

5.0 INTERPRETATIONS AND  
RECOMMENDATIONS



## 5.0 INTERPRETATIONS AND RECOMMENDATIONS

The Phase IB Archaeological Survey of the SR 1 Frederica Interchange project APE revealed extensive evidence of prehistoric and historic occupation across the landscape. Geomorphologic testing determined that the project APE consists of Pleistocene-age alluvial deposits capped with disturbed, surficial plowzone (Ap) horizons. Examination of the project area noted that in some areas gravel-rich Pleistocene deposits extended up to and within the disturbed surface plowzone stratum, while in other areas gravel-rich strata were clearly overlain with silty sands that exhibited a relatively high degree of sorting and conspicuous lack of gravel. Two test units, N590 E554 and N660 E584, were examined in detail for comparative characteristics of these soil variations. These silty sands are attributable to eolian redistribution of surface fines from erosional blowout features and low dunes across much of the regional landscape. While the age and depositional mode responsible for these near-surface fines is not clear, they were noted to occasionally include Holocene-age, prehistoric archaeological materials in subplowzone context, while within gravel-rich portions of the project area most archaeological materials (historic and prehistoric) were recovered from in and near the plowzone.

The implementation of a series of controlled surface collections and the excavation of 47 STPs and 30, 1.0-meter by 1.0-meter (3.3-ft by 3.3-ft) test units identified the presence of potentially significant prehistoric and historic archaeological deposits in Area 1 of the APE. The diverse assemblage of prehistoric artifacts recovered from several discreet loci during the surface collection suggests that this parcel of land was repeatedly occupied for extended periods of time, likely as a small community linked to a regional trade network. Diagnostic artifacts, including a Middle to Late Archaic Period (6500 to 1000 B.C.) jasper Lamoka point, a Late Archaic Period (3000 to 1000 B.C.) quartz MacPherson point, and eight prehistoric ceramic sherds with sufficient diagnostic characteristics reflective of Woodland I Period (3000 B.C. to 1000 A.D.) wares, reflect a significant temporal period of occupation. The presence of numerous prehistoric ceramic sherds, projectile points, bifaces, grinding stones, lithic blanks, a netsinker, shaft abraders, and other stone tools indicates that cooking, processing, and lithic maintenance activities took place in the APE. Prehistoric artifact distribution maps identified six individual loci in Area 1 that contained high concentrations of prehistoric cultural remains. These loci may

represent discrete activity areas utilized at different occupation episodes spanning the Middle Archaic through Late Woodland periods. Numerous argillite blanks (n=5), a rhyolite blank (n=1), and a fragment of a possible steatite pendant reflect the trade of lithic resources from south central and southeastern Pennsylvania, outside of the Delmarva Peninsula region.

While the prehistoric artifact assemblage collected from Area 1 and Area 2 indicates a substantial Native American presence in the APE, the horizontal, vertical, and temporal boundaries of this cultural occupation have yet to be defined. One prehistoric archaeological site, Site 7K-F-11, has previously been documented within the APE in Area 1. A review of the CRS Archaeological Site Form for 7K-F-11 (CRS #K-632) suggests that Loci 5 and 7K-F-11 are the same cultural resource. However, there is the potential that the loci identified in Area 1 are also associated with 7K-F-12, the Robbins Farm Site #1, located outside of the APE on the west side of SR 1 and the farm pond drainage. The clustering of prehistoric sites and resources in such a small area leads us to ponder this question: Do these loci represent one site (i.e., 7K-F-11), or is it necessary to assign individual site designations (i.e., 7K-F-11A, 7K-F-11B)? In addition, what is the relationship of Loci 1-6, as well as the prehistoric remains recovered in Area 2, to 7K-F-11 and 7K-F-12? These critical questions must be addressed before assigning a site designation to cultural features in the APE.

A comparison of the gravel-rich and gravel-poor areas in the plowzone horizon to the location of cultural features yielded limited evidence about the relationship between wind-blown soils and the preservation of prehistoric materials in Area 1. Feature 1 and 2 were both documented in the surface of the E-horizon, but the features and the surrounding soil matrix were left intact, prohibiting further excavations into soil column. It was not determined through the test unit excavations whether Feature 1 and 2 represent cultural activities within aeolian deposits, or if these feature stains are indicative of natural processes, such as root/rodent disturbance. Feature 3 was noted at the interface between the E-horizon and the Bt-horizon, extending into the Bt-horizon. The recovery of one FCR fragment and four lithic debitage within the top 20.0 centimeters (7.9 in) of the feature matrix suggests that this soil stain is part of a prehistoric cultural feature. However, it is unclear if the overlying E-horizon is comprised of wind-blown soils.

Inconclusive evidence was also found in the correlation between the location of designated prehistoric loci and the presence of gravel-rich or gravel-poor areas in the plowzone horizon. The surface collection of Area 1 yielded a varied number of prehistoric finds in grid cells subjected to test unit excavations (Table 1). The largest number of surface-collected prehistoric artifacts was recovered from Test Unit N629 E600 and N668 E600, both found in Locus 3. Inspection of the surface surrounding these two test units did not identify any gravel concentrations or soil anomalies which would distinguish gravel-rich or gravel-poor topsoil as an indicator of prehistoric artifact concentrations. Analysis of the soil profiles in these two test units produced a similar stratigraphy consisting of a plowzone horizon, E-horizon and Bt-horizon.

*Table 1. Comparison of Surface Collection Artifact Counts to Soil Stratigraphy*

Grid Cells	Surface-collected artifact count	Test Units	Features	Stratum	Locus
7-B	1	N568 E510 N569 E518		Ap/E/E Ap/E	
7-H	3	N560 E570		Ap/E/E	
8-C	0	N570 E525		Ap/E/Bt	
8-D	5	N570 E533 N570 E534 N573 E530 N576 E534 N576 E539	Feature 3  Feature 1	Ap/E/Bt Ap/E Ap/E/E Ap/E/Bt Ap/E	
9-E	1	N580 E543 N582 E546 N583 E549		Ap/E Ap/E/E Ap/E/Bt	
10-F	2	N590 E554 N594 E559	Feature 2	Ap/E/Bt Ap/E	
11-G	0	N600 E560 N609 E565		Ap/E/E Ap/E/E	
12-G	1	N619 E568		Ap/E	
13-H	3	N625 E570		Ap/E/Bt	
13-K	9	N629 E600		Ap/E/Bt	Locus 3
15-I	6	N643 E580		Ap/E/E	
17-I	4	N660 E584		Ap/E/Bt	
17-K	12	N668 E600		Ap/E/Bt	Locus 3
19-I	6	N680 E587		Ap/E/E	

The historic artifact collection recovered from the APE is representative of mid-eighteenth-through early-twentieth-century domestic and architectural refuse. A variety of historic ceramics, including redware, whiteware, porcelain, pearlware, vitreous china, stoneware, other earthenware, and creamware, provide a common cross-section of mid-eighteenth- through

twentieth-century domestic utilitarian ceramic types. Bottle glass and vessel glass rounded out the larger classes of domestic artifacts. Architectural artifacts included brick, window glass, and nails, are not unexpected given the presence of the Soulie Gray House in the APE.

While these historic cultural materials were recovered extensively from the plowzone horizon, the horizontal distribution of these materials does present interesting contrasts. The proximity of the Soulie Gray House to the proposed road alignment in Area 2 does provide a source for the surface scatter of brick, ceramics, bottle glass, and other historic refuse found in Area 2. However, the distribution maps indicate that a more diverse assortment of historic ceramics was encountered in Area 1, as opposed to Area 2. In addition, a concentration of brick was noted in a small area along the marshlands defined by Row 4 to the north, Column N to the east, Row 1 to the south, and Column K to the west. This historic artifact locus also contains two corroded square nails. It is suggested that this locus may represent the remains of a building associated with a river landing located along Spring Creek, such as a storage building. The diversity of historic ceramics in Area 1 may reflect broken dishes and crockery unloaded from a vessel and discarded along the landing, although this is only speculation. No records have been examined during this Phase IB Archaeological Survey that would indicate the presence of a dock in the APE. However, the documentation of an early-eighteenth-century landing downstream from the APE, and the reliance of maritime transportation for commercial goods in eighteenth- and nineteenth-century Frederica, suggests that Area 1 has strong potential to contain structures associated with a river landing.

Of particular note, the documentation of subsurface prehistoric features in Area 1 demonstrates that the APE has good potential for the spatial differentiation of site components (both temporal and functional) across the landscape. Feature 3, in particular, noted at 60.0 centimeters (23.6 in) below surface, produced FCR (n=1) and lithic debitage (n=4) in the top 20.0 centimeters (7.9 in) of the feature soil matrix. The overlying soil stratigraphy consists of silty sands that are probably the result of eolian reworking of Pleistocene-age sediments. The presence of intact cultural features beneath the eolian soil package demonstrates the potential within sections of the project area for the preservation of archaeological site components within a buried and possibly stratified context.

A.D. Marble & Company recommends a Phase II Investigation of Area 1 in the project APE. The Phase II Investigation should focus on potential impacts within the area defined by the conceptual extended limits of disturbance as presented by Century Engineering, Inc. (Attachment A). Based on the recovery of significant prehistoric diagnostic artifacts, potential activity areas identified through a surface collection, and the potential for buried and possibly stratified archaeological deposits in an intact setting, this site is potentially eligible for listing in the National Register under Criterion D. The prehistoric archaeological data offers an outstanding opportunity to further our understanding of the change in prehistoric lifeways and technological changes in the Murderkill River drainage. The recovery of Keyser Cord-Marked and Potomac Creek ceramics in 7K-F-12, located directly west of the APE, suggests that Area 1 may also yield similar ceramics, and expand upon limited information concerning migration patterns and trade networks of Native Americans in the Chesapeake and Delaware Bay areas. In addition, an examination of the eolian component of Area 1 can provide additional information regarding the formation of eolian surface features in the project area, as well as throughout the region.

Area 1 also has the potential to produce significant archaeological deposits associated with early- to mid-eighteenth- through twentieth-century domestic and transportation-related activities in the APE. A brick concentration along the edge of the marsh lands is interpreted to represent the remains of a structure associated with a river landing in Area 1. In addition, Area 1 exhibits a diverse collection of eighteenth- through twentieth-century ceramics that are thought to represent crockery damaged during shipment by commercial vessels on the Murderkill River. While the brick locus is situated outside of the conceptual extended limits of disturbance, the potential does exist for historic features within the extended limits of disturbance.

A.D. Marble & Company recommends a Phase II Investigation of Area 2 in the project APE focusing on the historic occupation of the parcel. Area 2 produced a limited amount of prehistoric and historic surface scatter, and subsurface testing identified one post mold feature to the north side of the Soulie Gray House. No prehistoric cultural features were found in Area 2. Additional testing is recommended to determine whether the post mold is part of a post-in-

ground structure and if any other historic features are present in the APE for Area 2. Given the mid-nineteenth-century date of the Soulie Gray House, outbuildings may have been present beyond the existing overgrown area of the farm, and were demolished due to disrepair and the necessity to expand tillable ground. As such, identifying the function of the post mold may offer new information about land use, farm outbuilding size, and other site-specific data.

No additional archaeological investigations are recommended for Area 3 or Area 4. These areas did not exhibit significant cultural resources, and will not likely offer any new information on the prehistory and history of the project area.