

# Chapter 1

## INTRODUCTION

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### A. PROJECT DESCRIPTION

#### 1. Purpose and Need

The Federal Highway Administration (FHWA) and the Delaware Department of Transportation (DelDOT) will construct a new alignment for U.S. Route 301 in southern New Castle County, Delaware, from just south of the Chesapeake and Delaware Canal as far as the Maryland State Line southwest of Middletown (Figure 1.1).

The purpose of the U.S. Route 301 project is “to improve and enhance highway safety, manage truck traffic, and address existing and projected traffic congestion in the US 301 corridor, while minimizing environmental impacts and accommodating existing and planned development.” Five specific needs for the project were identified: safety, traffic growth, system deficiencies, demographics, and land use (Federal Highway Administration and Delaware Department of Transportation 2007, Chapter 1).

#### 2. The Highway Project

In April 2008 the U.S. Department of Transportation issued the Record of Decision (ROD) on the Selected Alternative for U.S. Route 301 from the Maryland/Delaware State line to Delaware State Route 1 south of the Chesapeake and Delaware Canal (Federal Highway Administration 2008). This large (\$500 million-plus) highway construction undertaking is classed as a Major Project (often referred to as a Mega Project) under the 2005 SAFETEA-LU Act. Such projects have elevated standards of project and financial planning and oversight (Capka 2007). The

Delaware Department of Transportation (DelDOT) is required, under the ROD, to implement the mitigation features planned for this project.

The Selected Alternative mainline is a limited access toll highway with a 66-foot median, providing a four-lane, limited access roadway on a new location, extending generally northward from the Maryland/Delaware state line, west of Middletown, along the Ridge Route, to the vicinity of Armstrong Corner Road. In the vicinity of Armstrong Corner Road, the new U.S. Route 301 mainline alignment curves and extends northeast, crossing over existing U.S. Route 301, the Norfolk Southern Railroad, and existing SR 896 (Boyd's Corner Road) before curving and extending east and tying into SR 1, north of the Biddle's Corner Toll Plaza and south of the Chesapeake and Delaware Canal. The Spur Road portion of the Selected Alternative is a limited access toll highway with a 62-foot median. Near Armstrong Corner Road, the two-lane Spur Road would extend north on a new location from new U.S. Route 301, along the Ridge Route, to interchange with SR 15/SR 896 south of Summit Bridge and the Chesapeake and Delaware Canal (Federal highway Administration 2008:9).

#### 3. Planning for Cultural Resources

As a federally funded and supervised undertaking, the U.S. Route 301 project is required to comply with a range of statutes, Executive Orders and guiding regulations. The National Historic Preservation Act of 1966 (as amended) and the associated federal regulation 36 CFR 800 are in this case the primary instruments for addressing cultural resource issues.

In November 2007 a Memorandum of Agreement (MOA) was signed by the Federal Highway Administration, the Delaware State Historic Preservation Officer, the Maryland State Historic Preservation Officer and the Delaware Department of Transportation. This MOA, prepared pursuant to Section 106 of the National Historic Preservation Act of 1966 (as amended) and to 36 CFR 800, sets out the procedures to be followed for historic properties (Federal Highway Administration 2008, Attachment D).

For archaeological resources, the MOA stipulations include the following:

- Phase I identification surveys and, if necessary Phase II National Register eligibility evaluation surveys, within the APE.
- Submittal of reports by DelDOT to the Maryland and Delaware state historic Preservation Officers.
- Procedures for making National Register eligibility determinations.
- Treatment of adversely affected eligible archaeological resources, including documentation through research-oriented programs of archaeological data recovery. Such programs will include a public participation plan.
- Procedures for the treatment of human remains.
- Curation of Artifacts with the Delaware Division of Historical and Cultural Affairs.
- Procedures for addressing changes to the U.S. Route 301 project design.
- Procedures for addressing late or unanticipated discoveries in accordance with 36 CFR 800.13.

Only one listed archaeological resource (N05191) has been identified within the overall U.S. 301 project area. Its National Register eligibility has not been determined. This does not lie within Section 2 (Yellow).

#### 4. This Report

This report addresses the archaeological cultural resource sensitivity of Section 2 (Yellow) of the U.S. Route 301 corridor at the Phase IA level (see below, Section C). This section runs close to the western municipal boundary of Middletown, between Station 255+60 and Station 455+00 of the project alignment. A spur branches out at Station 370+00 and the Section ends at Station 100+00 on this spur. The main section extends for approximately 21,600 feet or just over four and a half miles (Figure 1.2). Additionally the Section entails the construction of six access ramps, (Ramp numbers 1 and 4 at the southern end and Ramp numbers 1- 3, and 7 located at the northern end with two toll plazas), one overpass (State Route 15, measuring 1,700 feet), 51 potential stormwater management facilities or basins (of various sizes) and three proposed earthen berms (measuring a total of 685 feet). The main highway corridor is about 300 feet wide between intersections and junctions.

The Section 2 alignment will cross State Route 15/ County Road 437 (Bunkerhill Road), Armstrong Corner Road (County Road 429) and the existing alignment of U.S. Route 301/ State Route 71 (Summit Bridge Road). At the northern end of Section 2 the proposed corridor crosses the Norfolk Southern Railroad. The proposed corridor also crosses two sub-branches of the Sandy Branch near the southern end of the Section, and a sub-branch of the Spring Mill Branch on the north. The headwaters and associated hydric soils of a sub-branch of the Dove Nest Branch fall within the Area of Potential Effects at around stations 340 and 365.

## **B. DEFINITION OF AREA OF POTENTIAL EFFECTS FOR ARCHAEOLOGICAL PROPERTIES**

The Area of Potential Effects (APE) is “the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if such properties exist. The area of potential effects is influenced by the scale and nature of the undertaking and may be different for different kinds of effects caused by the undertaking (36 CFR 800.16[d]).”

Following discussion with DelDOT and Delaware State Historic Preservation Office, the archaeological APE for Section 2 has been defined as the proposed right-of-way and the immediately adjacent zone (generally about 300-foot wide) delimited by a dashed black line on U.S. Route 301 Project Development Plans, and as areas of associated activities such as stormwater management facilities, wetland mitigation sites, staging, stockpiling and access areas, and disposal sites. The locations of some of these elements have not yet been determined or finalized, and will be the subject of future supplements to this report as required.

## **C. SCOPE OF WORK**

The scope of work for this project is set out in the approved proposal dated June 13, 2008, which is included in this report as Appendix B. In summary, this identifies the following tasks:

1. Background Research
2. Fieldwork Preparation, and 3. Walkover Survey
4. Development of Sampling Strategy for Phase IB testing
5. Completion of Phase IA report

## **D. PREVIOUS RESEARCH AND PRINCIPAL INFORMATION SOURCES**

### **1. Environmental Impact Studies of the U.S. Route 301 Corridor**

The overall background to the U.S. Route 301 project is documented in the Final Environmental Impact Statement (Federal Highway Administration and Delaware Department of Transportation 2007) and Record of Decision (Federal Highway Administration 2008). These documents summarize all aspects of the current environmental conditions and refer to detailed studies that support the conclusions and recommendations.

### **2. Cultural Resource Studies of the Corridor**

Since the early 1990s a series of cultural resource studies have been undertaken in or near the project corridor. In 1992-3 the University of Delaware completed three surveys of a then-larger U.S. Route 301 study area, which at that time included the current corridor but also extended northwards to the Newark, Delaware, area and northeast to roughly the area of Stanton, Delaware. These studies were contributions to a Draft Environmental Impact Statement for the U.S. Route 301 corridor (Federal Highway Administration 2008:3).

The initial study (Kellogg 1992) was a compilation of known information, concentrating on archaeological resources but also including previously identified historic structures because of the possibility of associated archaeological resources. The study unidentified 144 prehistoric and 34 historic known archaeological sites, 412 documented historic structures, 257 potentially significant structures, and 408 possible historic archaeological sites. Predictive models were also developed for prehistoric site location. This study

recognized that the watershed (Ridge) alignment of the currently Selected Alternative was likely to have the least impact on archaeological resources.

A more comprehensive study of historic architectural resources was completed in January 1993 (Siders 1993a), based on research and fieldwork along the various corridor alternatives then under evaluation. The significance of the identified resources was expressed in terms of relationship to the Delaware Historic Contexts framework and thematic or other National Register Nominations.

A third report (Siders 1993b) was submitted in June of 1993. This was an update of the January report and included archaeological information on known historic sites no longer extant. About 20 architectural and archaeological resources were identified in the area of Section 2 (then called the South Ridge Alternative). The Ridge Alternative was selected in 1994 as the preferred alignment south of the Chesapeake and Delaware Canal (Federal Highway Administration 2008:3).

With the completion of the Major Investment Study in 2000 (Federal Highway Administration 2008:4), a more focused approach to the Ridge Alternative was possible. In 2005 preparation of a new Environmental Impact Statement (EIS) was commenced, and the final document was issued in 2007 (Federal Highway Administration and Delaware Department of Transportation 2007).

A.D. Marble & Company completed four cultural resource documents for the EIS between 2005 and 2007 (A.D. Marble & Company 2005a, 2005b, 2006, 2007). The *Historic Context and Reconnaissance Survey Report* (July 2005) and subsequent *Determination of Eligibility Report* (A.D. Marble & Company 2005b) compiled information on previously documented and newly identified historic resources (including archaeological properties) within an Area of Potential Effect

that extended 1,000 feet either side of the centerline of the alternatives then under consideration. The first study also presented a comprehensive historic context framework for the evaluation of such resources. This framework is considered relevant to the evaluation of historic archaeological properties within the current study area.

These primarily historic architectural studies were followed by the *Archaeological Predictive Model Study* (A.D. Marble & Company 2006).

Important data on the geoarchaeology of the project vicinity is contained in Hayes 2009. Geoarchaeological investigation and assessment were undertaken on a flat upland plain interfluvial landform between two headwaters of the Sandy Branch/Bohemia River, immediately northwest of the southern portion of Section 2. The study reviewed geotechnical data from 25 borings undertaken by others, supplemented by seven hand-excavated cores, including two in the tributary floodplains. The study concluded that archaeological sites in the upland are likely to be expressed in the plowzone. Streambed deposits were assessed as of recent date (less than 100 years). Any gravel resources exposed at headwaters will include lithic types used for prehistoric tools.

### **3. Other Cultural Resource Studies in or Close to Section 2**

The largest nearby archaeological cultural resource survey is the DelDOT investigation along Choptank Road, west of, and broadly parallel to, the southern portion of the U.S. Route 301 Selected Alignment. Final reporting on this project has not been completed, but a draft combined Phase I/II report has been prepared (Kise Straw & Kolodner 2008).

The southern portion of the Choptank Road/SR 15 Improvement Project lies immediately west of Section 2, where the southern end of the present Choptank Road meets Bunker Hill Road just outside the current APE. McCormick & Taylor, Associates (MTA) and Kise Straw & Kolodner (KSK) conducted Phase I and II archaeological investigations throughout the roadway improvement project area between 2001 and 2006. A summary of the Phase I survey lists 17 sites, eight of them south of Bohemia Mill Road and therefore within about one mile of Section 2 of U.S. Route 301. Two locations, the School Drive Test Area and 7NC-F-103, lie along Bunker Hill road a short distance west of the Section 2 APE.

The Phase I/II draft report identified a total of 14 sites, of which eight were investigated to the Phase II level. Of these eight, two were considered eligible for the National Register. The first, 7NC-F-100, dated to the beginning of the 18th century. Several sub-plowzone features, possibly the remains of earthfast foundation elements, were located. This site has been avoided by the road design and has therefore not been investigated at a data recovery level.

The second eligible resource was the late 19th- and early 20th-century Wilson Farm Tenancy site (7NC-F-94), which lies on the west side of Choptank Road about 1.2 miles north of Bunker Hill Road. URS Corporation is currently preparing the report on data recovery at the Wilson Farm Tenancy Site for the Delaware Department of Transportation.

The Choptank Road studies are informative for the Section 2 investigation because of the similarity of both the projects and the terrain, and the proximity of the two projects. The Choptank Road investigations tested predictive models of prehistoric site location and produced data on the stratigraphic integrity of archaeological sites in these settings.

#### **4. Historical Research Resources**

The focus of primary archival research undertaken in connection with this project was the development of chains of title for various parcels that will be impacted by the proposed construction of Segment 2 of the U.S. Route 301 alignment. In this regard, land records at the Delaware Historical Society, the Delaware Public Archives, the Maryland State Archives, Historical Society of Pennsylvania and the New Castle County Recorder of Deeds were extensively consulted. Over the course of these investigations, title research was undertaken for all of the parcels that will be impacted by the proposed project footprint. Complete chains of title, however, were not developed for every property. The most intensive research was focused on parcels which were assessed as having high historic archaeological sensitivity on the basis of predictive modeling (principally A.D. Marble & Company 2006), preliminary background research and field reconnaissance. Relative emphasis on specific properties changed as historic details were fleshed out by background research.

In addition to warrant, patent, deed and probate records, a small number of other primary archival records were also consulted. The most significant of these were the Rumsey Family Papers which are held by the Library of Congress in Washington, D.C. During the late 17th, 18th and early 19th centuries, the Rumseys were among the most prominent local land owners in the project area vicinity. In addition to providing basic genealogical and biographical information concerning members of the Rumsey family, these documents also provided a wealth of information concerning the ownership histories of properties within the project area and broader data about the historic development of the area at the headwaters of the Bohemia River.

Throughout the process of primary archival research, repeated reference was made to historic maps and various published secondary sources in search of background information on specific people and places. John Thomas Scharf's *History of Maryland History of Maryland from the Earliest Period to the Present Day* (1879), his *History of Delaware, 1609-1888* (1888) and George Johnston's *History of Cecil County, Maryland* (1881) were relied upon extensively for basic information concerning the historic evolution of the project area. William B. Marye's essay entitled "The Old Choptank or Delaware Path" which was originally published in the *Bulletin of the Archaeological Society of Delaware* in 1936 was found to provide critical information concerning the early development of the road network in the project area vicinity.

Historic cartographic evidence is critical to any effort to identify the locations of historic archaeological resources in the mid-Atlantic region. Although a large number of historic maps were consulted during the course of background research activities, several in particular were found to be of great utility in identifying the locations of specific historic buildings and features. These included Samuel M. Rea and Jacob Price's *Map of New Castle County, Delaware* of 1849, D.G. Beers' map of St. George's Hundred in his *Atlas of the State of Delaware* of 1868, G.M. Hopkins' *Map of New Castle County, Delaware* of 1881 and G.W. Baist's map of St. George's Hundred in his *Atlas of New Castle County, Delaware* of 1893. Numerous maps and surveys found in the Cecil County Maryland Circuit Court records, the New Castle County Orphan's Court records and the Rumsey Family Papers were also of significant value.