S.R. 26 ALTERNATIVE ROUTE
STORM WATER MANAGEMENT AREAS 1-7, BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

PHASE I ARCHAEOLOGY
ARCHAEOLOGICAL SURVEY REPORT FORM

Prepared for:

THE STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION

Prepared by:

SKELLY and LOY, Inc.
Engineers-Consultants
Pittsburgh/Harrisburg, PA

MAY 2009

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Archaeological Survey Report Form

(For use when NO archaeological sites were identified; see *Guidelines and Instructions*.)

1. **Report title:** S.R. 26 Alternative Route Storm Water Management Areas 1-7, Sussex County, Delaware, Phase I Archaeology

2. **Date:** 5/27/09

3. **Author(s):** Barbara J. Gundy, Ph. D., R.P.A., Jamie R. Papinchak

4. **Consulting firm name and address:** Skelly and Loy, Inc., 3280 William Pitt Way, Pittsburgh, PA 15238

5. **Client agency:** Delaware Department of Transportation

LOCATION

6. **County (check as many as apply):** ☐ **New Castle** ☐ **Kent** ☒ **Sussex**

7. **Nearest town(s):** Millville

8. **Physiographic and geographic zone(s):** Costal/Bay and Coastal

PROJECT DESCRIPTION

9. **Dates of fieldwork:** February 25-26, 2009

10. **Size of area covered:** **unit used:** ☒ **acres** ☐ **hectares**
project area: 10.32 **surveyed area**: **10.32**

11. **Project description (describe location and nature of project):** As part of Delaware Department of Transportation's (DelDOT's) planned State Route (S.R.) 26 Alternative from S.R. 17 to S.R. 361, the construction of seven storm water management areas in the vicinity of the alternative route is proposed. Archaeological research for the S.R. 26 Alternative was previously completed by URS Corporation in 2004 (Marston *et al.* 2004). The survey resulted in the identification of 14 historic architectural resources, all of which

were recommended not eligible for listing in the National Register of Historic Places (NRHP). No archaeological sites were identified during the URS research.

Phase I archaeological survey for the seven proposed storm water management areas was conducted by Skelly and Loy, Inc. (Figure 1). The Area of Potential Effects (APE) is comprised of seven non-contiguous storm water management areas designated as Test Areas 1-7 (Figure 2). The APE is located on nearly level lands in agricultural fields and landscaped lawns mapped on the 7.5 minute Bethany Beach and Frankford, Delaware United State Geological Survey (USGS) topographic quadrangles (USGS 1984a, 1984b). Test Areas 1, 2, 3, 4, 5, and 7 were located in agricultural fields and residential lawns. Test Area 6 was located in landscaped lawns that exhibit extensive disturbance associated with the construction of a modern subdivision and its associated infrastructure. Soils mapped within the APE include Pokamoke sandy loam (Pm); Evesboro loamy sand, loamy substratum, 0 to 2 percent slopes (EvA); Osier loamy sand (Os); and Fallsington sandy loam (Fa) (Figures 3 and 4) (Matthews and Ireland 1974). Soils within the APE are forming in unconsolidated coastal plain sediments which are predominantly sandy sediments on broad uplands of very gentle slope. Undisturbed soil profiles typical for this area have a dark brown surface layer (A horizon) underlain by a brown subsoil (B horizon). Excavated shovel test pit (STP) profiles are very high in sand content, with lesser amounts of silt and clay.

RESEARCH DESIGN

12. Survey objectives: To determine the presence or absence of archaeological resources within the seven separate storm water management areas and their associated feeder routes (Test Areas 1-7) located along Windmill Drive, Roxanne, Burbage, and Beaver Dam roads south of existing S.R. 26 at Millville, Sussex County, Delaware.

13. Survey methods (describe both field and background research methods): Prior to the initiation of the archaeological fieldwork, background research was conducted. Background research for the project included the examination of the Delaware archaeological site files, the NRHP files, the historic resources inventory files, reports documenting previously conducted cultural resource studies, and relevant state-wide historic contexts housed at the Delaware State Historic Preservation Office (DE SHPO) and DelDOT offices. Because geomorphology had been completed for the nearby S.R. 26 project and the landforms and soils are similar, no additional geomorphology fieldwork was completed for this project. Phase I archaeological fieldwork consisted of a visual examination of the entire APE followed by subsurface testing of the seven test areas. The excavation of 157, 57.0 cm (22.4 in) diameter STPs, emplaced at 15.0 m (49.2 ft) grid intervals within the limits of each of the test areas was undertaken during the Phase I fieldwork. The STPs were excavated in arbitrary 10.0 cm (3.9 in) levels within natural strata to a minimum depth of 10.0 cm (3.9 in) below the A/B horizon interface into the culturally sterile subsoil. All excavated soils were screened through 0.64 cm (0.25 in) mesh hardware cloth. Informatin regarding the soil texture and color, depth of any cultural materials recovered, and any soil disturbance was recorded on Skelly and Loy's standard excavation forms. Daily field notes and STP excavation information were kept by the Field Director and crew. Field data were recorded on standard field forms and were supplemented with notes made on the project maps, as warranted. The fieldwork was documented *via* digital photography. Only recent glass fragments and metal were

recovered; therefore, no analysis or curation tasks were associated with this Phase I survey.

14. Expected site types for this area (cite earlier surveys & known nearby resources, information from historic maps or research): The background research for this project had three primary components: the review of previously surveyed archaeological sites and historic resources at the DE SHPO, the review of historic maps and aerial photographs, and the review of relevant cultural resource reports and historic texts. Previously conducted archaeological surveys in the general vicinity of the APE, including the one conducted for the alternative route (Marston *et al*. 2004), did not identify any pre-contact or historic period archaeological sites located within or near the SWM 1-7 APE. Marston *et al.* (2004) did identify one pre-contact period projectile point isolate, the location of a cemetery, and several late nineteenth and twentieth century historic period artifact scatters. None of these finds were considered archaeological sites and none are within the SWM Areas 1-7 APE. No previously surveyed archaeological sites or historic resources were identified within the APE.

The Paleoindian period started with the arrival of the earliest inhabitants of Delaware, *ca*. 15,000 years ago, and ended with the emergence of essentially modern environmental conditions at approximately 6,500 years ago. Paleoindian archaeological remains in Delaware include fluted projectile points attributable to the Clovis, Mid-Paleo, and Dalton-Hardaway phases, as well as early side and corner-notched projectile points such as Palmer, Amos, and Kirk types (Broyles 1971; Coe 1964; Custer 1986:32). Types of Paleoindian sites include quarries, quarry reduction stations, base camps, base camp maintenance stations, outlying hunting sites, and isolated projectile point finds, with isolated projectile point finds being the most common site type (Custer 1984:52-53). The majority of the Paleoindian site types, as defined by Gardner (1979), are directly related to lithic resource procurement and lithic tool manufacturing. Since no good sources of high quality lithic raw materials are located in the APE region, Paleoindian sites would not be expected in this area. Custer (1986, 1987) and Custer and Mellin (1991a, 1991b) do not list any Paleoindian sites in southeast Delaware, and no Paleoindian archaeological remains have been previously identified within or adjacent to the APE. The APE lacks sources of high quality lithic raw materials, and there are no previously identified Paleoindian sites located in the Coastal Plain of Delaware. The combination of these factors appears to preclude the potential for Paleoindian remains to be present in the project APE.

"The beginning of the Archaic period coincides with the emergence of Holocene environments in Delaware and is characterized by a shift in human adaptation strategies" (Custer 1984:61). This adaptation strategy shift occurs at approximately 6,500 years ago with the emergence of bifurcate projectile points such as St. Albans, LeCroy, and Kanawha types (Broyles 1971; Chapman 1975). Based on preliminary information gleaned from excavated archaeological sites in locations surrounding Delaware, a variety of stemmed projectile point types characterize the Archaic period from approximately 6,000 B.C. to 4,000 B.C. (Custer 1984:62). Indicators of the new adaptations include the addition of new tools, such as groundstone, to the tool kit; the addition of alternative lithic raw material sources (e.g., secondary cobble sources) for tool making; replacement of direct procurement systems by embedded systems; reduction in the range of activities carried out at special purpose sites; less reliance on cryptocrystalline lithic raw materials; increased floral resource use; reduced emphasis on hunting; and site location preference to a wider variety of environmental settings different from Paleoindian preferences. "In the

overall picture the variety of site types and activities seems to represent a diffuse adaptation (Cleland 1976) to an increasing variety of environmental settings as well as the increasing variety of resources available due to increased seasonality" (Custer 1986:65). This seasonality is reflected in the macro/micro-band/procurement site settlement types postulated for the Archaic period in Delaware. Interior environmental settings are likely to yield procurement sites and stations adjacent to poorly drained locations (Custer 1987:27). The APE is located in an interior environmental setting; therefore, procurement sites rather than base camps would be expected. The Indian River and Assawoman Bay areas to the north and south of the project APE contain major drainages and the types of settings in which base camps would be expected. None of the previously identified archaeological sites located close to the project APE have defined Archaic components. The potential for the APE to contain Archaic period archaeological remains is low based on the absence of defined Archaic cultural materials associated with nearby previously recorded archaeological sites, and the absence of typical environmental settings associated with Archaic period sites. If Archaic period materials are identified in the APE, they will most likely reflect ephemeral transitory use of the area for procurement activities.

The Woodland I period begins approximately 3,000 B.C. when the rate of sea level rise slowed, riverine and estuary environments began to stabilize, and a pronounced warm and dry period set in (Custer 1987:31; Morin *et al.* 2001:3.2). An increase in population is posited for the period, along with the development of sedentism. Many large base camp sites, with associated large numbers of people, are evident in many parts of the Delmarva peninsula during the Woodland I period (Custer and Catts 1991:19). The overall trend was towards more sedentism with increases in local populations. Woodland I period lifeways varied from the Archaic period and included increases in plant processing tools; the introduction of stone and then ceramic containers; the development of incipient ranked societies; the addition of fishing gear such as netsinkers; increases in broad-bladed knives; and the development of trade and exchange networks/systems. Settlement during the Woodland I period commonly consisted of repeated use camp sites and semi-sedentary to sedentary village sites along major river floodplains and estuaries (Custer 1987:31; Morin *et al.* 2001:3.3). Woodland I sites are the most common sites identified in Delaware's Atlantic Coastal zone. Three of the seven previously recorded sites within 0.8 km (0.5 mi) of the APE have identified Woodland I artifacts associated with them. However, all of these sites are north of the APE in the Indian River area and are associated with major water sources. Due to the lack of major river/stream floodplains and estuaries in the APE, there is a low probability of identifying Woodland I period macro-band sites; however, due to the proximity of large streams to the project APE, associated Woodland I micro-band sites may be present. The Woodland II period is dated from A.D. 1000 to the Contact period, *ca*. A.D. 1600. The period is marked by the alteration of Woodland I lifeways (Custer 1984:146). "The basic changes noted in Delaware include the breakdown of trade and exchange networks, alterations of settlement patterns, the development of sedentary lifestyles, and the appearance of agricultural food production to varying degrees in different areas" (Custer 1984:146). Horticulture became very important across the Middle Atlantic region during the Woodland II period, although little archaeological evidence for it has been identified in Delaware (Morin *et al.* 2001:3.3).

"Exploitation of sites with Woodland I components continued during Woodland II" (Brown *et al*. 1990:9). Small triangular projectile points and various styles of ceramics are temporally diagnostic Woodland II period artifacts. Two basic varieties of ceramics, Townsend and Minguannan wares, are distinguished in Delaware (Custer 1984:148). Townsend ceramics are described as shell tempered, fabric impressed exterior surface

wares (Griffith 1982), while Minguannan wares exhibit sand, grit, or quartz temper with smoothed, corded, or smoothed-over corded surfaces (Custer 1981). Other items of material culture include bone and antler tools, stone celts, clay pipes, and shell beads (Brown and Basalik 1984). Settlement patterns in the Woodland II period are similar to those of the Woodland I period. In interior environmental settings, micro-band base camps are located on floodplains of low-order drainages, with procurement sites located near poorly drained woodlands and ephemeral drainages (Custer 1987:45). Four of the seven previously identified archaeological sites located proximal to the APE have identified Woodland II period artifacts. Due to the lack of floodplains of low-order drainages in the APE, micro-band base camps would not be expected. If Woodland II period cultural remains are identified in the project APE, they will most likely be associated with ephemeral transitory behaviors associated with procurement site activities.

Test Areas 1, 2, 5, and 6 are located in cultivated fields that may have formerly been associated with surveyed historic period structures. S-10030, the Clinton Robinson House (*ca*. 1945, recommended not eligible), is located in a separate tax parcel to the north and northeast of Test Areas 1 and 2. Test Area 5 crosses some of the property associated with S-11513, the Ocean View Post Office (*ca*. 1955, recommended not eligible), which was moved to this location in 1985, and therefore, has no claim to integrity of setting or location. It is not clear whether the farmland crossed by the southeastern limits of Test Area 5 was once associated with S-2356, the J. Hall House (*ca*. 1850, with early twentieth century barn, recommended not eligible). The southern limit of the Test Area 6 is adjacent to S-10033, the Orville Quillen House (*ca*. 1945, recommended not eligible). Historic mapping and aerial photographs were collected for the APE. Many maps gave very specific information about changes to the areas over time, including historic aerials (Delaware DataMil 2009), topographic maps (USGS 1918, 1934, 1943, 1944, 1949, 1954), and other historic maps (Beers 1868; Doolittle 1796, 1801; Farm Journal, Inc. 1913). Other maps offered a general overview of the areas or information about a single test area, including the 1737 Eastburn map and Preliminary Land Use Service (2004, 2006) mapping. Based on review of these maps, no structures have been present in the test areas during the historic period. In addition, relevant cultural resources reports (Gundy 2006; Gundy *et al.* 2004; Marston *et al.* 2004; McCormick, Taylor & Associates 2003; Edward Otter, Inc. 2007) and historic texts (Scharf 1888) were reviewed for information about the project area. None of these sources indicated the presence of any potential historic period structural resources in the APE.

Marston *et al.* (2004) provide a detailed history of Delaware and the S.R. 26 Alternative Route project area; therefore, it is not repeated here. Based on the discussions included in that report, the overall rural character of this portion of Baltimore Hundred, the apparent lack of structures in the project APE for much of the historic period, and the results of the Phase I survey for the alternative (Marston *et al.* 2004), the types of historic period archaeological resources which might be expected include: small family cemeteries; nineteenth and twentieth century agricultural and domestic artifact scatters resulting from inadvertent garbage disposal and redeposition; and mid- to late-twentieth century ephemeral artifact scatters related to roadway construction, maintenance, and use (e.g., original roadway surfaces, litter). Based on that same research, the types of historic period archaeological resources that would not be expected include those associated with land uses denoted by specialized structures (e.g., church, school, store, mill); farm houses and outbuildings; and suburban residential deposits. If historic period artifact scatters or isolates are found during the Phase I survey, they will most likely be representative of recent roadside litter or manuring activities. Generalized/fragmentary temporally and

functionally non-diagnostic historic period artifacts do not permit specific contextual associations, nor do the interpretations of them contribute significant information to the specific land-use history of the project APE.

RESULTS and RECOMMENDATIONS

15. Fieldwork (describe survey; add maps as needed): Seven test areas (Test Areas 1-7) which correspond to seven proposed storm water management areas comprise the APE. Test Area 1 is 0.38 ha or 0.95 ac in size and is located east of Roxanna Road, approximately 115.0 m (377.3 ft) south/southwest of the intersection of Roxanna and Burbage roads (See Figure 2, Sheet 1). Test Area 1 is located entirely within an actively plowed agricultural field across a gently undulating landform. Ten STPs were excavated in Test Area 1 and were labeled 1-1 through 1-10. The soil profiles for the Test Area 1 STPs were comprised of a black (10YR 2/1) Ap horizon silt loam with an average thickness of 42.0 cm (16.5 in) overlying a light brownish gray (10YR 6/2) Bw horizon clay loam. No artifacts or other cultural materials were recovered from the excavated Test Area 1 STPs and no cultural features were identified.

Test Area 2 is 0.68 ha or 1.69 ac in size and is located in the southeast quadrant of the intersection of Roxanna and Burbage roads (see Figure 2, Sheet 1). Portions of Test Area 2 are located in an actively plowed agricultural field and a graded area of landscaped lawn associated with a nearby residence. Twenty-nine STPs were excavated in Test Area 2 and were labeled 2-1 through 2-29. The soil profiles for the Test Area 2 STPs were comprised of a black (10YR 2/1) Ap horizon silt loam overlying a light brownish gray (10YR 6/2) Bw horizon clay loam. The average thickness of the Ap horizon was greater in the excavated STPs that were located in the agricultural field than those located in the landscaped lawn. Two pieces of broken brown beer bottle glass and a rusted nail (modern/machine cut) fragment were noted in the uppermost level of STP 2-12. These materials are recent and most likely represent litter that has been incorporated into the plow zone. No other artifacts or cultural materials were recovered from the excavated Test Area 2 STPs and no cultural features were identified.

Test Area 3 is 0.34 ha or 0.86 ac in size and is located south of Burbage Road, east of Test Area 2, and south of Test Area 4 (see Figure 2, Sheet 1). Test Area 3 is located entirely within an actively plowed agricultural field and is adjacent to a drainage ditch which seperates the agricultural field from a residential property. Twelve STPs were excavated in Test Area 3 and were labeled 3-1 through 3-12. The soil profiles for the Test Area 3 STPs were comprised of a black (10YR 2/1) Ap horizon silt loam with an average thickness of 50.0 cm (19.7 in) overlying a light brownish gray (10YR 6/2) Bw horizon clay loam. No artifacts or other cultural materials were recovered from the excavated Test Area 3 STPs and no cultural features were identified.

Test Area 4 is 0.43 ha or 1.07 ac in size and is located north of Test Area 3 in the southwest quadrant of the intersection of Burbage and Substation roads (see Figure 2, Sheet 1). Test Area 4 is located entirely within an actively plowed agricultural field and is adjacent to a drainage ditch that separates the agricultural field from a residential property. Thirteen STPs were excavated in Test Area 4 and were labeled 4-1 through 4-13. The soil profiles for the Test Area 3 STPs were comprised of a black (10YR 2/1) Ap horizon silt loam with an average thickness of 39.0 cm (13.0 in) overlying a light brownish gray (10YR 6/2) Bw horizon clay loam. Partial gleying of the Bw horizon was present in the STPs

located in swales. The STPs located in the swales also exhibited thicker Ap horizons denoting leveling of the surface through erosive forces. One piece of broken brown beer bottle glass and a piece of unidentified metal were noted in the uppermost level of STP 4-4. These materials are recent and most likely represent litter that has been incorporated into the plowzone. No other artifacts or cultural materials were recovered from the excavated Test Area 3 STPs and no cultural features were identified.

Test Area 5 is in 0.81 ha or 2.0 ac size and is located in the southwest quadrant of the intersection of Burbage Road and Windmill Drive in a plowed agricultural field with drainage ditches. Test Area 5 cuts across an abandoned residential property (see Figure 2, Sheet 2). None of the structures present on the property are located within the test area. There are a brick home, gravel driveway, and dilapidated outbuildings on the property, including S-11513, the former Ocean View Post Office (moved). Forty-three STPs were excavated in Test Area 5 and were labeled 5-1 through 5-43. The soil profiles for the Test Area 5 STPs were comprised of either a black (10YR 2/1) Ap horizon silt loam with an average thickness of 33.0 cm (13.0 in) or a dark yellowish brown (10YR 4/4) Ap horizon sand silt loam overlying a light brownish gray (10YR 6/2) Bw horizon clay loam. Partial gleying of the Bw horizon was present in the STPs located in swales. The STPs located in the swales also exhibited thicker Ap horizons denoting leveling of the surface through erosive forces. A single piece of brown beer bottle glass was noted in the uppermost level in STP 5-10. This glass is recent litter which has been incorporated into the plowzone. No other artifacts or cultural materials were recovered from the excavated Test Area 5 STPs and no cultural features were identified.

Test Area 6 is 0.21 ha or 0.52 ac in size and is located approximately 180.0 m (590.6 ft) south of the intersection of Burbage Road and Windmill Drive, on the east side of Windmill Drive in a residential area called Avon Park (see Figure 2, Sheet 2). Based on a visual inspection of the test area, it was determined that the residential development and its associated infrastructure activities had totally disturbed the test area. Two STPs were excavated in the test area (labeled 6-1 and 6-2). These excavations confirmed that the surface disturbance continued to depths which precluded the presence of *in situ* archaeological remains. The profiles for the two STPs consisted of fill overlying compacted gravels. Disturbances exhibited in the test area include graded fill, landscaped grass, areas of mounded earth with capped pipes protruding from the ground, as well as a utility box indicating buried utilities within the test area. No artifacts or other cultural materials were recovered from Test Area 6 and no cultural features were identified.

Test Area 7 is 1.21 ha or 3.0 ac in size and is located in the northwest quadrant of the intersection of Central Avenue and Beaver Dam Road adjacent to the north side of Beaver Dam Road (see Figure 2, Sheet 3). Test Area 7 is located entirely within an agricultural field across a gently undulating landform. Forty-eight STPs were excavated in Test Area 7 and were labeled 7-1 through 7-48. The soil profiles for the Test Area 7 STPs were comprised of a black (10YR 2/1) Ap horizon silt loam with an average thickness of 39.0 cm (15.4 in) overlying a light brownish gray (10YR 6/2) Bw horizon clay loam. No artifacts or other cultural materials were recovered from the excavated Test Area 7 STPs and no cultural features were identified.

16. Artifacts (describe any found; identify location; explain why determined not to be a site): Only a few pieces of modern litter were recovered from Test Areas 2, 4, and 5. These materials were all recovered from the 0-10 cm level of the Ap horizon. The debris consisted of fragments of broken beer bottle glass and a heaviliy oxidized machine-cut

nail head. These materials do not constitute an archaeological site. This modern trash was recorded and then discarded.

17. Recommendations: Based on the lack of previously identified archaeological sites and historic structures within the APE, and the negative results of the Phase I survey, the proposed storm water management construction, as currently designed, will not affect any cultural resources listed in or potentially eligible for listing in the NRHP. No further archaeological investigations are warranted.

ATTACHMENTS

18. Attachments checklist:

- **a. ☒ bibliography**
- **b. ☒ location map (USGS or equivalent)**
- **c. ☒ detailed map(s) (project plans and/or field survey map)**
- **d. ☒ historic map(s) (list)**
- **e. ☒ photographs of general project/surveyed area**
- **f. ☒ table of collection units and/or excavated tests**
- **g. ☒ soils map(s)**

Others (list, if any):

Map of Previously Identified Cultural Resource near the APE.

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PHOTOGRAPHS

Photograph 1. Test Area 1 taken at the intersection of Burbage and Roxanne roads, facing south.

Photograph 2. Test Area 2, general overview, facing east.

Photograph 3. Test Area 3, taken from Substation Road, facing west.

Photograph 4. Test Area 4, taken from Burbage Road, facing south.

Photograph 5. Test Area 5, taken from Burbage Road, facing south.

Photograph 6. Test Area 6, showing disturbances, facing northeast.

Photograph 7. Test Area 7, taken from Beaver Dam Road, facing northwest.

TABLE OF COLLECTION UNITS

Test Area	Shovel Test Pit (STP)	Stratigraphic Profile (depths below modern ground surface in centimeters) Texture and Soil Color Description Artifact/Ecofact Types Identified	Associated Artifacts	Total Excavation Depth (below modern ground surface in centimeters)
1	STP 1-1	Stratum 1 (0-34) light silt loam 10YR 2/1 Stratum 2 (34-60) clay loam 10YR 6/2		60
1	STP 1-2	Stratum 1 (0-33) light silt loam 10YR 2/1 Stratum 2 (33-45) clay loam 10YR 6/2		45
1	STP 1-3	Stratum 1 (0-35) light silt loam 10YR 2/1 Stratum 2 (35-65) clay loam 10YR 6/2		65
1	STP 1-4	Stratum 1 (0-35) light silt loam 10YR 2/1 Stratum 2 (35-58) clay loam 10YR 6/2		58
1	STP 1-5	Stratum 1 (0-34) light silt loam 10YR 2/1 Stratum 2 (34-44) clay loam 10YR 6/2		44
1	STP 1-6	Stratum 1 (0-39) light silt loam 10YR 2/1 Stratum 2 (39-50) clay loam 10YR 6/2		50
1	STP 1-7	Stratum 1 (0-36) light silt loam 10YR 2/1 Stratum 2 (36-46) clay loam 10YR 6/2		46
1	STP 1-8	Stratum 1 (0-42) light silt loam 10YR 2/1 Stratum 2 (42-52) clay loam 10YR 6/2		52
1	STP 1-9	Stratum 1 (0-45) light silt loam 10YR 2/1 Stratum 2 (45-55) clay loam 10YR 6/2		55
1	STP 1-10	Stratum 1 (0-47) light silt loam 10YR 2/1 Stratum 2 (47-57) clay loam 10YR 6/2		57
2	STP 2-1	Stratum 1 (0-58) light silt loam 10YR 2/1 Stratum 2 (58-68) clay loam 10YR 6/2		68
2	STP 2-2	Stratum 1 (0-55) light silt loam 10YR 2/1 Stratum 2 (54-65) clay loam 10YR 6/2		65
2	STP 2-3	Stratum 1 (0-50) light silt loam 10YR 2/1 Stratum 2 (50-60) clay loam 10YR 6/2		60
2	STP 2-4	Stratum 1 (0-46) light silt loam 10YR 2/1 Stratum 2 (46-56) clay loam 10YR 6/2		56
2	STP 2-5	Stratum 1 (0-32) light silt loam 10YR 2/1 Stratum 2 (32-42) clay loam 10YR 6/2		42
2	STP 2-6	Stratum 1 (0-38) light silt loam 10YR 2/1 Stratum 2 (38-48) clay loam 10YR 6/2		48
2	STP 2-7	Stratum 1 (0-35) light silt loam 10YR 2/1 Stratum 2 (35-45) clay loam 10YR 6/2		45
2	STP 2-8	Stratum 1 (0-46) light silt loam 10YR 2/1 Stratum 2 (46-56) clay loam 10YR 6/2		56
2	STP 2-9	Stratum 1 (0-44) light silt loam 10YR 2/1 Stratum 2 (44-60) clay loam 10YR 6/2		60
2	STP 2-10	Stratum 1 (0-40) light silt loam 10YR 2/1 Stratum 2 (40-50) clay loam 10YR 6/2		50
2	STP 2-11	Stratum 1 (0-66) light silt loam 10YR 2/1 Stratum 2 (66-76) clay loam 10YR 6/2		76
2	STP 2-12	Stratum 1 (0-38) light silt loam 10YR 2/1 Stratum 2 (38-48) clay loam 10YR 6/2	2 glass, 1 nail	48
2	STP 2-13	Stratum 1 (0-30) light silt loam 10YR 2/1 Stratum 2 (30-40) clay loam 10YR 6/2		40
2	STP 2-14	Stratum 1 (0-36) light silt loam 10YR 2/1 Stratum 2 (36-46) clay loam 10YR 6/2		46

Test Area	Shovel Test Pit (STP)	Stratigraphic Profile (depths below modern ground surface in centimeters) Texture and Soil Color Description Artifact/Ecofact Types Identified				Associated Artifacts	Total Excavation Depth (below modern ground surface in centimeters)
2	STP 2-15	Stratum 1 Stratum 2	(0-42) (42-55)	light silt loam clay loam	10YR 2/1 10YR 6/2		55
2	STP 2-16	Stratum 1 Stratum 2	(0-34) (34-44)	light silt loam clay loam	10YR 2/1 10YR 6/2		44
2	STP 2-17	Stratum 1 Stratum 2	(0-37) (37-47)	light silt loam clay loam	10YR 2/1 10YR 6/2		47
2	STP 2-18	Stratum 1 Stratum 2	(0-38) (38-48)	light silt loam clay loam	10YR 2/1 10YR 6/2		48
2	STP 2-19	Stratum 1 Stratum 2	(0-30) (30-40)	light silt loam clay loam	10YR 2/1 10YR 6/2		40
2	STP 2-20	Stratum 1 Stratum 2	(0-34) (34-44)	light silt loam clay loam	10YR 2/1 10YR 6/2		44
2	STP 2-21	Stratum 1 Stratum 2	(0-38) (38-48)	light silt loam clay loam	10YR 2/1 10YR 6/2		48
2	STP 2-22	Stratum 1 Stratum 2	(0-28) (28-38)	light silt loam clay loam	10YR 2/1 10YR 6/2		38
2	STP 2-23	Stratum 1 Stratum 2	(0-30) (30-40)	light silt loam clay loam	10YR 2/1 10YR 6/2		40
2	STP 2-24	Stratum 1 Stratum 2	(0-15) (15-25)	light silt loam clay loam	10YR 2/1 10YR 6/2		25
2	STP 2-25	Stratum 1 Stratum 2	(0-27) (27-37)	light silt loam clay loam	10YR 2/1 10YR 6/2		37
2	STP 2-26	Stratum 1 Stratum 2	(0-28) (28-38)	light silt loam clay loam	10YR 2/1 10YR 6/2		38
2	STP 2-27	Stratum 1 Stratum 2	(0-35) (35-45)	light silt loam clay loam	10YR 2/1 10YR 6/2		45
2	STP 2-28	Stratum 1 Stratum 2	(0-25) (25-35)	light silt loam clay loam	10YR 2/1 10YR 6/2		35
2	STP 2-29	Stratum 1 Stratum 2	(0-29) (29-39)	light silt loam clay loam	10YR 2/1 10YR 6/2		39
3	STP 3-1	Stratum 1 Stratum 2	(0-56) (56-66)	light silt loam clay loam	10YR 2/1 10YR 6/2		66
3	STP 3-2	Stratum 1 Stratum 2	(0-52) (52-62)	light silt loam clay loam	10YR 2/1 10YR 6/2		62
3	STP 3-3	Stratum 1 Stratum 2	(0-53) (53-63)	light silt loam clay loam	10YR 2/1 10YR 6/2		63
3	STP 3-4	Stratum 1 Stratum 2	(0-46) (46-59)	light silt loam clay loam	10YR 2/1 10YR 6/2		59
3	STP 3-5	Stratum 1 Stratum 2	(0-41) (41-51)	light silt loam clay loam	10YR 2/1 10YR 6/2		51
3	STP 3-6	Stratum 1 Stratum 2	(0-53) (53-63)	light silt loam clay loam	10YR 2/1 10YR 6/2		63
3	STP 3-7	Stratum 1 Stratum 2	(0-52) (52-62)	light silt loam clay loam	10YR 2/1 10YR 6/2		62
3	STP 3-8	Stratum 1 Stratum 2	(0-60) (60-70)	light silt loam clay loam	10YR 2/1 10YR 6/2		70
3	STP 3-9	Stratum 1 Stratum 2	(0-49) (49-59)	light silt loam clay loam	10YR 2/1 10YR 6/2		59
3	STP 3-10	Stratum 1 Stratum 2	(0-40) (40-50)	light silt loam clay loam	10YR 2/1 10YR 6/2		50

Test Area	Shovel Test Pit (STP)	Stratigraphic Profile (depths below modern ground surface in centimeters) Texture and Soil Color Description Artifact/Ecofact Types Identified				Associated Artifacts	Total Excavation Depth (below modern ground surface in centimeters)
3	STP 3-11	Stratum 1 Stratum 2	(0-48) (48-58)	light silt loam clay loam	10YR 2/1 10YR 6/2		58
3	STP 3-12	Stratum 1 Stratum 2	(0-43) (43-53)	light silt loam clay loam	10YR 2/1 10YR 6/2		53
4	STP 4-1	Stratum 1 Stratum 2	(0-36) (36-46)	light silt loam clay loam	10YR 2/1 10YR 6/2		46
4	STP 4-2	Stratum 1 Stratum 2	(0-30) (30-40)	light silt loam clay loam	10YR 2/1 10YR 6/2		40
4	STP 4-3	Stratum 1 Stratum 2	(0-38) (38-48)	light silt loam clay loam	10YR 2/1 10YR 6/2		48
4	STP 4-4	Stratum 1 Stratum 2	(0-50) (50-60)	light silt loam clay loam	10YR 2/1 10YR 6/2	1 glass, 1 metal	60
4	STP 4-5	Stratum 1 Stratum 2	(0-38) (38-48)	light silt loam clay loam	10YR 2/1 10YR 6/2		48
4	STP 4-6	Stratum 1 Stratum 2	(0-33) (33-43)	light silt loam clay loam	10YR 2/1 10YR 6/2		43
4	STP 4-7	Stratum 1 Stratum 2	(0-34) (34-44)	light silt loam clay loam	10YR 2/1 10YR 6/2		44
4	STP 4-8	Stratum 1 Stratum 2	(0-43) (43-53)	light silt loam clay loam	10YR 2/1 10YR 6/2		53
4	STP 4-9	Stratum 1 Stratum 2	(0-41) (41-51)	light silt loam clay loam	10YR 2/1 10YR 6/2		51
4	STP 4-10	Stratum 1 Stratum 2	(0-37) (37-52)	light silt loam clay loam	10YR 2/1 10YR 6/2		52
4	STP 4-11	Stratum 1 Stratum 2	(0-43) (43-53)	light silt loam clay loam	10YR 2/1 10YR 6/2		53
4	STP 4-12	Stratum 1 Stratum 2	(0-28) (28-38)	light silt loam clay loam	10YR 2/1 10YR 6/2		38
4	STP 4-13	Stratum 1 Stratum 2	(0-30) (30-40)	light silt loam clay loam	10YR 2/1 10YR 6/2		40
5	STP 5-1	Stratum 1 Stratum 2	(0-28) (28-38)	light silt loam clay loam	10YR 2/1 10YR 6/2		38
5	STP 5-2	Stratum 1 Stratum 2	(0-30) (30-40)	light silt loam clay loam	10YR 2/1 10YR 6/2		40
5	STP 5-3	Stratum 1 Stratum 2	(0-28) (28-38)	light silt loam clay loam	10YR 2/1 10YR 6/2		38
5	STP 5-4	Stratum 1 Stratum 2	(0-32) (32-42)	light silt loam clay loam	10YR 2/1 10YR 6/2		42
5	STP 5-5	Stratum 1 Stratum 2	(0-33) (33-43)	light silt loam clay loam	10YR 2/1 10YR 6/2		43
5	STP 5-6	Stratum 1 Stratum 2	(0-32) (32-42)	light silt loam clay loam	10YR 2/1 10YR 6/2		42
5	STP 5-7	Stratum 1 Stratum 2	(0-31) (31-41)	light silt loam clay loam	10YR 2/1 10YR 6/2		41
5	STP 5-8	Stratum 1 Stratum 2	(0-25) (25-35)	light silt loam clay loam	10YR 4/4 10YR 6/2		35
5	STP 5-9	Stratum 1 Stratum 2	(0-28) (28-38)	light silt loam clay loam	10YR 4/4 10YR 6/2		38
5	STP 5-10	Stratum 1 Stratum 2	(0-27) (27-37)	light silt loam clay loam	10YR 4/4 10YR 6/2	1 glass	37

Test Area	Shovel Test Pit (STP)	Stratigraphic Profile (depths below modern ground surface in centimeters) Texture and Soil Color Description Artifact/Ecofact Types Identified				Associated Artifacts	Total Excavation Depth (below modern ground surface in centimeters)
5	STP 5-11	Stratum 1 Stratum 2	(0-35) (35-45)	light silt loam clay loam	10YR 4/4 10YR 6/2		45
5	STP 5-12	Stratum 1 Stratum 2	(0-36) (36-46)	light silt loam clay loam	10YR 4/4 10YR 6/2		46
5	STP 5-13	Stratum 1 Stratum 2	(0-33) (33-43)	light silt loam clay loam	10YR 4/4 10YR 6/2		43
5	STP 5-14	Stratum 1 Stratum 2	(0-30) (30-40)	light silt loam clay loam	10YR 4/4 10YR 6/2		40
5	STP 5-15	Stratum 1 Stratum 2	(0-28) (28-38)	light silt loam clay loam	10YR 4/4 10YR 6/2		38
5	STP 5-16	Stratum 1 Stratum 2	(0-25) (25-35)	light silt loam clay loam	10YR 4/4 10YR 6/2		35
5	STP 5-17	Stratum 1 Stratum 2	(0-32) (32-42)	light silt loam clay loam	10YR 4/4 10YR 6/2		42
5	STP 5-18	Stratum 1 Stratum 2	(0-35) (35-45)	light silt loam clay loam	10YR 4/4 10YR 6/2		45
5	STP 5-19	Stratum 1 Stratum 2	(0-29) (29-39)	light silt loam clay loam	10YR 4/4 10YR 6/2		39
5	STP 5-20	Stratum 1 Stratum 2	(0-27) (27-37)	light silt loam clay loam	10YR 4/4 10YR 6/2		37
5	STP 5-21	Stratum 1 Stratum 2	(0-32) (32-42)	light silt loam clay loam	10YR 4/4 10YR 6/2		42
5	STP 5-22	Stratum 1 Stratum 2	(0-30) (30-40)	light silt loam clay loam	10YR 4/4 10YR 6/2		40
5	STP 5-23	Stratum 1 Stratum 2	(0-40) (40-50)	light silt loam clay loam	10YR 2/1 10YR 6/2		50
5	STP 5-24	Stratum 1 Stratum 2	(0-37) (37-47)	light silt loam clay loam	10YR 2/1 10YR 6/2		47
5	STP 5-25	Stratum 1 Stratum 2	(0-29) (29-39)	light silt loam clay loam	10YR 2/1 10YR 6/2		39
5	STP 5-26	Stratum 1 Stratum 2	(0-27) (27-37)	light silt loam clay loam	10YR 2/1 10YR 6/2		37
5	STP 5-27	Stratum 1 Stratum 2	(0-32) (32-42)	light silt loam clay loam	10YR 2/1 10YR 6/2		42
5	STP 5-28	Stratum 1 Stratum 2	(0-29) (29-39)	light silt loam clay loam	10YR 2/1 10YR 6/2		39
5	STP 5-29	Stratum 1 Stratum 2	(0-28) (28-38)	light silt loam clay loam	10YR 2/1 10YR 6/2		38
5	STP 5-30	Stratum 1 Stratum 2	(0-30) (30-40)	light silt loam clay loam	10YR 2/1 10YR 6/2		40
5	STP 5-31	Stratum 1 Stratum 2	(0-31) (31-41)	light silt loam clay loam	10YR 2/1 10YR 6/2		41
5	STP 5-32	Stratum 1 Stratum 2	(0-36) (36-46)	light silt loam clay loam	10YR 2/1 10YR 6/2		46
5	STP 5-33	Stratum 1 Stratum 2	(0-40) (40-50)	light silt loam clay loam	10YR 2/1 10YR 6/2		50
5	STP 5-34	Stratum 1 Stratum 2	(0-32) (32-42)	light silt loam clay loam	10YR 2/1 10YR 6/2		42
5	STP 5-35	Stratum 1 Stratum 2	(0-35) (35-45)	light silt loam clay loam	10YR 2/1 10YR 6/2		45

Test Area	Shovel Test Pit (STP)	Stratigraphic Profile (depths below modern ground surface in centimeters) Texture and Soil Color Description Artifact/Ecofact Types Identified	Associated Artifacts	Total Excavation Depth (below modern ground surface in centimeters)
5	STP 5-36	Stratum 1 (0-28) light silt loam 10YR 2/1 Stratum 2 (28-38) clay loam 10YR 6/2		38
5	STP 5-37	Stratum 1 (0-30) light silt loam 10YR 2/1 Stratum 2 (30-40) clay loam 10YR 6/2		40
5	STP 5-38	Stratum 1 (0-30) light silt loam 10YR 2/1 Stratum 2 (30-40) clay loam 10YR 6/2		40
5	STP 5-39	Stratum 1 (0-34) light silt loam 10YR 2/1 Stratum 2 (34-44) clay loam 10YR 6/2		44
5	STP 5-40	Stratum 1 (0-32) light silt loam 10YR 2/1 Stratum 2 (32-42) clay loam 10YR 6/2		42
5	STP 5-41	Stratum 1 (0-36) light silt loam 10YR 2/1 Stratum 2 (36-47) clay loam 10YR 6/2		47
5	STP 5-42	Stratum 1 (0-33) light silt loam 10YR 2/1 Stratum 2 (33-43) clay loam 10YR 6/2		43
5	STP 5-43	Stratum 1 (0-39) light silt loam 10YR 2/1 Stratum 2 (39-49) clay loam 10YR 6/2		49
6	STP 6-1	Fill (0-38) coarse sands/silts 10YR5/6 and 10YR 2/1		38
6	STP 6-2	Fill (0-40) coarse sand/silts 10YR 5/6 and 10YR 2/1		40
7	STP 7-1	Stratum 1 (0-37) light silt loam 10YR 2/1 Stratum 2 (37-47) clay loam 10YR 6/2		47
7	STP 7-2	Stratum 1 (0-28) light silt loam 10YR 2/1 Stratum 2 (28-38) clay loam 10YR 6/2		38
7	STP 7-3	Stratum 1 (0-29) light silt loam 10YR 2/1 Stratum 2 (29-39) clay loam 10YR 6/2		39
7	STP 7-4	Stratum 1 (0-31) light silt loam 10YR 2/1 Stratum 2 (31-41) clay loam 10YR 6/2		41
7	STP 7-5	Stratum 1 (0-38) light silt loam 10YR 2/1 Stratum 2 (38-48) clay loam 10YR 6/2		48
7	STP 7-6	Stratum 1 (0-40) light silt loam 10YR 2/1 Stratum 2 (40-50) clay loam 10YR 6/2		50
7	STP 7-7	Stratum 1 (0-31) light silt loam 10YR 2/1 Stratum 2 (31-41) clay loam 10YR 6/2		41
7	STP 7-8	Stratum 1 (0-27) light silt loam 10YR 2/1 Stratum 2 (27-37) clay loam 10YR 6/2		37
7	STP 7-9	Stratum 1 (0-28) light silt loam 10YR 2/1 Stratum 2 (28-38) clay loam 10YR 6/2		38
7	STP 7-10	Stratum 1 (0-25) light silt loam 10YR 2/1 Stratum 2 (25-35) clay loam 10YR 6/2		35
7	STP 7-11	Stratum 1 (0-30) light silt loam 10YR 2/1 Stratum 2 (30-40) clay loam 10YR 6/2		40
7	STP 7-12	Stratum 1 (0-28) light silt loam 10YR 2/1 Stratum 2 (28-38) clay loam 10YR 6/2		38
7	STP 7-13	Stratum 1 (0-33) light silt loam 10YR 2/1 Stratum 2 (33-43) clay loam 10YR 6/2		43
7	STP 7-14	Stratum 1 (0-28) light silt loam 10YR 2/1 Stratum 2 (28-38) clay loam 10YR 6/2		38
7	STP 7-15	Stratum 1 (0-36) light silt loam 10YR 2/1 Stratum 2 (36-46) clay loam 10YR 6/2		46

Test Area	Shovel Test Pit (STP)	Stratigraphic Profile (depths below modern ground surface in centimeters) Texture and Soil Color Description Artifact/Ecofact Types Identified				Associated Artifacts	Total Excavation Depth (below modern ground surface in centimeters)
7	STP 7-16	Stratum 1 Stratum 2	(0-31) (31-41)	light silt loam clay loam	10YR 2/1 10YR 6/2		41
7	STP 7-17	Stratum 1 Stratum 2	(0-30) (30-40)	light silt loam clay loam	10YR 2/1 10YR 6/2		40
7	STP 7-18	Stratum 1 Stratum 2	(0-33) (33-43)	light silt loam clay loam	10YR 2/1 10YR 6/2		43
7	STP 7-19	Stratum 1 Stratum 2	(0-33) (33-43)	light silt loam clay loam	10YR 2/1 10YR 6/2		43
7	STP 7-20	Stratum 1 Stratum 2	(0-40) (40-50)	light silt loam clay loam	10YR 2/1 10YR 6/2		50
7	STP 7-21	Stratum 1 Stratum 2	(0-38) (38-48)	light silt loam clay loam	10YR 2/1 10YR 6/2		48
7	STP 7-22	Stratum 1 Stratum 2	(0-35) (35-45)	light silt loam clay loam	10YR 2/1 10YR 6/2		45
7	STP 7-23	Stratum 1 Stratum 2	(0-33) (33-43)	light silt loam clay loam	10YR 2/1 10YR 6/2		43
7	STP 7-24	Stratum 1 Stratum 2	(0-42) (42-52)	light silt loam clay loam	10YR 2/1 10YR 6/2		52
7	STP 7-25	Stratum 1 Stratum 2	(0-38) (38-48)	light silt loam clay loam	10YR 2/1 10YR 6/2		48
7	STP 7-26	Stratum 1 Stratum 2	(0-51) (51-61)	light silt loam clay loam	10YR 2/1 10YR 6/2		61
7	STP 7-27	Stratum 1 Stratum 2	(0-42) (42-52)	light silt loam clay loam	10YR 2/1 10YR 6/2		52
7	STP 7-28	Stratum 1 Stratum 2	(0-50) (50-60)	light silt loam clay loam	10YR 2/1 10YR 6/2		60
7	STP 7-29	Stratum 1 Stratum 2	(0-35) (35-45)	light silt loam clay loam	10YR 2/1 10YR 6/2		45
7	STP 7-30	Stratum 1 Stratum 2	(0-40) (40-50)	light silt loam clay loam	10YR 2/1 10YR 6/2		50
7	STP 7-31	Stratum 1 Stratum 2	(0-43) (43-53)	light silt loam clay loam	10YR 2/1 10YR 6/2		53
7	STP 7-32	Stratum 1 Stratum 2	(0-40) (40-50)	light silt loam clay loam	10YR 2/1 10YR 6/2		50
7	STP 7-33	Stratum 1 Stratum 2	(0-47) (47-57)	light silt loam clay loam	10YR 2/1 10YR 6/2		57
7	STP 7-34	Stratum 1 Stratum 2	(0-45) (45-55)	light silt loam clay loam	10YR 2/1 10YR 6/2		55
7	STP 7-35	Stratum 1 Stratum 2	(0-48) (48-58)	light silt loam clay loam	10YR 2/1 10YR 6/2		58
7	STP 7-36	Stratum 1 Stratum 2	(0-52) (52-62)	light silt loam clay loam	10YR 2/1 10YR 6/2		62
7	STP 7-37	Stratum 1 Stratum 2	(0-40) (40-50)	light silt loam clay loam	10YR 2/1 10YR 6/2		50
7	STP 7-38	Stratum 1 Stratum 2	(0-41) (41-55)	light silt loam clay loam	10YR 2/1 10YR 6/2		55
7	STP 7-39	Stratum 1 Stratum 2	(0-39) (39-49)	light silt loam clay loam	10YR 2/1 10YR 6/2		49
7	STP 7-40	Stratum 1 Stratum 2	(0-28) (28-38)	light silt loam clay loam	10YR 2/1 10YR 6/2		38

Test Area	Shovel Test Pit (STP)	Stratigraphic Profile (depths below modern ground surface in centimeters) Texture and Soil Color Description Artifact/Ecofact Types Identified				Associated Artifacts	Total Excavation Depth (below modern ground surface in centimeters)
7	STP 7-41	Stratum 1 Stratum 2	(0-26) (26-36)	light silt loam clay loam	10YR 2/1 10YR 6/2		36
7	STP 7-42	Stratum 1 Stratum 2	(0-43) (43-53)	light silt loam clay loam	10YR 2/1 10YR 6/2		53
7	STP 7-43	Stratum 1 Stratum 2	(0-43) (43-53)	light silt loam clay loam	10YR 2/1 10YR 6/2		53
7	STP 7-44	Stratum 1 Stratum 2	(0-40) (40-50)	light silt loam clay loam	10YR 2/1 10YR 6/2		50
7	STP 7-45	Stratum 1 Stratum 2	(0-48) (48-58)	light silt loam clay loam	10YR 2/1 10YR 6/2		58
7	STP 7-46	Stratum 1 Stratum 2	(0-38) (38-48)	light silt loam clay loam	10YR 2/1 10YR 6/2		48
7	STP 7-47	Stratum 1 Stratum 2	(0-41) (41-51)	light silt loam clay loam	10YR 2/1 10YR 6/2		51
7	STP 7-48	Stratum 1 Stratum 2	(0-37) (37-47)	light silt loam clay loam	10YR 2/1 10YR 6/2		47