

4.0 RESEARCH DESIGN AND METHODS

4.1 Research Design

The purpose of the Phase I investigation was to identify archaeological resources in the APE. The goals of this study were to identify archaeological-bearing deposits, if possible; then to attempt to determine the integrity of those deposits; and if possible, to also discover the range of historic and precontact activities that may have occurred within the APE. The APE is based on the proposed limits of construction for the West Dover Connector corridor Alternate 5C Modified. Prior to the start of the fieldwork, DelDOT and DESHPO assessed the sensitivity of the APE and generated a testing strategy. They divided the APE into seven resource-sensitive areas (see Figure 2); these areas underwent Phase I survey via a combination of shovel testing and pedestrian survey.

Test Area 1 is located near Puncheon Run and was believed likely to contain a portion of the previously identified Woodland I-era site, 7K-C-73. The wooded portion of Test Area 1 underwent shovel testing; the cultivated field portion of Test Area 1 underwent pedestrian survey. Test Areas 2, 3, 4, and 5 are located near the Kesselring Farm (CRS K-1030) and near bay/basin features located in the nearby field. These four test areas underwent pedestrian survey. Test Area 6 is located near multiple historic properties that were owned by H. Jenkins (CRS K-7638, K-1072, and K-3205). The majority of Test Area 6 underwent pedestrian survey, while the portion of Test Area 6 that serves as the access road to the Boy Scouts of America camp underwent shovel testing. The northern section of Test Area 7 is located near the H. Jenkins farmstead (CRS K-3205); the southern section of Test Area 7 is located near Isaac Branch. The bulk of the test area underwent pedestrian survey, while the wooded portion in the southern margin of the test area underwent shovel testing.

The survey was conducted in light of the Delaware Statewide Comprehensive Historic Preservation Plan (Ames et al. 1987; see also Bedell 2002; Herman and Siders 1989; Catts and De Cunzo 1999; De Cunzo 2004). The Plan identifies five historic periods:

- 1630 to 1730 – Exploration and frontier settlement
- 1730 to 1770 – Intensification and durable occupation
- 1770 to 1830 – Early industrialization
- 1830 to 1880 – Industrialization and early urbanization
- 1880 to 1940 – Urbanization and early suburbanization

Given the occupation history of the project area, it would appear that the periods dating from 1770 to 1940 are the most relevant. Based on the known resources in and near the APE, it was expected that any historic resources identified in the APE would date to the early nineteenth to mid-twentieth centuries and reflect the *longue durée* of “cultures of agriculture” in the local area. Information gathered from previous studies suggests that historic resources in the APE might be linked to a few of the research domains outlined by De Cunzo and Catts (1990), such as the general themes of domestic economy and landscape, as well as settlement patterns and demography. Artifacts associated with historic farmstead properties dating to the nineteenth century that are/were located in or adjacent to the APE were anticipated to dominate any historic artifact assemblages recovered during the investigation (see Figure 7 and Section 3.3).

A.D. Marble & Company also conducted the survey in light of the Delaware Management Plan for Prehistoric Resources (Custer 1983). The project area falls within the Mid-Drainage Management Unit of the Plan. Probability for finding sites dating to the various precontact eras was determined by information gathered during previous investigations in the Unit. In general, the probability for finding Paleoindian-period sites is low, moderate for Archaic-period sites, high for Woodland I period sites, moderate for Woodland II period sites, and low for European Contact period sites. Sites within the Unit that may be attributed to the Woodland I and Woodland II periods are considered likely to yield significant data (Custer 1983). Based on the local precontact archaeological site information documenting three Woodland I sites and one Woodland II site in the nearby area, the likelihood of identifying sites attributed to these two periods during this specific survey was considered high. More specifically, the likelihood of re-identifying the Woodland I-era precontact site 7K-C-73 (CRS K-470) that was believed to be located in and/or adjacent to Test Area 1 was considered to be very high.

4.2 Field Methods

The investigation was accomplished via pedestrian survey in the agricultural field portions of Test Areas 1 and 7, in the entirety of Test Areas 2 through 5, and in the majority of Test Area 6. The fields were plowed, disked, and subjected to a washing rain. Archaeologists examined the plowed fields in 2-meter transects. All artifacts were flagged, and their locations were recorded using a hand-held Global Positioning System (GPS) unit. The artifacts were then collected for subsequent processing and analysis.

Archaeological survey was also conducted via a systematic sampling strategy employing 50-foot interval shovel test pit (STP) excavations in the wooded portions of Test Areas 1 and 7, and in the Boy Scouts of America access road section of Test Area 6. All STPs were excavated at least 10 centimeters into culturally sterile subsoil. All excavated sediments were sifted through 0.64-centimeter wire mesh cloth. Excavation data from all STPs were recorded on standard field forms. With the exception of modern debris (plastic, aluminum foil, etc.), which was noted on the field forms, all artifacts recovered from the tests were retained for processing and analysis. The locations of the STPs were recorded on scale maps.

4.3 Lab Methods

All artifacts recovered during the investigation were washed, inventoried, cataloged, and prepared following the curation standards of the Delaware State Museum. Artifacts recovered during the survey were analyzed according to their relevant attributes; artifacts were characterized as to their type, function, period of attribution, and diagnostic features. Various sources were consulted for identifying the historic materials; these included works by Noël Hume (1969, 2001), Jones et al. (1989), Miller (1980), and South (1977). Works by Custer (1989) and Fogelman (1988) were consulted to identify the precontact materials.

Analyses of the field findings included basic numeric and qualitative assessments of the artifacts to evaluate the nature of the artifact assemblages and their depositional contexts. The goal of these analyses was to attempt, if possible, to determine the integrity of the archaeological deposits and to determine their potential to provide new and significant historical information.