
4.0 RESULTS

4.1 EXPECTED PROPERTY TYPES

4.1.1 *Prehistoric Archeology*

Based on the background research, expectations for archeological resources in the project area were developed. For prehistoric archeological sites the discussion is guided primarily by the management plan for the Delaware Atlantic coastal region (DACR) (Custer 1987) with reference to more recent work (e.g., Custer 1989; Custer and Mellin 1991). The survey was limited to areas considered both relatively undisturbed and sensitive for archeological resources based on a review of the project area by DelDOT archeologists.

Custer (1987:22) identified only one site dating to the Paleoindian period (7S-G-19) on the southern Delmarva Peninsula; however, isolated points have been found in the project region. Two Study Units were defined for the Paleoindian period: major drainage, and interior (Custer 1987:27). Base camps might be expected in the major drainage zone, while procurement sites and stations might occur almost anywhere. Data quality is poor for the Paleoindian period, as only one site is known. The single known site is situated on the north shore of tidal Indian River near its opening into the bay. Any finds of Paleoindian cultural material in the project area would be considered potentially significant.

The study units defined by Custer (1987:31) for the Archaic period are identical to the Paleoindian units (i.e., major drainage and interior). However, climatic conditions were probably drier ca. 9,000 years BP (Kellogg and Custer 1994:21–24), so that Archaic sites might be expected closer to reliable or predictable water sources. As with the Paleoindian period, only a few Archaic sites are known for the DACR. Custer (1987:30–31) identifies three sites.

The archeology of the Woodland I and II periods is much better known than that of the preceding Paleoindian and Archaic periods. By 5,000 years BP, climatic conditions had attained an essentially modern character, and the rate of sea-level rise had slowed. The slowing of sea-level rise led to the development of stable and more extensive coastal environments and estuarine resources. Prehistoric population densities increased, and large sites representing long-term camps were established (Custer 1987:31). Woodland I sites are numerous in the DACR. Three study units are defined for the Woodland I period (Custer 1987:43). Study Unit I is on Cape Henlopen. Study Units II and III are relevant to the current project area. Study Unit II encompasses the inland bays and floodplains of the major drainages of the region, while Study Unit III consists of interior areas used primarily for resource procurement. Base camp sites are expected in Study Unit II (Custer 1987:43). Data quality is considered poor/fair for Study Unit II and poor for Study Unit III (Custer 1987:45). Because the Woodland I period is fairly well known for the DACR, a wider variety of research questions could be addressed in archeological research (Custer 1987:55–56). For example, storage features become more prevalent in the transition from the Woodland I to the Woodland II period, suggesting food surpluses, perhaps resulting from the development of plant cultivation and horticulture (see LeeDecker et al. 1996).

The archeology of the Woodland II period is also well known for the DACR, chiefly through the early efforts of the Sussex Society for Archeology and History. The dominant cultural manifestation in the region during the Woodland II period was the Slaughter Creek complex. Sites of the Slaughter Creek complex are often extensive with many subsurface features, many containing shellfish remains. The Woodland II study units are the same as for the earlier

Woodland I period (Custer 1987:49, 52). A seasonal round of shifting base camps is hypothesized for the Woodland II period, with spring and summer camps near the coast and falls and winters spent farther inland (Custer 1987:52). Data quality for the Woodland II is comparable to the Woodland I period (Custer 1987:45).

The Intersection Improvement project at Plantation and Cedar Grove roads falls into the Indian River subsection of the Inland Bay/Mid Drainage Management Unit, and also into the Interior Management Unit (Custer 1987:59). Site probabilities for the Indian River management units are generally high for all time periods. Moderate probability applies only to Paleoindian procurement sites. Data quality, on the other hand, is generally considered poor or fair for the management unit. Data for the Paleoindian and Archaic periods are poor because only one site is known. For the Woodland I period, data quality is better because more sites are known. Only a few sites have been excavated, however. For the Interior Management Unit, site probabilities are somewhat lower, ranging from low for base camps in all time periods to high for procurement sites dating to the Woodland time periods. In general, smaller sites are expected in relation to the Inland Bay/Mid Drainage Management Unit. Data quality is generally poor for the Interior Management Unit. Only Woodland I and II procurement sites are fairly well known. The potential for prehistoric archeological sites within the Plantation and Cedar Grove Intersection project area was considered low to moderate.

4.1.2 Historical Archeology

General historical archeological expectations are based more directly on the documentary sources. The state plan for Delaware's historical archeological resources (De Cunzo and Catts 1990) provides an initial basis for evaluating potential archeological sites of all time periods in the project area. A more project-specific historical context has also been developed and will serve to guide the present investigation. In "*Neither a Desert nor a Paradise: Historic Context for the Archeology of Agriculture and Rural Life, Sussex County, Delaware, 1770–1940*" (De Cunzo and Garcia 1992:248–260), the authors define seven property types associated with the archeological investigation of farmsteads. The property types defined by De Cunzo and Garcia were developed for the period from 1770–1940, but they are also applicable to the 1630–1730 and 1730–1770 periods.

1. *Agricultural Complex*: the farmstead, or main compound, of the farm itself, including at least one dwelling, domestic and agricultural outbuildings, yards, gardens, and associated activity areas (De Cunzo and Garcia 1992:250). Family cemeteries are included in this property type, since historically they would have been associated with a farmstead.

2. *Agricultural Dwelling*: the residence of a farm owner-operator, tenant farmer, farm manager, or other free agricultural laborer and his or her family household. It encompasses at least one dwelling, as well as domestic outbuildings and yards, gardens, and associated activity areas (De Cunzo and Garcia 1992:251).

3. *Agricultural Outbuilding*: One or more outbuildings of the same or different agricultural functions located on farms but isolated from the farmstead or agricultural complex (defined above). The outbuilding(s) also includes associated work and storage yards (De Cunzo and Garcia 1992:252).

4. *Agricultural Quarter*: A residence or residential complex housing numbers of agricultural laborers such as slaves or migrant workers. The property type includes at least one dwelling, along with domestic outbuildings in some situations, and the associated yards, gardens, and

activity areas. The primary distinctions between agricultural dwellings and quarters are found in the architectural and landscape features and configurations, and in the nature of the resident housing (De Cunzo and Garcia 1992:254).

5. Agricultural Transport Facility: This property type contains two components: the agricultural landing complex and the railroad/road. The landing complex includes one or more wharves and outbuildings along with the activity areas, yard, and work spaces, as well as underwater features associated with farm landings. Isolated from the agricultural complex, the landing facility is located on the river or creek side in association with a particular farm and is distinctive from larger commercial landings (De Cunzo and Garcia 1992:255). The railroad/road facility consists of one or more outbuildings along with activity areas associated with land-based transportation on farms. Like the water-oriented landing, the railroad/road facility is isolated from the agricultural complex but is situated next to a transportation artery (road or railroad) (De Cunzo and Garcia 1992:257).

6. Agricultural Structure: One or more structures not designed to shelter humans or their activities, along with associated activity areas, yard, and work spaces. Isolated from the agricultural complex but located on the farm, this property type includes such structures as the embankments, drains, sluices, and ditches found on many late-eighteenth- through mid-twentieth-century Sussex County farms (De Cunzo and Garcia 1992:258). These marsh architectural features have also been more thoroughly addressed in a separate historical context (Fisher et al. 1993).

7. Agricultural Commercial/Industrial Outbuilding: Composed of one or more outbuildings of the same or different commercial or industrial functions located in isolation from the main agricultural complex. This property type includes such structures as blacksmith and other craft or artisan shops, agricultural processing complexes, such as canneries, and roadside stores and produce stands (De Cunzo and Garcia 1992:259). Not specifically mentioned in the above definition, gristmills and sawmills are industrial and commercial in their composition. For the purposes of the present survey, mills are included in this property type. Like the Commercial/Industrial Outbuilding property type, mills are public-private complexes, located on private land but serving a community in a vital capacity.

Eight historical properties in the project vicinity were assigned CRS numbers (S00958, S00965, S00967, S00988, S00989, S00996, S00997, and S08056), and one property on Postal Road outside of the project area, that was identified as Pre 1955 but was unevaluated and not assigned a CRS number (Chadwick 2004). One archeological site has been previously identified northeast of the project area. This site (S-8004) is located at the northern end of Postal Lane at the site of the Midway Shopping Center on Route 1. Two historic properties and one unevaluated property (the Ebenezer Methodist Church cemetery) had previously been identified within the project area making the potential for historic archeological sites high. Based on background research, property types potentially found within the project area include Agricultural Complexes, Dwellings, Outbuildings, Quarters, and Structures.

4.2 PHASE I SURVEY RESULTS

4.2.1 Surface Reconnaissance, Plowed Field

The pedestrian survey of the plowed field on the north side of Cedar Grove Road west of Plantation Road resulted in the plotting and collecting of 61 artifacts. All but one artifact, an

unmodified quartzite cobble, were historic. Historic-period artifacts defined a concentration (n=33) at the northwestern corner of the field (Locus 1), and a sparse cluster (n=17) in the central part of the field (Locus 2) (Figure 2; Plate 4). Over half of the artifacts were nineteenth-century ceramic sherds (n=34), glass (n=17) including three fragments of milk glass canning jar lids, and a few fragments of brick, coal, and plastic. The ceramics consisted of whiteware (1810-present) (n=19), white granite ware (1842-1930) (n=14), redware (n=2), and yellowware (1830-1930) (n=1). Locus 1 roughly defined the location of a house shown on an 1883 Orphans Court map (see Figure 7). Four STUs (L1-1 through L1-4) were excavated to further investigate Locus 1. The artifacts recovered included nine unidentifiable cut or wrought nails but otherwise resembled those found during the pedestrian survey. No historic-period archeological features were identified.

One unmodified quartzite cobble (Point Provenience 57) was collected because it was found in an otherwise stone-free field. However, one olive green, free blown bottle fragment found in Locus 1 appears to have been worked into a scraper.

4.2.2 *Transects 1-3*

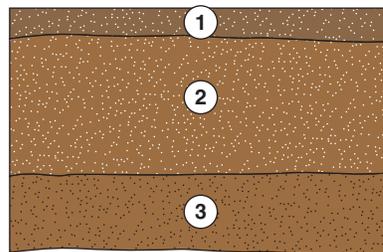
Shovel testing occurred along three transects. Transect 1, consisting of 16 STUs, was established along Plantation Road, east of Cedar Grove Road (Figure 2, Plate 3). The typical soil profile along Transect 1 consisted of a thin layer of brown (10YR4/3) silty sand overlaying a dark yellowish brown (10YR4/4) sandy silt (Figure 8). The subsoil consisted of a dark yellowish brown (10YR4/6) to yellowish brown (10YR5/6) clay silt or sandy silt. In a few instances a second subsoil layer was encountered that consisted of a strong brown (7.5YR4/6) silty clay sand. Nearly all of the STUs held pieces of plastic and modern brown beer bottle glass in the upper layers, being consistent with trash found along roadsides. Historic-period artifacts in an undisturbed context were recovered from only three STUs: T1-3, T1-5, and T1-7. The artifacts recovered were several fragments of bottle glass, coal/coal ash and fragments of building material such as window glass, brick, and a wood screw. The only diagnostic artifact was a whiteware sherd (1810-present). One STU, T1-3, contained a layer of dark yellowish brown (10YR4/4) sandy silt with 10 percent angular gravel that might define a road or parking area of the David G. Drain House (CRS S-995).

Transect 2, established along Cedar Grove Road in a plowed field to the south of the Ebenezer Church cemetery, consisted of three STUs (Figure 2). The typical soil profile consisted of a dark yellowish brown (10YR4/4) fine sandy silt overlaying a dark yellowish brown (10YR4/6) clay fine sandy silt or strong brown (7.5YR4/6) sandy clay silt (Figure 9). The plowzone of the STUs held recent artifacts, such as clear bottle glass, an electrical connector, a headlight, plastic, and an unidentified steel tool.

Transect 3 consisted of 16 STUs placed along the west side of Cedar Grove Road, of which four were radials (Figure 2, Plate 5). The typical soil profile consisted of a dark grayish brown (10YR4/2) silty sand overlaying a dark yellowish brown (10YR4/4) sandy silt. The subsoil consisted of a dark yellowish brown (10YR4/6) sandy silt, yellowish brown (10YR5/6) sandy silt, or a strong brown (7.5YR4/6) sandy clay silt (Figure 10). In some instances the subsoil consisted of two layers, being one of the aforementioned sandy silts overlaying the sandy clay silt. Nearly all of the STUs held pieces of plastic and brown bottle glass in the upper layers, consistent with trash found along roadsides. Historic-period artifacts consisting of two redware sherds and two milk glass canning lid liners (post 1869) were found in STU T3-1, warranting a radial to the south. Radial T3-1S held fragments of brick and machine-made bottle glass as well as a crown



STU T1-5



- 1 10YR 4/3 brown silty sand
- 2 10YR 4/4 dark yellowish brown silty sand
- 3 10YR 4/6 dark yellowish brown clay sand

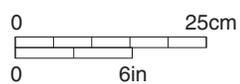
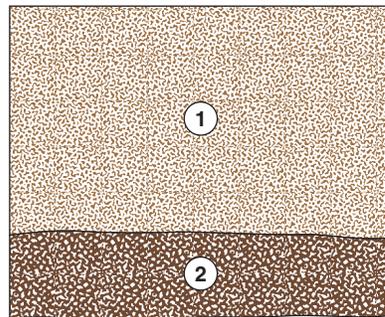


Figure 8. Soil profile drawing and photograph of STU T1-5.



STU T2-2



- 1 10YR 4/4 dark yellowish brown sandy silt
- 2 7.5YR 4/6 strong brown sandy clay silt

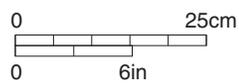


Figure 9. Soil profile drawing and photograph of STU T2-2.



Plate 5. Shovel test Transect 3 along the west side of Cedar Grove Road, looking northeast. Ebenezer Methodist Church cemetery is visible in the center right of photograph.

bottle cap (post 1892), wire, and windshield glass. The eastern radial fell in Cedar Grove Road, and therefore was not excavated. The northern and western radials fell within the plowed field. The only nearby artifacts in the field were a whiteware sherd and a blown-in-mold aqua bottle glass fragment, both located approximately 15 meters north of STU T3-1.

The discovery of a Late Woodland chert projectile point below a brick and nail fragment, at a depth of 42 centimeters below the surface, in STU T3-5 lead to the excavation of three additional STU radials to the south, north and west of this unit. These combined units recovered a light scattering of historic-period artifacts that included one white earthenware sherd, one clam shell, several unidentified nail fragments, a couple of brick fragments and machine-made bottle glass. No prehistoric artifacts were recovered in the surrounding radials.

4.2.3 *Gradall Trenches, Ebenezer Methodist Church Cemetery*

The potential for burials associated with the Ebenezer Church Cemetery was investigated through the mechanical stripping of topsoil. The gradall trench was executed in two sections (Figures 2 and 11). Trench 1 extended north-northeast 55 meters from a utility pole near the southern end of the cemetery (Plate 6). Trench 2 extended southwest 66 meters from the opposite side of the utility pole (Plate 7). Ten features were documented, five in Trench 1 and five in Trench 2 (Table 1, Figure 11). No burial shafts were noted, and none of the features were excavated.

Table 1. Features located in Trench 1 and Trench 2, between Cedar Grove Road and the Ebenezer Methodist Church cemetery.

Feature No.	Interpretation
1	Possible hearth
2	Post hole
3	Post hole
4	Oblong stain with post hole and wooden post
5	Possible refuse pit
6	Unidentified; possible road-related disturbance
7	Post hole
8	Post hole
9	Post hole
10	Former tree line (7 stains in a row)

Feature 1 was roughly 58 cm square in plan. Approximately 35 percent of the surface matrix was flecked with charcoal and appeared to be a possible hearth of undetermined age.

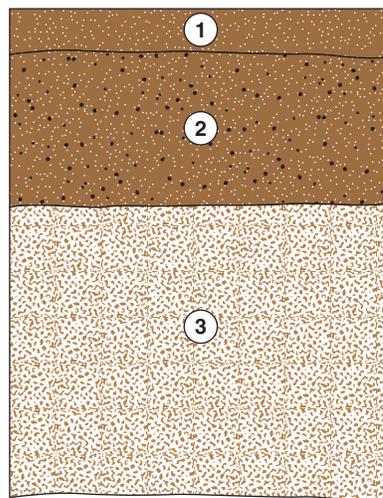
Seven post holes were located in Trenches 1 and 2, roughly in line with the northern and southern edges of the cemetery, and may represent the remains of a fence that once marked its bounds (Figures 11-13). Features 2, 3, and 4a/b, post holes at the northern edge, measured on average 12 cm by 18 cm (4.7 in x 7 in), while Features 7-9, at the southern edge, measured on average 20 cm by 22 cm (7.8 in x 8.7 in) (Figure 12). The exceptions were the remnant wooden post in Feature 4, which had a 6 cm (2.4 in) diameter, and Feature 7, which was roughly 32 cm (12.6 in) square (Figure 13).

Of the remaining historic-period features, Feature 5 was an 82 cm by 87 cm oblong pit with a butchered pig bone at the surface, an apparent refuse pit (Figure 12). Feature 6 was a partially exposed, irregularly-shaped 3.5 m long stain along the western edge of Trench 2. It was bisected by a band of sand running north to south and appeared to be a modern disturbance related to the

adjacent roadway (Figure 13). Feature 10 consisted of a line of seven oblong stains some with flecks of charcoal, each measuring roughly 44 cm round (Figures 11 and 13). The alignment of these stains parallel with the road suggested a former tree line.



STU T3-5



- 1 10YR 3/6 dark yellowish brown silty fine sand with organics
- 2 10YR 4/4 dark yellowish brown silty fine sand, compact, 20% charcoal, but no obvious feature
- 3 10YR 5/6 yellowish brown fine sandy silt, compact



Figure 10. Soil profile drawing and photograph of STU T3-5.

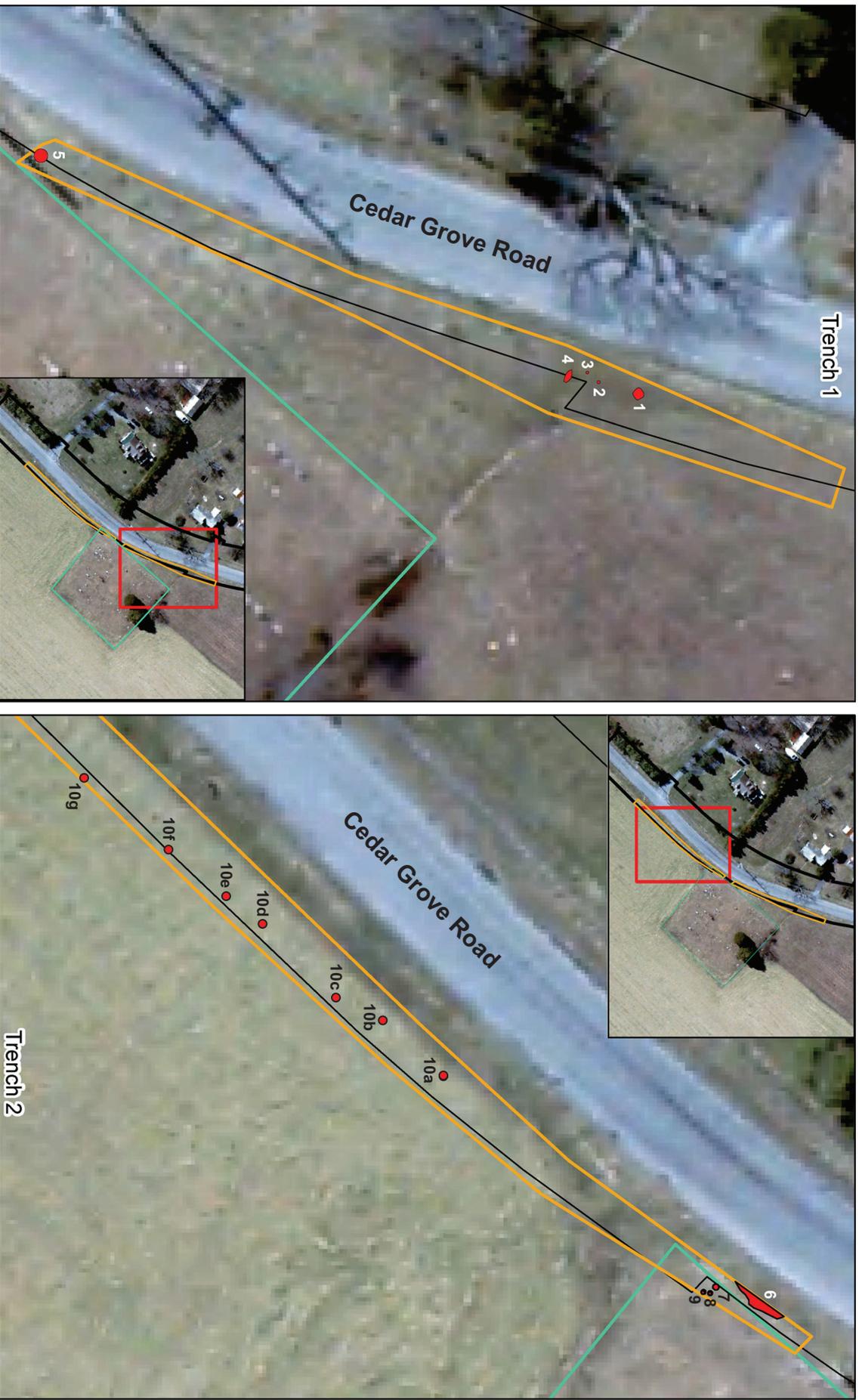
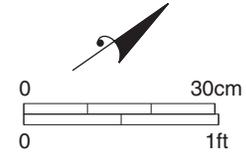
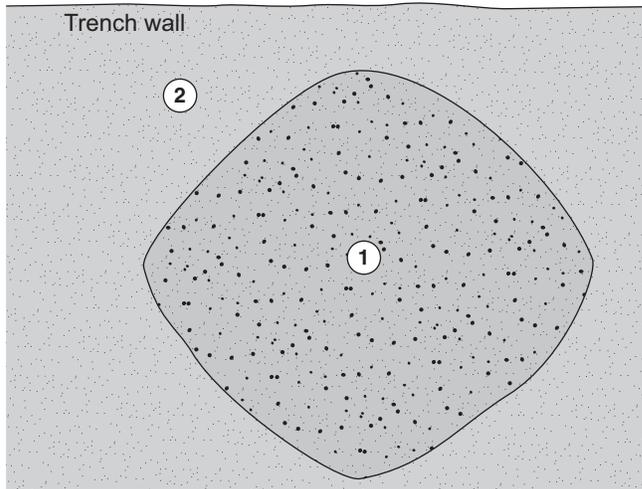


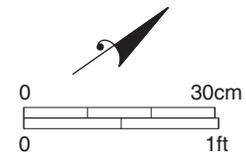
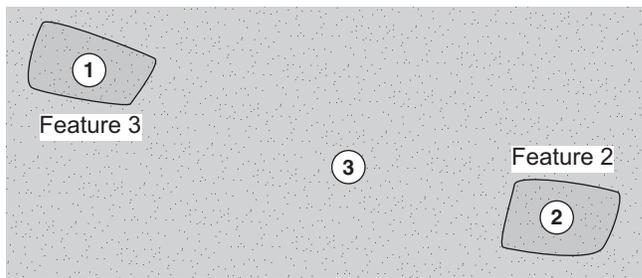
Figure 11. Gradall trenches along Cedar Grove Road in front of the Ebenezer Methodist Church property.

Trench 1, Feature 1 Plan View



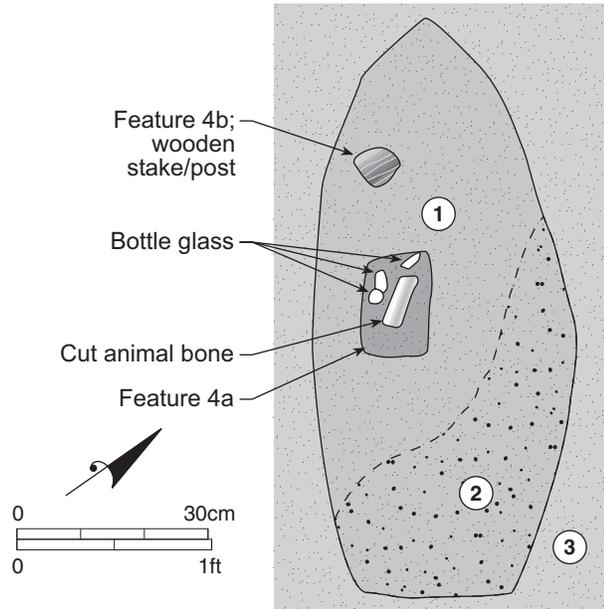
- 1 10YR 3/4 dark yellowish brown fine sandy silt with 35% charcoal flecking
- 2 10YR 5/6 yellowish brown fine sandy silt

Trench 1, Feature 2 and 3 Plan View



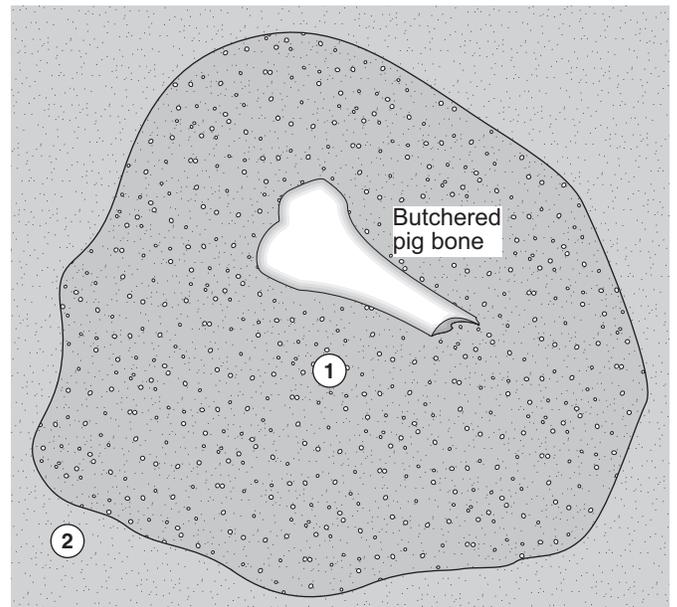
- 1 Feature 3; 10YR 4/6 dark yellowish brown silty fine sand
- 2 Feature 2; 10YR 4/4 dark yellowish brown silty fine sand
- 3 10YR 5/6 yellowish brown fine sandy silt

Trench 1, Feature 4/4a/4b Plan View



- 1 10YR 4/3 brown silty sand
- 2 10YR 4/3 brown silty sand with charcoal flecking
- 3 10YR 5/6 yellowish brown fine sandy silt

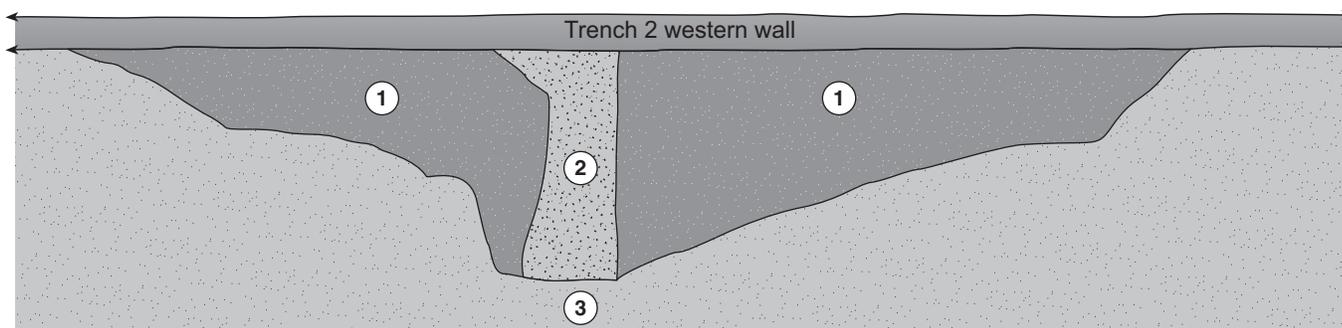
Trench 1, Feature 5 Plan View



- 1 2.5Y 4/3 olive brown sand with 10% small gravels
- 2 10YR 5/4 yellowish brown silty sand

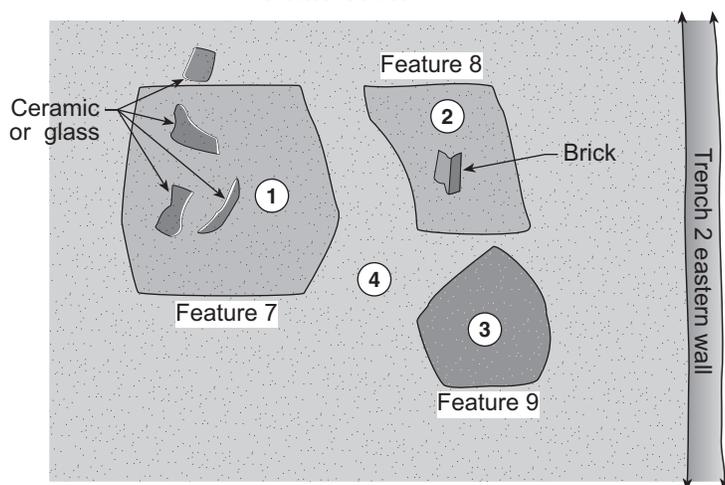
Figure 12. Plan views of Features 1 through 5 exposed in Trench 1, west-northwest of the Ebenezer Methodist Church cemetery.

Trench 2, Feature 6 Plan View



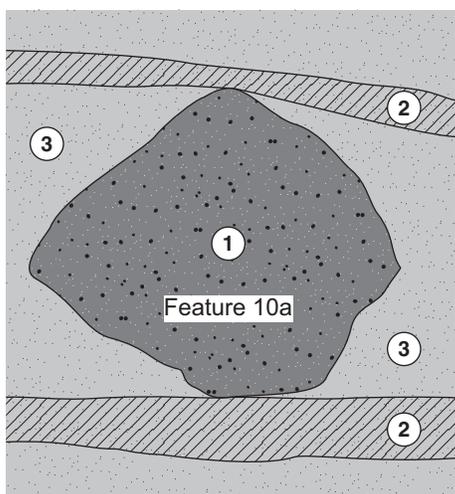
- 1 10YR 4/2 dark grayish brown silty sand
- 2 10YR 7/4 very pale brown fine to medium sand
- 3 10YR 4/4 dark yellowish brown silty fine sand

Trench 2, Feature 7, 8 and 9 Plan View



- 1 Feature 7; 10YR 3/4 dark yellowish brown silty fine sand
- 2 Feature 8; 10YR 3/4 dark yellowish brown silty fine sand
- 3 Feature 9; 10YR 3/2 very dark grayish brown sandy silt
- 4 10YR 4/4 yellowish brown silty fine sand

Trench 2, Feature 10a Plan View



- 1 Feature 10a; 10YR 3/3 dark brown sandy silt with charcoal
- 2 Plow scar; 10YR 3/6 dark yellowish brown sandy silt
- 3 10YR 4/4 dark yellowish brown sandy silt

Figure 13. Plan views of Features 6 through 10 exposed in Trench 2, southwest of the Ebenezer Methodist Church property.



Plate 6. Trench 1 excavated within the project area on the east side of Cedar Grove Road, view south.



Plate 7. Trench 2 excavated within the project area on the east side of Cedar Grove Road, view northeast.