4.0 CONCLUSIONS

Two archaeological sites, 7NC-J-227 and 7NJ-228, were discovered in the projected right-of-way of the Smyrna-to-Pine-Tree-Corners segment of SR1—along a tributary of Sandom Branch—as a result of survey conducted in 1997. Both sites were to be adversely affected by road construction associated with SR1. The CR Division designed and executed an extensive and ambitious program of archaeological evaluation and data recovery for DelDOT on what we collectively referred to as the Sandom Branch Site Complex. In accordance with a Memorandum of Agreement developed in 1987 for the entire highway construction project, data recovery excavations were designed and field work undertaken by the CR Division in the fall and winter of 1999-2000.

The recovery and subsequent analysis of data from the Sandom Branch sites provided an excellent opportunity to gain significant insights into American Indian life in the interior of the Delmarva Peninsula at a more intensive level than had been accomplished in this region prior to this project. A number of prehistoric archaeological sites had been recorded in the Blackbird Creek basin, but few had been investigated in detail. Most of these sites had been noted on the basis of surface collection alone, and existing documentation was limited (Custer and Bachman 1986). The present, detailed study has provided opportunities to discover new information both in terms of the interpretations resulting from the data collected and analyzed, and through lessons learned from the process. The findings of the Sandom Branch Site Complex investigations and some of the implications are reviewed below. Recommendations are presented for the treatment of similar resources in the future.

4.1 Summary of Findings

The two sites comprising the Sandom Branch Site Complex were situated on a terrace above a low-order tributary of Sandom Branch. The sites were investigated with a total of 472-m^2 of excavation, comprising between 8 and 9 percent samples of each site (Table 9-1). 7NC-J-228 was at the north end of the terrace, overlooking the confluence of Sandom Branch and its tributary. This site contained evidence indicating three general periods of site use. An early deposit, of indeterminate time period, consisted of a scattered distribution of chipped stone and thermally altered stone artifacts. An intermediate deposit included a number of pit features excavated into the early deposit. Lastly, the uppermost stratum, by implication the most recent in date, contained a series of large, thermally altered stone features. Temporally diagnostic artifacts and radiocarbon assays indicated that the stone features represent American Indian use of this landscape largely in the Early and Middle Woodland periods.

Situated across a wide swale through which a small, intermittent stream once flowed, 7NC-J-227 was located about 150 m to the south of 7NC-J-228. Evidence of American Indian activity at 7NC-J-227 was recorded in an extensive distribution of thermally altered stone features that appeared to date largely to the Middle Woodland period. Overlying the Middle Woodland deposits was evidence for Late Woodland activity, principally in the remains of ceramic vessels. A single Early Archaic Kirk point indicated much earlier use of this landscape, although the CR Division investigations did not uncover further information about this early occupation.

Table 9-1. Excavation Samples at 7NC-J-227 and 7NC-J-228.

Site	Area		
7NC-J-227	2,788 sq. m	Site Evaluation (Phase II) Sample	26 sq. m
		Data Recovery (Phase III) Sample	228 sq m
		Total	254 sq. m
		Proportion of Site	(9.1%)
7NC-J-228	2,600 sq. m	Site Evaluation (Phase II) Sample	29 sq. m
		Data Recovery (Phase III) Sample	189 sq. m
		Total	218 sq. m
		Proportion of Site	(8.4%)

In-depth analysis of the heated rock concentrations at both sites resulted in the conclusion that most of the features were roughly contemporaneous and probably represented a similar form of activity. That is, taking the natural slope of the landform into account, the features occurred at elevations implying they had been deposited on a single surface. The majority of the temporal evidence from this surface indicated more intensive activities in the Early and Middle Woodland periods—although clear evidence for use of this landscape dates both to the preceding Late Archaic and the succeeding Late Woodland periods.

4.2 Future Directions

The research design that guided our analysis was presented in Section 2.0. This research design was integrated into our analyses and interpretations of the archaeological findings from the two Sandom Branch sites that was presented in Sections 6.0 and 7.0 and further explored in Section 8.0. Here, we briefly examine the main elements of the research design and present suggestions for future research on sites similar to those at the Sandom Branch Site Complex.

4.2.1 Creating a Chronological Framework

Three lines of evidence were used to create the chronological framework for the Sandom Branch Site Complex: stratigraphy, temporally diagnostic artifacts, and AMS assays. The stratigraphic analyses greatly benefited from the attention of geoarchaeologists, who helped reconstruct the history of the physical landscape through time, although not always on the fine scale required to discerning closely overlapping occupations. Of particular importance to understanding the Sandom Branch stratigraphy and integral to understanding site formation processes was the refitting of thermally altered stones, and the cross-mending of ceramics. Future studies should emphasize both of these approaches, the former of which adds to the analytical importance of what is a ubiquitous and unglamorous artifact type.

Temporally diagnostic artifacts are potentially useful for recognizing broad patterns of landscape use, but are more challenging to use when trying to discern occupations that are not separated far from one another in time. The utility of temporally diagnostic artifacts

increases when they are found in association with other dated items. Small, stemmed points, referred to as Woodland I stemmed, made from pebble material were found in general association with Mockley ceramic sherds at 7NC-J-227, corroborating a pattern seen at other sites in central Delaware that places these points in the Early to Middle Woodland periods. In addition, triangle points were found in association with Minguannan ceramic sherds at 7NC-J-227, in a pattern referred to as the Minguannan Complex. Townsend sherds were also found intermixed with Minguannan. Whether this resulted from the co-occurrence of the two Late Woodland wares or from the presence of different groups using different ceramic wares at the same locale could not be determined.

AMS assays contributed to placing the Sandom Branch Site Complex within the regional chronological framework, and aided in the recognition that the thermally altered rock features were largely created close to one another in time. Procuring additional AMS assays would have proved useful in refining the local chronology but organic preservation precluded this course of action. We recommend that multiple AMS assays should be obtained from each site component when feasible, ideally from discrete contexts that also contain temporally diagnostic artifacts.

4.2.2 Technology, Materiality and Social Processes

The major artifact categories encountered at the Sandom Branch Site Complex consisted of thermally altered stones, chipped stone tools and debitage, and ceramic vessel fragments. Few ecofacts were recovered from the site, and provided minimal insight into the diet of the American Indians who occupied the Sandom Branch Site Complex.

The physical attributes of the thermally altered stone fragments that constituted the features were carefully examined, as was their spatial distributions. A lack of associated evidence for burning implied that most of the stones had been used in indirect heating, or stone-boiling, associated with cooking activities. Cross-mending of these thermally altered stones not only aided understanding of the activities that produced these stones but also significantly aided the interpretation of how these archaeological deposits formed. The refit study conducted at 7NC-J-227, for example, was a valuable contribution to the interpretation of the Sandom Branch Site Complex, both in terms of evaluating depositional contexts and in assessing the types of activity that may have produced the features recorded at the sites. The value of the refit study cannot be denied, and we recommend that the humble and oft overlooked thermally altered stones should be subject to similar studies in the future.

Our understanding of the American Indian presence at the Sandom Branch Site Complex was furthered by a special study designed to explore the sources of the stones associated with the thermally altered features, as well as those used to manufacture stone tools. A similar study looked at the composition of clay vessels recovered at the two sites and compared them to locally available clays. In both cases, these special studies revealed that the people at Sandom Branch relied largely on locally available raw materials, rather than using their social networks to draw on materials from outside the immediate region.

Evidence from both sites indicated the American Indians relied heavily on locally procured gravels as the source for lithic tools. Small, cortical flakes were common in the artifact

assemblages from each identifiable period of site use, and non-local or exotic materials were rarely present. Formal tools were confined to points that were typically made from cryptocrystalline materials and appeared to have been used both as projectile points and cutting tools. Expedient flake tools, made from cryptocrystalline and quartz pebbles, appeared to complete the American Indian lithic tool kit.

Ceramic lot analysis suggested that few vessels were represented at the Sandom Branch Site Complex, perhaps as few as three. Yet, two of the lots contained rim fragments with applied collars, a design attribute that distinguished Minguannan forms from the molded collar forms of Owasco and Iroquoian wares. A petrographic study resulted in a detailed catalog of the mineralogy of the constituents of temper and clay in a small sample of sherds from the sites. This study demonstrated that useful data may be anticipated from similar studies in the future.

4.2.3 Scales of Social Organization

The smallest scale of social organization is the individual, but individuals are difficult to recognize in the archaeological record. This is partly because our analyses struggle with dealing with vast amounts of information that we categorize and computerize, losing the person in the process. One possible solution is to seek out and identify unique objects that can be more directly linked to an individual's agency. Such an emphasis on "small finds" is becoming important in historical archaeology, and certainly should be extended to prehistoric sites. One such artifact, an ulu or gorget fragment, was found at the Sandom Branch Site Complex. The attention to detail in the comparative analysis of this object is one that should be replicated in future studies. How many of these unique, personal items are lost in traditional archaeological approaches to mass data analyses?

The Sandom Branch sites were inhabited by small social groups and may have been socially linked to larger American Indian camps situated in downstream settings. Given the apparently intensive processing carried out at the sites, as indicated by the amount of thermally altered stone fragments discarded across the area, American Indians were probably focused on harvesting and processing specific resources that were later used at larger sites in the region. Several pit features identified at 7NC-J-228 were interpreted as the remnants of storage features. These pits suggest the caching and storage of resources by mobile American Indian social groups. Stratigraphic analysis suggested that they predated the Middle Woodland deposits represented by the majority of the thermally altered stone features at the site. As we discuss below, continued close attention should be paid to small sites such as those that characterized the Sandom Branch Site Complex.

4.2.4 Paleoenvironmental Studies

One interesting finding from the geoarchaeological study of the Sandom Branch Site Complex was the suggestion that some larger pits represented tree throws that were secondarily used by American Indian gatherer-hunters for storage and potentially for temporary dwellings. Not surprisingly, the American Indians who occupied this region took advantage of all aspects of the local landscape. The geoarchaeological studies also indicated that aeolian deposition on the two sites along Sandom Branch may have resulted from areas upwind that had been stripped of vegetation by American Indians. In addition to this insight

into activities that occurred off site, the geoarchaeological studies helped with understanding the occupational history of the Sandom Branch Site Complex through examination of the vertical and horizontal distribution of artifacts. Geoarchaeological studies should continue to be incorporated into archeological studies of similar sites.

The archaeobotanical studies were faced with limited preservation of organic materials. Nonetheless, these verified that oak and hickory were important over the last 6,000 years. Nuts and acorns were an important food resource for humans and animals that shared this landscape. Future researchers should explore ways of obtaining microfloral and microfaunal remains in similar site contexts where organic preservation is problematic. This might also aid the expansion of AMS dating suggested above.

4.2.5 Landscape Approach: Placing People in their Past Cultural Landscapes

We necessarily focus on the tangible aspects of the past. In the case of the Sandom Branch Site Complex: thermally altered rock features, ceramic and lithic technology, the nature and formation of archaeological deposits—among other lines of evidence—provide the clues we use to comprehend past American Indian lifeways. Sometimes we get lost in a sea of numbers, measuring, counting, and manipulating our data. But, we must never forget that living and breathing individuals created the archaeological record that we study. However informative and detailed our analyses are, we must always take care to step back and recall that our ultimate goal as archaeologists is to arrive at some understanding of what motivated people to undertake their actions that manifested in the archaeological record.

Our basic findings show that, over millennia, people came to Sandom Branch to acquire critical resources from this rich wetlands environment. They made stone tools and pottery from locally available materials, gathered plant remains, and hunted game, which they then processed using thermally altered stones. The latter became an important part of the cultural landscape and created the major physical traces of their past activities that we encountered during our archaeological investigations. Their sojourns at Sandom Branch appear to have been fairly brief; American Indians stayed here only as long as needed. We speculate that they returned to larger settlements located in lowland settings that would have encompassed a fuller range of their activities. These larger sites in lowland settings that may have contained further evidence of the patterns of landscape use, such as increased sedentism, seasonal changes in resource utilization, and changes in community or residential patterns, that are important to understanding regional subsistence-settlement systems.

One might ask why archaeologists should investigate sites that are comparatively smaller than these main settlements, and that represent the manifestation of fewer activities. Studies of this category of sites helps with developing a holistic view of the American Indians that once made Delaware their home. For archaeologists, small sites may lack the complexity seen at larger, more sedentary settlements, but, conversely, this can make it easier to recognize small groups of American Indians—even individuals—from the discrete traces of their activities. Fewer people and fewer activities mean that those that did take place at small sites can be more readily discerned.

From the perspective of reconstructing American Indian lifeways, simply because the Sandom Branch sites were focused on procuring and processing local resources does not mean that these were not critical activities for local social groups—and perceived as such. Certainly, examining small sites such as those at Sandom Branch are critical to better understanding the resources exploited by American Indians, how these patterns of exploitation may have changed over time, and how that change may have affected dynamics within the local social group.

Thus, small sites in upland areas remain a valuable part of the archaeological record of the region, and their study should not be neglected in the future. The investigation of small upland sites, combined with continued study of new data from large occupation sites and the existing database of previously recorded occupations, should bring the patterns of use of the region throughout prehistory into increasingly clarity.