2.0 Description of Steps to Identify Historic Properties

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2.1 Area of Potential Effect

As part of the identification of historic properties effort, FHWA and DelDOT, in consultation with the DE SHPO, defined the APE for the undertaking. The APE is defined as "the geographic area or areas within which an undertaking may cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effect is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking" (36 CFR Part 800.16[d], 2001).

The APE for the proposed project includes all areas containing National Register-listed or eligible cultural resources whose character and/or setting could be affected by the Preferred Alternative. The APE was initially drawn to conform to the boundaries of the tax parcels included within 600 feet of the centerline of the Alternatives Retained for Detailed Studies (ARDS). As revisions were made to the Green North Alternative, the APE was reviewed and, if necessary, the boundary was revised. All potential types of effects, including physical, audible, visual, secondary, and cumulative effects, were considered during the development of the APE. The APE for the current project includes the areas of temporary construction and permanent disturbance for the Green North Alternative. Secondary and cumulative effects for specific resources, i.e., those adversely affected by the project, were considered individually based on the past effects and anticipated future effects of development. As the project design develops, it may be necessary to revise the APE.

The properties included in the APE for the Green North Alternative were verified during field views conducted by DelDOT, DE SHPO, FHWA, RK&K, and A.D. Marble & Company staff on July 18, 2006, and February 5, 2007. Based on these field views and other reviews, none of the historic properties included within the APE will be physically impacted by the undertaking. As part of this effort, DelDOT and FWHA also consulted with the MD SHPO on the project APE limits extending into Maryland.

2.2 Historic Structures

Numerous cultural resources surveys were conducted within or near the APE for the Green North Alternative over the past 30 years. In the 1970s, persons affiliated with the Division of Historical and Cultural Affairs prepared National Register nominations for four properties within the Green North Alternative APE (The Maples, Cultural Resources Survey [CRS] No. N00106; Rumsey Farm, CRS No. N00113; Cochran Grange, CRS No. N00117; and Hedgelawn, CRS No. N00118). Three more properties were individually listed in the 1980s (Achmester, CRS No. N03930; Governor Benjamin T. Biggs Farm, CRS No. N05123, and B.F. Hanson House, CRS No. N05225). In 1985, the Center for Historic and Engineering (CHAE) - known today as the Center for Historic Architecture and Design (CHAD) - at the University of Delaware prepared the *Rebuilding St. Georges Hundred* multiple property nomination that resulted in the National Register listing of seven extant resources within the APE (S. Holton Farm, CRS No. N00107; Choptank, CRS No. N00109; Weston, CRS No. N00121; Woodside, CRS No. N00427; Idalia Manor, CRS No. N03947; Armstrong-Walker House, CRS No. N05146; and Rosedale, CRS No. N05148) (Herman et al. 1985).

Between 1985 and 1986, the firm of Killinger Kise Franks Straw (KKFS) evaluated resources within the eastern portion of the US 301 corridor as part of their work for the US 13 Relief Route corridor (present-day SR 1) that extended from SR 7 in New Castle County to US 113 in Kent County. As a result, KKFS prepared documentation for one property (Fairview, CRS No. N05244) within the Green North Alternative APE that resulted in a determination of National Register eligibility (KKFS 1995).

In 1992, CHAE/CHAD completed a preliminary survey for a proposed US 301 corridor extending from the Delaware-Maryland state line to I-95. As part of early identification efforts conducted for the proposed project in 1993, CHAE/CHAD presented eligibility recommendations for properties situated south of the C&D Canal (Siders et al. 1993). CHAE/CHAD's findings were submitted as part of the US 301 Draft Environmental Impact Statement and the US 301 MIS (VHB 1993, 2000). No formal determinations of eligibility were ever made or submitted as a result of this previous study.

A study prepared for Nextel communications in 2004 resulted in the determination of eligibility for one property (Lovett Farm, CRS No. N05132) within the Green North Alternative APE (Rottenstein 2004). Published in 2000, A.G. Lichtenstein Consulting Engineers, Inc.'s inventory of Delaware bridges resulted in the determination of eligibility for one bridge within the Green North Alternative APE (State Bridge Number 383, CRS No. N12636).

As part of the project re-initiation and in consultation with the DE SHPO, DelDOT undertook a field survey from the summer of 2005 to the summer of 2006 to identify previously evaluated resources in the vicinity of the US 301 Project Development. Previously unidentified historic properties that met the 1962 cut-off date for survey were assessed to determine if they met National Register requirements for significance and integrity. A.D. Marble & Company finalized the Historic Context and Determination of Eligibility reports, and DelDOT and DE SHPO provided concurrence on the Eligibility Report recommendations in February of 2006 (A.D. Marble & Company 2006) (Appendix A). Historic preservation planners of the NCC were also provided the opportunity to review the context and eligibility reports. Five properties within the APE that were not previously evaluated were identified, recommended eligible, and subsequently concurred with by the DE SHPO (Summerton, CRS No. N00112; T. J. Houston Farm, CRS No. N05131; J. Houston House, CRS No. N05195, C. Polk House Estate, CRS No. N05221, and the Shahan Farm, CRS No. N14388). The final reports were posted on DelDOT's 301 project web site for the general public to view. As a result of all the surveys, 22 eligible or listed resources are identified within the APE for the Green North Alternative.

2.3 Archaeology

An archaeological predictive model was prepared for the proposed study area associated with the various design alternatives under consideration for the US 301 Project Development in St. Georges, Pencader, and Appoquinimink Hundreds, New Castle County, Delaware. Archaeological predictive models developed previously for the US 13 Relief Route Corridor (Custer et al. 1984), the Route 896 Corridor (Lothrop et al. 1987) and the 1993 Reconnaissance Study for the Route 301 Corridor (Kellogg 1993) were consulted during the course of the development of this model. The model was intended to serve as a planning tool to assist in the development of the designs for

the alternatives under consideration for the project and to aid in the assessment of their relative potential impacts on archaeologically sensitive areas. Both prehistoric and historic archaeological potential were considered in this model. Characterization of the environment was accomplished using data available in a Geographic Information System (GIS) format, and GIS was used to compare the relative significance of the relevant criteria within the various parts of the study area. Historic and modern ground disturbances were modeled to qualify the areas of archaeological potential relative to their likely integrity.

Between May and July 2006, a sample Phase IB archaeological survey was undertaken within two DelDOT-owned parcels, one straddling Bethel Church Road and the other extending from Old Schoolhouse Road to south of Armstrong Corner Road. These two parcels fell within the proposed alignment of the Green North Alternative as well as the Purple and Brown Alternatives. The field studies undertaken within these parcels were intended to serve as a preliminary assessment of the utility of the archaeological predictive model (A.D. Marble & Company 2006) that was prepared for the project. The archaeological predictive model is based on current theory regarding prehistoric and historic archaeological site location selection. The results of the archaeological testing were presented as an addendum to the revised archaeological predictive model. The testing identified two previously unreported historic archaeological sites within areas that the model predicted would have a high sensitivity for such deposits. Two lower density concentrations of historic artifacts were also encountered in the course of the testing, although it is not clear that these represent intact historic archaeological sites. While this is relatively limited data, it does suggest that the historic archaeological component of the model works for resources for which historic cartographic evidence is available.

The ruins of a previously identified farmstead, the S. Burnham/"Noxon's Adventure" property (CRS No. N05151), fell within the tested parcel north of Armstrong Corner Road. The S. Burnham farmstead ruins were cleared of overgrown vegetation, photo-documented, and mapped. This work recorded the house foundation, a wooden shed, the foundation of a second outbuilding, and a windmill. Historic research on the parcel demonstrated that the 300-acre plantation was warranted to Thomas Noxon in 1734. Other information collected during intensive background research suggests that more detailed research undertaken for other areas within the Green North Alternative's APE may yield information similarly valuable for identifying areas of early historic archaeological potential.

As for prehistoric archaeological resources, the predictive model test failed to record any definitive sites. Rather, what was found was a small number of isolated point fragments and flakes. This suggests an ephemeral prehistoric usage of the area consistent with the current theories of prehistoric settlement and subsistence patterns in the Midpeninsular Drainage Divide Zone during the period. Because no areas of high prehistoric archaeological sensitivity fell within the two parcels, the preliminary testing cannot be considered to have adequately assessed the model. However, the data is in part supportive of the prehistoric archaeological model in that no prehistoric archaeological sites were encountered within the two parcels. The parcels contained areas of only moderate and low prehistoric archaeological sensitivity.

The MOA provides for the phased identification and evaluation of archaeological sites in consultation with the DE and MD SHPOs. The MOA also outlines the process for assessing the

effects of the project on eligible archaeological sites and consultation on ways to avoid, minimize, or mitigate for adverse effects. Mitigation may include data recovery through excavation and/or alternative treatments.