

CH. 5 CULTURAL RESOURCES



Chapter 5 describes the historic architectural and archaeological resources in the area and potential impacts to these resources from the Detailed Study Alternatives. No adverse effects to historic or archaeological resources are anticipated. The last section in this chapter describes resources afforded special protection under Section 4(f) of the US Department of Transportation Act and Section 6(f) of the Land and Water Conservation Fund Act and potential impacts to these resources.

5.1 SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT

Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended (36 CFR 800), requires federal agencies to take into account the effects of their undertakings on historic properties (including archaeological sites) and afford the Advisory Council on Historic Preservation (ACHP) (an independent federal agency) an opportunity to comment on the effects of the undertaking. Historic properties are districts, sites, buildings, structures, and objects associated with American history, architecture, archaeology, engineering, and culture listed on or eligible for listing on the National Register of Historic Places (NRHP).

National Historic Preservation Act

Section 106 of the NHPA requires federal agencies to consider the effects of their undertakings on historic properties (including archaeological sites).

Historic properties are generally 50 years old or older, and are considered eligible for listing on the NRHP if they possess integrity of location, design, setting, materials, workmanship, feeling, and association and meet one or more of the following criteria (36 CFR 60.4):

- Criterion A: Resources that are associated with events that have made a significant contribution to the broad pattern of our history; or
- Criterion B: Resources that are associated with the lives of persons significant in our past; or
- Criterion C: Resources that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- Criterion D: Resources that have yielded, or may be likely to yield, information important in prehistory or history.

The Section 106 process can be described in four steps (American Association of State Highway and Transportation Officials [AASHTO] Center for Environmental Excellence Web site: http://environment.transportation.org/environmental_issues/historic_cultural).

The first step is to determine whether the proposed project has the potential to affect historic properties, and if so, to initiate consultation with the State Historic Preservation Office (HPO) and other consulting parties.

The second step involves identifying historic properties (including archaeological sites) within the project's Area of Potential Effects (APE). The APE is the area in which a project may directly or indirectly cause changes in the character or use of historic properties, if such properties exist.

Step three is the evaluation of the proposed project's effects on properties in the APE that are on or determined eligible for listing on the NRHP. The following findings can be made:

- **No Effect:** There would be no effect, neither adverse nor beneficial, on historic properties.
- **No Adverse Effect:** There would be an effect, but it is determined that the effect would not compromise those characteristics that qualify the property for listing on the NRHP.
- **Adverse Effect:** There would be an effect that may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the NRHP in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling or association (36 CFR 800.5).

If there is an Adverse Effect on one or more historic properties, the fourth step must be completed, which involves working with consulting parties to resolve the adverse effects on the historic property(ies). Resolution could include redesigning the project to avoid or minimize impacts to the property(ies) or providing mitigation for the adverse effects.

5.2 HISTORIC ARCHITECTURAL RESOURCES

This section summarizes the historic architectural resource survey completed for the project, and the project's effects on these resources. The details of the survey are included in the *Phase II Architectural Resources Survey Report for the Gaston East-West Connector* (Mattson, Alexander and Associates, Inc., February 2008), incorporated by reference and available on the NCTA Web site (www.ncturnpike.org/projects/gaston).

5.2.1 HISTORIC ARCHITECTURAL RESOURCES IN THE PROJECT STUDY AREA

5.2.1.1 Historic Architectural Survey Methodology

The intensive level historic architectural survey for the project was conducted in accordance with Section 106 of the NHPA of 1966, as amended. The survey also followed guidelines set forth in *Section 106 Procedures and Guidelines* (NCDOT, October 2003).

The goals of the historic architectural survey were to determine the APE for the area, identify all resources 45 years of age or older within the APE, and determine the eligibility of these resources for listing on the NRHP. A threshold of 45 years was chosen to include resources that may become 50 years old prior to completion of the EIS process.

Background research and field surveys were conducted. Background research included searches of architectural survey files at the Charlotte-Mecklenburg Historic Landmarks Commission (Charlotte), the Gaston County Historic Preservation Commission (Gastonia), and the Historic Preservation Office (Raleigh). Local historians, property owners, planners, governmental agencies, and historic preservation specialists were also contacted to gain an understanding of specific resources in the area.

Field surveys were conducted between April 2006 and October 2007, and one hundred percent of the APE was surveyed. As shown on **Figure 5-1**, the APE extends beyond the DSA corridor boundaries and is about 22 miles long and one to three miles wide, with an area of approximately 31,600 acres. It encompasses areas of both direct and indirect effects that may result from the proposed project, including possible takings, alterations to historic view sheds, and the introduction of noise elements.

5.2.1.2 Historic Architectural Survey Findings

A total of 182 resources in the APE were identified as being at least 45 years of age. Two of these resources are currently listed on the NRHP, and two properties (a rural historic district and a bridge) have previously been determined eligible for the NRHP. In addition, 25 properties warranted intensive evaluation, of which fourteen were determined eligible for listing on the NRHP. Concurrence forms from the HPO regarding eligibility are included in **Appendix A-2**.

Historic Architectural Resources
There are eighteen historic architectural resources listed on or eligible for the NRHP in the project's APE.

Table 5-1 and **Figure 5-1** present the historic architectural resources in the APE that are listed on or eligible for listing on the NRHP. **Figures 2-9(a-ii)** show the boundaries of the historic architectural resources in more detail. **Section 5.1** describes the eligibility criteria.

TABLE 5-1: Historic Architectural Resources in the Area of Potential Effects

Property Name	Site Number	Approximate Size (Acres)	Eligibility Determination	Eligibility Criterion
Wolfe Family Dairy Farm	GS 1327	257	Eligible	A and C
Pisgah Associate Reformed Presbyterian Church	GS 00547	2	Eligible	C and Criteria Consideration A*
Jake Long Dairy Barn	GS 1320	<1	Eligible	A and C
William Wilson House	GS 00198	1	Eligible	C
William Alexander Falls House	GS 00169	6	Eligible	C
Mendenhall-Grissom House	GS 00173	13	Eligible	A and C
Stowe-Caldwell-Lowery House	GS 00179	2	Eligible	C
William Clarence Wilson House	GS 00341	1	Eligible	C
JBF Riddle House	GS 00337	2	Eligible	C
Harrison Family Dairy Farm	GS 1322	80	Eligible	A
William N. Craig Farmstead	GS 00320	19	On NRHP	C
Thomas Allison House	GS 00316	4	Eligible	C
Dillard-Falls House	GS 1323	3	Eligible	C
Bridge No. 350022	Pending	Bridge Footprint	Previously Determined Eligible	C
Byrum-Croft House	MK 2841	5	Eligible	C
Steele Creek Presbyterian Church and Cemetery	MK 01377	20	On NRHP	C and Criteria Consideration A*
Steele Creek Presbyterian Church Manse	MK 1378	7	Eligible	C
Shopton Rural Historic District	--	16	Previously Determined Eligible	A and C

Source: April 21, 2008 Eligibility Meeting – HPO, FHWA, NCTA, and NCDOT.

Notes: Properties are listed generally from west to east. * Criteria Consideration A for religious properties

The following are brief descriptions of each of the properties currently listed on or determined eligible for listing on the NRHP. All photos are from the *Phase II Architectural Resources Survey Report for the Gaston East-West Connector* (Mattson, Alexander and Associates, Inc., February 2008).

Wolfe Family Dairy Farm (GS 1327). This site is located northwest of the Edgewood Road interchange at I-85. The Wolfe Family Dairy Farm was established in the 1890s by Beaugard Jefferson (BJ) Wolfe. The property currently encompasses 257 acres of fields, woodland, and a complex of farm buildings, most of which have been vacant since the 1960s. Examples of early twentieth century small to middling dairy farms in Gaston County are increasingly rare. The farm is eligible for listing on the NRHP under Criterion A for agriculture and under Criterion C for architecture.



Wolfe Family Dairy Farm



Pisgah ARP Church

Pisgah Associate Reformed Presbyterian Church (GS 00547). The Pisgah Associate Reformed Presbyterian (ARP) Church is a well-preserved, brick, post-World War II, Gothic Revival church. The site consists of the church building, manse, educational building, family outreach center, and Boy Scout Hut situated on an expansive, tree-shaded property on the north side of Linwood Road west of Carson Road. The church cemetery is located on the south side of the road. Pisgah ARP Church is eligible for listing on the NRHP under Criterion C for architecture and meets Criteria Consideration A as a religious property.

Jake Long Dairy Barn (GS 1320). The Jake Long Dairy Barn, located west of Camp Rotary Road on Barn View Road, is eligible for listing on the NRHP under Criterion A for agriculture and under Criterion C for architecture. The well-preserved barn illustrates the rise of dairy farming in Gaston County. During the early twentieth century, small dairy farms arose throughout the county to play an important role in the local agricultural economy. The barn represents a popular national type promoted by agricultural extension services and farming journals.



Jake Long Dairy Barn and Silo



William Wilson House

William Wilson House (GS 00198). The William Wilson House is located on the south side of Camp Rotary Road, just west of where Camp Rotary Road intersects with Jake Long Road. A rare and intact survivor from the antebellum period, the Wilson House is eligible for listing on the NRHP under Criterion C for architecture as one of the finest Greek Revival dwellings remaining in rural Gaston County. Dating to the period before the Civil War, both the frame smokehouse and frame kitchen are considered contributing resources.



William Alexander Falls House

William Alexander Falls House (GS 00169). The William Alexander Falls House is located on the east side of Old Providence Road, approximately 0.5 miles down an unpaved road in the Crowders Creek vicinity of Gaston County. An intact expression of a traditional, post-Civil War I-house in Gaston County, the William Alexander Falls House is eligible for listing on the NRHP under Criterion C for architecture. The house is a well-preserved and late example of a hall and parlor I-house. I-houses are at least two rooms in length, one room deep, and two stories tall, often with a rear wing.

Mendenhall-Grissom House (GS 00173). The Mendenhall-Grissom House is located at the end of Grissom Road, a one-mile long unpaved road that ties into Crowders Creek Road. The Mendenhall-Grissom House is eligible for listing on the NRHP under Criterion A for agriculture and under Criterion C for architecture. Although no agricultural land remains on this tract, the farm complex has agricultural significance, illustrating the middling diversified farms that predominated in Gaston County during the late nineteenth and early twentieth centuries but that are now unusual. The barn, corncrib, and kitchen are especially fine surviving examples of workaday log buildings in the county. The early twentieth century, frame cotton house is an intact example of another locally rare building type.



Mendenhall-Grissom House

Stowe-Caldwell-Lowery House (GS 00179). The Stowe-Caldwell-Lowery House, located on the east side of CR Wood Road, is eligible for listing on the NRHP under Criterion C for architecture. The house ranks among the county's more notable and exceptionally rare farmhouses from the early nineteenth century.



Stowe-Caldwell-Lowery House



Barn at the William Clarence Wilson House

William Clarence Wilson House (GS 00341). The William Clarence Wilson House is located on the east side of Bud Wilson Road, one mile south of NC 274 (Union Road). About 1887, Clarence Wilson constructed the two-story farmhouse, and in the ensuing decades established a sizable cotton farm that included an array of outbuildings. The barn and corncrib are the only outbuildings to remain. The William Clarence Wilson House (including the barn and corncrib) is eligible for listing on the NRHP under Criterion C for architecture.

JBF Riddle House (GS 00337). The JBF Riddle House is located on the west side of Patrick Road, 0.2 mile south of NC 274 (Union Road). The JBF Riddle House is eligible for listing on the NRHP under Criterion C for architecture. This substantial and well-preserved farmhouse is among the finest regional interpretations of the nationally popular picturesque styles.



JBF Riddle House



Harrison Family Dairy Farm

Harrison Family Dairy Farm (GS 1322). The Harrison Family Dairy Farm is located on the west side of NC 274 (Union Road), approximately 0.5 miles south of Union-New Hope Road. It is one of the county's most intact dairy farms of the early twentieth century. The property includes a circa 1910 farmhouse, a collection of outbuildings mainly devoted to the family's mid-twentieth century commercial dairy operation, and adjoining 80 acres of fields and pastures. The property is eligible for listing on the NRHP under Criterion A for agriculture as a rare surviving, twentieth century dairy farm in Gaston County.

William N. Craig Farmstead (GS 00320). The Craig Farmstead is listed on the National Register under Criterion C for architecture. The farm complex and surrounding pasture and woodland encompass approximately nineteen acres on the south side of Union-New Hope Road (SR 2435) east of NC 274 (Union Road). The 1880s farmhouse is exemplary of the Italianate I-houses erected for South Point Township farmers after the Civil War and is a fine example of the work of local builder, Lawson Henderson Stowe.



William N. Craig Farmstead



Thomas Allison House

Thomas Allison House (GS 00316). The Thomas Allison House is located on the west side of NC 279 (South New Hope Road), 0.5 miles south of Union New Hope Road. It is an especially well-preserved, rural example of a Queen Anne cottage in Gaston County that was probably erected in the 1890s for farmer Thomas Allison. The Thomas Allison House is eligible for listing on the NRHP under Criterion C for architecture.

Dillard-Falls House (GS 1323). The Dillard-Falls House is located on the west side of NC 279 (South New Hope Road), approximately 1.5 miles south of Union New Hope Road. Dating to the 1880s, this traditional, two-story, single-pile dwelling remains substantially intact. It is a fine example of the traditional I-house form in Gaston County, and is eligible for listing on the National Register under Criterion C for architecture.



Dillard-Falls House



Bridge No. 350022

Bridge No. 350022. Built in 1956, this steel deck truss bridge (448 feet long) carries NC 273 (Southpoint Road) over the Duke Energy Allen Steam Plant discharge canal south of Belmont. In 1995, the bridge was determined eligible for the NRHP under Criterion C for architecture as the only example of a cantilevered truss bridge. The span was re-evaluated in 2003 and is unchanged since its determination of eligibility. The NRHP boundaries are limited to the footprint of the bridge superstructure and substructure.

Byrum-Croft House (MK 2841). This substantial, frame bungalow occupies a large, tree-shaded lot on the west side of Steele Creek Road in the Steele Creek Community of Mecklenburg County. The circa 1931 Byrum-Croft House is one of the few bungalows remaining in rural Mecklenburg County. It is eligible for listing on the National Register under Criterion C for architecture. Still in well-preserved condition, the house is a testament to the prosperity and relative urbanity of the Steele Creek community, the center of which is the Steele Creek Presbyterian Church.



Byrum-Croft House

Steele Creek Presbyterian Church and Cemetery (MK 01377). Scots settlers founded Steele Creek Presbyterian Church in the 1760s, and the church remains the focus of this rural community. The imposing, red brick, Gothic Revival church (1889) is one of the finer examples of late nineteenth century church architecture in rural Mecklenburg County. The church, located at 7404 Steele Creek Road, is also significant for its rock-walled cemetery which contains notable headstones that date to the eighteenth century. The church and cemetery are listed on the NRHP and remain eligible under Criterion A for exploration and settlement, under Criterion C for art and architecture, and meet Criteria Consideration A for religious properties.



Steele Creek Presbyterian Church

Steele Creek Presbyterian Church Manse (MK 1378). Steele Creek Presbyterian Church Manse is located on Steele Creek Road south of the Steele Creek Presbyterian Church. The Manse stands as one of the more important surviving architectural resources in the rural Steele Creek community, and the finest example of the Colonial Revival style. The manse is eligible for listing on the NRHP under Criterion C for architecture and meets Criteria Consideration A because of its architectural significance.



Steele Creek Presbyterian Church Manse

Shopton Rural Historic District. The Shopton Rural Historic District, located on the west side of Steele Creek Road (NC 160) east of I-485, comprises a cluster of historic buildings that took shape around the rural hamlet of Shopton during the nineteenth and early twentieth centuries. The community developed along Steele Creek Road, a nineteenth century stage route that linked Salisbury, North Carolina, with Camden, South Carolina. The Shopton Rural Historic District was previously determined eligible for listing on the NRHP under Criterion A for commerce and under Criterion C for architecture.



Shopton Rural Historic District

5.2.2 IMPACTS TO HISTORIC ARCHITECTURAL RESOURCES

Meetings were held with the HPO on April 21, 2008 and July 21, 2008 to determine NRHP-eligible properties and to reach concurrence on the assessment of effects to listed and eligible properties from the DSAs. Concurrence forms are included in **Appendix A-2**. Effects were determined based on the preliminary engineering designs for each DSA. **Table 5-2** presents the effects determination for each listed and eligible property, as well as any conditions placed on the DSAs to achieve a No Adverse Effect determination.

TABLE 5-2: Effects to Historic Architectural Resources

Property Name	Site No.	Size (Acres)	Effects Determination*	Additional Notes
Wolfe Family Dairy Farm	GS 1327	~257	No Effect – DSAs 4, 5, 9, 22, 23, 27 No Adverse Effect – DSAs 58, 64, 68, 76, 77, 81	No Adverse Effect for DSAs (58, 64, 68, 76, 77, and 81) that use the western interchange at I-85 (Segment H1A). Conditions include plantings at right of way, replace fencing, and steepen slopes to minimize footprint on site.
Pisgah ARP Church	GS 00547	~2	No Effect	--
Jake Long Dairy Barn	GS 1320	< 1	No Effect	--
William Wilson House	GS 00198	~ 1	No Effect	--
William Alexander Falls House	GS 00169	~6	No Effect	--
Mendenhall-Grissom House	GS 00173	~13	No Effect	--
Stowe-Caldwell-Lowery House	GS 00179	~2	No Effect	--
William Clarence Wilson House	GS 00341	~1	No Effect – DSAs 4, 5, 9, 22, 23, 27, 58, 76, 77, 81 No Adverse Effect – DSAs 64, 68	For DSAs using Segment J1c (DSAs 64 and 68), ensure full access to the property is maintained.
JBF Riddle House	GS 00337	~2	No Effect – DSAs 4, 22, 58, 76 No Adverse Effect – DSAs 64, 68 No Adverse Effect – DSAs 5, 9, 23, 27, 77, 81	No Effect for DSAs using Segments J5a (DSAs 4, 22, 58, 76) No Adverse Effect for DSAs using Segment J1d (DSAs 64 and 68) No Adverse Effect for DSAs using Segment JX4 (DSAs 5, 9, 23, 27, 77, and 81) provided the shoulder width and ditch slope do not result in taking of property either by fee simple or permanent easement.
Harrison Family Dairy Farm	GS 1322	~80	No Effect – DSAs 4, 22, 58, 76 No Adverse Effect – DSAs 5, 9, 23, 27, 64, 68, 77, 81	For DSAs using Segment J1f (DSAs 5, 9, 23, 27, 64, 68, 77 and 81), ensure full access to the property is maintained.
William N. Craig Farmstead	GS 00320	~19	No Effect	--

TABLE 5-2: Effects to Historic Architectural Resources

Property Name	Site No.	Size (Acres)	Effects Determination*	Additional Notes
Thomas Allison House	GS 00316	~4	No Effect – DSAs 5, 9, 23, 27, 64, 68, 77, 81 No Adverse Effect – DSAs 4, 22, 58, 76	For DSAs using Segment K2A (DSAs 4, 22, 58, 76), avoid drainage encroachment (either by fee simple or permanent easement) into southeast corner of site to maintain a No Adverse Effect determination.
Dillard-Falls House	GS 1323	~3	No Effect	--
Bridge No. 350022	Pending	Bridge footprint	No Effect	--
Byrum-Croft House	MK 2841	~5	No Effect	--
Steele Creek Presbyterian Church and Cemetery	MK 01377	~20	No Effect	--
Steele Creek Presbyterian Church Manse	MK 1378	~7	No Effect	--
Shopton Rural Historic District	--	~16	No Effect	--

Source: April 21, 2008 Effects Meeting – HPO, FHWA, NCTA, and NCDOT.

* Effects determination based upon Preliminary Engineering Designs. Unless otherwise noted, the effects determinations apply to all Detailed Study Alternatives

As listed in **Table 5-2**, none of the DSAs would result in an Adverse Effect to a historic property listed on or eligible for listing on the NRHP. During final design of the Preferred Alternative, the designs will be reviewed to ensure the applicable conditions listed in **Table 5-2** are met to maintain the No Adverse Effect determinations.

Each property with a No Adverse Effect determination is discussed briefly below. **Appendix L** contains figures showing each historic resource receiving a No Adverse Effect determination in relation to the DSAs’ preliminary engineering designs on aerial photography.

Wolfe Family Dairy Farm. DSAs that use Corridor Segment H1A (DSAs 58, 64, 68, 76, 77, and 81) would directly impact the southern portion of this 257-acre site, requiring approximately 29 acres for right of way (**Figure 2-9a** and **Appendix L** [Figure 1]). As shown in the figures, the contributing farm houses and outbuildings are located in the northern portion of the site. A determination of No Adverse Effect was made for DSAs 58, 64, 68, 76, 77, and 81, provided that measures to minimize the construction footprint and visually screen the project from the site are incorporated into the designs if one of these DSAs is selected as the Preferred Alternative.

These measures include steepening the slopes for the interchange ramps as much as possible to minimize the needed right of way, installing plantings along the right of way in areas adjacent to the fields on the farm site, and providing adequate fencing along the right of way through the property (taking into consideration cattle on the property).

As noted above, the direct and proximity impacts of DSA s that use Corridor Segment H1A (DSAs 58, 64, 68, 76, 77, and 81) would not cause an Adverse Effect on the Wolfe Family Dairy Farm. However, it should be noted that there are other considerations that make these alternatives potentially less desirable from the standpoint of protecting the Wolfe Family Dairy Farm.

As discussed in Chapter 1 (Sections 1.6.2.1 and 1.8.2.2), the GUAMPO 2030 LRTP includes the US 321 Bypass, which is shown as extending north from I-85 to US 321. The US 321 Bypass is a separate independent project for which no funding sources have been identified and there are no plans to begin studies at this time. It is uncertain whether or when the project would be constructed. However, if the US 321 Bypass is implemented at some future time, the most likely southern terminus would be the northern terminus of the Gaston East-West Connector at I-85.

If a DSA that includes Corridor Segment H1A is implemented (DSA 58, 64, 68, 76, 77, or 81), then the US 321 Bypass, if constructed, would be extended directly through the Wolfe Family Dairy Farm. While it may be possible to avoid impacts to the main structures on the site, the construction of the US 321 Bypass would require additional substantial right of way from the site. By contrast, DSAs that use Corridor Segment H2A (DSAs 4, 5, 9, 22, 23, and 27) would be located to the east of the Wolfe Family Dairy Farm. Therefore, if one of these DSAs is selected, it is likely that the US 321 Bypass, if constructed, would be located to the east of the Wolfe Family Dairy Farm and would entirely avoid the site.

William Clarence Wilson House. The preliminary engineering designs for DSAs that use Corridor Segment J1c (DSAs 64 and 68) would be adjacent to this site, and would affect the visual setting (Figure 2-9t and Appendix L [Figure 2]). The nearest contributing structures are approximately 95 feet from the proposed right of way. No property would be acquired from the site. The effect determination is No Adverse Effect, provided that full access is maintained to the property, as is currently shown in the preliminary engineering designs.

JBF Riddle House. The preliminary engineering designs for DSAs that use Corridor Segment JX4 (DSAs 5, 9, 23, 27, 77, and 81) or Corridor Segment J1d (DSAs 64 and 68) would be adjacent to this site, and would affect the visual setting (Figure 2-9t and Appendix L [Figure 3a-b]). No property would be acquired from the site. The nearest contributing structures are approximately 95 feet from the proposed right of way. A reduced shoulder and an increased ditch slope are incorporated into the preliminary engineering designs for DSAs 5, 9, 23, 27, 77, and 81 to avoid the need to acquire property from the JBF Riddle House. With these conditions, the determination is No Adverse Effect.

Harrison Family Dairy Farm. The preliminary engineering designs for DSAs that use Corridor Segment J1f (DSAs 5, 9, 23, 27, 64, 68, 77, and 81) would be adjacent to this site, and would affect the visual setting (Figure 2-9v, Figure 2-9x, and Appendix L [Figure 4]). The nearest contributing structures are approximately 85 feet from the proposed right of way. No property would be acquired from the site and the effect determination is No Adverse Effect.

Thomas Allison House. The preliminary engineering designs for DSAs that use Corridor Segment K2A (DSAs 4, 22, 58, and 76) would be adjacent to this site, and would affect the visual setting (Figure 2-9y and Appendix L [Figure 5]). No property would be acquired from the site. The nearest contributing structures are approximately 70 feet from the proposed right of way. A reduced shoulder and an increased ditch slope are incorporated into the preliminary engineering designs for DSAs 4, 22, 58, and 76 to avoid the need to acquire land from this property.

5.3 ARCHAEOLOGICAL RESOURCES

This section summarizes the archaeological resources assessment prepared for the project. Details are documented in the *Archaeological Assessment of Detailed Study Alternatives for the*

Proposed Gaston East-West Connector (Coastal Carolina Research, Inc., April 2007), incorporated by reference. A letter from the HPO documenting concurrence with the Archaeological Assessment is included in **Appendix A-2**.

5.3.1 ARCHAEOLOGICAL RESOURCES IN THE PROJECT STUDY AREA

5.3.1.1 Archaeological Assessment Methodology

The archaeological assessment was conducted in compliance with Sections 106 and 110 of the NHPA of 1966, as amended; the Advisory Council on Historic Preservation's regulations for compliance with Section 106, codified as 36 CFR Part 800; and all appropriate state and federal regulations governing archaeological resources. The scope of the investigations was consistent with the *Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation* (US Department of the Interior, September 1983).

The APE for archaeological resources was defined as the area within the DSA corridor boundaries.

Background Research. Research and/or interviews were conducted at the Office of State Archaeology, North Carolina State Archives, Gaston-Lincoln Regional Library, Hackney Library at Barton College, and the Schiele Museum of Natural History (interview with Dr. J. Alan May, Curator of Archaeology).

Windshield Survey. A windshield survey of portions of the DSAs accessible by roads was undertaken to assess current conditions and to note disturbed areas having diminished potential for containing archaeological sites.

Geomorphological (Landform) Survey. A geomorphological survey was conducted to assess the general potential for river sediment deposits that may contain intact, buried Native American sites. This involved both a review of the published soil surveys and other pertinent geological information, as well as field examinations of locations where the DSAs intersected mapped (or suspected) deep deposits. The floodplains and terraces of the Catawba River and the South Fork Catawba River have been inundated by modern damming, but the broad floodplains of Crowders Creek and Catawba Creek were examined as areas with potential for site burial.

5.3.1.2 Archaeological Assessment Findings

Known Archaeological Sites. There are 33 previously recorded sites within or immediately adjacent to the DSAs. Most of these sites have limited potential for additional significant information due to low artifact densities and/or loss of integrity through agriculture and erosion.

A small number of sites (31GS0184, 31GS0210, 31GS0211, 31GS0212, 31GS0085, 31GS0144, 31GS0146, and 31GS0058), however, were recommended for additional work or monitoring, and one site was recommended as potentially eligible for the NRHP (31MK0553). These are listed in **Table 5-3**. Because of the findings of previous work, the typically low artifact densities, and loss of integrity through agriculture and erosion, it is unlikely that any of these known sites would merit preservation in place or be extraordinarily complex and costly to mitigate.

TABLE 5-3: Previously Recorded Archaeological Sites Where Further Work Was Recommended

Site Number	USGS Quadrangle Map	Site Type*	Recommendations from Previous Studies	Corridor Segment	DSAs
31GS0184	Bessemer City	Early Archaic	Monitoring	H1A	58, 64, 68, 76, 77, 81
31GS0210	Gastonia South	Late Paleoindian and Early Archaic	No further work; further work if threatened	H3	4, 5, 9
31GS0211	Gastonia South	Early Woodland	No further work; further work if threatened	H3	4, 5, 9
31GS0212	Gastonia South	Unknown Precontact	No further work; further work if threatened	H3	4, 5, 9
31GS0085	Gastonia South	Early Archaic and Early Woodland	Further work recommended	J1c	64, 68
31GS0144	Gastonia South	Unknown Precontact	No further work; further work if threatened	J1c	64, 68
31GS0146	Gastonia South	Unknown Precontact	No further work; further work if threatened	J1c	64, 68
31GS0058	Belmont	Late Archaic and Early Woodland	Further work recommended	K2A	4, 22, 58, 76
31MK0553	Charlotte West	18th Century	Further work recommended (potentially eligible for NRHP)	K3C/K4A East of I-485	All DSAs

Source: *Archaeological Assessment of Detailed Study Alternatives for the Proposed Gaston East-West Connector* (Coastal Carolina Research, Inc., April 2007).

Notes: These sites are within or immediately adjacent to the DSA corridors. Sites listed from west to east. * Late Paleoindian is 9,000-8,000 BC, Early Archaic is 8,000-6,000 BC, Late Archaic is 3,000-1,000 BC, Early Woodland is 1,000 BC to AD 1650, Precontact is before European contact, approximately pre-1650.

Dr. J. Alan May of the Schiele Museum of Natural History in Gastonia has conducted numerous surveys within Gaston County and, as part of the Carolina Piedmont Archaeological Project, has developed a model for precontact (before approximately AD 1650, when contact with Europeans occurred) archaeological site potential and site locations. As summarized in a previous study by Dr. May (*An Archaeological Reconnaissance of the Proposed Misty Waters Residential Development, Belmont, Gaston County, North Carolina*, 2001, pg 15), the model suggests the following as archaeologically sensitive areas:

1. terraces adjacent to higher order (larger) stream confluences (locations where streams join);
2. terraces and the bases of ridges with slopes of less than 20 degrees, and ridge tops overlooking stream confluences; and
3. ridge bases adjacent to first and second order streams.

The model also suggests that floodplains may contain intact, deeply buried sites. Larger sites, such as Woodland villages, are expected in valleys with larger floodplains. Specific areas of high probability that overlap with the DSAs include the portion of the Crowders Creek drainage in the southern half of Gaston County and the South Fork Catawba River valley.

Known Gold Mines. There are several known and possible gold mines located in the general project vicinity. Many mines were opened in Gaston and Lincoln Counties in the 1800s, but only minor production was recorded (*Gold in North Carolina*, Carpenter, 1993). There are eight

known possible gold mines located within the DSAs. These are shown in **Figure 5-1**. Six of these mines are located on the western end of the project, in Corridor Segments H1A (3 mines), Corridor Segment H1C (1 mine), Corridor Segment H2B (2 mines). One other mine is located in Corridor Segment K3A east of NC 279 (South New Hope Road).

The eighth mine is recorded as an archaeological site, 31MK1054, located near the northern edge of Corridor Segment K3C, east of Beaverdam Creek. This site consisted of two roughly rectangular pits, and it was determined not eligible for the NRHP. Any additional archaeological sites within the DSAs associated with gold mining activity would most likely consist of pits similar to Site 31MK1054.

Archaeological Site Noted During the Project's Public Involvement Process. During the August 2008 Citizens Informational Workshops (**Section 9.1**), a citizen provided information about a potentially historic textile mill site on his property. The property is located on Gaither Road, on the east bank of the South Fork Catawba River, and is in the center of Corridor Segment K3A (DSAs 9, 27, 68, and 81). In September 2008, the NCDOT Archaeological Unit visited the site and interviewed the property owner. Initial research suggests the relic stone foundation found on the property likely is associated with the Stowe's Mill. The Office of State Archaeology was consulted in November 2008, and the site is considered unassessed for purposes of eligibility for listing on the NRHP. However, based on the research conducted, it is not likely this site would require preservation in place (Letter dated December 12, 2008 in **Appendix A-2**).

Windshield Survey. The windshield survey of the DSAs indicated substantial areas of major disturbance involving commercial or municipal development in the following locations: the northern terminus near I-85, areas along US 321, areas between NC 273 and the Catawba River, areas along I-485, and areas near the Charlotte-Douglas International Airport at the eastern terminus.

Geomorphological (Landform) Survey. The potential for intact buried Native American sites ranges from high to low. The highest potential is based upon the presence of well-drained alluvial soils (soils deposited by water flow) with evidence of a possible topsoil layer buried beneath these soils. This situation appears to occur in one location: a relatively modest floodplain area at the northernmost crossing of Catawba Creek (Corridor Segment K2A in DSAs 4, 22, 58, and 76). The southernmost crossing of Crowders Creek (Corridor Segment J1A in DSAs 58, 64, and 68) contains an area of moderate to high potential based upon a possible buried topsoil layer on a smaller and narrower floodplain. No sites were detected at these locations during the initial survey, but might be encountered during more intensive survey.

Summary of Archaeological Survey Findings. Sites from all of the major prehistoric and historic periods are represented in the Project Study Area, and their locations generally conform to the Carolina Piedmont Archaeological Project settlement model developed by Dr. May (2001). Sites are located in a range of settings from upland ridges to terraces and floodplains.

Only one known site that dates to the time of early European explorations is located within the Project Study Area. This Native American habitation site with burials, Site 31GS55 (or the Crowders Creek site), is located on a broad floodplain of Crowders Creek in an area south of the DSAs.

Eighteenth and twentieth century sites are numerous. Most are located in upland settings. Nineteenth- to twentieth-century gold mines represent a special type of site that is fairly common

in the Project Study Area. Several have been recorded as archaeological sites. Known but unrecorded gold mines are also present in the Project Study Area and within the DSAs.

Other types of industrial sites, such as a likely middle to late 19th century textile mill component, have been noted within the DSAs. Although iron furnaces are common in the vicinity of the Kings Mountain Belt and Bessemer City, only two are historically known in the Project Study Area and these are located outside the DSAs.

5.3.2 POTENTIAL IMPACTS TO ARCHAEOLOGICAL RESOURCES

As noted above, it is unlikely that any of the 33 known archaeological sites within or adjacent to the DSAs warrant preservation in place. However, there is the potential for impacts to archaeological sites that have not been previously identified. The archaeological resource assessment included an evaluation of the potential for site types that would merit preservation in place or would require costly and complex excavation. This evaluation was performed for each DSA using the compiled data and topographic information.

Based upon this information, **Table 5-4** presents a ranking of the DSAs. The results indicate that DSAs 4, 22, 58, and 76 have a high potential for archaeological sites that would merit preservation in place or costly and complex excavation due to the location of the Catawba Creek crossing. DSAs 23 and 27 have the lowest potential.

TABLE 5-4: Ranking of DSAs by Overall Potential to Impact Archaeological Resources

Overall Potential for Archaeological Sites Requiring Preservation in Place or Costly and Complex Excavation	DSAs
High	4, 22, 58, 76
Moderate to High	64, 68
Moderate	5, 9, 77, 81
Low	23, 27

Source: *Archaeological Assessment of Detailed Study Alternatives for the Proposed Gaston East-West Connector* (Coastal Carolina Research, Inc., April 2007).

5.3.3 MITIGATION FOR POTENTIAL IMPACTS TO ARCHAEOLOGICAL RESOURCES

Regardless of ranking, the Preferred Alternative, once defined, is recommended for intensive survey to determine if archaeological sites eligible for listing on the NRHP are present. The results of the intensive archaeological survey will be reported in the Final EIS.

Regarding the Stowe Mill site, if DSAs 9, 27, 68, or 81 are selected as the Preferred Alternative, the Office of State Archaeology recommends that additional work be conducted on the site, with an emphasis on archival research. It is not likely this site would warrant preservation in place.

Further geotechnical studies and surveys will be conducted during final design of the Preferred Alternative, and will include identification of abandoned mines in the area that could affect construction activities and the safety of construction workers. It is expected that the presence of identified mines can be accommodated in the design and construction of the roadway and would not preclude construction of any of the DSAs.

5.4 SECTION 4(f) AND SECTION 6(f) RESOURCES

Section 4(f) and Section 6(f) resources are afforded special protections from federal actions. The names “Section 4(f) resources” and “Section 6(f) resources” are derived from the laws which establish these protections. This section provides information about Section 4(f) and 6(f) regulations, what Section 4(f) and 6(f) resources are present within the DSA corridors, and potential impacts to these resources.

5.4.1 REGULATIONS

Section 4(f) Resources. In general, under Section 4(f) of the US Department of Transportation Act of 1966 (49 USC Section 303 and 23 CFR Part 774), the FHWA “may not approve the use of land from a significant publicly-owned park, recreation area, or wildlife and waterfowl refuge, or any significant historic site unless a determination is made that: (i) There is no feasible and prudent alternative to the use of land from the property; and (ii) The action includes all possible planning to minimize harm to the property resulting from such use.” There is an exception for *de minimis* impacts as discussed below. A “use” under Section 4(f) can be any of the following:

- a Section 4(f) property is permanently incorporated into the transportation project;
- a Section 4(f) property is temporarily occupied in a way that is adverse to the property’s purpose; or
- a Section 4(f) property is constructively used when “the transportation project does not incorporate land from a Section 4(f) property, but the project’s proximity impacts are so severe that the protected activities, features, or attributes that qualify the property for protection under Section 4(f) are substantially impaired. Substantial impairment occurs only when the protected activities, features, or attributes of the property are substantially diminished.” (23 CFR Section 774.15(a)).

Section 4(f) Resources

Section 4(f) resources include publicly-owned parks, recreation areas, and wildlife and waterfowl refuges as well as significant historic sites under public or private ownership. The Department of Transportation Act regulates the taking of these resources for federally-funded transportation projects.

Federal law (SAFETEA-LU Section 6009(a)) amended Section 4(f) to simplify the processing and approval of projects that have only *de minimis* impacts on lands protected by Section 4(f). FHWA subsequently issued guidance for making findings of *de minimis* impact and also amended its Section 4(f) regulations to provide for these findings (24 CFR 774.3(b), 774.5(b), 774.17) (*Guidance for Determining De Minimis Impacts for Section 4(f) Resources*, FHWA Web site: www.fhwa.dot.gov/hep/qasdeminimis.htm).

De minimis impacts on publicly-owned parks, recreation areas, and wildlife and waterfowl refuges are defined as those that do not "adversely affect the activities, features and attributes" of the Section 4(f) resource (FHWA Web site: www.fhwa.dot.gov/hep/qasdeminimis.htm). Regarding historic sites, a conclusion that impacts are *de minimis* requires a determination of either “No Adverse Effect” or “No Historic Properties Affected” in accordance with Section 106 of the NHPA.

Under the new provisions, once the US Department of Transportation (USDOT) determines that a transportation use of Section 4(f) property results in a *de minimis* impact, analysis of avoidance alternatives is not required for that property and the Section 4(f) evaluation process for that property is complete. The determination of *de minimis* impacts requires concurrence from the

officials with jurisdiction over the park, recreation area, or wildlife or waterfowl refuge; or in the case of a historic resource, concurrence from the SHPO. If the Advisory Council on Historic Preservation (ACHP) is participating in the consultation, the ACHP's concurrence also is required for *de minimis* findings for historic properties. All avoidance, minimization, mitigation, or enhancement measures that are required to be implemented as a condition of approval of the transportation program or project are incorporated as a part of the project (FHWA Web site: www.fhwa.dot.gov/hep/guidedeminimis.htm).

Section 6(f) Resources. The Land and Water Conservation Fund Act of 1965 established funding to provide matching grant assistance to states and local governments for the planning, acquisition, and development of outdoor public recreation sites and facilities. Section 6(f) of the Act prohibits the conversion of property acquired or developed with these grants to a non-recreational purpose without the approval of the Department of the Interior's National Park Service (NPS). Section 6(f) also requires that any applicable land converted to non-recreational uses be replaced with land of equal or greater value, location, and usefulness (NPS Web site: www.nps.gov/nrcr/programs/lwcf/index.htm).

5.4.2 RESOURCES IN THE PROJECT STUDY AREA

Section 4(f) Resources. There are three publicly-owned parks and eighteen significant historic sites located in or near the DSAs that are protected by Section 4(f). There are no publicly-owned recreation areas, wildlife refuges, or waterfowl refuges in or near the DSAs.

Publicly-owned parks include Crowders Mountain State Park and Gaston County's Park at Forestview High School (**Section 3.2.2.3** and **Figure 3-7a-b**). These parks are Section 4(f) resources because they are publicly-owned and open for public access. Mecklenburg County's future Berewick District Park also is considered a Section 4(f) resource because it is a publicly owned and designated as a future park (**Section 3.2.2.3** and **Figure 3-7b**).

There are eighteen historic architectural resources listed on or eligible for listing on the National Register of Historic Places (NRHP) located in the APE (**Section 5.2.1.2** and **Figure 5-1**). Because they are listed on or eligible for listing on the NRHP, they are considered significant historic sites under Section 4(f).

Section 6(f) Resources. Crowders Mountain State Park is the only Section 6(f) resource located near the DSAs (NPS Web site: <http://waso-lwcf.nrcr.nps.gov/public/index.cfm>).

5.4.3 IMPACTS TO SECTION 4(f) AND SECTION 6(f) RESOURCES

5.4.3.1 Section 4(f) Resources

Appendix L contains figures showing each Section 4(f) resource in relation to the DSAs' preliminary engineering designs on aerial photography.

Crowders Mountain State Park. Crowders Mountain State Park is shown in relation to the DSAs in **Figure 2-9d**, **Figure 2-9f**, and **Appendix L** (Figure 6). None of the DSAs would permanently or temporarily use land from Crowders Mountain State Park, a natural, forested park that offers hiking and other nature-related activities. There would be no use of the park.

Potential indirect impacts to Crowders Mountain State Park related to views and to noise were considered. The nearest corridor is Corridor Segment H1A (DSAs 58, 64, 68, 76, 77, and 81), located about one-half mile from the park boundary. Several overlooks and trails in the park have the potential for intermittent views of the proposed roadway when looking east. However, the existing viewshed in this direction includes a developed suburban and urban landscape and significant impacts to views were not identified (**Section 4.5.3**). A traffic noise assessment prepared for the project (*Final Traffic Noise Technical Memorandum for the Gaston East-West Connector*, PBS&J, July 2008, incorporated by reference and available on the NCTA Web site: www.ncturnpike.org/projects/gaston) concluded there would be no significant noise impacts to the park (**Section 4.1.5.2**).

Based upon the information above, the potential indirect impacts to Crowders Mountain State Park would not impair the function and use of the park and would not constitute a use of the resource.

Park at Forestview High School. The Park at Forestview High School is shown in relation to the DSAs in **Figure 2-9u** and **Appendix L** (Figure 7). DSAs that use Corridor Segment J5a propose to relocate NC 274 (Union Road) just south of Forestview High School and the Park at Forestview High School. The preliminary engineering design right of way for relocated Union Road would be approximately 180 feet south of the park boundary. The park would not be directly or indirectly impacted by any of the DSAs. There would be no use of the park.

Berewick District Park. All DSAs would involve a minor encroachment into the undeveloped parcels owned by Mecklenburg County and designated for future park use as Berewick District Park (**Figure 2-9hh** and **Appendix L** [Figure 8a-b]). DSAs that use Corridor Segment K3C (DSAs 4, 9, 22, 27, 58, 68, 76, and 81) would impact approximately 1.6 acres on the east end of the park, adjacent to I-485. DSAs that use Corridor Segment K4A (DSAs 5, 23, 64, and 77) would impact approximately 3.3 acres (2.1 acres on the east end of the park, adjacent to I-485, 0.6 acres from the northernmost parcel, and 0.6 acres on the southwest side of the property along Dixie River Road). These minor encroachments on the edges of the property owned by Mecklenburg County are not anticipated to impact access or any future planned uses.

At a meeting on April 28, 2008, the Mecklenburg County Park and Recreation Department stated that all DSAs would provide improved access to the Berewick District Park, which would be a benefit to the park. In a letter dated September 25, 2008 (**Appendix A-5**), the Mecklenburg County Park and Recreation Department stated that “Based upon the current preliminary engineering designs for the Detailed Study Alternative, this toll facility will not have an impact on the use, function, or development of the proposed park at this location. Furthermore, the impacted acreage is not identified as active or developable space on the adopted park master plan.” However, they would like to continue coordinating with the NCTA to ensure that, for the Preferred Alternative, right-of-way and construction limits within the property boundaries are minimized to the extent feasible. The NCTA will continue to coordinate with Mecklenburg County Park and Recreation Department during final design.

As described above, the Mecklenburg County Park and Recreation Department concurs that the estimated right of way needed under any of the DSAs would not adversely affect the activities, features, and attributes of Berewick District Park. It appears there are grounds for a finding of *de minimis* effect, and NCTA intends to seek a *de minimis* finding from FHWA. Section 4(f) property may be used where the FHWA determines that the use of the property, including any measure(s) to minimize harm (such as any avoidance, minimization, mitigation, or enhancement

measures) committed, will have a *de minimis* impact (as defined in 23 CFR 774.17) on the property. A *de minimis* impact determination under 23 CFR 774.3(b) subsumes the requirement for all possible planning to minimize harm by reducing impacts on the Section 4(f) property to a *de minimis* level (23 CFR 774.117(5)).

By publishing this Draft Environmental Impact Statement (Draft EIS), FHWA is requesting comments on the proposed finding of *de minimis* impact for the planned Berewick District Park. The final determination regarding this property will be included in the Final Environmental Impact Statement (Final EIS).

Historic Architectural Resources. Of the eighteen historic architectural resources in the APE, there are five historic architectural resources receiving a determination of No Adverse Effect from the HPO and FHWA, with conditions applied: Wolfe Family Dairy Farm, William Clarence Wilson House, JBF Riddle House, Harrison Family Dairy Farm, and Thomas Allison House (**Section 5.2.2** and **Appendix A-2**).

Acquisition of land from the Wolfe Family Dairy Farm site would be needed for the right of way proposed for Corridor Segment H1A (DSAs 58, 64, 68, 76, 77, and 81) at the project's interchange with I-85 (**Figure 2-9a**). DSAs 4, 5, 9, 22, 23, and 27 would not require any taking of property (either by fee simple acquisition or permanent easement) from the Wolfe Family Dairy Farm boundaries.

For the Wolfe Family Dairy Farm, approximately 29 acres from the property would be required to construct DSA 58, 64, 68, 76, 77, or 81. The permanent acquisition of property would not adversely impact the historic qualities of the farm as a result of the commitment to install plantings along the right of way, replace fencing, and incorporate steepened slopes on the loop ramp to minimize the project footprint on the site. With these conditions, a determination of No Adverse Effect was granted (**Appendix A-2**). The FHWA has determined that the impacts from DSAs 58, 64, 68, 76, 77, and 81 would constitute a *de minimis* effect, and therefore an analysis of avoidance alternatives is not required. If DSA 58, 64, 68, 76, 77, or 81 is selected as the Preferred Alternative, the FHWA intends to make a *de minimis* finding, and at that time the Section 4(f) process would be complete for this property. The SHPO concurred with the *de minimis* finding on August 11, 2008 (letter in **Appendix A-5** from FHWA dated August 7, 2008, with signed SHPO concurrence dated August 11, 2008).

For the William Clarence Wilson House, JBF Riddle House, Harrison Family Dairy Farm, and Thomas Allison House, there would be no taking of land from any of the DSAs' proposed right-of-way limits either by fee simple acquisition or permanent easement. All applicable conditions must be met in order to maintain the No Adverse Effects determinations. As long as the No Adverse Effects determinations are maintained, there would be no use of these resources and no Section 4(f) evaluation would be required.

5.4.3.2 Section 6(f) Resources

Crowders Mountain State Park is the only Section 6(f) resource located near the DSAs (Land and Water Conservation Fund Project List, NPS Web site: <http://waso-lwcf.ncrc.nps.gov/public/index.cfm>). None of the DSAs would directly impact the park or convert any of the park property to a non-recreational purpose.