FIELD AND LABORATORY METHODOLOGY

For logistic purposes, the project area was divided into eleven linear segments and two areas (Segments 1-11 and Areas 1-2, Figure 2). Field methods for the preliminary Phase I survey were conducted in accordance with the proposal (Taylor and Thompson 1986). Walkover survey, with crew members spaced every 15 feet, was employed for those areas where ground visibility was good (cultivated fields) and coverage was at 100%. Subsurface testing in the form of 2.5' by 2.5' shovel tests was employed in those areas where ground visibility was poor. Intensity of coverage in the shovel testing was governed by the probability of finding archeological remains based either on archival and historic map searches, or in the absence of documentary evidence, predictive models for the presence of archeological sites (Custer 1984). Generally, shovel tests were spaced every 100 feet, depending on field conditions and individual site circumstances. Shovel tests and surface reconnaissance were supplemented with a bucket auger in areas where there was a potential for buried land surfaces underneath either fill or slope wash. Previously identified sites were tested with slightly different methods, based on the information available, in order to maximize the recovery of data. At the T. Husbands site, for example, the location of the house was precisely known from survey maps drawn prior to its destruction, and preliminary Phase I fieldwork was restricted to determining the extent and condition of the house's subsurface structural elements and the potential for intact associated features.

Where sites were encountered in which architectural remains were extant and visible above the ground surface (such as foundation remnants, terrace walls, etc.), and these sites could be accounted for in documentary sources, preliminary Phase I fieldwork required only that these sites be mapped and photographed. Notes regarding the number and types of structures identifiable from close visual inspection were taken in the field. Extended Phase I investigations were then recommended for the sites where the combination of the preliminary field results and documentary evidence indicated that intact cultural resources might be expected.

All sites and shovel tests were plotted on topographic maps provided by the Delaware Department of Transportation at a scale of one inch equals 100 feet. All soil, except where noted, was sifted through 1/4 inch mesh screen and excavation proceeded according to natural soil horizons. Where sediments exceeded one foot in thickness, the natural levels were subdivided into arbitrary levels in order to maintain vertical control of artifact distribution. The results of the preliminary Phase I investigations and a proposal for additional investigations were presented to DelDOT and accepted by the State Historic Preservation Office and the Federal Highway Administration (Taylor and Thompson 1986).

Field methods for the extended Phase I investigations were structured on a site by site basis. They were designed to gather additional data on the sites in order to determine if subsequent investigations would be required. Site specific methodology is presented for each site where extended Phase I work was conducted in the individual sections covering these sites.

The results of the field investigations are presented in the following section by each segment and area, beginning at the westernmost portion of the project area. Sites where extended Phase I investigations were required are noted and the results of those investigations are included. The segments and areas are delineated on Figure 2. Figure 3 presents the location of each of the sites on the Wilmington North 7.5 minute series quadrangle map. Each segment then has a separate map showing the location of all shovel tests, walkover survey coverage and the individual sites. Those sites at which extended Phase I work was conducted have individual site maps at a larger scale, showing the location of all excavation units, features and any above ground remains which were present. Plan and profile maps of the excavation units and features are provided where this information is required for clarification or, in the case of areas where all profiles were similar, representative profiles are given.

A number of different types of artifacts were recovered during the archeological investigations. Because of their varying information potential with regard to the research design and the use of computer coding, different artifact types were handled in slightly different ways. Because of changes in technology and decorative styles, the ceramics and glass were considered to be the most sensitive temporal indicators. In addition, ceramics have been demonstrated to provide a means of evaluating economic status (Miller 1980; Beidleman et al 1983; T. Thompson 1985), thus contributing directly to the research design. Therefore, a more detailed attribute analysis of these two classes which would be amenable to computer analysis was used to record these artifact types. The attributes coded for the ceramics and glass are presented in more detail in other reports (c.f. Thompson and Taylor 1987). Metal and the remaining artifact category, Miscellaneous, were simply described according to material, method of manufacture, and function, insofar as these items could be determined for a particular object.

The artifact analysis procedures discussed below were developed in connection with a data recovery project in New Jersey and greater detail on artifact coding is presented in that report (Thompson 1985). Only a summary is presented here, with any deviation from that coding system noted. Artifacts were assigned Field Specimen Numbers in the field. The Field Specimen Number simply provides a means of greater control over the artifacts recovered. A number of attributes of potential interest were identified (separately) for the glass and ceramics. Numerical codes were assigned for each of a range of possible variable states. A standard IBM 80 column coding form was subdivided and

the numerical codes for each variable state was recorded directly from the artifacts. Artifacts from each Field Specimen Number were sorted and the numerical values were recorded on the form. Items or groups of items with identical attributes were combined on the form with the set of attributes being recorded only once for the entire set. The coding forms were then entered into an Apple MacIntosh computer according to specific provenience groupings (detailed under the Results of the Investigations section) and analysis was performed by these provenience groupings and separately for each unit at a site. The variables tabulated include, for ceramics: ware type; glaze and/or slip; method of decoration; color of decoration; variety (provides more detailed information such as a specific motif); function/shape; South's (1977) function; South's (1977) type; beginning date and ending date (based on South's type); sherd count; presence or absence of maker's mark; vessel count; Econscale type and date code (before 1903 or after 1903). The variables tabulated for glass include type variety (method of manufacture and/or shape if manufacture method is not known), function/shape, South's function, lip/neck treatment, body treatment, base treatment, closure, decoration, color, beginning and ending date (primarily based on method of manufacture, see Reher 1977), sherd count, vessel count, geographic origin and date code (before 1903 or after 1903).

The provenience groupings were then used to calculate Mean Ceramic Dates, following South (1977) and to place the artifacts within South's Function Groups (1977). The functional groupings could then be examined to determine the nature of the deposit and differences in functional/activity areas across a particular site, insofar as these could be determined for a particular site.

The final phase of laboratory analysis was designed to accomplish two goals. The first was cross provenience group mending in order to determine if the provenience groupings (based on stratigraphic context) represented intact, separate cultural contexts. The second was a determination of the minimum number of individual (MNI) vessels recovered from some of the sites tested. The data from the MNI vessel count was applied to Miller's cost scaling index with the expectation that the expenditure patterns will reflect the socio-economic status of the occupants of the site. This could not be done for all sites because of the small size of the sherds. It was done for the Dwelling H site, Walkers Bank/Keg Factory, the Row House and Weldin Plantation. The results of this analysis are presented in the Summary and Conclusions section of the report.

The inherent difficulties encountered with this phase of the analysis are due to the preliminary nature of the survey investigations. No features which were identified during the course of the survey were fully excavated. The bulk of the artifacts were recovered from 2' by 2' test pits and 1' by 1' shovel tests. The artifacts from all units were examined to establish mends between stratigraphic levels and between shovel tests or test units across each site. Each mend was recorded and

used to validate stratigraphic information. Vessel count was calculated using all single unique sherds where vessel form could be reliably established and mended fragmentary vessels with known form. In instances where two or more sherds were obviously part of the same vessel but did not mend, they were counted as one non-mending vessel. Greater detail on this is presented later in the report.

RESULTS OF THE INVESTIGATIONS

SEGMENT 1

Segment 1 (Figures 2 and 4) is located near the intersection of Route 141 and Route 100 (Montchanin Road). It measures approximately 300 by 1200 feet and is bordered on the south by the Columbia Gas building and on the north by Route 141. There was no indication from the archival investigations for the presence of historic period sites, and the area was considered to have low to moderate probability for containing prehistoric sites. There is a gentle slope to the east towards Brandywine Creek which gradually increases at the eastern end. Ground cover at the time of the survey consisted of mown grass. A fair amount of alteration to the original topography was visually apparent and was indicated in the profiles of the shovel tests. This alteration appears to have consisted of cutting and filling. Thirty shovel tests were placed across the area in three rows, with tests spaced every 100 feet. Each shovel test was excavated to sterile subsoil. The profiles across the area were all very similar and consisted of an Ap (plowzone) or a fill horizon resting on an unweathered silt C horizon (Figure 5). Artifacts were recovered from the Ap and consisted primarily of coal with a lesser amount of ceramics and glass. The presence of the artifacts is felt to represent secondary field scatter and not significant or primary archeological remains. There was no evidence for subsurface features.

No significant archeological remains were recovered from Segment 1 and no further work is recommended.

School House 28 Site

Archival investigations conducted prior to the preliminary Phase I field investigations revealed a schoolhouse on the other side of Route 141 from Segment 1, between a cemetery and Montchanin Road (Figures 3 and 4). The school is present on the Rea and Price map (1849), the Beers map (1860), the Beers Atlas (1868), the Hopkins Atlas (1881) and the Baist Atlas (1893). These maps indicate that the school building was located mid-way between the west cemetery wall and Montchanin Road, directly adjacent to what is now Route 141. There is currently an abandoned cinder block garage at this location, and the intersection of Montchanin Road and 141 has been extended to the north. Eight 2.5' by 2.5' shovel tests were excavated at the location of the schoolhouse as shown on the historic maps. These excavations indicated several layers