

V. METHODOLOGY

A. Field Methods

The Phase II archaeological investigation of Sites 7K-C-394 and 7K-C-396 was carried out by the hand excavation of shovel tests and test units. The proposal for the project specified unit size and grid intervals in metric measurements, but this approach was modified to maintain consistency with the previous UDCAR investigation, in which English measurements were employed. The revised Phase II plan called for the excavation of 24 3x3-foot test units, 12 on each site, and up to 24 discretionary units to be excavated on either site as warranted. In order to utilize the Phase I survey grid, shovel tests were excavated at 20- and 40-foot intervals. The survey grid was reestablished from the remains of the barn foundations at Site 7K-C-394, and by relocating Phase I shovel tests in the wooded part of Site 7K-C-394.

Shovel tests at Sites 7K-C-394 and 7K-C-396 measured approximately 4.5 feet in diameter and were excavated until sterile soil was reached. The excavation of shovel tests proceeded by plowed and natural stratigraphic soil horizons. Strata were excavated separately and designated by letters in an alphabetic sequence according to their relative stratigraphic position. Excavated soil were screened through ¼-inch hardware mesh for systematic artifact recovery. All artifacts were collected and cataloged according to shovel test and stratigraphic provenience. Munsell soil color notation and USDA soil texture nomenclature were employed to standardize descriptions of all excavated strata. Standardized LBA shovel test forms were used to record field data following the completion of each test. After each provenience was cataloged, the quantities of recovered cultural materials were recorded on maps to illustrate the distributions of different historic and prehistoric artifact classes. These data, in conjunction with the results of the Phase I investigation, were later used to determine test unit placement.

Test units at each site were excavated in areas where artifact concentrations or possible archaeological features had been identified during shovel testing. The units were excavated in arbitrary 0.3-foot levels within natural stratigraphic soil horizons. The plowzone layer, present in all of the Phase II units, was removed as a single natural level. Two-liter flotation samples were removed from all identified features, and from a sample of unit levels containing prehistoric artifacts below the plowzone. Profile drawings were completed of at least one wall from each unit, and a representative sample of all wall profiles was photographed in black-and-white print and color-slide film. Plan view and bisection drawings were prepared for all features, and all features were also photographed using black-and-white and color film.

B. Laboratory Methods

The artifacts from Sites 7K-C-394 and 7K-C-396 were processed according to the standards of the Delaware State Museum, which will be the final repository. All proveniences

were assigned Delaware State Museum Ascension Numbers. Site 7K-C-394 was assigned Ascension Numbers 94/51/1-120, and Site 7K-C-396 was assigned Ascension Numbers 94/52/1-112. All artifacts were transported from the field to LBA's laboratory in East Orange, New Jersey. After being cleaned and sorted according to major material categories (prehistoric lithics, prehistoric ceramics, historic ceramics, glass, small finds, etc.), the collections were analyzed by specialists and the artifact attributes were coded on computer data entry forms. Artifact cataloging and tabulation were accomplished using LBA's computerized database system. The system is written on an IBM PC-compatible computer using R:BASE System V, a relational database development package. The database allows more than a dozen attributes to be recorded for each artifact. In addition to standard descriptors, the database allows the entry of lengthy notes specific to individual artifacts. LBA's database handles both prehistoric and historic artifacts, with separate but linked datafiles for each. The system also allows ad hoc data queries as well as data exports to other microcomputer systems for analysis at remote locations. After analysis, the artifacts were re-bagged into clean, 4-millimeter, resealable plastic bags with air holes. An acid-free artifact card with provenience information and catalog number was included in the bags.

Historic artifacts were cataloged according to standard typologies (Noel Hume 1970; South 1977), using the class, type, and variety approach (for example, class = glass, type = bottle, variety = case). First, the entire collection was sorted according to major classes: ceramics, curved glass, and small finds. The small finds class is a residual or catch-all category that comprises a broad variety of items, including artifacts assignable to South's (1977) Architectural, Furnishings, Arms, Personal, Clothing, and Activities groups. Cataloging of the ceramics and glass was carried only to the level of individual sherds, and no crossmends or Minimum Number of Vessel determinations were made. Dating of deposits was accomplished primarily by the Terminus Post Quem (TPQ) technique, using the beginning date of manufacture for artifacts with a known temporal range. Some artifact attributes, including the date range, were automatically entered by the computer for common artifact types. Data processing speed and storage were enhanced by the use of alphabetic and numeric codes for the various attributes, but more lengthy "translations" are printed on the catalog sheets. For example, "CRW 10" translates to "ceramic, whiteware, shell-edged blue," with an automatically entered date range of 1820 to 1900.

The cataloging of prehistoric artifacts was carried out according to a technomorphological classification system. First, the collection was sorted into major formal classes: bifacial tools, unifacial tools, cores, chunks, flakes, cracked rock, and ceramics. Within the major lithic classes, each item was then classified according to more specific functional types. Debitage was divided into decortication flakes, early reduction flakes, biface reduction flakes, bipolar reduction flakes, block shatter, flake shatter, and flake fragments. A notation was made of whether each piece of debitage included cobble or block cortex. The core types identified in the collection were bipolar cores and freehand cores. Unifacial tool types include utilized flakes, retouched flakes, sidescrapers, and endscrapers. Incompletely finished bifacial tools were sorted

according to the early-stage, middle-stage, and late-stage categories defined by Callahan (1979); other types include projectile points and indeterminate biface fragments. All lithics were sorted and coded according to raw material and weight. The length, width, and thickness of bifaces and unifaces were measured. Ceramics were cataloged according to temper, surface treatment, and surface decoration and assigned to a formally defined ware if possible.

A catalog listing of the recovered cultural material has been prepared to accompany the artifact collections and is available from the LBA Cultural Resource Group in East Orange, New Jersey, and from DelDOT.