

4.0 RESEARCH DESIGN AND METHODS

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4.1 Research Design

The purpose of the Phase IB investigation was to identify the presence or absence of potentially significant cultural resources within the project APE. In this effort, the investigation was aimed at determining the range of historic and precontact era activities that may have occurred in the APE and the broader project area. To achieve these goals, archaeological fieldwork was conducted in the APE, and the cultural material from the excavations was processed and analyzed. However, the archaeological precontact- and historic-resources potential of the APE was first considered.

Areas within the APE that have the greatest likelihood to contain prehistoric sites are those characterized by level, well-drained soils and in the vicinity of water sources. The APE contains level and relatively well-drained soils, but it does not contain any drainages, bays, or seasonal or perennial wetlands. Such water sources would include the two drainages that flow near the APE, namely Red Clay Creek and Hershey Run. The two separate areas of the APE, located respectively to the immediate northwest and southeast of the railroad, appeared to have a high potential to contain precontact archaeological sites because the surrounding terrain has been maintained as farm fields until the recent past.

Areas within the APE that typically have the greatest likelihood to contain historic archaeological sites are those that lay in the vicinity of currently or previously standing historic structures. A modern dwelling now stands where a dwelling that was occupied in the late nineteenth and early twentieth centuries stood in the northeast quadrant of the intersection of the railroad and Newport Road. The APE is located on the edge of this property; it was believed that project construction could possibly impact the edge of an archaeological site associated with the older dwelling that stood at this location. On the opposite side of the railroad, an early twentieth-century American Foursquare dwelling (CRS No. N-13111) stands in the southwest quadrant of the intersection of the railroad and Newport Road. This portion of the APE is composed of the entire 1500 Newport Road parcel. It was believed that project construction could impact an archaeological site associated with the occupation of this property. As a result, it

was determined that both portions of the APE contained moderate to high potential for containing significant historic archaeological resources. Like the determinations of archaeological potential, the survey methods were also determined in consultation with DelDOT.

4.2 Methods

4.2.1 Field Methods

A.D. Marble & Company conducted the survey via a rigorous, systematic sampling strategy that involved the excavation of STPs laid in at 50-foot intervals. A total of 23 STPs were excavated in the APE. Six STPs were located on the north side of Newport Rd, east of the CSX railroad corridor, on the edge of the residential yard associated with the former location of an historic structure. Seventeen STPs were excavated in the approximately one-acre parcel north of the corridor and west of Newport Rd. All STPs were excavated at least 10 cm into culturally sterile deposits. All excavated sediments were sifted through ¼-in wire mesh cloth. Excavation data from all STPs were recorded on standard field forms. Artifacts recovered from the STPs were retained for processing and analysis. The locations of the STPs were recorded on scale maps of the survey areas. One STP (#18) was placed judgmentally in the backyard of the 1500 Newport property. This STP was located in an area where the property owner (Wally Poindexter) told A.D. Marble & Company field crew members a possible railroad water tank may have once stood.

4.2.2 Lab Methods

All artifacts recovered during the Phase IB testing were washed, inventoried, cataloged, and prepared for curation according to the most current standards of the DESHPO. Artifacts recovered during the investigation were analyzed according to their pertinent attributes. That is, historic artifacts were characterized as to their type, function, date/period of attribution, and diagnostic features. Analyses of the field findings included the use of numerical and qualitative assessments of the artifacts to evaluate the nature of the artifact deposits identified during testing and their depositional contexts. The goal of these analyses was to determine the integrity of the archaeological deposits and their potential to provide new and significant information about local and regional prehistory.