor River Bridge Replacement Project will have no effect on Resource 5071.

Acknowledgments

The authors would like to thank Chad Long and Bill Jurgelski of the South Carolina Department of Transportation, Sarah Stephens of the South Carolina Department of Archives and History, Blair Wade and Shannon Meder of HDR Inc., and Dr. Herman Blake of the Gullah Geechee Cultural Heritage Corridor for their assistance during this project. Sheldon Owens and Josh Fletcher conducted the background research for the project. Sheldon Owens served as architectural historian and conducted the architectural survey. The archaeological field crew consisted of Josh Fletcher and Scott Kitchens. Chad Long, Bill Jurgelski, and Sarah Stephens also assisted with the archaeological field work. Sheldon Owens and Jake Wilkerson conducted the artifact processing and analysis. Cristian LaRosa, Inna Moore, and Michael Walsh prepared the graphics for this document. Alicia Sullivan provided editorial assistance. Michael Walsh produced the report.

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1.0 Introduction and Methods of Investigation

1.1 Introduction

Brockington and Associates, Inc. (Brockington) conducted an intensive cultural resources survey of the US 21 Harbor River Bridge Replacement Project in June and September 2015. This work was conducted for the South Carolina Department of Transportation (SCDOT) and HDR Inc. to determine whether any known or previously unknown historic properties (i.e., sites, buildings, structures, objects, or districts listed on or eligible for the National Register of Historic Places [NRHP]) may be affected by the construction and use of the roadway. This survey provides partial compliance with Section 4(f) of the US Department of Transportation Act of 1966, as amended (49 USC 303), and Section 106 of the National Historic Preservation Act of 1966, as amended (16 USC 470).

The SCDOT has considered location and design alternatives in the process of developing the currently proposed “build” alternatives. The “no-build” alternative, which consists of the SCDOT making no improvements, was considered as a baseline for comparison. Five build alignments, consisting of alternatives to the north and south of the existing route, have been considered as part of this study. The Area of Potential Effect (APE) for the proposed project consists of a corridor measuring two miles long and 1,200 feet wide, centered on existing US 21 between St. Helena Island and Harbor Island, where the five build alignments are proposed. The study corridor begins 150 feet west of Gay Fish County Road on US 21, extends east across the bridge to Harbor Island, and ends 150 feet past the intersection of US 21 and Harbor Drive. The US 21 Harbor River Bridge Replacement Project consists of the replacement and realignment of an approximately 0.5-mile long bridge over the Harbor River in Beaufort County, South Carolina (Harbor River Bridge).

The project involves the bridge replacement as well as the construction of a new roadway approach alignment. The purpose of the project is to correct structural and functional deficiencies of the Harbor River Bridge and to upgrade the bridge and its approaches to current design standards. The existing Harbor River Bridge is a 76-year old metal truss swing

span that was evaluated in terms of its structural integrity and functional efficiency and found to be structurally deficient and functionally obsolete, and therefore no longer meets the SCDOT’s safety and design requirements for its transportation system. There is an urgent need to replace the Harbor River Bridge because of the physical condition of the existing structure and the important linkage for Beaufort County. US 21 comprises the only vehicle access between mainland Beaufort County and Harbor Island, Hunting Island, and Fripp Island. US 21 also serves as a designated hurricane evacuation route for coastal Beaufort County. The bridge requires greater maintenance efforts and costs to keep the structure protected from natural elements and its mechanical parts fully functional. Three malfunctions have occurred since May of 2014 that temporarily obstructed either the passage of vehicles or boats.

Existing right-of-way (ROW) varies through the corridor. The existing ROW on the eastern approach is 100 feet, while the existing ROW on the western approach is 50 feet. The existing ROW surrounding the Beaufort County boat ramp on Butcher’s Island is 250 feet. To encompass the differing ROWs and the five build alternatives, the archaeological and architectural survey universes are 1,200 feet wide, extending 600 feet to either side of the US 21 centerline for the two-mile length of the corridor. The APE includes the archaeological and architectural survey universes. Figure 1.1 shows the location of the US 21 Harbor River Bridge Replacement Project on the Beaufort County Highway Map (SCDOT 2005). Figure 1.2 shows the location of the project and all identified cultural resources within 0.25 mile of the project on the USGS 1956/p.r. 1979 St. Helena Sound, SC quadrangle.

The cultural resources survey involved the excavation of 25 shovel tests in areas determined to be natural and relatively undisturbed or the location of previously recorded archaeological sites. The survey resulted in the revisit of two previously recorded archaeological sites (Sites 38BU113 and 38BU147), the recording of one new architectural resource (Resource 5071), and the revisit of one previously identified architectural resource (Resource 5070) within the project APE.

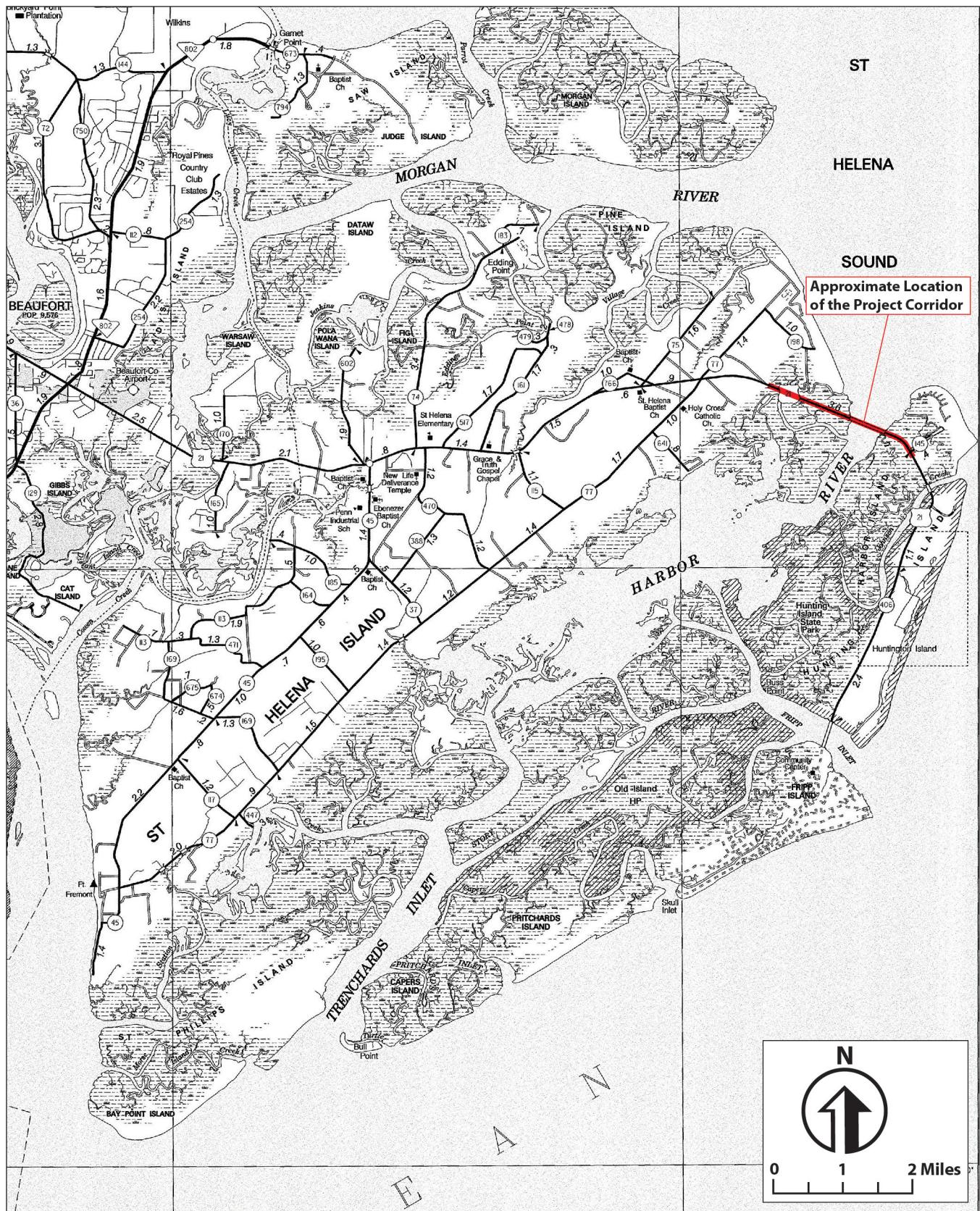


Figure 1.1 Location of the US 21 Harbor River Bridge Replacement Project on the Beaufort County Highway Map (SCDOT 2005).

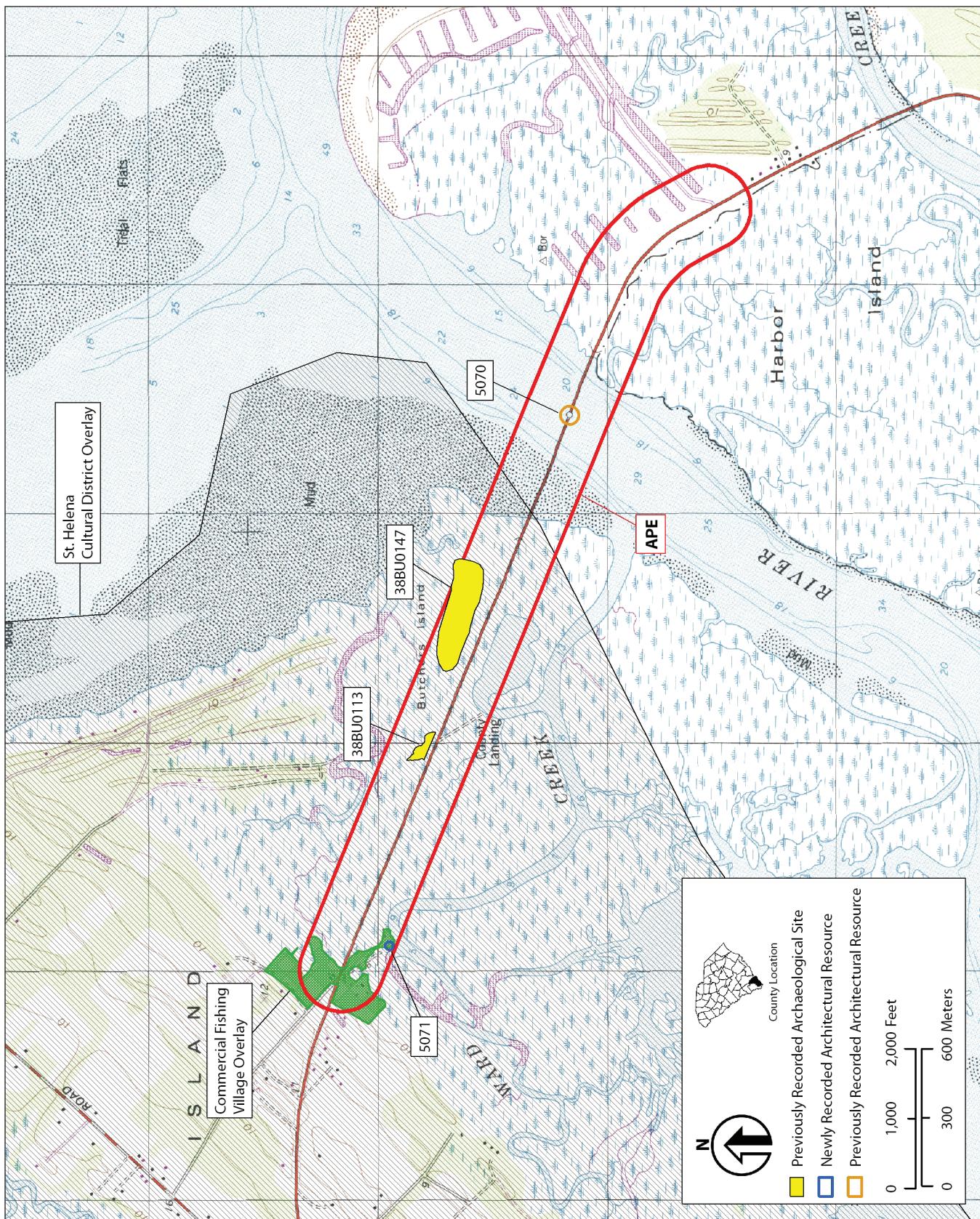


Figure 1.2 Location of the US 21 Harbor River Bridge Replacement Project and all identified cultural resources (USGS 1956/p.r. 1979 St. Helena Sound, SC quadrangle).

Site 38BU147 was originally recorded by Larry Lepionka (1978) as a series of (presumably) Pre-Contact shell mounds. Evidence in the form of mid-twentieth-century aerial photographs and roadway construction plans, as well as the condition of the shell encountered in the shovel tests excavated during the current investigations, suggests that these “shell mounds” are very likely excess or displaced road construction materials. We recommend Site 38BU147 not eligible for the NRHP. Further management consideration of this resource is not warranted. If current proposed road plans change, additional survey may be necessary.

Site 38BU113 is a large surface and subsurface scatter of shell and Pre-Contact ceramic artifacts located on a landform named Butcher’s Island to the north of US 21. We recommend Site 38BU113 eligible for the NRHP. As currently designed, none of the proposed alternatives will impact the site. Therefore, the project will have no effect on the site.

The Harbor River Bridge (Resource 5070) was previously determined eligible for listing in the NRHP (Clemson University 1981). As discussed in more detail above, the bridge has been determined to no longer meet the State’s safety and design requirements for its transportation system. Rehabilitating the existing swing span bridge was considered. Rehabilitation includes measures that address the structural condition of the bridge in order to maintain the carrying capacity rating. This would require extensive inspections, maintenance, and repairs to allow the bridge to be structurally sufficient without posting a vehicle weight limit. Rehabilitation would likely require temporary closures of the bridge, which is not feasible since the bridge provides the only link between mainland Beaufort County and the islands. The rehabilitation measures would also not address the substandard geometry of the bridge deck, including the width of travel lanes and shoulders. In light of the age of and structural condition of the bridge, rehabilitation was eliminated from further review. Replacement of the existing bridge is deemed the only feasible and prudent alternative to continue providing a safe and efficient transportation network. The proposed bridge replacement project would result in an adverse effect to Resource 5070. A Programmatic Section 4(f) Evaluation will be prepared in accordance to 23 CFR 771.135(i). All

proposed mitigation of adverse effects to Resource 5070 will be developed in consultation with the SCDOT and the South Carolina Department of Archives and History (SCDAH).

We recommend Resource 5071 (Gay Fish Company) eligible for the NRHP. As currently designed, none of the proposed alternatives are in close proximity to Resource 5071. While the existing truss swing span Harbor River Bridge (Resource 5070) is proposed to be replaced with a 65-foot fixed span bridge, the setting of Gay Fish Company as it relates to St. Helena Island and Ward Creek will remain unchanged and any possible viewshed effects will be minimal due to distance and tree cover. Therefore, the proposed US 21 Harbor River Bridge Replacement Project will have no effect on Resource 5071.

The remainder of Chapter 1 describes the methods employed during this survey. Chapter 2 presents the environmental and cultural setting for the project. Chapter 3 presents results of the archaeological survey. Chapter 4 presents the results of the architectural survey. Chapter 5 provides a summary of the cultural resources survey and includes recommendations for the management of cultural resources within the study area. The artifact catalog is attached as Appendix A. Appendix B includes Statewide Survey Forms. Appendix C presents project correspondence.

1.2 Methods of Investigation

1.2.1 Project Objective

The objective of the cultural resources investigations was to assess the potential for development of the US 21 Harbor River Bridge Replacement Project to affect historic properties within the APE. Tasks performed to accomplish this objective included background research, field investigations, laboratory analysis, and the assessment of the NRHP eligibility of identified resources. Methods employed for each of these tasks are described below.

1.2.2 Background Research

The Project Historian (Sheldon Owens) examined archival, documentary, and cartographic resources in various libraries and repositories. Specific materials sought during this phase of work included historical

maps, aerial photography, tax records, newspaper articles, any published documents (books and articles at both the scholarly and popular level), previous cultural resources management reports, and state architectural survey forms, and other relevant data. Digital research was also conducted using the SCDAH online records index. Research was also conducted at the Beaufort County Register of Deeds Office in Beaufort, and at the Beaufort County Library's Special Local History Collection Research Room in Beaufort.

The Principal Investigator (Josh Fletcher) also conducted research at the South Carolina Institute of Archaeology and Anthropology (SCIAA) and SCDAH to identify nearby areas of previous cultural resources investigations and the locations of known archaeological sites, historic architectural resources, and historic properties within 0.25 mile of the US 21 Harbor River Bridge Replacement Project. Previously recorded cultural resources within 0.25 mile of the study area are summarized in Chapter 2. The purposes of the archival research were to identify potential Pre- or Post-Contact archaeological sites and buildings and to develop a historical context that would assist in evaluating cultural resources.

1.2.3 Project Coordination, Consultation, and Considerations

During the course of this project, the Principal Investigator consulted with a number of people and entities about possible issues within the study area. These issues are summarized below.

The Principal Investigator attended a public information meeting in the project area on September 15, 2015 and spoke with several attendees about possible cultural resource issues in and near the study area. There were no cultural resource issues brought up at the meeting or in the subsequent feedback forms submitted by individuals at the meeting.

Beaufort County's Rural and Critical Lands Preservation Program (RCLPP), established by Ordinance in 1999, is an effort to provide a means by which lands may be protected by fee simple purchase or conservation easements. Beaufort County contracted with the Trust for Public Land (TPL) to manage the program, negotiate with property owners and to assist in the purchase of properties. Research has revealed that there are no RCLPP property easements within the study area.

Beaufort County operates the Ward Creek boat ramp on Butcher's Island in the central portion of the project. Potential impacts to the Beaufort County boat ramp on Butcher's Island may include partial or full temporary closure during construction. None of the proposed build alternatives would permanently close the boat ramp. If construction, including materials staging or stockpiling, would result in partial or full temporary closure of the boat ramp, the contractor would be responsible for coordinating the 4(f) use with the SCDOT, Federal Highway Administration (FHWA), and Beaufort County.

In November and December, 2015, the Principal Investigator consulted with Dr. Herman Blake of the Gullah Geechee Cultural Heritage Corridor to determine if he or others had concerns about possible Gullah Geechee issues, resources, or traditions within the project study area. Dr. Blake reached out to several local constituents and no one had any concerns that the project would negatively impact any Gullah Geechee issues, resources, or traditions.

The St. Helena Island Cultural Protection Overlay (Beaufort County 2014:3-77) was designated by Beaufort County to protect the historical cultural landscape and its physical setting on St. Helena Island. As one of Beaufort County's last substantially rural Sea Islands and the center of its most notable concentration of Gullah culture, the island requires an additional level of development standards to protect this important resource. The Cultural Protection Overlay was created to help prevent rural gentrification and displacement of residents in these cultural communities. The intent of this overlay is to protect this area from encroaching development pressures. While growth is not discouraged, the quality and rate of growth is of concern. The Cultural Protection Overlay encompasses the entire island and acknowledges its historic cultural landscape and the sense of community that has existed on the island for 300 years (see Figure 1.2). Uses that are considered incompatible with the purpose of this area and should be discouraged or prohibited include:

- Gated communities, which are intentionally designed or developed to prevent access by nonresidents.
- Resorts that could include lodging that serves as a designation point for visitors,

or is located and designed with some combination of recreational uses or natural areas such as marinas, beaches, pools, tennis courts, golf courses, equestrian uses, and other special recreation opportunities. This use does not include ecotourism or its associated lodging.

- Golf courses that includes regulation and par three golf courses and related uses (e.g., clubhouse) having nine or more holes.

The Principal Investigator discussed the St. Helena Island Cultural Protection Overlay with Dr. Blake of the Gullah Geechee Cultural Heritage Corridor. Dr. Blake agreed that since the US 21 Harbor River Bridge Replacement Project was along an existing roadway, and since it would result in no access restrictions, he and his constituents have no issues with the project moving forward.

Gay Fish Company (Resource 5071) is located on St. Helena Island and on properties zoned by Beaufort County as a Commercial Fishing Village Overlay (see Figure 1.2). Beaufort County has designated areas within the Commercial Fishing Village Overlay to recognize the cultural contributions of the seafood industry. Goals of the Commercial Fishing Village Overlay include providing for the maintenance and enhancement of the commercial seafood industry and supporting traditional uses, preserving existing and potential commercial fishing areas, and reducing conflicts between the seafood industry and residential developments (Beaufort County 2014:3-78 to 3-82). Permitted uses within the Commercial Fishing Village Overlay include marine retail or service establishments, restaurants, marine-related educational facilities, commercial docks, fish houses, boat charters, and boat landings. Conditional and Special Uses include marine storage and repair facilities, ice houses, large wholesale fish houses, fuel storage facilities, marine construction facilities, and jellyfish processing facilities. Specific uses and limitations can be found in the Beaufort County Community Development Code (Beaufort County 2014). The US 21 Harbor River Bridge Replacement Project is compatible with the Beaufort County Commercial Fishing Village Overlay because the proposed 65-foot bridge height would accommodate a variety of marine uses on the designated properties. If Gay Fish Company were sold, the bridge height would accom-

modate most uses allowed under the Overlay development guidelines.

1.2.4 Field Investigations

Archaeological Survey

Archaeological survey of the US 21 Harbor River Bridge Replacement Project followed the *South Carolina Standards and Guidelines for Archaeological Investigations* (COSCAPA et al. 2013). The archaeological survey universe is 1,200 feet wide, extending 600 feet to either side of the US 21 centerline for the two-mile length of the corridor. Generally, shovel tests were placed in areas determined to be natural and relatively undisturbed along the existing road. Areas away from the road are generally very disturbed by residential and commercial development, or are made land or marsh.

Investigators generally excavated shovel tests at 30-meter (100-foot intervals) along each transect spaced at 30-meter (100-foot) intervals. Each shovel test measured approximately 30 centimeters (one foot) in diameter and was excavated into sterile subsoil. The fill from these tests was sifted through one-quarter-inch mesh hardware cloth. Investigators excavated a total of 25 shovel tests. Investigators traversed the entire archaeological survey universe and visually inspected the ground surface. All identifiable or suspected cultural materials were collected. Excavators recorded provenience information including transect, shovel test, and surface collection numbers on resealable, archivally stable plastic artifact collection bags. Information relating to each shovel test also was recorded in field notebooks. This information included the content (e.g., presence or absence of artifacts) and context (e.g., soil color, texture, stratification) of each test. Excavators flagged and labeled positive shovel tests (those where artifacts were present) for relocation and site delineation so that they could be located again and for the purposes of site delineation.

Shovel tests were not excavated in wetlands or disturbed/developed areas. Much of the study area on Harbor Island is made land and has been further disturbed by residential development. The portion of Butcher's Island to the north of US 21 appears to be largely intact, but the portion of the island to the south of US 21 has been heavily disturbed during the original construction of the US 21 causeway and the later development of the boat ramp facility. The western



Figure 1.3 The location of the project and shovel tested areas on a modern aerial photograph.

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end of the project on St. Helena Island has been heavily disturbed by the creation and maintenance of Gay Fish Company to the south of US 21 and commercial and residential developments to the north of US 21. Figure 1.3 shows the location of the project and areas that were shovel tested, along with the five proposed alternatives, on a modern aerial photograph.

Locales that produced artifacts from shovel testing or surface inspection were subjected to reduced-interval shovel testing. Investigators excavated additional shovel tests at 15-meter (50-foot) intervals and also placed an auger test within Site 38BU113, which is located entirely within Butcher's Island to the north of US 21.

An archaeological site is a locale that produces three or more contemporary artifacts within a 30-meter (100-foot) radius or an area with visible or historically recorded cultural features. Locales that produce fewer than three artifacts are isolated finds (COSCAPA et al. 2013). Also, obviously redeposited artifacts (even if greater than three in number) are typically defined as an isolated find rather than a site unless there is a compelling reason for doing otherwise.

A map showing the location of each shovel test and approximate site boundaries was prepared in the field for each site. Investigators recorded several points within Sites 38BU113 and 38BU147 with a Trimble Pro XR GPS with sub-meter accuracy. The GPS receiver was calibrated to the 1983 North American Datum. Data was differentially corrected and brought into the ArcView 10 software program where it was reprojected to the UTM Zone 17N NAD27 projected coordinate system and plotted on the digital USGS quadrangle and aerial photographs for the project.

Architectural Survey

The architectural survey universe is 1,200 feet wide, extending 600 feet to either side of the US 21 centerline for the two-mile length of the corridor. The project architectural historian conducted an intensive architectural survey of all aboveground cultural resources within the architectural survey universe to take into account any possible visual effects of the proposed undertaking. The survey was designed to identify, record, and evaluate all historic architectural resources (buildings, structures, objects, designed landscapes, and/or sites with aboveground components) in the architectural survey universe. Field survey methods complied with

the *Survey Manual: South Carolina Statewide Survey of Historic Places* (SCDAH 2007) and National Register Bulletin 24, *Guidelines for Local Surveys: A Basis for Preservation Planning* (Parker 1985). In accordance with the scope of work and standard South Carolina Department of Archives and History (SCDAH) survey practice, the project architectural historian drove every street and road in the architectural survey universe and conducted a pedestrian inspection of all potential historic architectural resources.

The principal criterion used by SCDAH to define historic architectural resources is a 50-year minimum age; however, that rule does not always allow for the recordation of all historically significant resources. This could include resources related to the civil rights movement, the Cold War, or the development of tourism in South Carolina. In addition, certain other classes of architectural resources may be recorded (SCDAH 2007:9):

- Architectural resources representative of a particular style, form of craftsmanship, method of construction, or building type
- Properties associated with significant events or broad patterns in local, state, or national history
- Properties that convey evidence of the community's historical patterns of development
- Historic cemeteries and burial grounds
- Historic landscapes such as parks, gardens, and agricultural fields
- Properties that convey evidence of significant "recent past" history (i.e., civil rights movement, Cold War, etc.)
- Properties associated with the lives or activities of persons significant in local, state, or national history
- Sites where ruins, foundations, or remnants of historically significant structures are present

For a resource to be eligible for documentation, the architectural historian must determine that it retains some degree of integrity. According to the SCDAH (2007:10), a resource that has integrity,

retains its historic appearance and character... [and] conveys a strong feeling of the period in history during which it achieved significance.

Integrity is the composite of seven qualities: location, design, setting, materials, workmanship, feeling, and association. To have a reasonable degree of integrity, a property must possess at least several of these qualities.

Also, integrity is evaluated in the context of the local region.

While in the field, the architectural historian evaluated the integrity of each identified historic architectural resource. Resources exhibiting poor integrity were not recorded. For the purpose of this project, four levels of architectural integrity were employed. These include:

Excellent - All original construction materials and design remain intact and unchanged.

Good - The majority of original construction materials remain intact and unchanged except for roofing and other renewable elements.

Fair - A substantial number of original architectural elements have been altered, such as the installation of aluminum, asbestos, or vinyl siding, the substitution of historic doors and windows with non-historic replacements, and the construction of non-historic additions.

Poor - Has been radically altered from its original design by non-historic renovations and/or additions.

All architectural resources in the project area were recorded on South Carolina Statewide Survey (SCSS) forms in digital format using the Survey database in Microsoft Access. At least one digital photograph, preferably showing the main and side elevations, was taken of each resource. The location of each architectural resource was recorded on USGS topographic maps. The completed forms, including the various maps and photographs, were prepared for the SCDAH for review. Photography for this project included digital images produced by methods demonstrated to meet the 75-year permanence standard required by SCDAH and the National Park Service (NPS 2005; SCDAH 2007:31).

1.2.5 Laboratory Analysis and Curation

All recovered artifacts were transported to Brockington and Associates, Inc.'s Mt. Pleasant laboratory facility, where they were cleaned according to their material composition and fragility, sorted, and inventoried. Most artifacts were washed in warm water with a soft-bristled toothbrush. Artifacts that are fragile, have soot, or are to be used for chemical analyses were not washed but were left to air-dry and, if needed, lightly brushed. Each separate archaeological context from within each site (e.g., surface collection, shovel test) was assigned a specific provenience number. The artifacts from each provenience were separated by artifact type, using published artifact type descriptions from sources that are pertinent to the project area. Artifact types were assigned a separate catalog number and analyzed, and quantity and weight were recorded. All artifact analysis information was entered into a coded database (Microsoft Access 2000TM). The artifact catalog is included in Appendix A.

Typological identification as manifested by technological and stylistic attributes served as the basis for Pre-Contact artifact analysis. When recognizable, diagnostic attributes were recorded for residual sherds, i.e., those smaller than 2-by-2 centimeters. Sherds and other diagnostic artifacts then were compared to published type descriptions from available sources (Anderson et al. 1982; Blanton et al. 1986; DePratter 1979, 1989; Espenshade and Brockington 1989; South 1976; Trinkley 1980, 1981a, 1981b, 1981c, 1989f, 1990a; Williams and Shapiro 1990).

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

1.2.6 NRHP Assessment of Cultural Resources

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

- A. is associated with events that have made a significant contribution to the broad pattern of history;
- B. is associated with the lives of persons significant in the past;
- C. embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, possesses high artistic value, or represents a significant and distinguishable entity whose components may lack individual distinction; or
- D. has yielded, or is likely to yield, information important to history or prehistory.

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

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

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

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

The fourth step involves determining the specific association of a resource with aspects of the significant historic context. Savage and Pope (1998) define how one should consider a resource under each of the four criteria of significance. Under Criterion A, a property must have existed at the time that a particular event or pattern of events occurred, and activities associated with the event(s) must have occurred at the site. In addition, this association must be of a significant nature, not just a casual occurrence (Savage and Pope 1998). Under Criterion B, the resource must be associated with historically important individuals. Again, this association must relate to the period or events that convey historical significance to the individual, not just that this person was present at this locale (Savage and Pope 1998). Under Criterion C, a resource must possess physical features or traits that reflect a style, type, period, or method of construction; display high artistic value; or represent the work of a master (an individual whose work can be distinguished from others and possesses recognizable greatness) (Savage and Pope 1998). Under Criterion D, a resource must possess sources of information that can ad-

dress specific important research questions (Savage and Pope 1998). These questions must generate information that is important in reconstructing or interpreting the past (Butler 1987; Townsend et al. 1993). For archaeological sites, recoverable data must be able to address specific research questions.

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

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

2.0 Environmental and Cultural Overview

2.1 Environmental Setting

The US 21 Harbor River Bridge Replacement Project study corridor begins 150 feet west of Gay Fish County Road on US 21 on St. Helena Island, extends east across the Harbor River Bridge to Harbor Island, and ends 150 feet past the intersection of US 21 and Harbor Drive. The project corridor terrain is generally flat with the surface runoff draining to the adjacent salt marsh or roadside ditches. The existing land use along the project boundaries is primarily tidal wetlands, with small areas of residential and commercial development. Gay Fish Company and its associated docks are located in the western portion of the study area. The western end of the study area has been heavily disturbed by the creation and maintenance of Gay Fish Company to the south of US 21 and commercial and residential development to the north of US 21. The Beaufort County boat ramp providing access to Ward Creek is located on Butcher's Island, south of the causeway between St. Helena Island and the Harbor River Bridge. The portion of Butcher's Island to the north of US 21 appears to be largely intact, but the portion of the island to the south of US 21 was heavily disturbed during the original construction of the US 21 causeway and the later development of the Ward Creek boat ramp facility. Harbor Island and Harbor Key residential communities are located east of the existing bridge, north of the causeway. Much of the study area on Harbor Island is made land and has been further disturbed by residential development. Figure 2.1 presents typical views of the project area.

US 21 is a two-lane roadway with earthen shoulders on a causeway connecting St. Helena Island with Harbor Island, Hunting Island, and Fripp Island. US 21 provides an important transportation link for the residents of and visitors to the islands. US 21 is also designated as a hurricane evacuation route for coastal Beaufort County.

The Harbor River Bridge over the Harbor River was constructed in 1939 with a 170-foot through truss swing span over the channel and 40-foot concrete spans supported on concrete beams for the bridge approaches. The vertical navigational clearance is 15 feet when the swing span is closed. The horizontal navigational clearance is 60 feet. The total bridge length is

2,851 feet. The existing bridge deck consists of two 10-foot travel lanes, one in each direction, with a one-foot curb and railing. There are no dedicated bicycle or pedestrian facilities on the bridge or causeway within the project corridor.

2.1.1 Climate

Beaufort County lies in the southernmost portion of South Carolina and has the mildest climate in the state. The climate is subtropical, with long, hot summers followed by short, mild winters. Precipitation is abundant and well distributed throughout the year. The abundant supply of moist, warm, unstable air produces frequent scattered showers and thunderstorms.

Average annual rainfall in Beaufort County is approximately 3.87 feet. The low monthly average occurs in November (0.13 feet); the high monthly average occurs in July (0.62 feet). The average annual temperature is 65.7°F. The county averages 249 frost-free days per year. The first freezing temperatures typically occur in November. The tropical storm season runs from June through October. Hurricanes are rare for the area, but tropical storms with winds up to 50 miles per hour occur every two to three years on average. Tornado season runs from March through October, but April and May are the most tornado-prone months. Many reported tornadoes are waterspouts that do not come ashore (Stuck 1980).

2.1.2 Soils

Soils in the study area include Capers association, Fripp-Baratari complex, and Ridgeland fine sand. Capers association soils consist of very poorly drained, nearly level soils located on tidal flats (Stuck 1980:19). Fripp-Baratari complex soils consist of excessively drained and poorly drained soils located on a series of ridges and troughs. The Fripp soils are located on the ridges and the Baratari soils are in the troughs (Stuck 1980:25). Ridgeland fine sand soils are somewhat poorly drained soils located on low ridges (Stuck 1980:37).

2.1.3 Floral and Faunal Communities

Information on floral and faunal communities for the area is summarized from general sources such as Quarterman and Keever (1962) and Shelford (1963).



Figure 2.1 Typical views of the project: eastern end of the project, facing northwest (top); Harbor River bridge, facing northwest (middle); and western end of the project, facing east (bottom).

Most of the extant woodlands today are mixed pine/hardwood forests. A mixed forest supports an active faunal community including deer and small mammals (e.g., various squirrels and mice, opossum, raccoon, rabbit, fox, skunk), birds (e.g., various songbirds, ducks and wading birds, quail, turkey, doves, hawks, owls), and reptiles/amphibians (e.g., frogs, toads, lizards, snakes, turtles, alligator). Freshwater and saltwater fish are abundant in the streams and marshes of the region, and shellfish are present in large numbers in most of the tidally affected waters throughout the region.

2.1.4 Holocene Changes in the Environment

Profound changes in climate and dependent biophysical aspects of regional environments have been documented over the last 20,000 years (the potential span of human occupation of the Southeast). Major changes include a general warming trend, melting of the large ice sheets of the Wisconsin glaciation in northern North America, and the associated rise in sea level. This sea level rise was dramatic along the South Carolina coast (Brooks et al. 1989), with an increase of as much as 330 feet during the last 20,000 years. At least 10,000 years ago (the first documented presence of human groups in the region)

the ocean was located 50 to 100 miles east of its present position. Unremarkable Coastal Plain flatwoods probably characterized the project area. Sea level rose steadily from that time until about 5,000 years ago, when the sea reached essentially modern levels. During the last 5,000 years, there has been a 400- to 500-year cycle of sea level fluctuations of about 6.5 feet (Brooks et al. 1989; Colquhoun et al. 1981). Figure 2.2 summarizes these more recent fluctuations in the region.

As sea level quickly rose to modern levels, it altered the gradients of major rivers and flooded near-coast river valleys, creating estuaries like Port Royal and St. Helena Sounds. These estuaries became great centers for saltwater and freshwater resources, and thus population centers for human groups. Such dramatic changes affected any human groups living in the region.

The general warming trend which led to the melting of glacial ice and the rise in sea level also greatly affected vegetation communities in the Southeast. During the late Wisconsin glacial period, until about 12,000 years ago, boreal forest dominated by pine and spruce covered most of the Southeast. This forest changed from coniferous trees to deciduous trees by 10,000 years ago. The new deciduous forest was dominated by northern hardwoods such

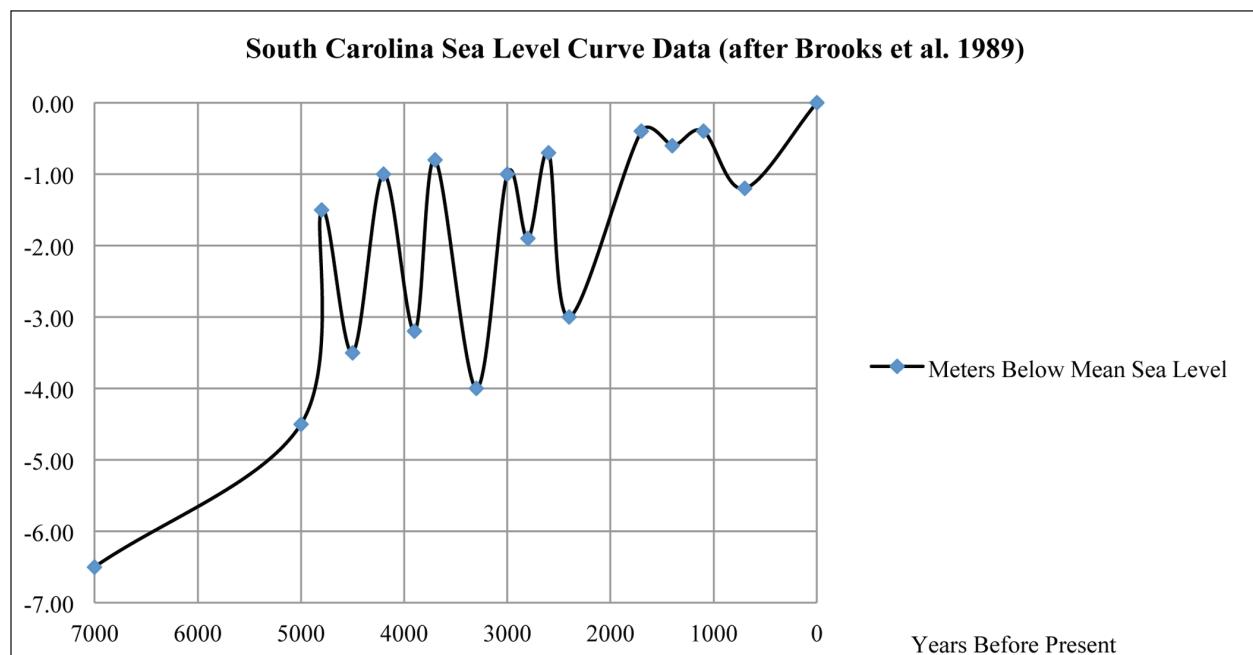


Figure 2.2 South Carolina sea level curve data (after Brooks et al. 1989).

as beech, hemlock, and alder, with oak and hickory beginning to increase in number. With continuation of the general warming and drying trend, the oak and hickory came to dominate, along with southern species of pine. Oak and hickory appear from pollen data to have reached a peak at 7,000 to 5,000 years ago (Watts 1970, 1980; Whitehead 1965, 1973). Since then, the general climatic trend in the Southeast has been toward cooler and moister conditions, and the present Southern Mixed Hardwood Forest as defined by Quarterman and Keever (1962) became established. Faunal communities also changed dramatically during this time. Several large mammal species (e.g., mammoth, mastodon, horse, camel, giant sloth) became extinct at the end of the glacial period, approximately 10,000 to 12,000 years ago. Pre-Contact groups that had focused on hunting these large mammals adapted their strategy to exploitation of smaller mammals, primarily deer in the Southeast.

2.2 Cultural Setting

2.2.1 Context for the Pre-Contact Era

In South Carolina, the Pre-Contact era is divided into four stages (after Willey and Phillips 1958). These include the Lithic, Archaic, Woodland, and Mississippian. Specific technologies and strategies for procuring resources define each of these stages, with approximate temporal limits also in place. Within each stage, with the exception of the Lithic stage, there are temporal periods that are defined on technological bases as well. A brief description of each stage follows, including discussions of the temporal periods within each stage. Readers are directed to Goodyear and Hanson (1989) for more detailed discussions of particular aspects of these stages and periods in South Carolina.

The Lithic Stage (>12000 – 8000 BC). The beginning of the human occupation of North America is unclear. For most of the twentieth century, archaeologists believed that humans arrived on the continent near the end of the last Pleistocene glaciation, termed the Wisconsinan in North America, a few centuries prior to 10000 BC. The distinctive fluted projectile points and blade tool technology of the Paleoindians

(described below) occurs throughout North America by this time. During the last few decades of the twentieth century, researchers began to encounter artifacts and deposits that predate the Paleoindian period at a small number of sites in North and South America. The most notable are Meadowcroft Rock Shelter in Pennsylvania (Adovasio et al. 1990; Carlisle and Adovasio 1982), Monte Verde in Chile (Dillehay 1989, 1997; Meltzer et al. 1997), Cactus Hill in Virginia (McAvoy and McAvoy 1997), and most recently, the Topper/Big Pine Tree site in Allendale County, South Carolina (Goodyear 1999). All of these sites contain artifacts in stratigraphic locales below Paleoindian deposits. Radiocarbon dates indicate occupations at the Meadowcroft and Topper/Big Pine Tree sites that are 10,000 to 20,000 years earlier than the earliest Paleoindian occupations. Cactus Hill produced evidence of a blade technology that predates Paleoindian sites by 2,000 to 3,000 years. Monte Verde produced radiocarbon dates comparable to those at North and South American Paleoindian sites, but reflects a very different lithic technology than that evidenced at Paleoindian sites. Similarly, the lithic artifacts associated with the other pre-Paleoindian deposits discovered to date do not display the blade technology so evident during the succeeding period. Unfortunately, the numbers of artifacts recovered from these sites are too small at present to determine if they reflect a single technology or multiple approaches to lithic tool manufacture. Additional research at these and other sites will be necessary to determine how they relate to the better-known sites of the succeeding Paleoindian period, and how these early sites reflect the peopling of North America and the New World.

Paleoindian Period (12000–8000 BC). An identifiable human presence in the South Carolina Coastal Plain began about 12,000 years ago with the movement of Paleoindian hunter-gatherers into the region. Initially, the Paleoindian period is marked by the presence of distinctive fluted projectile points and other tools manufactured on stone blades. Excavations at sites throughout North America have produced datable remains that indicate that these types of stone tools were in use by about 10,000 BC.

Goodyear et al. (1989) review the evidence for the Paleoindian occupation of South Carolina. Based on the distribution of the distinctive fluted spear

points, they see the major sources of highly workable lithic raw materials as the principal determinant of Paleoindian site location, with a concentration of sites at the Fall Line possibly indicating a subsistence strategy of seasonal relocation between the Piedmont and Coastal Plain. Based on data from many sites excavated in western North America, Paleoindian groups generally were nomadic, with subsistence focusing on the hunting of large mammals, specifically the now-extinct mammoth, horse, camel, and giant bison. In the east, Paleoindians apparently hunted smaller animals than their western counterparts, although extinct species (such as bison, caribou, and mastodon) were routinely exploited where present. Paleoindian groups were probably small, kin-based bands of 50 or fewer persons. As the environment changed at the end of the Wisconsinan glaciation, Paleoindian groups had to adapt to new forest conditions in the Southeast and throughout North America.

The Archaic Stage (8000 – 1000 BC). The Archaic stage represents the adaptation of southeastern Native Americans to Holocene environments. By 8000 BC, the forests had changed from sub-boreal types common during the Paleoindian period to more modern types. The Archaic stage is divided into three temporal periods: Early, Middle, and Late. Distinctive projectile point types serve as markers for each of these periods. Hunting and gathering was the predominant subsistence mode throughout the Archaic periods, although incipient use of cultigens probably occurred by the Late Archaic period. Also, the terminal Archaic witnessed the introduction of a new technology, namely, the manufacture and use of pottery.

Early Archaic Period (8000–6000 BC). The Early Archaic corresponds to the adaptation of native groups to Holocene conditions. The environment in coastal South Carolina during this period was still colder and moister than at present, and an oak-hickory forest was establishing itself on the Coastal Plain (Watts 1970, 1980; Whitehead 1965, 1973). The megafauna of the Pleistocene became extinct early in this period, and more typically modern woodland flora and fauna were established. The Early Archaic adaptation in the South Carolina Lower Coastal Plain is not clear, as Anderson and Logan (1981:13) report:

At the present, very little is known about Early Archaic site distribution, although there is some suggestion that sites tend to occur along river terraces, with a decrease in occurrence away from this zone.

Early Archaic finds in the Lower Coastal Plain are typically corner- or side-notched projectile points, determined to be Early Archaic through excavation of sites in other areas of the Southeast (Claggett and Cable 1982; Coe 1964). Generally, Early Archaic sites are small, indicating a high degree of mobility.

Archaic groups probably moved within a regular territory on a seasonal basis; exploitation of wild plant and animal resources was well planned and scheduled. Anderson and Hanson (1988) developed a settlement model for the Early Archaic period (8000–6000 BC) in South Carolina involving movement of relatively small groups (bands) on a seasonal basis within major river drainages. Anderson and Hanson (1988) hypothesize that Early Archaic use of the Lower Coastal Plain was limited to seasonal (springtime) foraging camps and logistic camps. Aggregation camps and winter base camps are suggested to have been near the Fall Line.

Middle and Preceramic Late Archaic Period (6000–2500 BC). The trends initiated in the Early Archaic, i.e., increased population and adaptation to local environments, continued through the Middle Archaic and Preceramic Late Archaic. Climatically, the region was still warming, and an oak-hickory forest dominated the coast until after 3000 BC, when pines became more prevalent (Watts 1970, 1980). Stemmed projectile points and ground stone artifacts characterize this period, and sites increased in size and density through the period.

Blanton and Sassaman (1989) reviewed the archaeological literature on the Middle Archaic period. They document an increased simplification of lithic technology during this period, with increased use of expedient, situational tools. Furthermore, they argue that the use of local lithic raw materials is characteristic of the Middle and Late Archaic periods. Blanton and Sassaman (1989:68) conclude that “the data at hand suggest that Middle Archaic populations resorted to a pattern of adaptive flex-

ibility as a response to ‘mid-Holocene environmental conditions’ such as variable precipitation, sea level rise, and differential vegetational succession.” These processes resulted in changes in the types of resources available from year to year.

Ceramic Late Archaic Period (2500–1000 BC). By the end of the Late Archaic period, two developments occurred that changed human lifeways on the South Carolina Coastal Plain. Sea level rose to within one meter of present levels and the extensive estuaries now present were established (Colquhoun et al. 1981). These estuaries were a reliable source of shellfish, and the Ceramic Late Archaic period saw the first documented emphasis on shellfish exploitation. It was also during this time that the first pottery appeared on the South Carolina coast. In the project region, this pottery is represented by the fiber-tempered Stallings series and the sand-tempered or untempered Thom’s Creek series. Decorations include punctuation, incising, finger pinching, and simple stamping. Table 2.1 presents the ceramic sequence for the southern coast of South Carolina.

The best-known Ceramic Late Archaic-period sites are shell rings, which occur frequently along tidal marshes. These are usually round or oval rings of shell and other artifacts, with a relatively sterile area in the center. Today many of these rings are in tidal marsh waters. Some archaeologists have interpreted these sites as actual habitation loci adjacent to or within productive shellfish beds. More recent research suggests that these sites had some ceremonial function and represent monumental architecture along the Southeast Atlantic Seaboard (Saunders 2002). These sites attest to a high degree of sedentism, at least seasonally, by Ceramic Late Archaic peoples.

The Woodland Stage (1500 BC – AD 1100). The Woodland stage is marked by the widespread use of pottery, with many new and regionally diverse types appearing, and changes in the strategies and approaches to hunting and gathering. Native Americans appear to be living in smaller groups than during the preceding Ceramic Late Archaic period, but the overall population likely increased. The Woodland is divided into three temporal periods (Early, Middle, and Late), marked by distinctive pottery types. Also, there is an interval when Ceramic

Late Archaic ceramic types and Early Woodland ceramic types were being manufactured at the same time, often on the same site (see Espenshade and Brockington 1989). It is unclear at present if these coeval types represent distinct individual populations, some of whom continued to practice Archaic lifeways, or technological concepts that lingered in some areas longer than in others.

Early Woodland Period (1500 BC–AD 200). In the Early Woodland period, the region was apparently an area of interaction between widespread ceramic decorative and manufacturing traditions. The paddle-stamping tradition dominated the decorative tradition to the south, and fabric impressing and cord marking dominated to the north and west (Blanton et al. 1986; Caldwell 1958; Espenshade and Brockington 1989).

The subsistence and settlement patterns of the Early Woodland period suggest population expansion and the movement of groups into areas minimally used in the earlier periods. Early and Middle Woodland sites are the most common on the South Carolina coast and generally consist of shell middens near tidal marshes, along with ceramic and lithic scatters in a variety of other environmental zones. It appears that group organization during this period was based on the semipermanent occupation of shell midden sites, with the short-term use of interior coastal strand sites.

Middle Woodland Period (200 BC–AD 500). The extreme sea level fluctuations that marked the Ceramic Late Archaic and Early Woodland periods ceased during the Middle Woodland period. The Middle Woodland period began as sea level rose from a significant low stand at 300 BC, and for the majority of the period the sea level remained within 3.28 feet of current levels (Brooks et al. 1989). The comments of Brooks et al. (1989:95) are pertinent in describing the changes in settlement:

It is apparent that a generally rising sea level, and corresponding estuarine expansion, caused an increased dispersion of some resources (e.g., small inter-tidal oyster beds in the expanding tidal creek network...). This hypothesized change in the structure of the subsistence

Table 2.1 Pre-Contact Ceramic Sequence for the Southern South Carolina Coast (after Anderson et al. 1982; DePratter 1979; Poplin et al. 1993; Trinkley 1989f).

Period/Era	Date	Ceramic Types
Contact	AD 1550-1715	Ashley Burnished Plain, Complicated Stamped, Cob Marked, Line Block Stamped
Late Mississippian	AD 1400-1550	Pee Dee Burnished Plain, Complicated Stamped, Incised
Early Mississippian	AD 1100-1400	Savannah/Jeremy Burnished Plain, Check Stamped, Complicated Stamped
Late Woodland	AD 900-1100	St. Catherines Cord Marked, Fabric Impressed, Net Impressed
		McClellanville Cord Marked, Fabric Impressed
		Santee Simple Stamped
		Wando Check Stamped, Cord Marked, Fabric Impressed, Simple Stamped
		Wilmington Cord Marked
	AD 500-900	Deptford Cord Marked, Fabric Impressed
		McClellanville Cord Marked, Fabric Impressed
		Wando Check Stamped, Cord Marked, Fabric Impressed, Simple Stamped
		Wilmington Cord Marked, Fabric Impressed, Plain
Middle Woodland	AD 200-500	Wilmington Check Stamped, Cord Marked, Fabric Impressed, Plain
		Deptford Brushed, Check Stamped, Cord Marked, Fabric Impressed, Plain
	200 BC-AD 200	Deptford Brushed, Check Stamped, Simple Stamped, Plain
Early Woodland	1000-200 BC	Deptford Brushed, Check Stamped, Simple Stamped, Plain
	1500-1000 BC	Refuge Dentate Stamped, Incised, Punctate, Simple Stamped, Plain
Ceramic Late Archaic	2500-1000 BC	Thom's Creek Drag and Jab Punctate, Finger Pinched, Incised, Simple Stamped, Plain
		Stallings Drag and Jab Punctate, Finger Pinched, Incised, Simple Stamped, Plain

resource base may partially explain why these sites tend to be correspondingly smaller, more numerous, and more dispersed through time.

Survey and testing data from a number of sites in the region clearly indicate that Middle Woodland-period sites are the most frequently encountered throughout the region. These sites include small, single-house shell middens, larger shell middens, and a wide variety of shell-less sites of varying size and density in the interior. The present data from the region suggest seasonal mobility, with certain locations revisited on a regular basis (e.g., 38GE46 [Espenshade and Brockington 1989]). Subsistence remains indicate that oysters and estuarine fish were major faunal contributors, while hickory nut and

acorn have been recovered from ethnobotanical samples (Drucker and Jackson 1984; Espenshade and Brockington 1989; Trinkley 1976, 1980).

The Middle Woodland period witnessed increased regional interaction and saw the incorporation of extralocal ceramic decorative modes into the established Deptford technological tradition. As Caldwell (1958) first suggested, the period apparently saw the expansion and subsequent interaction of groups of different regional traditions (Espenshade 1986, 1990).

Late Woodland Period (AD 500–1100). The nature of Late Woodland adaptation in the region is unclear due to a general lack of excavations of Late Woodland components, but Trinkley (1989f:84) offers this summary:

In many respects the South Carolina Late Woodland may be characterized as a continuation of previous Middle Woodland cultural assemblages. While outside the Carolinas there were major cultural changes, such as the continued development and elaboration of agriculture, the Carolina groups settled into a lifeway not appreciably different from that observed for the past 500 to 700 years.

The Late Woodland represents the most stable Pre-Contact period in terms of sea level change, with sea level for the entire period between 1.3 and 2.0 feet below the present high marsh surface (Brooks et al. 1989). It would be expected that this general stability in climate and sea level would result in a well-entrenched settlement pattern, but the data are not available to address this expectation. In fact, the interpretation of Late Woodland adaptations in the region has been somewhat hindered by past typological problems.

Overall, the Late Woodland is noteworthy for its lack of check-stamped pottery. However, recent investigations by Poplin et al. (2002) indicate that the limestone-tempered Wando series found along the Wando and Cooper Rivers near Charleston Harbor displays all of the Middle Woodland decorative elements, including check stamping, but appears to have been manufactured between AD 700 and 1000. Excavations at the Buck Hall Site (38CH644) in the Francis Marion National Forest suggest that McClellanville and Santee ceramic types were employed between AD 500 and 900, and represent the dominant ceramic assemblages of this period (Poplin et al. 1993).

The sea level change at this time caused major shifts in settlement and subsistence patterns. The rising sea level and estuary expansion caused an increase in the dispersal of resources such as oyster beds, and thus a corresponding increase in the dispersal of sites. Semipermanent shell midden sites continue to be common in this period, although overall site frequency appears to be lower than in the Early Woodland. Instead, there appears to be an increase in short-term occupations along the tidal marshes. Espenshade et al. (1994) state that at many of the sites postdating the Early Woodland period, the intact shell deposits appear to represent

short-term activity areas rather than permanent or semipermanent habitations.

During the current project, investigators identified Site 38BU113, a Middle to Late Woodland site with dense marine shell concentrations. Data recovered to date suggest that 38BU113 was likely visited on numerous occasions and likely functioned as a short-duration, seasonal resource encampment.

The Mississippian Stage (AD 1000–1521). Approximately 1,000 years ago, Native American cultures in much of the Southeast began a marked shift away from the settlement and subsistence practices common during the Woodland periods. Some settlements became quite large, often incorporating temple mounds or plazas. The use of tropical cultigens (e.g., corn and beans) became more common. Hierarchical societies developed, and technological, decorative, and presumably religious ideas spread throughout the Southeast, supplanting what had been distinct regional traditions in many areas. In coastal South Carolina, the Mississippian stage is divided into two temporal periods, Early and Late. Previous sequences for the region separated Mississippian ceramic types into three periods (Early, Middle, and Late), following sequences developed in other portions of the Southeast. However, a simpler characterization of the technological advancements made between AD 1000 and 1500 appears more appropriate. During these centuries, the decorative techniques that characterize the Early Mississippian period slowly evolved without the appearance of distinctly new ceramic types until the Late Mississippian. The ceramics of this period, in chronological order, include Savannah Fine Cord Marked, Check Stamped, Complicated Stamped, and Burnished Plain followed by Irene Complicated Stamped, Incised, and Burnished Plain (Anderson 1989, 1990; DePratter 1979; Howard et al. 1980).

Several archaeological studies have identified manifestations of the Mississippian period in coastal South Carolina and Georgia. Caldwell and McCann (1941) found mound centers at the Irene Site. Trinkley (1987) found large shell middens at 38BU63, while Braley (1982) identified single-household sites at the Pinckney Island Wildlife Refuge. Savannah and Irene sites have been encountered on Hilton Head Island (Trinkley 1987), Spring Island (Trinkley 1989a,

1989b, 1989c, 1989d, 1989e, 1990a, 1990b, 1990c, 1991), and Dataw Island (Jones 1993). Southerlin et al. (1997) investigated Mississippian households at 38BU306 and 38BU789 on Spring Island. Southerlin et al. (1997) characterized these households as seasonal or year-round residences that likely were associated with a larger settlement system.

2.2.2 Contact and Post-Contact Context

The low-lying lands surrounding the Port Royal area were an early focus of European settlement. The Spanish and French sought to hold the excellent harbor and the rich swamp lands in the sixteenth century, while Scottish and English settlers first aligned with and then defeated local Native Americans in the late seventeenth century.

Initial European Contact. Native American groups encountered by the first European explorers probably were living in a way that was very similar to the Late Mississippian groups identified in archaeological sites throughout the Southeast. Indeed, the highly structured society of Cofitachequi, formerly located in central South Carolina and visited by De Soto in 1540, represents an excellent example of the Mississippian social organizations present throughout southeastern North America during the late Pre-Contact era (Anderson 1985). Initial European forays into the Southeast led to the disintegration and collapse of the aboriginal Mississippian social structures; disease, warfare, and European slave raids contributed to the rapid decline of the regional Native populations during the sixteenth century (Dobyns 1983; Ramenofsky 1982; Smith 1984). By the late seventeenth century, Native American groups in coastal South Carolina apparently lived in small, politically and socially autonomous, semi-sedentary groups (Waddell 1980). By the middle to late eighteenth century, very few Native Americans remained in the region; all were displaced or annihilated by the rapidly expanding English colonial settlement of the Carolinas (cf. Bull 1770, cited in Anderson and Logan 1981:24-25).

Groups known to have lived in the Beaufort County area during the Contact era include the Guale, Cusabo, and later the Yamasee. The Cusabo, a collection of loosely related and/or affiliated groups, occupied the coastal areas of South Carolina from

Charleston Harbor to the Savannah River. The Cusabo apparently had poor relations with the Spanish, suffering frequent attacks from them in Santa Elena during the late sixteenth century and razing that settlement on two occasions. They remained in the Beaufort area until the early 1700s. The Cusabo received a grant for Polawana Island, east of Beaufort, in 1712; in 1738, this land was ceded by the colonial government to a group of Natchez. Whether these Natchez were related to the Cusabo or had derived a claim to Polawana Island from them is unknown (Swanton 1946:128-129). The Guale lived along the Georgia coast from the Savannah River to St. Andrews Sound. They had continuous, albeit at times strained, relations with the Spanish. Many of the Guale converted to Christianity or regularly visited the Franciscan missions established along the coast. In the 1680s, the Guale asked to be removed to Spanish Florida to avoid the nearly constant harassment from northern Native groups and the English settlers of the expanding Carolina colony (Swanton 1946:135-136). The Yamasee originally occupied lands along the central Georgia coast, centered on the Altamaha River. During the fifteenth and most of the sixteenth century, they moved into settlements created for native groups near the Spanish missions and settlements of Florida and south Georgia (Swanton 1946:208-209). In 1685, they moved north, severing their ties with the Spanish, and settled in the Beaufort area around the newly established settlement of Stuart's Town. Following the Spanish destruction of Stuart's Town, the Yamasee moved farther north, settling between the Ashepoo and Combahee Rivers in what is now Colleton County. In the 1690s, they returned to the Beaufort area, where they remained until 1715 (Green 1992:23-28). The Yamasee initiated a war against the English colonists in that year that resulted in their destruction or removal from Carolina by the early 1720s (Swanton 1946:210). To date, we have little archaeological information about these groups except the Yamasee. Excavations at a number of sites throughout Beaufort and Colleton Counties permit the association of a distinct ceramic series, Altamaha, with the Yamasee (Fletcher et al. 2000; Green 1989, 1992).

Spanish and French Attempts at Colonization. Spanish exploration on the South Carolina coast began as early as 1514, and a landing party went ashore in the Port Royal vicinity (now Beaufort County) in 1520 at a spot they named Santa Elena (Hoffman 1983:64; Rowland 1978:1). From that time on, the Port Royal area was of great interest to both the Spanish and the French. This was not a permanent settlement, however. The first Spanish attempt at a permanent settlement on the South Carolina coast, in 1526, was San Miguel de Gualdape. The location of this settlement has long been in dispute, with opinions ranging from the Winyah Bay area, near Georgetown, to as far south as St. Catherine's Sound in Georgia (Rowland et al. 1996:18). The French, under Jean Ribault, also attempted to establish a settlement on the South Carolina coast in 1562. This settlement on Parris Island was called Charlesfort, and also was unsuccessful.

The French presence on the South Carolina coast drew the Spanish back to protect their original interest. Spanish forces attacked Charlesfort and established their own settlement of Santa Elena in 1566. Recent archaeological evidence indicates that the Spanish built their new settlement of Santa Elena on top of the destroyed French settlement (DePratter et al. 1997). Local Indians, the Cusabo, were less than friendly, but despite numerous attacks and several burnings, the Spanish settlers did not abandon Santa Elena until 1587 (Lyon 1984; Rowland 1978:25-57). The Spanish maintained their interest in Santa Elena as part of a series of missions on the Sea Islands from St. Augustine, Florida, through Georgia and into South Carolina; Spanish friars were at "St. Ellens" when William Hilton visited the area in 1663 (Covington 1978:8-9; Hilton 1664:2). During its 20-year existence, this settlement served as the base for the first serious explorations into the interior of the state.

English Colonial Occupation. Settlers in the Carolina Lowcountry were caught up in and were integral parts of wide ranging disputes and rivalries among the English, Spanish, Native Americans, and African slaves. These disputes and rivalries encompassed nearly all of the Lowcountry, an area that spanned hundreds of miles from Georgetown, north of Charleston, south to St. Augustine, Florida. The Spanish had routed the French in East Florida

in 1565 and established a settlement at what is now St. Augustine. This Spanish presence was a continual threat to the English settlers, particularly after the 1670s, when Spain learned of the Charles Towne settlement along the Ashley River.

King Charles II of England disregarded Spain's claim to the region, and he granted Carolina to the Lords Proprietors in 1662. A group of Barbados planters hired William Hilton to explore the acquisition the next year. Hilton spent over a month in the waters of both Port Royal and St. Ellens, leaving with a high opinion of the area's potential as a colony (Hilton 1664). Prompted by the account of tall pines and good soils, a small group set out for Port Royal. Tales of hostile Indians convinced them to move farther north, though, where they founded Charles Towne in 1670. One of the first orders of business for the settlers was initiating trade with the Indians as a way of ensuring both economic and physical survival (Covington 1978:9).

Scottish dissenters established Stuart's Town on Port Royal Island in 1684. The Scots forged ties with the Yamasee Indians, who sought to avoid Spanish missionaries in coastal Georgia. They effectively formed a defensive perimeter of ten villages on the islands surrounding Port Royal Sound. Stuart's Town was short lived, however, and was destroyed by the Spanish in 1686, largely as a result of joint Scottish-Yamasee attacks on the Spanish fort at Santa Catalina. At this time the Yamasee left the Port Royal area and settled near the Ashepoo and Combahee Rivers (Green 1992:23-27).

A series of large land grants beginning in 1698 signaled a renewed interest in settling the Port Royal area (Holmgren 1959:42). The Yamasee also returned to the Port Royal area in the 1690s (Green 1992:28). When the town of Beaufort was chartered in 1711, the Yamasee still had 10 villages in what are now Beaufort and Jasper Counties; the available evidence does not allow a positive location of most of these sites. Angered by mistreatment from traders, the Yamasee attacked but did not succeed in dislodging the English in the Yamasee War in 1715 (Covington 1978:12). At the time, the war was blamed on Spanish influence from Florida, but a more likely cause was the English traders' practice of seizing Indian women and children and holding them as slaves to meet Indian debts.

These early English settlements grew slowly, and despite its geographic spread, the Lowcountry of South Carolina contained only around 5,000 European and African-American inhabitants in 1700 (Kovacik and Winberry 1989:77). The early economy centered on naval stores, beef and pork production, and trade with the Native American populations, particularly in deerskins. By the end of the seventeenth century, however, the colonists had begun to experiment with rice cultivation. The first attempts at growing rice in the Lowcountry were on dry upland soil. By the late seventeenth and early eighteenth centuries, however, attention turned to the inland swamps. This new location required constructing elaborate drainage ditches and canals and making other vast modifications to the terrain. Rice was complemented by the introduction of indigo as a cash crop in the 1740s. Indigo became one of South Carolina's principal exports during the eighteenth century. While rice generally did not grow well on the Sea Islands, indigo was successful and provided a strong economic base for the area. It faded quickly as a staple crop, however, due to the loss of British markets during and after the Revolutionary War.

Beaufort, Lady's Island, and Port Royal. The political boundaries of the Beaufort area changed several times during the seventeenth, eighteenth, and nineteenth centuries. The Carolina colony consisted of four coastal counties in the seventeenth century: Craven, Berkeley, Colleton, and Granville. There were no county seats, and all official records were kept in Charleston. As a result of the Church Act of 1706, the coastal portions of South Carolina were divided into parishes between 1706 and 1767, with each parish centered around an Anglican church. St. Luke's Parish was created in 1712. The colony of South Carolina was reorganized into circuit court districts in 1769. The circuit court seat moved from Beaufort to Coosawhatchie in the early nineteenth century, to Gillisonville in the 1830s, and then back to Beaufort later in the nineteenth century. The new state constitution of 1868 redesignated the districts as counties, and the project area has remained within Beaufort County since that time.

The Revolution and Its Aftermath. The colonies declared their independence from Britain in 1776, following several years of increasing tension due to unfair taxation and trade restrictions imposed on them by the British Parliament. South Carolinians were divided during the war, although most citizens ultimately supported the American cause. Those individuals who remained loyal to the British government tended to reside in Charleston or in certain enclaves within the interior of the province. The division of political sentiment in the Beaufort region was especially strong. Many residents of the town of Beaufort and St. Helena Parish were Loyalists, while their neighbors in St. Luke's Parish were strong advocates of independence. The divisions between Loyalist and Patriot were both geographical and generational. Older members of respected colonial families like the Bulls, Barnwells, and Heywards, for example, remained loyal to the king, while their sons became active rebels (Rowland 1993).

Britain's Royal Navy attacked Fort Sullivan (later renamed Fort Moultrie) near Charleston in 1776. The British failed to take the fort, and the defeat bolstered the morale of American revolutionaries throughout the colonies. The British military then turned their attention northward. They returned in 1778, however, besieging and capturing Savannah late in December. Two months later, in February 1779, British troops attacked Port Royal Island. When British forces under General Augustine Prevost withdrew to Savannah after attempting to take Charleston that same year, the rearguard of his army occupied Beaufort (Rowland 1978, 1993).

A major British expeditionary force landed on Seabrook Island during the winter of 1780, and then marched north and east to invade Charleston from its landward approaches (Lumpkin 1981:42-46). The rebel South Carolinians were not prepared for an attack from this direction. They were besieged and entirely captured in May after offering a weak defense. Charleston subsequently became a base of operations for British campaigns into the interior of South Carolina, Georgia, and North Carolina. However, the combined American and French victory over Lord Cornwallis at Yorktown in 1782 effectively destroyed British military activity in the South and forced a negotiated peace (Lumpkin 1981). The 13 colonies gained full independence, and the English evacuated Charleston in December 1782.

The Port Royal area was hard hit by the armies that passed back and forth. The legacy of war in the area was not promising. A minister who fled the Port Royal area during the war described the changes when he returned at the end of the war:

All was desolation....Every field, every plantation, showd [sic] marks of ruin and devastation. Not a person was to be met with in the roads. All was Gloomy [sic]....The people that remain have been peeled, pillaged, and plundered. Poverty, want, and hardship appear in almost every countenance" (quoted in Weir 1983:336).

One immediate administrative change in the Beaufort District after the war was its subdivision into Shrewsbury, Lincoln, Hilton, and Granville Counties in 1785. However, the counties created at this time failed to supplant the earlier parishes as political entities and soon were abandoned (Stauffer 1994).

Antebellum Period. The period between the close of the American Revolution and the beginning of the Civil War was characterized in South Carolina, and throughout the South, by plantation agriculture based on slave labor and the production of cotton. It was also a period of increasing sectional tensions, with Southerners emphasizing the political expedience of states' rights, nullification, and agricultural expansion as means to protect their slave-based society.

With Eli Whitney's invention of the cotton gin on a Savannah River plantation in 1793, cotton superseded rice as the South's most important cash crop. Although rice remained an important crop along the major freshwater swamps and rivers of the South Carolina Lowcountry, the Sea Islands of Beaufort District were completely devoted to the cultivation of long-staple cotton. Long-staple, or Sea Island, cotton was introduced in the Lowcountry in the 1790s. The seeds for Sea Island cotton came from Loyalist families who had left the American colonies in the 1780s and settled in the Bahamas. Long-staple cotton was grown to great profit in the Bahamas during the late 1780s. The poor soil in the Bahamas, however, quickly lost its ability to produce exportable quantities of cotton, and the Loyalist families sent seeds to friends and relatives in the Sea Islands in Beaufort District. William Elliott II was

the first in Beaufort District to plant the new staple at his plantation on Hilton Head Island in 1790 (Rowland et al. 1996:278-280). The timely arrival of long-staple cotton allowed planters in Beaufort District to switch seamlessly from indigo production, which suffered with the loss of its British subsidy, to another high-profit staple crop.

Sea Island cotton provided high market returns for planters on the Sea Islands throughout the antebellum period and established a political counterweight to the rice planters of the mainland (Rowland et al. 1996:280). The fine, long staple (14.9 to 19.8 inches compared to 7.4 to 9.9 inches for upland cotton) was used to weave the finest laces and fabrics. The crop thrived on the soils of the Sea Islands, where farmers fertilized it with marsh mud, eventually even reclaiming salt marshes for cotton fields. The diking and ditching necessary for this reclamation, and also to channel away torrential rains from the fields, created a flood control system nearly as extensive as that for rice. According to Gray (1973:734-735):

[I]t was customary to "quarter-drain" the land; that is, divide it into square plots of 3 acre by cross ditches about 105 feet apart, commonly spoken of as a "task."

The crop was planted on high ridges thrown up at distances of 3 to 6 feet, usually about 4 feet. In the old sea-island region the labor of throwing up the ridges and the entire work of cultivation were generally performed with the hoe until near the close of the period. Many planters maintained permanent ridges, sometimes alternating them with provision crops. Others continued the older practice of hauling down the ridges into the baulks, bedding on the cotton stalks and other manures. In the last two decades of the ante bellum [sic] period the plow was more generally employed.

The crop required greater care in production than the shorter-stapled upland cotton and underwent a number of different operations prior to being shipped. These included planting, hoeing, picking, whipping, moting, ginning (initially by hand, then by treadle gins, and by the 1850s the

larger and mechanized McCarthy gin), and packing. Bale weights averaged 1,465 to 1,709 pounds, and actually were large, round sacks of cotton – not the square, higher compression bales used for upland cotton (Gray 1973:735-737). The wealth returned to the planters of St. Helena and St. Luke's parishes and the other Sea Islands as a result of this crop provided an opulent lifestyle second only to that enjoyed by Lowcountry rice planters. As one northern reporter observed, Beaufort and its environs was "the exclusive home of the most exclusive few of that most exclusive aristocracy" (quoted in Rose 1964:xiv-xv).

The Civil War. Seven months after the successful Confederate attack on Fort Sumter, the initial military action of the Civil War, Beaufort and the surrounding Sea Islands fell to Union forces. The harbor of Port Royal was attacked by a Federal fleet on November 7, 1861. Union forces made effective use of steamboat technology as their 19 boats repeatedly steamed past Fort Walker on the northern end of Hilton Head Island in a tight elliptical formation, bombarding as they passed. While they originally stayed out of firing range of the Confederate shells, the Federal ships steamed closer to the coast with each pass. The main body of the Federal ships made several passes within 500 yards of the beach in front of Fort Walker. Beverly S. Osborn, a *New York Herald* correspondent, reported: "The noise was terrific, while bursting of the shells was as terrible as it was destructive. I counted no less than forty shells bursting at one time, and that into the battery and the woods (Bluffton Historic Preservation Society [BHPHS]:Thomas F. Drayton File)." The noise was so loud that it was heard as far south as Fernandina, Florida. After five hours of bombardment, Fort Walker surrendered. When Confederate forces learned of Fort Walker's surrender, they determined the defense of the harbor impossible and ordered the retreat from Fort Beauregard on Port Royal Sound's eastern shore (Carse 1961:11; *Official Records [OR]* I(6):27-29). Sea Island plantation owners fled to the mainland, leaving behind a slave populace convinced they would soon be free (Rose 1964:11-12).

The entire Port Royal area was occupied by Federal troops. Treasury Department operatives and abolitionists in the form of missionaries, teachers,

farm managers, and agents for Northern investors swarmed over the islands within weeks of the military invasion. Congress passed a direct tax law in August 1861 and an enforcement provision in June 1862. This placed a levy on all properties held by the Confederates in the Sea Islands. Landowners were given 60 days to pay the taxes, plus penalties, or the property would be sold. Few if any levies were paid by their owners, who had fled at the Union occupation of Port Royal. All of the lands in St. Helena Parish and a portion of those in St. Luke's were confiscated. The land was advertised for sale in January 1863 (*Free South* 1863), and in a series of public government auctions 76,775 acres were sold, 60,296 (or 78 percent) going to the US government for military, educational, and charitable purposes. Freedmen, military leaders, and abolitionists hotly contested the sales, the conditions of which effectively prevented blacks from buying the lands that they had formerly worked. Nevertheless, the sale and the accompanying surveys of parish land went forward, as the tax commission sought the highest return for the government. This land confiscation and redistribution had significant lasting effects on the parish for over thirty years, leaving a legacy of government regulations, additional sales, and court cases long after the war was over (Rose 1964; Rosengarten 1986).

Despite the controversy surrounding property ownership, the area surrounding Port Royal Sound served as the proving ground for Reconstruction policy toward the freedmen. In the early part of the war, many in the North did not believe that the liberated slaves would labor without being forced to do so. Policies quickly changed, however, and the US Army, Department of the South, issued General Order Number 9 in February 1862, which set up districts to oversee plantation work and provided for educational and religious instruction to the former slaves (*OR* I(6):222-223). The experience in the Port Royal area proved that freedmen could be successful, self-sufficient farmers. It was hoped that this experiment would prepare freedmen for land ownership and stimulate economic independence through agriculture (Rose 1964; Rosengarten 1986).

Postbellum Adaptations. Beaufort District became Beaufort County in 1868, under the newly ratified state constitution that redesignated South Carolina's judicial districts (Stauffer 1994). Ten years later, Hampton County was created from northern and western Beaufort County. Jasper County was then created from southern Hampton County in 1912, thus containing what was, prior to 1878, western Beaufort County.

Administrative changes were among the least of the transformations experienced by Beaufort County residents in the aftermath of the Civil War. The large number of African Americans in the county enjoyed more complete political participation, for a longer period of time, than elsewhere in the state. The freedmen were led by a former slave turned congressman, Robert Smalls. Most of the county's officeholders were African Americans well into the 1880s, and the congressional district of which the county was a part elected African American representatives until 1896 (Edgar 1992).

The Civil War effectively destroyed the plantation system in South Carolina and the rest of the South. This meant profound changes for the county both economically and socially. The antebellum economic system disintegrated as a result of emancipation and the physical destruction of agricultural property through neglect and (to a lesser extent) military action. A constricted money supply coupled with huge debt made the readjustments worse. The changes were enormous. Land ownership was reshuffled, as outsiders began purchasing plots and former plantations that had been abandoned in the wake of the Civil War. Newly freed slaves often exercised their freedom by moving, making the labor situation even more unsettled.

One result of this migration was the development of new labor systems and a period of experimentation and redefinition in the socio-economic relationships between freed blacks, landless whites, and white landowners. Although many freedmen owned their own small farms, farm tenancy emerged as a dominant form of agricultural land management toward the end of the nineteenth century. Large tracts of land in Beaufort County were purchased by Northern investors or regained by their former Southern owners (now repatriated). This movement toward amalgamation slowly drove

the freedmen into tenancy arrangements as sharecroppers or cash renters. This trend was so pervasive in South Carolina that the state ranked second in the nation in percentage of tenant farmers in 1890 (Wilson and Ferris 1989:30).

While census statistics for Beaufort County in 1890 and 1900 indicate that the average farm size was approximately 45 acres, a figure deceptively close to the "40 acres and a mule" ideal held by the Freedmen's Bureau during Reconstruction, very little of the county outside of St. Helena Parish went to the former slaves (US Census 1895, 1902). In fact, only a small portion of the St. Helena property seized and sold by the US government during and after the war made it to the hands of freedmen (Rose 1964; Rosengarten 1986). For instance, only three lots of 20 acres or less each on Salem Plantation of Port Royal Island were apparently sold to free African Americans. These transactions did not occur until 1885 or after, and the property was quickly repurchased by whites (Beaufort County Deed Book [BCDB] 18:133, 583, 589, 740, 766). Developers actively encouraged small farmers to immigrate to the area to break the pattern of large landholding, but their efforts were focused on whites (Maul n.d.).

Phosphate mining provided a brief ray of hope for destitute farmers and landowners in the 1880s and 1890s. Phosphate, used in the production of agricultural fertilizers, helped to fuel the renewed cotton economy of South Carolina in the Victorian period. Beds of phosphate rock were first mined along the Ashley River near Charleston in 1867, and the potential profits proved enticing. Well-capitalized companies established mines and processing plants near Charleston and helped spur interest in Beaufort County. The Coosaw River Mining Company, for example, based in Charleston, began mining operations along the Coosaw and Bull Rivers in the early 1870s (Shick and Doyle 1985:4-9). As defined in 1907, the area of phosphate mining in Beaufort County was marked by Cotton Hope Plantation, out to the Combahee River, around Morgan Island where the Combahee and Coosaw Rivers drain into St. Helena Sound, southward along St. Helena Island to the Beaufort River, northward past Port Royal, through Brickyard Creek to the Coosaw River, northward again along Whale Branch and on up to Cotton Hope Plantation (South Carolina Department of

Agriculture 1907:125). The phosphate boom in South Carolina did not last long; strong competition from new phosphate beds in central Florida and Tennessee, limited capital, and a reluctant workforce kept the industry from enduring success. The industry did not die out entirely, however, nor was it without impact on the landscape and economy of Beaufort County. Readers are directed to Shuler and Bailey (2004) for an informative overview of the phosphate mining industry in the South Carolina Lowcountry.

Truck farming also quickly became an important part of Beaufort County's economy in the late nineteenth and twentieth centuries. This type of agriculture grew as the result of increased urban demand for fresh fruits and vegetables and a simultaneous expansion of the railroads enabling rapid access to the market centers. Unlike many cotton farmers, who were tied to the crop-lien or sharecropping system, truck farmers tended to be small, independent farmers. The railroads fostered this type of farming in the coastal plain of South Carolina, and particularly in Georgia and Florida, where a warm climate fostered a long growing season. Around the turn of the century, a promotional brochure on the Beaufort District distributed by the Charleston & Western Carolina Railway advertised 300 frost-free days a year (Maul n.d.). Lettuce was the principal crop, while cabbages, cucumbers, peas, and beans placed second, with radishes and string beans coming third in order of importance. Watermelons, cantaloupes, and Irish potatoes were among the other crops that could be grown on places like Daufuskie and Savage Island. Prominent physical facilities connected to truck cropping were packing sheds, with their adjacent "hot spots" where buyer and seller conducted business, and ice plants (Wilson and Ferris 1989:49-50).

Truck farming grew rapidly in Beaufort from the 1880s. Improvements to the waterways among the Sea Islands and better railroad facilities all gave the industry a boost. Beaufort County's truck farming industry grew from a mere 30 acres of commercial farms in 1890 to nearly 1,000 acres ten years later. Growth continued into the twentieth century; the total value of truck crops rose from \$121,000 in 1904 to \$237,000 in 1906 (Simkins and Roland 1972:467).

The vast pine forests in the Lowcountry provided other opportunities. In the 1880s and 1890s,

large timber companies began buying up the former agricultural lands and exploiting the timber. This represents an important theme in the development of Beaufort County and the surrounding areas, as well as throughout the South. The yield of timber from Southern forests doubled between 1880 and 1890, and in the first three decades of the twentieth century the South's share of the nation's timber production rose from under one-third to nearly one-half. These early timber industries were exploitative in the worst sense, symbolized most graphically by the turpentine industry, which bled the trees of their vitality and left the hulks to deteriorate and in danger from fire. Many of these lumber and turpentine companies remained in business in the area for only a few decades before either going bankrupt or moving on.

Although cultivated until the third decade of the twentieth century, Sea Island cotton gradually declined in importance (Rose 1964; Rosengarten 1986). In the three years prior to the Civil War, Beaufort County produced 54,904 bales of the staple. A decade later (1870-1873), only 23,307 bales made it to market. By the end of the same decade, over 100,000 acres of formerly cultivated land lay fallow. Some of the decline was due to natural forces, such as the unfavorable weather in the years after the war. The altered labor force and lack of capital on the part of former owners who could no longer afford large-scale operations also stymied production. As Rose (1964:381-382) noted, "other land was in disuse because many northern investors had failed at cotton planting." However, the cotton culture still persisted. The first wilt-free variety of Sea Island cotton was developed by US Department of Agriculture research off the coast of South Carolina in 1899. The hope produced by such advances was dashed with the arrival of the boll weevil in South Carolina. Severe infestations of the pest eliminated Sea Island cotton as a viable crop (Wilson and Ferris 1989:32, 41).

The Twentieth Century and Beyond. The twentieth century saw vast changes in the economy of the Lowcountry. Several factors precipitated the changes, including the rapid drop in cotton profitability, the increased temptation of cash labor opportunities in other areas of the state, soil depletion, and the increased profitability of land sales to outside investors. Peter Coelans (1989:156-157) argues that

the devastation of the Lowcountry's economy since the demise of the rice industry in the late nineteenth and early twentieth centuries was due to the very forces that propelled the Lowcountry's economy in the eighteenth and nineteenth centuries. The centuries-long dependence on staple crop industry, he argues, left residents in the Lowcountry without the economic infrastructure to develop new and more complex industries. Instead, new capital in the area was invested in extractive industries such as timber products and phosphate mining, limited manufacturing enterprises, military installations, and tourism.

These forces were often conjoined in the persons of wealthy northern men who invested in both recreational and agricultural lands in Beaufort, Jasper, and Hampton Counties. Realtors and railroads promoted the establishment of game preserves in the late nineteenth and early twentieth centuries. They assembled large tracts of undervalued land for resale to wealthy Northerners who were seeking rural lands where they could relax far from the public exposure of their lives in the northern cities. It was a different type of movement from the early lumber and hunt club purchases in the late nineteenth century. Indeed, many of the families that formed the new plantations were introduced to the area by hunt clubs. Large game or retreat plantations in Beaufort and Jasper Counties included Palmetto Bluff, Pine-land, Okatee, and Chelsea. Readers are directed to Fletcher et al.'s (2004) comprehensive overview of the rebirth of the Southern plantations.

As in the late nineteenth century, a range of small industries boosted the economy and shaped patterns of life and building in the county in the early twentieth century. In particular, fishing and related industries came to increasing prominence. Oysters, clams, and shrimp were important commercial items in 1927, while truck farming continued to grow into the twentieth century.

The United States government became the major employer and economic force in the Beaufort area between World War I and World War II with the establishment of the Parris Island Marine Corps Recruiting Depot (Butler et al. 1994). Otherwise, the predominantly African Americans population of St. Helena Parish remained isolated, eking subsistence from their small farms and gardens, hunting, and

fishing in the area's vast woodlands and wetlands until large-scale land development began on the island.

The federal government also contributed to the development of the local economy in the mid-twentieth century by establishing depression-era Civilian Conservation Corps (CCC) camps in the county. Among the work accomplished by these camps was the construction of Hunting Island State Park, which is today the most visited state park in South Carolina. CCC labor also appears to have been employed in the construction of at least part of the causeway that carries US 21 through the project area. Funds from another depression era relief program, the Public Works Administration (PWA), were used to construct the current Harbor River Bridge.

2.3 Previous Cultural Resources Investigations Near the US 21 Bridge Replacement Project

We examined the state archaeological site files at SCIAA and the NRHP listings on ArchSite and SCDAH for previously recorded archaeological sites, historic properties, and previous investigations within 0.25 mile of the proposed US 21 Bridge Replacement Project. Previous investigations identified two archaeological sites (38BU113 and 38BU147) and one architectural resource (the US 21 Harbor River Bridge; designated as Resource 5070 during the current investigations) within 0.25 mile of the project corridor (see Figure 1.2).

Site 38BU113 was originally recorded by Rhett (1974), and was referred to on the site form as part of the Don Mackintosh Collection. The site was originally known as "D. Mackintosh's Be-1." The site form contains a sketch map dated June 6, 1963. The site plan shows Be-1 on the western edge of a landform to the north of US 21. This landform is believed to be Butcher's Island. The site/landform is drawn in an area noted by the author as approximately .75 mile to the west of the Harbor River. The sketch map also notes "All Wilmington cordmarked." On a specimen catalog dated January 14, 1975, which is included in the site form, the three recovered artifacts include one plain pot sherd and two punctate pot sherds. It is unclear why all of the artifacts were noted as being Wilmington cordmarked on the 1963 sketch map, unless they were re-typed later, in 1975. The site form

(Rhett 1974:1) notes that the site is located on St. Helena Island on the left side of US 21 before crossing to Hunting Island. These descriptions and depiction of the site matches the location of the site identified/revisited during the current investigations. The site location seems to have been incorrectly plotted on a series of USGS quadrangle maps and highway map included with the site form; the site location was previously incorrect on ArchSite. Consultation with staff at the SCIAA during the current US 21 Harbor River Bridge Replacement Project resulted in the site location being corrected in the site files and on ArchSite. During the current investigations, archaeologists revisited Site 38BU113 (see Chapter 3).

Site 38BU147 was originally identified by Larry Lepionka (1978). The site, which he named “Harbor River Shell Mounds”, was noted as being possibly located within the ROW of US 21. Lepionka (1978:1) described the site as “...a series of low shell based islands with marsh rim vegetation, cedar, and yucca. They are isolated at high tide and exist only because of the erosion resistant shell substratum which includes conch and clam as well as the predominant oyster.” Lepionka (1978:1) noted that “No artifacts were found in the brief survey, but the shell accumulation is definitely not natural, nor particularly recent. Test pits to recover artifacts and thus determine cultural affinity might be in order, but these are low priority sites.” Regarding the condition of the site, Lepionka (1978:1) noted that the “Wide shell scatter indicates tidal erosion of some of the ‘islands’ but others are apparently stabilized.” The USGS quadrangle map accompanying the 38BU147 site form shows a group of six small “islands” that make up an oval shape in the hard marsh alongside US 21 measuring approximately 488 meters northwest/southeast by 152 meters northeast/southwest. During the current investigations, archaeologists revisited Site 38BU147. Based on a series of historic maps and aerial photographs, it is likely that the “islands” that make up Site 38BU147 are, in fact, discarded/excess construction materials deposited during the c. 1940 construction of the causeway for US 21 (see Chapter 3).

The US 21 bridge over the Harbor River (Resource 5070) was constructed in 1939. According to the SCDOT Historic Bridge Inventory Report (2013:2), “The bridge is historic in association with

the CCC/WPA (Civilian Conservation Corps/Works Progress Administration) work relief programs that developed South Carolina’s state park system, including Hunting Island. That program has significance on the state level. The bridge is individually eligible on its own merits, and it shares a history with the CCC development of the park itself.” The bridge is eligible for inclusion in the NRHP and is discussed further in Chapter 4.

3.0 Results of the Archaeological Survey

The archaeological survey involved the excavation of 25 shovel tests in areas determined to be natural and relatively undisturbed or the locations of previously recorded archaeological sites. The survey resulted in the revisit of two previously recorded archaeological sites (Sites 38BU113 and 38BU147). Sites 38BU113 and 38BU147 are discussed below.

3.1 38BU113

Cultural Affiliation: Middle to Late Woodland

Site Type: Pre-Contact shell midden(s) and ceramic scatter

Site Dimensions: 75 meters northeast/southwest by 180 meters northwest/southeast

Soil Type: Fripp-Baratari complex

Elevation: 3.05 m above mean sea level (amsl)

Vegetation: Hardwoods and palmetto trees with an understory of scrub palmettos

Nearest Water Source: Harbor River

NRHP Recommendation: Eligible

Site 38BU113 is a large surface and subsurface scatter of shell and Pre-Contact ceramic artifacts located on a landform named Butcher's Island to the north of US 21, and approximately 1,290 meters to the west of the western edge of the Harbor River (see Figures 1.2 and 1.3). The site/landform is surrounded to the west, north, and east by hard marsh. The site measures 75 meters northeast/southwest by 180 meters northwest/southeast. The site is wooded in hardwoods and palmetto trees with a fairly dense understory of scrub palmettos. A transmission line corridor running northwest to southeast passes through the center of the site. A fenced water treatment facility is also located in the central portion of the site. The highest portions of the site are located in the west. An exposed steep bank on the western edge of the landform/site is covered in shell eroding out of the shell midden(s) that is present across large portions of the site. Figure 3.1 provides a plan of 38BU113. Figure 3.2 presents views of 38BU113.

Butcher's Island was originally bordered to the west by a tidal creek. Figure 3.3 presents a 1939 aerial photograph, showing the location of the creek in relation to Butcher's Island. Figure 3.4 presents a

drawing of the island (it was then known as Butcher Island, and apparently was owned by A. O. Christensen) from the 1940 plans for the proposed state highway crossing the Harbor River (modern day US 21). The creek is shown to the west of the island, with what appears to be a smaller creek along the northeast edge of the island. An aerial photograph from 1951 reveals that the construction of the highway causeway cut off the larger tidal creek, and the creek had begun to silt in (Figure 3.5). This photograph also shows the addition of a series of lightly colored "piles" in the hard marsh to the north of the causeway. These piles were not present prior to the construction of the causeway (see Figure 3.3), and will be discussed further in the summary of Site 38BU147 (see below). Figure 3.6 shows a cross section of the roadway plan, where it is noted "State forces to place oyster shells on slopes of fill for a thickness of 12'." We believe that the shell piles in the hard marsh are excess road construction materials. A 1955 aerial photograph indicates that the boat landing to the south of US 21 was in place by that time (Figure 3.7). This photograph also demonstrates that the portion of Butcher's Island to the south of US 21 has been heavily modified/destroyed.

Site 38BU113 was originally recorded by Rhett (1974), and was referred to on the site form as part of the Don Mackintosh Collection. The site was originally known as "D. Mackintosh's Be-1." The site form contains a sketch map dated June 6, 1963 (Figure 3.8). The site plan shows Be-1 on the western edge of a landform to the north of US 21. This landform is believed to be Butcher's Island. The site/landform is drawn in an area noted by the author as approximately .75 mile to the west of the Harbor River. The sketch map also notes "All Wilmington cordmarked." On a specimen catalog dated January 14, 1975, which is included in the site form, the three recovered artifacts include one plain pot sherd and two punctate pot sherds. So, it is unclear why the artifacts were noted as being all Wilmington Cord Marked on the 1963 sketch map, unless they were re-typed later, in 1975. The site form (Rhett 1974:1) notes that the site is located on St. Helena Island on the left side of US 21 before crossing to Hunting Island. These descriptions and depiction of the site



Figure 3.1 Plan of 38BU113.



Figure 3.2 Views of 38BU113: high point in the northwest portion of the site, facing northeast (top); shell on the west bank of the site, facing east (middle); and the northwest tip of the site, facing southeast (bottom).



Figure 3.3 Portion of a 1939 aerial photograph showing the project location.

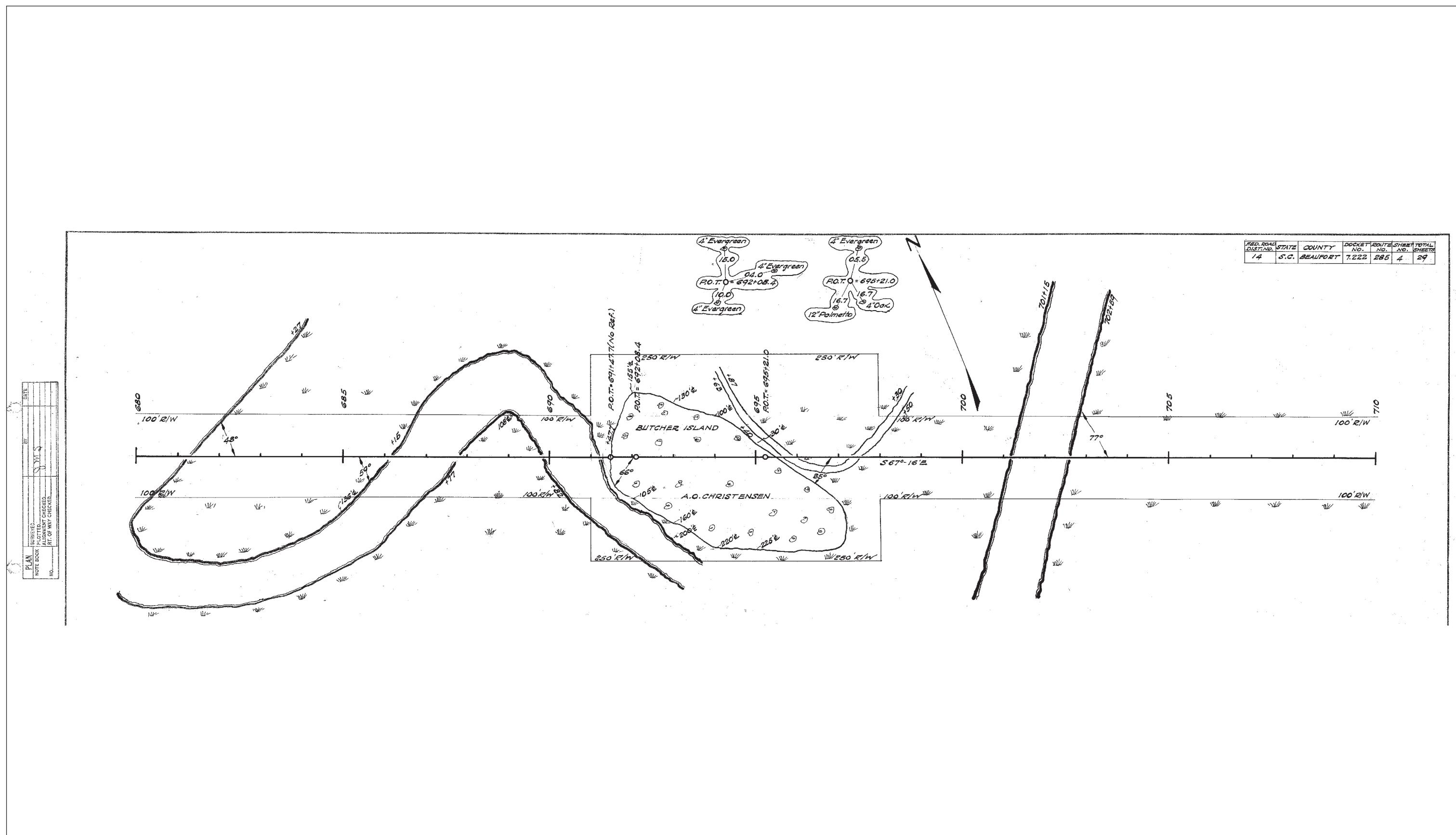


Figure 3.4 Portion of the 1940 highway construction plans showing Butcher's Island.

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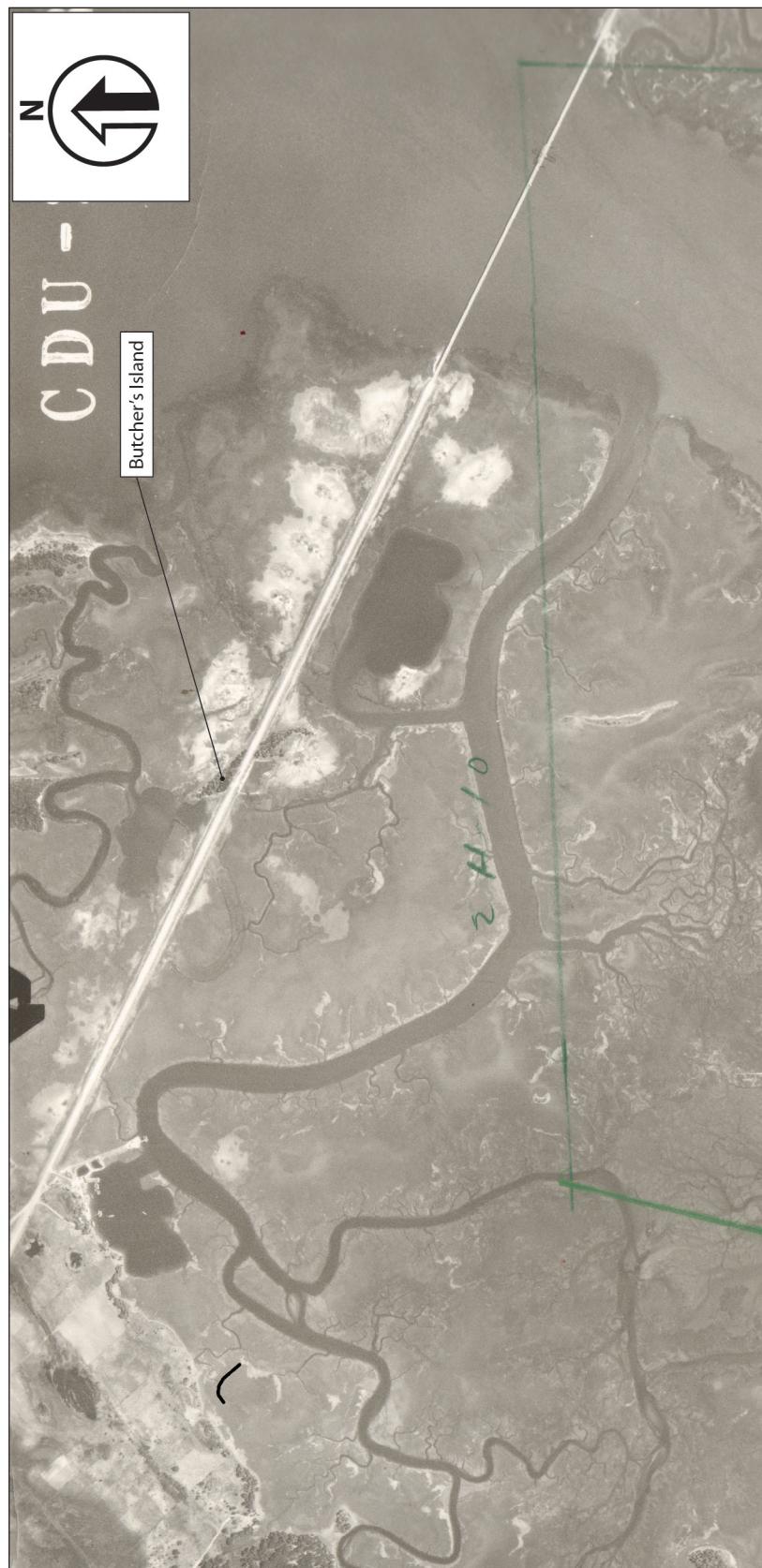


Figure 3.5 Portion of a 1951 aerial photograph showing the highway causeway and Butcher's Island.

matches the location of the site identified/revisited during the current investigations. The site location seems to have been incorrectly plotted on a series of USGS quadrangle maps and on the highway map included with the site form. Consultation with staff at the SCIAA during the current US 21 Harbor River Bridge Replacement Project resulted in the site location being corrected in the site files and on ArchSite.

During the current investigations, archaeologists excavated shovel tests at 15- and 30-meter intervals, as well as one judgmentally-placed shovel test, within Site 38BU113 on Butcher's Island, for a total of 11 shovel tests. Two (18 percent) of these shovel tests produced artifacts. The numbers shown on Figure 3.1 represent shovel tests producing artifacts and/or shell, and correspond with entries in the artifact catalog presented in Appendix A. Shovel tests excavated to the opposite side of US 21, within the portion of Butcher's Island that includes the Ward Creek boat ramp, revealed a high degree of disturbance and no cultural deposits. The boundaries of the site are determined by the limits of the Butcher's Island landform to the north of US 21. Shovel tests containing thicker deposits of shell generally revealed a humic layer 0-5 centimeters below surface (cm bs), over a grayish brown sand with dense shell 5-50 cm bs, underlain by a pale yellowish brown sand 50-80+ cm bs. Shovel tests containing thinner deposits of shell generally revealed a humic layer 0-5 cm bs, over a dark grayish brown sand with dense shell 5-30 cm bs, over a light gray sand 30-50 cm bs, underlain by a light grayish brown sand 50-70 cm bs. We recovered artifacts from 0-60 cm bs. Investigators also collected two ceramic artifacts from the exposed western bank of the site/landform. Ten of the 11 shovel tests contained moderate to dense subsurface deposits of mixed shell. Shell weights ranged from a low of 23.2 grams in Shovel Test 7.1 in the central/western portion of the site to a high of 98.8 kilograms of shell in Shovel Test 11.1 in the northwest portion of the site. The majority of the shell consisted of whole oyster shells, with lesser amounts of clam and whelk. The investigators also excavated one auger test in the highest (northwest) portion of the site. This auger test revealed no shell in this portion of the site.

The investigators also excavated four shovel tests in areas of shell in the hard marsh to the east of Butcher's Island. These shovel tests revealed a gray

wet sand 0-10 cm bs, over gray wet sand and crushed/deteriorated oyster shell 10-50 cm bs, underlain by a gray wet sand 50-60+ cm bs. These shell deposits are believed to have been excess construction materials left here following the c. 1940 construction of the US 21 causeway (see description of Site 38BU147 in section 3.2).

Investigators recovered eight Pre-Contact ceramic artifacts, as well as 267.6 kilograms of oyster shell mixed with small amounts of clam shell and crushed whelk shell, a partially intact whelk shell (possible tool) weighing 344 grams, and 1.6 grams of faunal remains from 38BU113 (for a complete artifact inventory, see Appendix A). Artifacts were recovered from only two shovel tests and one surface collection along the western edge of the site (see Figure 3.1). Artifacts include two Deptford Cord Marked and Smoothed sherds, one St. Catherines Cord Marked and Smoothed sherd, two St. Catherines Cord Marked sherds, and three grog tempered residual sherds. The Deptford sherds indicate a Middle Woodland occupation. The St. Catherines sherds indicate a Late Woodland occupation. Dense shell deposits were encountered across the majority of the site. Several of the shovel tests contained whelk shells, and Shovel Test 2.1 contained a whelk shell that may have been modified into a tool. Figure 3.9 presents a view of representative ceramic artifacts and the possible whelk shell tool recovered from Site 38BU113. Data recovered to date suggest that 38BU113 was likely visited on numerous occasions and likely functioned as a short-duration, seasonal resource encampment during the Middle to Late Woodland periods.

We assessed the NRHP eligibility of Site 38BU113 with respect to Criteria A-D, though a site of this type is most applicable to Criterion D, its ability to add significantly to our understanding of the history or pre-history of the region. Our recommendation is based on three factors. First, while a portion of the site was undoubtedly disturbed/destroyed by the construction of the US 21 causeway, the majority of the site appears to have been spared from major disturbances. Second, dense marine shell concentrations were observed on the ground surface and in the majority of the shovel tests excavated across the site. These concentrations represent Pre-Contact trash deposits and indicate that portions of the site may contain intact cultural features,

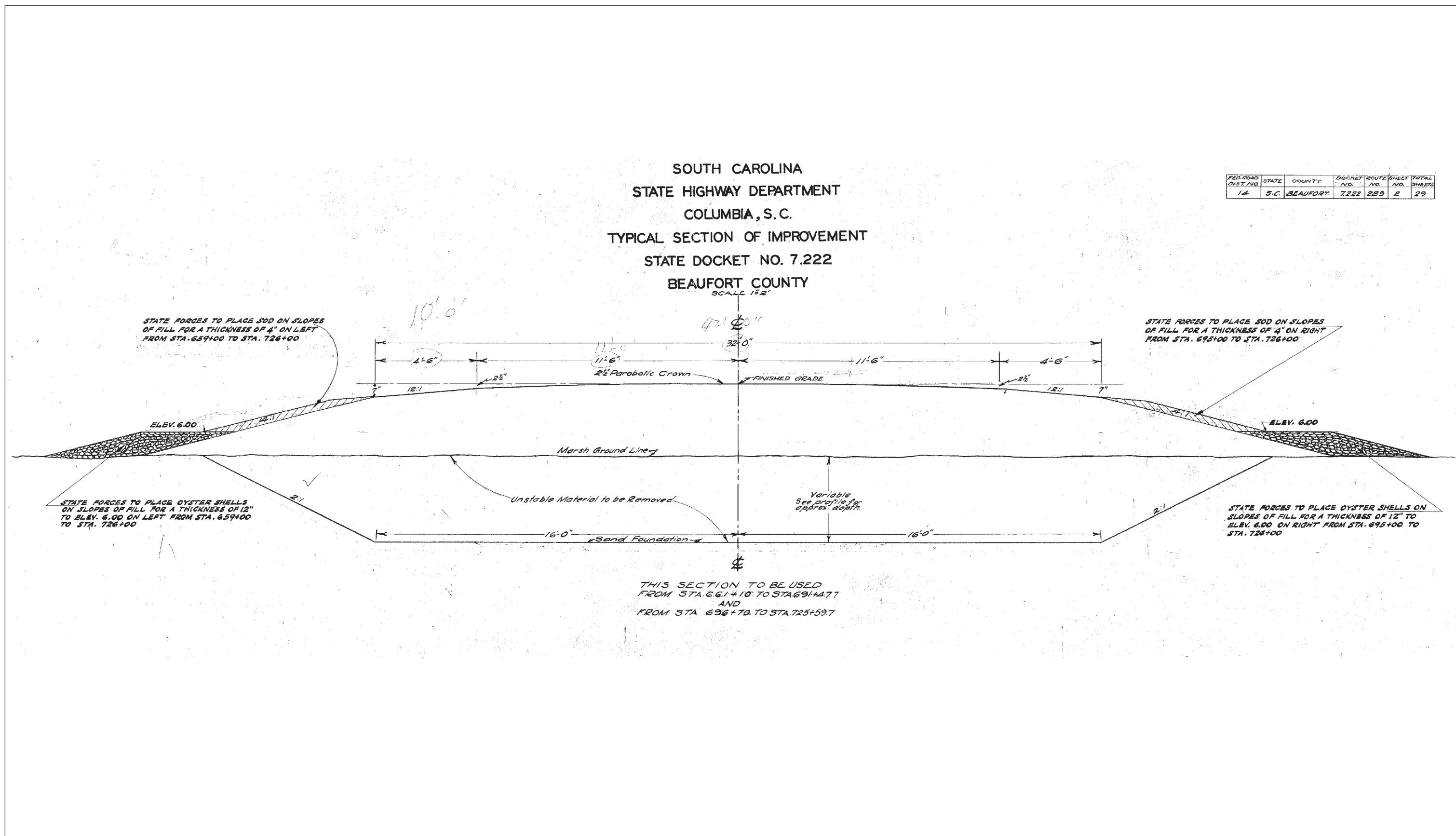


Figure 3.6 Portion of the 1940 highway construction plans showing the cross section of the roadway. Note the annotation stating "State forces to place oyster shells on slopes of fill for a thickness of 12".

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Figure 3.7 Portion of a 1955 aerial photograph showing the highway causeway and the boat landing.

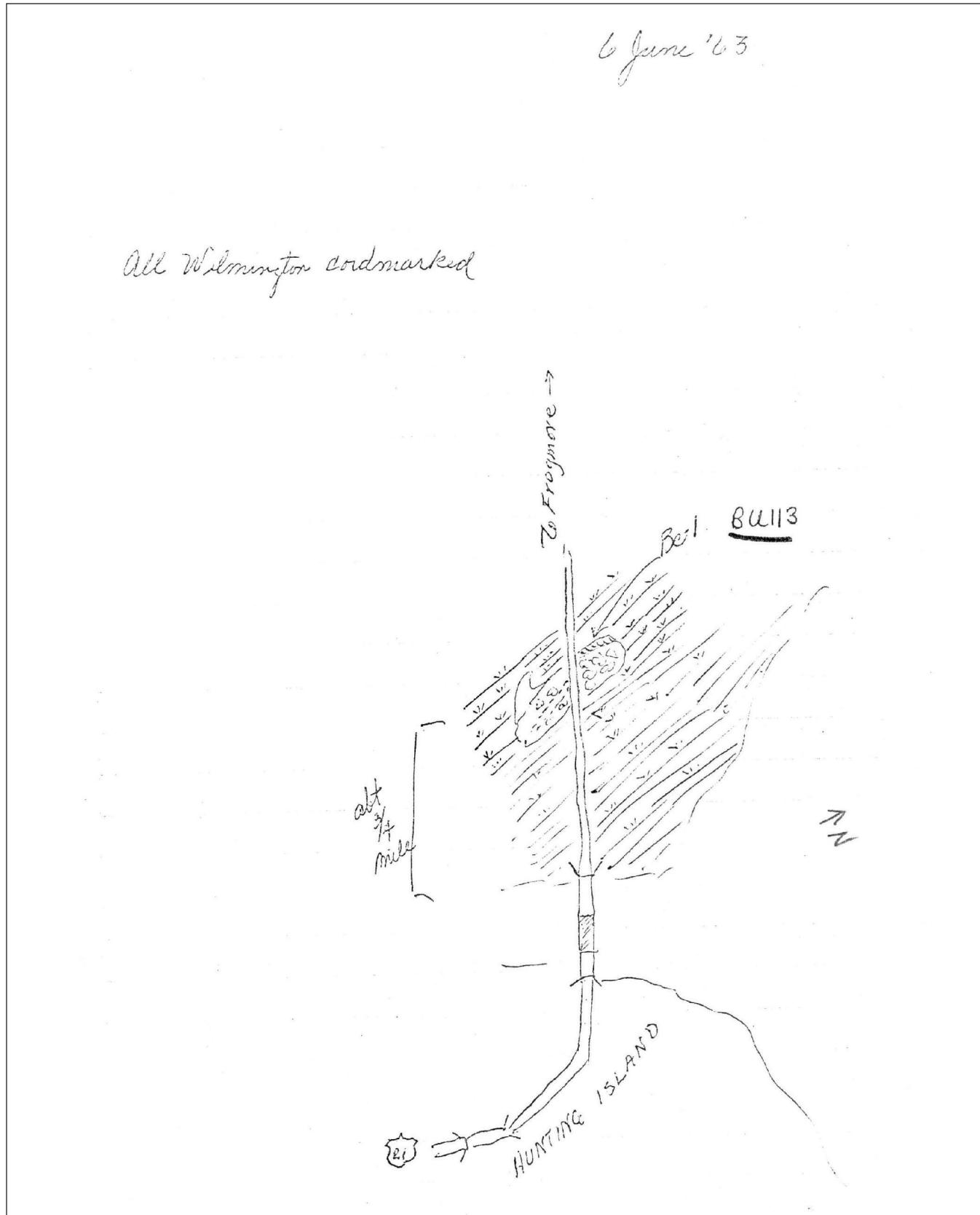


Figure 3.8 Original sketch map of Site 38BU113 (from Rhett 1974).



Figure 3.9 View of artifacts recovered from Site 38BU113.

and the shell deposits themselves likely represent a series of cultural features. Third, shovel testing and surface collections recovered a number of Middle to Late Woodland artifacts from the site, which suggest that the site may contain a substantial Pre-Contact occupational component. Taken together, these three factors demonstrate that Site 38BU113 has the potential to add significantly to our knowledge of Middle to Late Woodland lifeways along the southern South Carolina coast. Based on these findings, we recommend Site 38BU113 eligible for the NRHP.

The SCDOT has considered location and design alternatives in the process of developing the currently proposed “build” alternatives. Five “build” alignments, alternatives to the north and south side of the existing route, have been considered as part of this study. As currently designed, none of the proposed alternatives will impact the site. Therefore, the project will have no effect on the site.

3.2 38BU147

Cultural Affiliation: Middle twentieth century

Site Type: Road construction materials

Site Dimensions: 488 meters northwest/southeast by 152 meters northeast/southwest

Soil Type: Capers Association

Elevation: 1.52 m amsl

Vegetation: Cedar trees and sea oxeye

Nearest Water Source: Harbor River

NRHP Recommendation: Not eligible / no further management

Site 38BU147 consists of a series of shell concentrations in the hard marsh to the north of the US 21 causeway. The site is located between a tidal creek to the west and the Harbor River to the east. Site 38BU147, as defined by Lepionka (1978), measures approximately 488 meters northwest/southeast by 152 meters northeast/southwest. The shell concentrations vary in vegetation. Some of the concentrations are covered only in a growth of dense sea oxeye, while others contain cedar trees, as well. Figure 3.10 provides the previously recorded limits of 38BU147 on a modern aerial photograph. Figure 3.11 presents a view of 38BU147.

Site 38BU147 was originally identified by Larry Lepionka (1978). The site, which he named “Harbor

River Shell Mounds”, was noted as being possibly located within the ROW of US 21. Lepionka (1978:1) described the site as “...a series of low shell based islands with marsh rim vegetation, cedar, and yucca. They are isolated at high tide and exist only because of the erosion resistant shell substratum which includes conch and clam as well as the predominant oyster.” Lepionka (1978:1) noted that “No artifacts were found in the brief survey, but the shell accumulation is definitely not natural, nor particularly recent. Test pits to recover artifacts and thus determine cultural affinity might be in order, but these are low priority sites.” Regarding the condition of the site, Lepionka (1978:1) noted that the “Wide shell scatter indicates tidal erosion of some of the ‘islands’ but others are apparently stabilized.” The USGS quadrangle map accompanying the 38BU147 site form shows a group of six small “islands” that make up an oval shape in the hard marsh alongside US 21 measuring approximately 488 meters northwest/southeast by 152 meters northeast/southwest. Figure 3.12 presents Lepionka’s (1978) plan of Site 38BU147.

During the current investigations at Site 38BU147, archaeologists excavated a total of two judgmentally placed shovel tests in two separate shell concentrations to confirm the suspicion that the shell was placed in the site area as a result of the construction of the roadway causeway (see below). Neither one of these shovel tests produced artifacts. Shovel Test 4, excavated on a high, wooded hummock, revealed wet, dense crushed/deteriorated oyster shells with some larger oyster shells mixed in 0-60 cm bs, over a wet light gray sand 60-70+ cm bs. Shovel Test 5, excavated on the easternmost wooded “island”, revealed crushed/deteriorated oyster shell down to at least 80 cm bs. Excavation of this shovel test was terminated at 80 cm bs because the water table that was encountered at approximately 35 cm bs made it difficult for the excavation to continue.

The 1939 aerial photograph presented in Figure 3.3 shows no shell concentrations in the marsh in the area of Site 38BU147. The 1951 aerial photograph (see Figure 3.5) shows the series of lightly colored “piles” in the hard marsh to the north of the causeway. From the 1940 roadway plans, it is known that oyster shell was used in the construction of the roadway causeway (see Figure 3.6). Again, we believe that the shell piles in the hard marsh in the area



Figure 3.10 Plan of 38BU147 on a modern aerial photograph.



Figure 3.11 View of 38BU147, facing northeast.

of Site 38BU147 are excess road construction materials, and were likely either discarded in the marsh at the completion of the construction of the causeway in the early 1940s, or are the remainders of supply stockpiles accessed from the marsh area during the construction of the causeway.

We assessed the NRHP eligibility of Site 38BU147 with respect to Criterion D, its ability to add significantly to our understanding of the history or prehistory of the region. Though the site was originally recorded in 1978 as a series of (presumably) Pre-Contact shell mounds, evidence in the form of mid-twentieth-century aerial photographs and roadway construction plans, as well as the condition of the shell encountered in the shovel tests, suggests that these “shell mounds” are very likely excess or displaced road construction materials. While we still refer to this grouping of shell deposits as archaeological site 38BU147, it should not be considered to be a true archaeological site. Additional investigation of 38BU147 is unlikely to generate information beyond the period of use (middle twentieth century) and the presumed function (excess road construc-

tion materials). The site cannot generate additional important information concerning past settlement patterns or land-use practices in Beaufort County. Therefore, we recommend Site 38BU147 not eligible for the NRHP. Additional management of this site is not warranted.

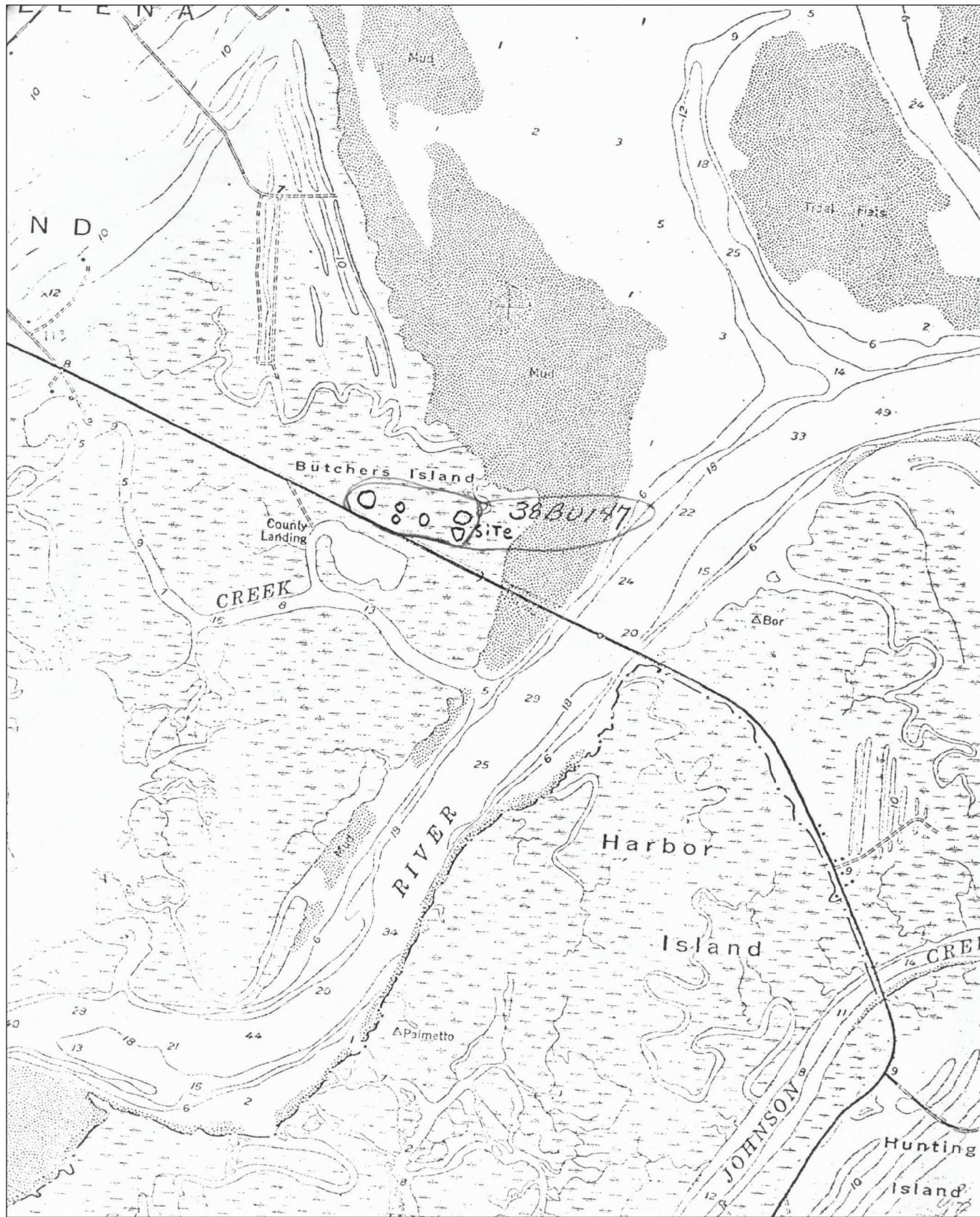


Figure 3.12 Original plan of Site 38BU147 (from Lepionka 1978).

4.0 Results of the Architectural Survey

During the cultural resources survey of the US 21 Harbor River Bridge Replacement Project, the architectural historian recorded one architectural resource (Resource 5071) within the architectural survey universe. In addition to the newly recorded resource, there is one previously recorded resource located within the architectural survey universe. The Harbor River Bridge (Resource 5070) was recorded by Clemson University (1981) during the survey for The Metal Truss Highway Bridge Inventory for the South Carolina Department of Highways and Public Transportation. Resource 5070 was determined eligible for listing in the NRHP under Criterion A. Newly recorded Resource 5071, the Gay Fish Company, is recommended eligible for listing in the NRHP under Criterion A. Figure 1.2 shows the locations of both resources and the project architectural survey universe. A brief description of the resources within the project architectural survey universe follows.

4.1 Resource 5070, Harbor River Bridge, the portion of US 21 that spans Harbor River

Resource 5070 is a modified Warren thru truss swing span bridge constructed in 1938-39 by the Virginia Bridge Company for the South Carolina Highway Department. The 2,851-foot, two-lane bridge is made of steel and has a rim bearing design. The bridge is operated by electric motors that rotate the movable span in a horizontal plane on a pivot pier located in the center of the navigable channel. The inclined end posts and upper chords are composed of built up box sections, and the lower chords are channels with lacing and battens. Web members are rolled sections. Centered overhead is an octagonal operator's house that was rebuilt in 1997. The approach spans are composed of four lines of 28-inch deep steel stringers on concrete column bents founded on timber piles. The stringers support a concrete deck and standard design, one-rail high railing on brush curbs. A modern sidewalk addition with two-rail high angle railings is cantilevered off of the south side of the bridge. The 1938-39 bridge is historic in association with the Civilian Conservation Corps/ Works Progress Administration (CCC/WPA) work relief programs

that developed South Carolina's state park system, including Hunting Island State Park. In the statewide contexts of Depression-era work relief programs and development of the state's network of state parks, it is historically significant under Criterion A and is eligible for listing in the NRHP (SCDOT 2013). Figures 4.1 and 4.2 provide current views of the bridge. Figure 4.3 presents an historic view of the bridge, apparently taken during construction.

The 1938-39 bridge is historic in association with the CCC/WPA work relief programs that developed South Carolina's state park system, including Hunting Island State Park, to which the bridge links. According to the SCDOT (2013:1-2),

"The bridge was constructed using Depression-era work relief programs to link a private islands [sic], used for livestock and hunting and the location of a light house maintained by the federal light house service, to St. Helena Island. It was paid for using Progressive Works Administration (WPA) funds and was fabricated by the Virginia Bridge Company headquartered in Roanoke, Va...Starting in 1939 when the Civilian Conservations Corps (CCC) established a camp on Hunting Island, it was transformed into a state park by CCC forces. Much of that effort addressed improving drainage in order to control the insect population and construct roads and trails, especially to the lighthouse. A federal light house was first placed on the island in 1859. Because of chronic erosion problems, the 1873 lighthouse, which replaced the 1859 one, was moved to its current relocated [sic] in 1887-1889. It was decommissioned in 1933 but became a focal point of the late 1930s state park. The Corps also built the causeway from Johnson Creek to the bridge. Hunting Island is one of seventeen South Carolina state parks developed using CCC forces. Since this is a barrier island park, the Harbor River bridge is a particularly vital component of its historical development. The road across St. Helena Island linking Hunting Island to Lady's Island was not completed until after World War II...The 1938-1939 bridge is historic in association with the CCC/PWA



Figure 4.1 Resource 5070 Harbor River Bridge, facing northwest.



Figure 4.2 Resource 5070 Harbor River Bridge central pivoting section, facing northwest.



Figure 4.3 Historic view of the Harbor River Bridge (from Cole 1997:60).

[sic?] work relief programs that developed South Carolina's state park system, including Hunting Island. That program has significance on the state level. The bridge is individually eligible on its own merits, and it shares a history with the CCC development of the park itself."

As mentioned above, the CCC provided the labor for the construction of Hunting Island State Park. A CCC camp was placed on Hunting Island in 1938 for the purposes of initial timber and brush clearing work (*The State*, September 24, 1939). Prior to the opening of the state park, Hunting Island was separated from Harbor Island and St. Helena Island by a series of tidal creeks, the Harbor River, and wide expanses of marsh. Therefore, it was necessary to construct a roadway/causeway and bridges to connect Hunting Island with Harbor Island and St. Helena Island. The CCC was believed to be largely, and possibly completely, responsible for the hard work of constructing the earthen causeways that would form the building surface for US 21. The Harbor River Bridge was completed by the Virginia Bridge

Company prior to the construction of the causeways (see Figure 3.3). The construction of the causeways began in the late 1930s and involved the piling of marsh mud, sand, top soil, and oyster shells. The following excerpt is taken from a Hunting Island State Park planning document in the CCC files located at the SCDAH (CCC Files n.d. Folder 162-1).

"A major job of the Hunting Island project is the building of a causeway between Hunting Island and St. Helena Island across approximately two miles of marshland. To build this causeway under the CCC program means special equipment and special allotment other than the customary procedure.

The total fill of the causeway is approximately 100,000 cubic yards of sand and topsoil. We have at present data to show that the stretch from Johnson Creek along Harbor Island to Harbor River, a distance of one mile, will take 17,000 to 20,000 man days, or a crew of 100 to 115 enrollees ten months to build, or, in other

words, almost one full camp six months. To build the stretch of causeway across the marsh from Harbor River to St. Helena Island, which is also approximately one mile, would also be six month's labor for one full company of CCC enrollees.

Considering the causeway the most important work, all man days and funds of a 12-month CCC allotment will be used for it, leaving the Park development for the period October 1, 1939 to June 31, 1940.

The approximate 100,000 cubic yards of fill can be obtained from Hunting Island, Harbor Island, and St. Helena Island. It will be necessary to build two or three vehicle bridges for which \$3,000.00 for materials will be requested."

Figure 4.4 presents views of the CCC crew constructing portions of the causeway between Hunting Island and St. Helena Island.

While it is assumed that the CCC provided all of the labor for the construction of the causeways linking Hunting Island, Harbor Island, and St. Helena Island, a piece of correspondence suggests that another entity may have at least been considered to complete some of the work. In a letter dated July 16, 1938, from R. S. Merritt of the Merritt Dredging Company (based in Charleston) to R. A. Walker of the National Parks Service (office in Columbia), Mr. Merritt (R. S. Merritt of Merritt Dredging Company to R. A. Walker of the NPS, letter correspondence, July 1938) writes:

Dear Mr. Walker:

I surely enjoyed our talk in your office last Tuesday concerning your Hunting Island project and since returning to Charleston, I have given the road-building problem considerable thought and we have discussed it frequently in our office. It is going to be a tough job as you already know and even an experienced and well equipped road contractor would find the work unusually difficult. Cutting off those streams with trucked dirt may even be impossible without sheet pile dikes if the current is at all fast. You know that was one of the main reasons the

State Highway Department decided on a dredge fill for the new Beaufort-Parris Island road. It is a shame that your setup for the road allows you so little latitude because the job appears on the surface to be ideal for a dredge.

The problem certainly has aroused our interest and we do hope that you will find it convenient to show us the location the next time you make the trip. We could meet you either in Charleston or Beaufort. If you care to stop at our office, we may be able to give you some data or ideas that will help and if we are able to inspect the site, we can make some definite recommendations. Please do not hesitate to call on us even though you know there is no dredging in it for us.

While it appears that the Merritt Dredging Company may have eventually played no role in the construction of the causeways, it is interesting to note the "cutting off" of streams. This is ultimately what occurred to the creeks in the area of Butcher's Island, as evidenced in the road plan in Figure 3.4 and the historic aerial photograph in Figure 3.5.

A later article in The State newspaper (March 29, 1940) mentions the Harbor River Bridge and the causeway, though it clouds the waters somewhat on who was responsible for the construction, or at least the completion, of the causeway(s). The article (The State, March 29, 1940) states, "The bridge and the Hunting Island causeway were completed last October. The Beaufort causeway is yet incomplete and in order to expedite its construction the state highway department has taken it over and will receive bids April 4 for dredging the pluff mud so that top soil can be laid and the causeway completed." From this account, it seems that the portion of the causeway from Hunting Island to Harbor Island may have been completed by the CCC, while the "Beaufort causeway" (assumed to be the portion to the west of the Harbor River, towards St. Helena Island), was completed by another entity.

The Harbor River Bridge (Resource 5070) has been determined by the SCDOT to no longer meet the State's safety and design requirements for its transportation system. Rehabilitating the existing swing span bridge was considered. Rehabilitation includes measures that address the structural condition of the bridge in order to maintain the carrying capac-

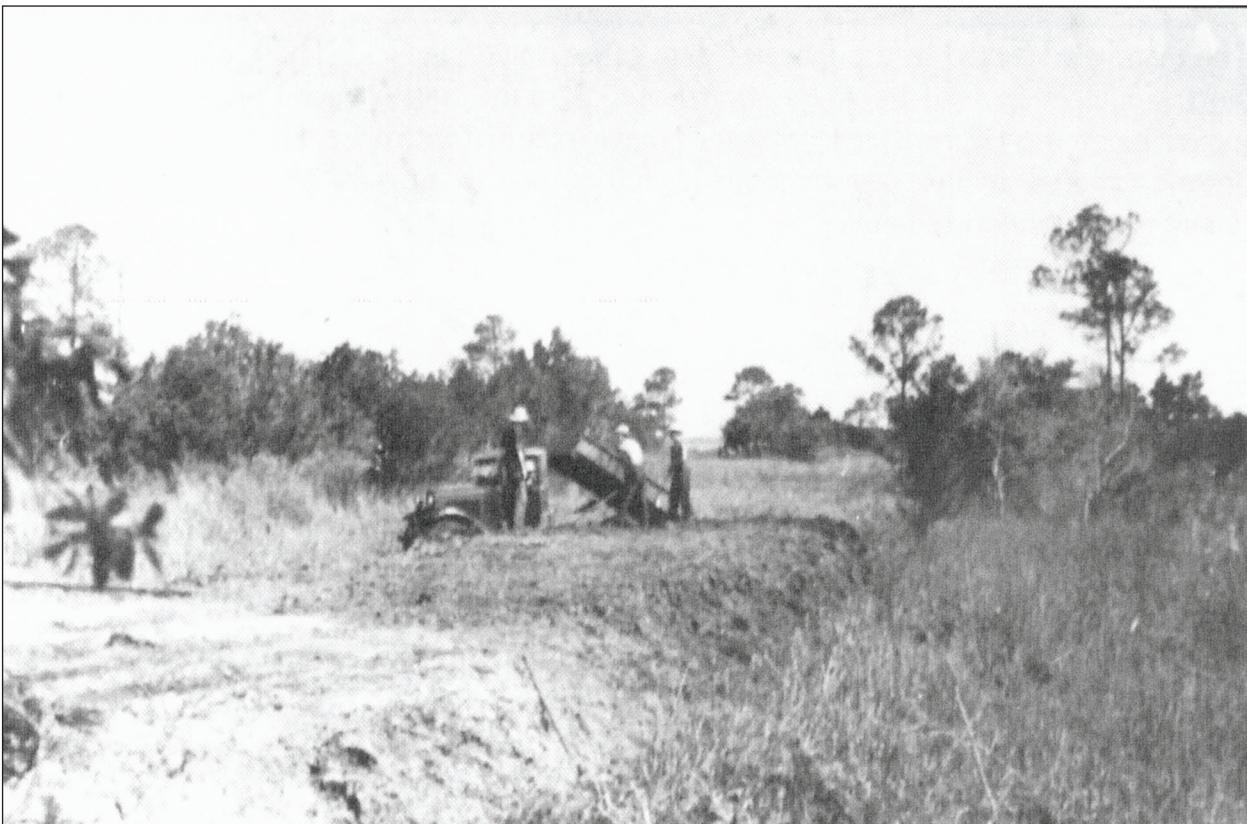


Figure 4.4 Views of the CCC crew constructing portions of the causeway between Hunting Island and St. Helena Island (from Cole 1997:57).

ity rating. This would require extensive inspections, maintenance, and repairs to allow the bridge to be structurally sufficient without posting a vehicle weight limit. Rehabilitation would likely require temporary closures of the bridge, which is not feasible since the bridge provides the only link between mainland Beaufort County and the islands. The rehabilitation measures would also not address the substandard geometry of the bridge deck, including the width of travel lanes and shoulders. In light of the age of and structural condition of the bridge, rehabilitation was eliminated from further review. Replacement of the existing bridge is deemed the only feasible and prudent alternative to continue providing a safe and efficient transportation network. The proposed bridge replacement project would result in an adverse effect to Resource 5070. A Programmatic Section 4(f) Evaluation will be prepared in accordance with 23 CFR 771.135(i). All proposed mitigation of adverse effects to Resource 5070 will be developed in consultation with the SCDOT and SCDAH.

4.2 Resource 5071, Gay Fish Company, 1948 Sea Island Parkway (US 21)

Resource 5071 is a commercial building constructed in 1952 by Gay Fish Company (established on the same parcel in 1948). The concrete block building and associated dock system is located on the north bank of Ward Creek. The building has a rectangular footprint with a lateral gable roof clad in V-crimp sheet metal. There have been many alterations to the material and form of the building. The foundation is of poured concrete slab and the siding is uncovered concrete block. The northeast side has a shed addition that runs the length of the building and contains a retail center open to the public. There is a large gable addition off of the northwestern end with a smaller gable addition off of that. There is a large, two-story parallel gable addition connected to the southwest side of the building. The retail section is flanked by recessed entry porches and has large picture windows across the façade. The other windows are metal two-over-two and one-over-one double hung sash replacements. The doors are modern replacements.

The southeast end of the building opens directly onto the docks that run parallel to the creek; the

docks contain approximately 650 feet of decking. The dock system is of simple pile and platform construction and is in poor condition. Several abandoned shrimping boats and other commercial equipment have accumulated around the property as evidence of the continued commercial fishing operation. Beaufort County has zoned the Gay Fish Company parcel within the Commercial Fishing Village Overlay to recognize the cultural contributions of the seafood industry. In the statewide context of the important mid-twentieth century commercial fishing industry, the Gay Fish Company commercial building and dock system is an excellent example of a family-owned and operated shrimping company. Resource 5071 is recommended eligible for the NRHP under Criterion A. Figures 4.5 and 4.6 provide views of the commercial building and docks.

As currently designed, none of the proposed build alternatives are in close proximity to Resource 5071. The US 21 Harbor River Bridge Replacement Project is compatible with the Beaufort County Commercial Fishing Village Overlay because the proposed 65-foot bridge height would accommodate a variety of marine uses on the designated properties. If the Gay Fish Company were sold, the bridge height would accommodate most uses allowed under the Overlay development guidelines. The existing bridge over the Harbor River (Resource 5070) is located approximately 1.5 mile from the Gay Fish Company and is not visible from the complex due to the trees on Butcher's Island. While the existing truss swing span Harbor River bridge is proposed to be replaced with a 65-foot fixed span bridge, the setting of Gay Fish Company as it relates to St. Helena Island and Ward Creek will remain unchanged and any possible viewshed effects will be minimal due to distance and tree cover. Therefore, the project will have no effect on Resource 5071.



Figure 4.5 Resource 5071 Gay Fish Company commercial building, facing southwest.



Figure 4.6 Resource 5071 Gay Fish Company portion of the dock and shrimping boat, facing southeast.

5.0 Project Summary and Management Recommendations

Brockington conducted an intensive cultural resources survey of the US 21 Harbor River Bridge Replacement Project in June and September 2015. This work was conducted for the SCDOT and HDR Inc. to determine whether any known historic properties (i.e., sites, buildings, structures, objects, or districts listed on or eligible for the NRHP) may be affected by the construction and use of the roadway. This survey provides partial compliance with Section 4(f) of the US Department of Transportation Act of 1966, as amended (49 USC 303), and Section 106 of the National Historic Preservation Act of 1966, as amended (16 USC 470).

The cultural resources survey involved the excavation of 25 shovel tests in areas determined to be natural and relatively undisturbed or the location of previously recorded archaeological sites. The survey resulted in the revisit of two previously recorded archaeological sites (Sites 38BU113 and 38BU147), the recording of one new architectural resource (Resource 5071), and the revisit of one previously identified architectural resource (Resource 5070) within the project APE. Site 38BU147 likely results from road construction, and we recommend it not eligible for the NRHP. Further management consideration of this resource is not warranted. If current proposed road plans change, additional survey may be necessary.

We recommend Site 38BU113 eligible for the NRHP. As currently designed, none of the proposed alternatives will impact the site. Therefore, the project will have no effect on the site.

The bridge that would be replaced in the proposed project, the Harbor River Bridge (Resource 5070), was previously determined eligible for listing in the NRHP (Clemson University 1981). The bridge has been determined to no longer meet the State's safety and design requirements for its transportation system. Rehabilitating the existing swing span bridge was considered. Rehabilitation includes measures that address the structural condition of the bridge in order to maintain the carrying capacity rating. This would require extensive inspections, maintenance, and repairs to allow the bridge to be structurally sufficient without posting a vehicle weight limit. Rehabilitation would likely require temporary

closures of the bridge, which is not feasible since the bridge provides the only link between mainland Beaufort County and the islands. The rehabilitation measures would also not address the substandard geometry of the bridge deck, including the width of travel lanes and shoulders. In light of the age of and structural condition of the bridge, rehabilitation was eliminated from further review. Replacement of the existing bridge is deemed the only feasible and prudent alternative to continue providing a safe and efficient transportation network. The proposed bridge replacement project would result in an adverse effect to Resource 5070. A Programmatic Section 4(f) Evaluation will be prepared in accordance to 23 CFR 771.135(i). All proposed mitigation of adverse effects to Resource 5070 will be developed in consultation with the SCDOT and SCDAH.

We recommend Resource 5071 (Gay Fish Company) eligible for the NRHP. As currently designed, none of the proposed alternatives are in close proximity to Resource 5071. While the existing truss swing span Harbor River Bridge (Resource 5070) is proposed to be replaced with a 65-foot fixed span bridge, the setting of Gay Fish Company as it relates to St. Helena Island and Ward Creek will remain unchanged and any possible viewshed effects will be minimal due to distance and tree cover. Therefore, the proposed US 21 Harbor River Bridge Replacement Project will have no effect on Resource 5071.

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Appendix A

Artifact Catalog

Artifact Catalog

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

Table of Contents

Site Number	Page Number
38BU113	1-2

Site Number:	Catalog #	Count	Weight (in g)	Artifact Description	Lithic Type	Ceramic Type	Temporal Range	Comments
SITE NUMBER: 38BU113								
<i>Provenience Number:</i>								
1	3	5.1		Shovel Test , N500, E447.5, 0-60cmbs, +72Kg Shell DIF	Residual Sherd, Grog Tempered			St. Catherine's
2	2	14			Cord Marked and Smoothed Body Sherd, Fine/Medium Sand Tempered			Deptford
3	1	1.6			Bone, Faunal Remains			Faunal Remains
4	1	344			Whelk, Possibly Tool, Shows Possible Signs of Use			Possibly Tool, Shows Possible Signs of Use
5	1	72000			Oyster, Discarded in Field, Not Counted			Discarded in Field, Not Counted
<i>Provenience Number:</i>								
1	1	2000		Shovel Test , N515, E455, 30-40cmbs, +2Kg Shell DIF	Oyster, Discarded in Field, Not Counted			Discarded in Field, Not Counted
<i>Provenience Number:</i>								
1	1	19200		Shovel Test , N485, E470, 0-30cmbs, +19.2Kg Shell DIF	Oyster, Discarded in Field, Not Counted			Discarded in Field, Not Counted
<i>Provenience Number:</i>								
1	1	10400		Shovel Test , N500, E470, 10-30cmbs, +10.4Kg Shell DIF	Oyster, Discarded in Field, Not Counted			Discarded in Field, Not Counted
<i>Provenience Number:</i>								
1	1	800		Shovel Test , N515, E470, 5-40cmbs, +800g Shell DIF	Oyster, Discarded in Field, Not Counted			Discarded in Field, Not Counted
<i>Provenience Number:</i>								
1	1	23.2		Shovel Test , N507.5, E485, 5-40cmbs, +23.2Kg Shell DIF	Oyster, Discarded in Field, Not Counted			Discarded in Field, Not Counted

Site Number:	38BU113			Catalog #	Count	Weight (in g)	Artifact Description	Lithic Type	Ceramic Type	Temporal Range	Comments
Provenience Number:											
1	1	34000	8 . 1	Shovel Test , N500, E500, 0-50cmbs, +34Kg Shell DIF	Oyster,	Discarded in Field, Not Counted					Discarded in Field, Not Counted
Provenience Number:											
1	1	4400	9 . 1	Shovel Test , N485, E530, 10-30cmbs, +4.4Kg Shell DIF	Oyster,	Discarded in Field, Not Counted					Discarded in Field, Not Counted
Provenience Number:											
1	1	26000	10 . 1	Shovel Test , N485, E530, 10-50cmbs, +26Kg Shell DIF	Oyster,	Discarded in Field, Not Counted					Discarded in Field, Not Counted
Provenience Number:											
1	1	25.6	11 . 1	Shovel Test , 0-60cmbs, +98.8Kg Shell DIF	Cord Marked and Smoothed Body Sherd, Fine/Medium Sand Tempered						St. Catherines
2	1	98800			Oyster,	Discarded in Field, Not Counted					Discarded in Field, Not Counted
Provenience Number:											
1	2	27.9	12 . 0	Surface Collection	Cord Marked Body Sherd, Fine/Medium Grog Tempered						St. Catherines

Appendix B

South Carolina Statewide Survey Forms

Statewide Survey of Historic Properties//
State Historic Preservation Office
South Carolina Department of Archives and History
Quad Name:
8301 Parklane Rd.
Columbia, SC 29223-4905 (803) 896-6100
Intensive Documentation Form

Control Number: U / 13 / 5070
Status County No Site No
St. Helena Sound
Tax Map

Identification

Historic Harbor River Bridge

Common

Address/Location: Portion of US 21 that crosses the Harbor River

City:	County:	Beaufort
Vicinity of:	Frogmore	
Ownership:	Category:	structure
Historical	Transportation	
Current	Transportation	

National Register of Historic Places

SHPO National Register

Notes on National Register

Other Designation:

Property Description

Construction	1938-39	Commercial	Stories:
Alteration	1997	Historic Core	
<i>Roof Features</i>		<i>Porch Features</i>	
Shape:		Porch Width:	
Materials:		Shape:	
Construction	steel		
Exterior Walls:			
Foundation:	other		
Significant Architectural	2,851 feet long, 21 feet wide, two-lane bridge; modified Warren thru truss swing span, rim bearing design; operated by electric motors that rotate the movable span in a horizontal plane on a pivot pier; inclined end posts and upper chords are composed of built up box sections, and the lower chords are channels with lacing and battens; centered overhead is the octagonal-shape operators house; approach spans are composed of four lines of 28 inch deep steel stringers on concrete column bents founded on timber piles; The stringers support a concrete deck and standard design, one-rail high railing on brush curbs. modern sidewalk addition with two-rail high angle railings is cantilevered off of the south side of the bridge		
Alterations:	Operators house rebuilt		

Architect(s)/Builder(s): State Highway Dept./Virginia Bridge Co.

South Carolina Statewide Survey of Historic Properties
Intensive Documentation Form

Page 2

Site 5070

Historical Information

Historical Information: The 1938-39 bridge is historic in association with the CCC/WPA work relief programs that developed South Carolina's state park system, including Hunting Island. In the statewide contexts of Depression-era work relief programs and development of the state's network of state parks, it is historically significant under criterion A (SCDOT 2013).

Source of S.C. Dept. of Transportation Historic Bridge Inventory Report, 2013.

Photographs



Program Management

Recorded by: SO; Brockington and Assoc. Inc.
Date Recorded: 09/29/2015

Statewide Survey of Historic Properties//
State Historic Preservation Office
South Carolina Department of Archives and History
Quad Name:
8301 Parklane Rd.
Columbia, SC 29223-4905 (803) 896-6100
Intensive Documentation Form

Control Number: U / 13 / 5071
Status County No Site No
St. Helena Sound

Tax Map 00286835

Identification

Historic Gay's Seafood Company

Common

Address/Location: 1948 Sea Island Parkway (US 21)

City:	County:	Beaufort	
Vicinity of:	Frogmore		
Ownership:	Private	Category:	building
Historical	Industry/Processing/Extraction		
Current	Industry/Processing/Extraction		

National Register of Historic Places

SHPO National Register

Notes on National Register

Other Designation:

Property Description

Construction	1952	Commercial	Stories: 1 story
Alteration	Multiple	Historic Core	rectangular
<i>Roof Features</i>		<i>Porch Features</i>	
Shape:	gable, lateral	Porch Width:	
Materials:	raised seam metal	Shape:	
Construction	masonry		
Exterior Walls:	other		
Foundation:	slab construction		
Significant Architectural	Siding is uncovered concrete block; northeast side has a shed addition that runs the length of the building and contains a retail center open to the public; large gable addition off of the northwestern end with a smaller gable addition off of that; large, two-story parallel gable addition connected to the southwest side; retail section is flanked by recessed entry porches and has large picture windows across the façade; metal 2/2 and 1/1 DHS; modern doors; southeast end opens directly onto the docks which run parallel with to creek and contain approximately 650 feet of decking; dock system is of simple pile and platform construction and is in poor condition		
Alterations:	Additions; windows; doors; dock		

Architect(s)/Builder(s):

South Carolina Statewide Survey of Historic Properties
Intensive Documentation Form

Page 2

Site 5071

Historical Information

Historical Information: Established in 1948; several abandoned shrimping boats and other commercial equipment has accumulated around the property as evidence of the continued commercial fishing operation

Source of

Photographs



Program Management

Recorded by: SO; Brockington and Assoc. Inc.
Date Recorded: 09/29/2015

Appendix C

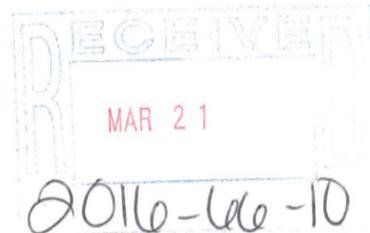
Project Correspondence

SCDOT Project ID P026862



South Carolina
Department of Transportation

March 17, 2016



Ms. Elizabeth Johnson
Deputy State Historic Preservation Officer
South Carolina Department of Archives & History
8301 Parklane Road
Columbia, South Carolina 29223-4905

O K,
WMA

**Re: Cultural Resources Survey of the US 21 Harbor River Bridge Replacement Project,
Beaufort County, South Carolina**

Dear Ms. Johnson:

Enclosed are two copies of a draft survey report that describes cultural resource investigations conducted for the proposed US 21 over Harbor River bridge replacement project in Beaufort County, South Carolina. The survey resulted in the evaluation of two previously recorded archaeological resources (38BU113 and 38BU147). Archaeological site 38BU113 has been determined eligible for listing in the National Register of Historic Places (NRHP). This site is located outside of the project's footprint and will not be affected by construction. Contractors will be made aware that the site cannot be used as a staging or laydown area during construction. Archaeological site 38BU147 was determined to be not eligible for the NRHP.

K
for your
records

Two above-ground resources (Resource 5070 and Resource 5071) were identified and evaluated during the investigations. Resource 5070, the Harbor River Bridge, is eligible for listing in the NRHP and would be adversely affected by the project. Resource 5071, the Gay Fish Company, was determined eligible for listing in the NRHP but will not be affected by the project.

Based on the results of background research and field investigations, the Department has determined that the proposed undertaking will result in an **adverse effect** to historic properties. A draft Memorandum of Agreement has been developed for your review and comment.

Per the terms of the Section 106 Programmatic Agreement executed on August 18, 2014, the Department is providing this information on behalf of the Federal Highway Administration. It is requested that you review the enclosed material and, if appropriate, indicate your concurrence with SCDOT findings. SCDOT plans hold additional meetings with your office regarding the proposed measures to resolve adverse effects. Please respond within 30 days if you have any objections or if you have need of additional information.

Sincerely,

Chad C. Long
Archaeologist/NEPA Coordinator

CCL:ccl

I (do not) concur in the above determination.

Signed: Wenonah G. Haire, P Date: 4/4/16
ec: Shane Belcher, FHWA
cc: Wenonah G. Haire, Catawba Nation THPO
Robin Dushane, Eastern Shawnee

File: ENV/CCL

Post Office Box 191
Columbia, South Carolina 29202-0191

Phone: (803) 737-2314
TTY: (803) 737-3870

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BG
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Environmental Management
Environmental Management
SCDOT

AN EQUAL OPPORTUNITY
AFFIRMATIVE ACTION EMPLOYER

4 May 2016

Mr. Chad Long
South Carolina Department of Transportation
955 Park Street
Columbia, SC 29201

Re: US-21 Harbor River Bridge Replacement
Beaufort County, South Carolina
SHPO Project No. 15-EJ0056
SCDOT Project No. P026862

Dear Mr. Long:

Thank you for your letter of May 3, 2016, which we received on the same day, regarding the US-21 Harbor River bridge replacement in Beaufort County. We also received the final report titled "Cultural Resources Survey of the US-21 Harbor River Bridge Replacement Project," as well as the draft Memorandum of Understanding for the project, as supporting documentation for this undertaking. The State Historic Preservation Office is providing comments to the South Carolina Department of Transportation pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR 800. Consultation with the SHPO is not a substitution for consultation with Tribal Historic Preservation Offices, other Native American tribes, local governments, or the public.

Based on the description of the Area of Potential Effect (APE) and the identification of historic properties within the APE, our office concurs with the assessment that both Site 38BU113 and Resource 5071 (the Gay Fish Company) are eligible for listing in the National Register of Historic Places, and that the project will have an adverse effect on Resource 5070 (the Harbor River Bridge), which has previously been determined eligible for listing in the National Register. We also concur with the recommendation that site 38BU113 and the Gay Fish Company be avoided during all phases of construction.

If archaeological materials are encountered during construction, the procedures codified at 36 CFR 800.13(b) will apply. Archaeological materials consist of any items, fifty years old or older, which were made or used by man. These items include, but are not limited to, human skeletal materials, stone projectile points (arrowheads), ceramic sherds, bricks, worked wood, bone and stone, and metal and glass objects. The federal agency or the applicant receiving federal assistance should contact our office immediately.

Our comments on the Memorandum of Understanding are listed below. In preparing these comments, I referred to the guidance provided by the American Council of Historic Preservation on their website at <http://achp.gov/agreementdocguidance.html>, in particular their template MOA (<http://achp.gov/docs/Template%20MOA%20and%20Amendment-S.pdf>), their agreement content checklist (<http://achp.gov/docs/Section%20106%20GAD%20Checklist%20-%20Content.pdf>), and their agreement reviewer checklist (<http://achp.gov/docs/Section%20106%20GAD%20Checklist%20-%20Reviewer's%20Guide.pdf>).

Technical comments:

In the third "whereas" clause, change "it's" to "its"

In the sixth "whereas" clause, clarify whether ACHP is participating

In stipulation 3, change "one-year" to "one year"

Under "Late Discoveries", include the full version of the name of the CIN THPO since it is not written out elsewhere

Content:

Following the guidelines on the ACHP's website, I recommend including "whereas" clauses that describe the scope of the undertaking and lay out a brief description of the project APE. It may also be helpful to include a clause describing public outreach efforts for the project – e.g., stating that the local Gullah community was consulted and they have no concerns, as well as one stating that site 38BU113 is eligible and within the APE but that it will be avoided.

Other content that may bear inclusion is an "other federal involvement" stipulation addressing the role of the Coast Guard in the environmental review process. Does the Coast Guard also need to be included as an invited signatory on the document?

Can a stipulation be included that lays out what process will be followed to decide what to do with the bridge itself (e.g., laying out which options are being considered and how to evaluate them)? There's been discussion of what to do with it but it doesn't seem like we have a clear path forward.

Stipulation 1: Who will be the party taking the lead on developing the public interpretation plan?

Stipulation 3: Can a location for the placement of the interpretation materials within the park be specified?

Per the ACHP guidance, also included at the end of the stipulations should be an "affirmation statement" with the following: The stipulations section should end with a statement affirming that by carrying out the terms of the MOA or PA, the federal agency will meet its responsibilities under Section 106 of the NHPA to "take into account" the undertaking's effects on historic properties, and afford the ACHP a "reasonable opportunity" to comment on the undertaking. The statement follows the statutory language to demonstrate fulfillment of the agency's responsibilities under Section 106 of the NHPA.

If you have any questions, please contact me at (803) 896-6184 or at ADaggett@scdah.sc.gov.

Sincerely,

Adrianne Daggett, PhD.

Transportation Review Coordinator
State Historic Preservation Office

**MEMORANDUM OF AGREEMENT BETWEEN
THE FEDERAL HIGHWAY ADMINISTRATION,
THE SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION,
AND THE SOUTH CAROLINA STATE HISTORIC PRESERVATION OFFICE**

**REGARDING THE REPLACEMENT OF THE US ROUTE 21 BRIDGE OVER THE HARBOR
RIVER, BEAUFORT COUNTY, SOUTH CAROLINA**

WHEREAS, the Federal Highway Administration (FHWA), in cooperation with the South Carolina Department of Transportation (SCDOT), proposes to replace the US Route 21 Bridge over the Harbor River in Beaufort County, South Carolina; and

WHEREAS, the FHWA and SCDOT defined the Area of Potential Effects (APE) for the project as a corridor that measures approximately two miles long and 1200' feet wide centered along existing US Route 21; and

WHEREAS, the FHWA and SCDOT have conducted public involvement activities and consulted with the Gullah Geechee Heritage Corridor Commission regarding the effects of the undertaking on historic properties,

WHEREAS, the FHWA has determined that the replacement of the US Route 21 Bridge over the Harbor River in Beaufort County, South Carolina, will have an adverse effect upon the Harbor River Bridge (Resource 5070), a historic property that is eligible for listing in the National Register of Historic Places (see Appendix A); and

WHEREAS, the SCDOT has advertised the bridge for alternative use as required by 23 USC Part 144(o) and no entities have accepted the bridge; and

WHEREAS, the FHWA and SCDOT identified one eligible archaeological site (38BU113) within the project's APE but determined that the site would be avoided by construction activities; and

WHEREAS, the FHWA and the SCDOT have consulted with the South Carolina (State Historic Preservation Office (SHPO) in accordance with Section 106 of the National Historic Preservation Act (16 U.S.C. Sec. 470f) and its implementing regulations (36 CFR Part 800) to resolve adverse effects, and

WHEREAS, the proposed undertaking will require a bridge permit from the United States Coast Guard (USCG), and in accordance with a Memorandum of Agreement between FHWA and the USCG, the USCG has agreed to become a cooperating agency in the environmental review process; and

WHEREAS, the proposed measures for resolving adverse effects to historic properties involves coordination with Hunting Island State Park, the South Carolina Department of Parks, Recreation, and Tourism (SCPRT) has therefore been invited to sign the MOA as a concurring party; and

WHEREAS, in accordance with 36 CFR § 800.6(a)(1), the FHWA has notified the Advisory Council on Historic Preservation (AHP) of its adverse effect determination providing the specified documentation, and the AHP has decided not to participate, and

NOW, THEREFORE, the FHWA, the SCDOT, and the South Carolina SHPO agree that the undertaking will be implemented according to the following stipulations in order to take into account the effects of the undertaking on the Harbor River Bridge.

RECEIVED

AUG 18 2016

Environmental Management
SCDOT

*US 21 over Harbor River
Section 106 Memorandum of Agreement*

I. STIPULATIONS

The FHWA and the SCDOT will ensure that the following stipulations are implemented:

A. Harbor River Bridge Mitigation

1. To mitigate adverse effects to the Harbor River Bridge, SCDOT will work with the SHPO, SCPRT, and the Hunting Island State Park Manager to develop and fund a public interpretation plan related to the impact of Depression-era Work Programs on the Hunting Island State Park and its associated landscape. The interpretation plan should include elements that relate to the construction of the US 21 roadway and bridge over Harbor River as well as the history of the Civilian Conservation Corps at Hunting Island State Park.
2. The draft public interpretation plan shall be developed within 6 months after the execution of the MOA. Copies of the draft interpretation plan shall be provided to the FHWA, SHPO, and Hunting Island State Park Manager for review and comment. A final public interpretation plan that incorporates comments received from FHWA, SHPO, and the Hunting Island State Park Manager shall be developed within 60 days after receipt of comments.
3. The components of the interpretation plan shall be developed and installed at the Hunting Island State Park within one year of the production of the final interpretation plan.
4. Bridge Placard: SCDOT will remove the existing bridge placard on the US 21 Bridge and provide it to SCPRT to be used as part of the interpretive plan developed for the park.
5. SCDOT will consider options for reuse of the bridge through advertisement, relocation, or salvaging a section of the bridge for display within Hunting Island State Park.

II. Duration

This MOA shall be null and void if its terms are not carried out within ten (10) years from the date of its execution, unless the signatories agree in writing to an extension for carrying out its terms.

III. Late Discoveries

If unanticipated cultural materials (e.g., large, intact artifacts or animal bones; large soils stains or patterns of soil stains; buried brick or stone structures; clusters of brick or stone) or human skeletal remains are discovered during construction activities, then the Resident Construction Engineer shall be immediately notified and all work in the vicinity of the discovered materials shall cease until an evaluation can be made by the SCDOT archaeologist in consultation with the South Carolina SHPO, the Catawba Indian Nation Tribal Historic Preservation Office, and the Eastern Shawnee Tribal Historic Preservation Office.

*US 21 over Harbor River
Section 106 Memorandum of Agreement*

IV. Monitoring and Reporting

Each year following the execution of this MOA until it expires or is terminated, the SCDOT shall provide all parties to this MOA a summary report detailing work carried out pursuant to its terms. Such report shall include any scheduling changes proposed, any problems encountered, and any disputes and objections received in FHWA's and SCDOT's efforts to carry out the terms of this MOA.

V. Dispute Resolution

The FHWA, the SCDOT, and the South Carolina SHPO will attempt to resolve any disagreement arising from the implementation of the MOA. This will include any disputes that arise concerning the contents of the report(s), including but not limited to its merit as a cultural resource management document.

In the event that the terms of this agreement cannot be carried out, the FHWA and SCDOT will submit a new (or amended) MOA to the South Carolina SHPO and the ACHP for review. If consultation to prepare a new MOA or amendments proves unproductive, the FHWA will seek ACHP comment in accordance with 36 CFR § 800.6(b)(2).

VI. Amendment and Modification

Any signatory to this MOA may request that it be amended or modified at any time, whereupon the parties will consult with each other to consider such amendment or modification.

VII. Termination

If any signatory to this MOA determines that its terms will not or cannot be carried out, that party shall immediately consult with the other parties to attempt to develop an amendment per Stipulation VI, above. If within (30) days an amendment cannot be reached, any signatory may terminate the MOA upon written notification to the other signatories.

Once the MOA is terminated, and prior to work continuing on the undertaking, the FHWA and the SCDOT must either (a) execute an MOA pursuant to 36 CFR § 800.6, or (b) request comments from the ACHP under 36 CFR § 800.7. The FHWA and the SCDOT will notify the signatories as to the course of action it will pursue.

US 21 over Harbor River
Section 106 Memorandum of Agreement

EXECUTION of this MOA by the Federal Highway Administration, the South Carolina Department of Transportation, and the South Carolina State Historic Preservation Office and implementation of its terms, is evidence that the FHWA has taken into account the effects of the undertaking on the Harbor River Bridge (Resource 5070) in accordance with Section 106 of the National Historic Preservation Act (16 U.S.C. Sec. 470f) and its implementing regulations (36 CFR Part 800). Fulfillment of this MOA by FHWA satisfies the Section 106 requirements of the National Historic Preservation Act (16 U.S.C. Sec. 470f) and its implementing regulation (36 CFR Part 800).

SIGNATORIES:

Federal Highway Administration

By: J. Shane Belcher Date: 8/22/2016

South Carolina Department of Transportation

By: Chad Bell Date: 8/15/16

South Carolina State Historic Preservation Office

By: Elizabeth M. Joshua Date: 8/16/2016

CONCURRING PARTY:

South Carolina Department of Parks, Recreation, and Tourism

By: Dan Dambra Date: 8/29/2016 n

