

## **SECTION 2.0 RESEARCH GOALS AND DESIGN**

The goals of this Phase II archaeological survey are to evaluate the eligibility of the Williams Historic site (CRS # N03988, 7NC-F-164) and the Howell School Road Prehistoric 2 site (CRS # N04347, 7NC-F-165) for listing on the National Register of Historic Places. Determinations of significance or potential significance are based on the National Register of Historic Places Criteria of historic and/or archaeological significance.

The research design for the Phase II archaeological survey includes background research to develop prehistoric and historic contexts, archaeological fieldwork to investigate archaeological integrity, and artifact analysis. The research design outlined herein was submitted to DelDOT Archaeologist David Clarke on April 3, 2012 and subsequently approved.

### **2.1 Williams Historic Site Research Design and Methodology**

The Phase II archaeological survey of the Williams Historic site (CRS # N03988, 7NC-F-164) evaluated the National Register of Historic Places eligibility. An archaeological site generally must have the potential to yield important new information in prehistory or history to be considered significant (National Register of Historic Places, Criterion D). Significance evaluations are dependent upon the quality of archaeological data retrieved from the ground, integrity or intactness of the deposits, prior research activities in the region, and the development of prehistoric and/or historic contexts that identifies critical research gaps in archaeological research that further work at the site may address.

The Williams Historic site (CRS # N03988, 7NC-F-164) is believed to have been associated with the Williams family and appears to represent deposits associated with the occupation of one of three houses that stood on Roger William's property at the time of his death in 1810 (Richard Grubb & Associates, Inc. 2012). It is unclear if the cultural material at the site was deposited by Roger Williams, one of his children, or a tenant, whose identity has not been determined. Given the site's short, possibly less than 50-year occupation period, data from this site may be compared to several contemporary sites, including the McKean/Cochran site (Bedell et al. 1999), Augustine Creek North site (Bedell et al. 2001), Whitten Road site (Shaffer et al. 1988), and the Benjamin Wynn site (Grettler et al. 1996) in Delaware (Bedell 2001); the Bob Family and Tenant Sub-Analytical Unit contexts from the Philadelphia Court House site (Richard Grubb & Associates, Inc. n.d.), Feature B and E contexts from the Hudson's Square site (John Milner Associates 2002), and Features 15BC, 19BC, 56, and Stratum A from the Metropolitan Detention Center site (Louis Berger & Associates, Inc. 1997) in Philadelphia, as well as contemporary and functionally similar sites in New Jersey if the

cultural deposits can be strongly related to known occupations and have archaeological integrity.

Phase II historic archaeological research attempted to locate structural remains and intact contexts that can aid in defining the nature of the site, its function, period of occupation, and whether the occupants can be identified and tied to specific artifact assemblages and features. While the following research questions may not be answerable at the Phase II level, they provide a direction for archaeological research and suggest some of the basis for evaluating site significance.

The Williams Historic site (CRS # N03988, 7NC-F-164) may be eligible under National Register of Historic Places, Criterion D, if the Phase II archaeological survey determines that it has the potential to yield important new information in history. In the *Management Plan for Delaware's Historical Archaeological Resources*, DeCunzo and Catts (1990) defined four broad research themes that remain current for archaeological research:

- Reconstruction and Interpretation of the Domestic Economy of Individual Sites  
Can the inhabitants of the site be tied to specific assemblages? Can the Williams Historic site (CRS # N03988, 7NC-F-164) yield significant information about the nature of economic and social decisions made by the occupants over time?
- Manufacturing and Trade  
Can the Williams Historic site (CRS # N03988, 7NC-F-164) provide information about trade and production networks, as well as the structure, function, and evolution of those networks over time?
- Reconstruction and Interpretation of the Historic Landscape  
What kind of activities took place at the site? Can spatial distribution of buildings and activity areas be identified at the site?
- Analysis and Identification of Social Group Behavior  
Some evidence of individual activities and social status are evident from the Phase IB artifact assemblage. Can further evidence of the occupants' identity, ethnicity, social class and status be ascertained?

The Phase II archaeological survey effort at the Williams Historic site included additional historical research to learn more about the site's inhabitants and archaeological fieldwork to define the site's boundaries and identify features and activity areas in order to address the site's significance.

### Background Research

Additional primary records, including deeds, mortgages, probate and Orphan Court records, and early tax records, were accessed to clarify the date when the Williams family acquired the property and the types of activities that took place on these lands during their ownership. Title records related

to adjoining properties were also researched as needed to assist with understanding the overall land-use history in the vicinity of the site. During the late seventeenth century and into the eighteenth-century, this area fell within the disputed land claims of Lord Baltimore and William Penn, a period when the boundary between Delaware and Maryland was not clearly defined. Therefore, land records for both states were researched. Consultation was also performed with interested parties (Appendix B).

### Fieldwork Methodology

The fieldwork consisted of excavation units (EUs) and feature excavations. Prior to the start of fieldwork, dense vegetation within the APE at the site was cleared. In addition, RGA consulted with DelDOT regarding the results of the background research prior to the start of fieldwork to allow for adjustments in the fieldwork strategy, if necessary. Forty EUs were plotted at 7.5-meter intervals in undisturbed portions of the site within the APE. Two EUs were also judgmentally placed near STP 3. Excavation units measured one-meter square in size. Given the documented lack of artifacts in the subsoil horizons in the Phase IB survey, excavation ceased at the top of subsoil unless prehistoric artifacts were encountered in the plowzone. The subsoil was cleaned and examined for features or artifacts. If prehistoric artifacts were located in the plowzone, the EU was extended into the upper portions of the subsoil into sterile levels. Two EUs were also taken to the top of the C horizon or to a maximum depth of 4 feet below ground surface. Shovel test pits were excavated at the bottom of each EU to ensure that the base of cultural deposits had been reached.

The EUs were excavated using square and round bladed shovels. The plowzone was removed as a natural stratum and B-horizon strata was excavated in 10 centimeter levels for control where necessary. Soils removed from EUs were separated by level and/or stratum and screened for artifacts through quarter-inch mesh hardware cloth. Descriptions of each stratum, including Munsell color, texture, sediments, and presence or absence of cultural material, were recorded on standardized forms. Plan views of the subsoil were drawn if features were encountered. Profiles were drawn of representative EUs, including ones with features. All EUs were backfilled after completion. Excavation unit locations were plotted on a map of existing conditions. Excavation units were documented through digital photography and field notes.

Cultural features were sampled and documented, and additional EUs were opened to explore the features. Exposed portions of features were bisected and excavated in natural levels. Where possible, features were sectioned or bisected along their long axis for profile exposure. Feature fills were separately excavated. The excavated soils from features were screened through 1/8-inch hardware cloth.

Excavation of features continued until the base of the feature was reached. Upon completion of the sampling, the feature was recorded (i.e. plan and profile drawings and digital photography), covered with tarps and backfilled in consultation with DelDOT. Each feature location was mapped and plotted on the project maps.

### Laboratory Methodology

Recovered artifacts were placed into re-sealable polyethylene bags with accompanying tags that list the appropriate provenience information. All artifacts were taken to an off-site laboratory at the RGA headquarters in Cranbury, New Jersey, where they were washed and processed. Artifacts were then sorted by material/artifact type and placed into a clean 4mm-thick re-sealable polyethylene bag. All artifacts recovered from a single provenience were bagged together with a tag listing the appropriate provenience information. The processing and analysis of artifacts sufficient for interpretation and National Register evaluation of the site was conducted.

Artifacts were cataloged according to provenience. Historic artifacts were cataloged according to functional group, material, class, and type. Prehistoric artifacts were cataloged by provenience, then by artifact type and material. Lithic and ceramic data was recorded in detail, including descriptions, size, and weight. Where appropriate, data from lithic analysis (e.g., length, width, thickness, platform, flake termination, cortex, and heat treatment) was recorded. The prehistoric artifact catalog is presented in Appendix C. When appropriate, a detailed description of artifacts was made. Wherever possible, a temporal designation was assigned to artifacts with known manufacture dates. The historic artifact catalog is presented in Appendix D. Upon completion, a revised Cultural Resource Survey (CRS) form was completed and is presented in Appendix E.

### Curation

All recovered artifacts and project documents are temporarily stored at the office of RGA, in Cranbury, New Jersey. Artifact processing, marking, and containerization, as well as curation preparation of project documents that adhere to the *Guidelines and Standards for the Curation of Archaeological Collections* prepared by the Delaware Division of Historical and Cultural Affairs, Delaware State Museum and in consultation with Charles Fithian of the DESHPO. Upon completion of the final report, the artifact assemblages and associated project documents will be transferred to DESHPO for permanent curation.

## 2.2 Howell School Road Prehistoric 2 Site Research Design and Methodology

### Fieldwork Methodology

The goals of the Phase II archaeological fieldwork were to identify prehistoric cultural features, if present; to further define the horizontal and vertical site boundaries within the APE; and to gain additional data regarding cultural and temporal affiliation.

Phase II archaeological fieldwork consisted of the excavation of six one-meter square EUs. The placement of EUs was based upon the consideration of several factors, including artifact type, distribution and density, and the presence of possible features.

Each of the Phase II EUs was plotted on the project base map. Excavation units were excavated in natural strata in the A horizons, and in arbitrary 10 centimeter levels within natural strata in subsoil until two sterile subsoil levels were reached. All EUs were documented through profile drawings, digital photographs and written descriptions. Based on the results of Phase I testing and previous research, all excavations proceeded to depths sufficient to penetrate culturally sensitive soil strata. Upon completion of all testing, the excavations were backfilled and the ground restored to its original contours.

Cultural features located within the EUs were explored within the confines of the EU; exposed portions of the features were photographed, mapped (i.e. plan and profile drawings), bisected, excavated, sampled for flotation, and soil screened through one-eighth-inch mesh hardware cloth. One gallon soil samples were collected from identified cultural features. Where appropriate, organic samples were collected and packaged for radiocarbon dating.

Artifacts were placed in resealable bags along with tags indicating their type and provenience (grid location, level, depth, and stratum). All collected artifacts were logged and removed to an off-site laboratory for cleaning, sorting, cataloging, and analysis.

### Laboratory Methodology

Prehistoric artifacts were cleaned to remove residual soils, dried, and bagged for cataloging. Lithics, which included debitage, tools, and fire-cracked rock (FCR)/thermally altered rock (TAR), were cataloged by material, artifact class, artifact type, and size grade and/or weight. Lithic tools are defined as retouched or utilized flakes, bifaces, scrapers, hammerstones and other artifacts that show signs of utilization (Andrefsky 2005; Kooyman 2000; Odell 2003). Projectile points consist of finished bifaces with a generally recognizable morphology. Diagnostic lithic tools were identified by time period, material, and named type when possible. Length, width, thickness, and weight attributes

were recorded for tools and cores. Cores consist of masses of rock from which flakes have been removed. For temporally diagnostic artifacts comparisons to historically defined types and temporal ranges were given (Custer 2001).

Debitage included both angular debris and flakes. Flakes exhibit a dorsal and ventral surface, while angular debris does not retain these characteristics (Andrefsky 2005: 82). Fordebitage, size classes were recorded using Patterson's (1990) methodology of fitting flakes through a series of squares of metric dimensions. The flakes can be placed through the squares in any orientation. For example, a flake in the 1.0-1.5 centimeters<sup>2</sup> size range is larger than or equal to the square with 1.0 centimeter sides and smaller than a square with 1.5 centimeter sides. Flakes were recorded as either whole or fragments. Fragments can consist of platform fragments, proximal fragments, distal fragments, and medial fragments. Cortex percentages were determined fordebitage by using a four rank scale (Andrefsky 2005:104-107). In this method, a dorsal surface devoid of cortex receives a value of zero, while flakes with 100 percent cortex receive a value of three. Ifdebitage had cortex on one to 50 percent of the surface it was given a value of one, while cortex between 50 and 99 percent was given a value of two. When values fell close to 50 percent cortex, a dot grid superimposed on a transparency was placed over the dorsal surface of the flake, and the number of dots that landed on the cortical and non-cortical portions was counted. The section with the greatest number of dots indicates whether the cortex value is greater or less than 50 percent. The measurements, characteristics, and attributes, along with provenience information are presented in the Phase II prehistoric artifact catalog (see Appendix C).

### Curation

All recovered artifacts and project documents are temporarily stored at the office of RGA, in Cranbury, New Jersey. Artifact processing, marking, and containerization, as well as curation preparation of project documents that adhere to the *Guidelines and Standards for the Curation of Archaeological Collections* prepared by the Delaware Division of Historical and Cultural Affairs, Delaware State Museum and in consultation with Charles Fithian of the DESHPO. Upon completion of the final report, the artifact assemblages and associated project documents will be transferred to DESHPO for permanent curation.

## **2.3 National Register of Historic Places Criteria**

Potentially significant historic properties include districts, structures, objects, or sites which are at least 50 years old and which meet at least one National Register criterion. Criteria used in the evaluation process are specified in the Code of Federal Regulations, Title 36, Part 60, National Register of Historic Places (36 CFR 60.4). To be eligible for inclusion in the National Register of

Historic Places, a historic property(s) must possess:

the quality of significance in American History, architecture, archaeology, engineering, and culture [that] is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:

- (a) that are associated with events that have made a significant contribution to the broad patterns of our history, or
- (b) that are associated with the lives of persons significant in our past, or
- (c) 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 lack individual distinction, or
- (d) that have yielded, or may be likely to yield, information important in prehistory or history (36 CFR 60.4).

There are several criteria considerations. Ordinarily, cemeteries, birthplaces, or graves of historical figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed historic buildings, properties primarily commemorative in nature, and properties that have achieved significance within the past 50 years shall not be considered eligible for the National Register of Historic Places. However, such properties will qualify if they are integral parts of districts that do meet the criteria or if they fall within the following categories:

- (a) a religious property deriving primary significance from architectural or artistic distinction or historical importance, or
- (b) a building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event, or
- (c) a birthplace or grave of a historical figure of outstanding importance if there is no other appropriate site or building directly associated with his/her productive life, or
- (d) a cemetery which derives its primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events, or
- (e) a reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and

when no other building or structure with the same association has survived,  
or

- (f) a property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own historic significance, or
- (g) a property achieving significance within the past 50 years if it is of exceptional importance. (36 CFR 60.4)

When conducting National Register evaluations, the physical characteristics and historic significance of the overall property are examined. While a property in its entirety may be considered eligible based on Criteria A, B, C, and/or D, specific data is also required for individual components therein based on date, function, history, and physical characteristics, and other information. Resources that do not relate in a significant way to the overall property may contribute if they independently meet the National Register criteria.

A contributing building, site, structure, or object adds to the historic architectural qualities, historic associations, or archeological values for which a property is significant because a) it was present during the period of significance, and possesses historic integrity reflecting its character at that time or is capable of yielding important information about the period, or b) it independently meets the National Register criteria. A non-contributing building, site, structure, or object does not add to the historic architectural qualities, historic associations, or archeological values for which a property is significant because a) it was not present during the period of significance, b) due to alterations, disturbances, additions, or other changes, it no longer possesses historic integrity reflecting its character at that time or is incapable of yielding important information about the period, or c) it does not independently meet the National Register criteria.

#### **2.4 Criteria of Adverse Effect**

Whenever a historic property may be affected by a proposed undertaking, Federal agency officials must assess whether the project constitutes an adverse effect on the historic property by applying the criteria of adverse effect. According to the Advisory Council on Historic Preservation, the criteria of adverse effect (36 CFR 800.5), is as follows:

- (1) An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that would qualify it for inclusion in the National Register, in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been

identified subsequent to the original evaluation for the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or cumulative.

- (2) Adverse effects on historic properties include, but are not limited to (36 CFR 800.5(a)(2)):
  - (i) Physical destruction of or damage to all or part of the property;
  - (ii) Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation and provision of handicapped access, that is not consistent with the Secretary's Standards for the Treatment of Historic Properties (36 CFR part 68) and applicable guidelines;
  - (iii) Removal of the property from its historic location;
  - (iv) Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;
  - (v) Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features;
  - (vi) Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and
  - (vii) Transfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

A finding of adverse effect or no adverse effect could occur based on the extent of alteration to a historic property, and the proposed treatment measures to mitigate the effects of a proposed undertaking. According to 36 CFR 800.5(3)(b):

The agency official, in consultation with the SHPO/THPO, may propose a finding of no adverse effect when the undertaking's effects do not meet the criteria of § 800.5(a)(1) or the undertaking is modified or conditions are imposed, such as the subsequent review of plans for rehabilitation by the SHPO/THPO to ensure consistency with the Secretary's Standards for the Treatment of Historic Properties (36 CFR part 68) and applicable guidelines, to avoid adverse effects.



## **SECTION 3.0 BACKGROUND RESEARCH**

Background research was conducted to create a context to evaluate the significance of identified archaeological resources within the APE. Research was conducted at the DESHPO/DHCA in Dover to identify archaeological resources within and near the APE, review previously conducted cultural resources surveys, and identify the location of registered archaeological sites. Sources for the background research included historic maps, published histories, deeds, inventories, and wills, which were reviewed at the DESHPO and the Delaware Public Archives in Dover; and the Historical Society of Delaware and the New Castle County Courthouse in Wilmington, Delaware.

### **3.1 Prehistoric Context**

The prehistory of Delaware is generally divided into the Paleo-Indian (12,000 to 6500 B.C.), Archaic (6500 to 3000 B.C.), Woodland I (3000 B.C. to A.D. 1000) and Woodland II (A.D. 1000 to A.D. 1600) chronological periods based on a system devised by Custer (e.g., 1984, 1986, 1989) (see Table 3.1). The following discussion briefly summarizes information regarding Delaware prehistoric archaeology from a variety of sources (e.g., Blume et al.1990; Custer 1984, 1989, 1996; Custer and DeSantis 1986; Custer et al. 1986; Custer et al. 1996; Eveleigh et al. 1983; Louis Berger Group 2005; Lowery 2002; Lothrop et al. 1987; Petraglia et al. 1998, Petraglia et al. 2002; Riley et al. 1994; Weslager 1972).

**Table 3.1:** Overview of Delaware prehistory.

<b>Time Frame</b>	<b>Delmarva Chronological Period</b>	<b>Characteristics</b>
12,000 B.C.to 6500 B.C.	Paleo-Indian (includes Early Archaic)	<ul style="list-style-type: none"> <li>- Earliest documented human occupation of Delmarva</li> <li>- Large game hunting followed by generalized foraging patterns</li> <li>- Fluted projectile points and a variety of other tools usually made of high quality jasper or chert</li> <li>- Small camps-band level society-highly mobile</li> <li>- Climate: Late Pleistocene/Early Holocene, cold and wet, mosaic of mixed boreal and deciduous forest and grasslands</li> <li>- Extremely rapid sea level rise</li> <li>- Site settings favored upland knolls and sandy ridges near poorly drained areas, swamps, and bay/basin features</li> <li>- Later Kirk and Palmer and other corner-notched and stemmed point types with increased use of other lithic materials such as rhyolite</li> </ul>