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State Historic Preservation Office
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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. 24 Improvements, Love Creek to S.R. 1 Additional Areas, Rehoboth and Indian River Hundreds, Sussex County, Delaware, Phase I Archaeology

2. **Date:** 5/21/10

3. **Author(s):** Barbara J. Gundy, Ph.D., R.P.A. and 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):** Robinsonville, Marshtown, Midway

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

PROJECT DESCRIPTION

9. **Dates of fieldwork:** October 27-November 1, 2009

10. **Size of area covered:** **unit used:** ☒ **acres** ☐ **hectares**
project area: 7.01 **surveyed area**: 6.34

11. **Project description (describe location and nature of project):** The Delaware Department of Transportation (DelDOT) is proposing improvements to a stretch of State Route (S.R.) 24 from Love Creek to S.R. 1 located in Rehoboth and Indian River Hundreds, Sussex County. The project area is specifically located on the United States Geological Survey (USGS) (USGS 2004) 7.5 minute Fairmount, Delaware topographic quadrangle (Figure 1). The proposed improvements include widening, the addition of turn lanes, new stormwater management features, tree restoration, and staging areas. Due to

the refinement of the construction plans, some of the proposed improvements are located on property which was not previously surveyed for archaeological resources, thereby necessitating additional Phase I archaeological survey.

The archaeological Area of Potential Effects (APE) for these additional areas consists of eight discontinuous areas (Test Areas A-H) located along the existing S.R. 24 roadway corridor. These test areas are shown on "Construction Plans" (Sheets 13 of 96 through 27 of 96) and five "Stormwater Management Plans" (Sheet X of 96) provided to Skelly and Loy by DelDOT (Figure 2).

Table 1 provides a physical description of each of the eight test areas at the time of the Phase I archaeological survey, as well as information regarding any disturbances to the deposits that were present. Table 3 provides a listing and description of previously identified cultural resources near the test areas and includes properties previously surveyed by McCormick Taylor, Inc. for the S.R. 24 Planning Study (Arnold *et al.* 2004). Photographs 1-14 show a general view of each test area at the time of the Phase I archaeological survey.

RESEARCH DESIGN

12. Survey objectives: To determine the presence or absence of archaeological resources within the defined archaeological APE (i.e., eight test areas).

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 review of previously conducted cultural resource research in the general vicinity and for the S.R. 24 project by Skelly and Loy (Gundy and Sams 2003, 2004; Gundy *et al.* 2006); the examination of the Delaware archaeological site files, the National Register of Historic Places (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 and Phase I survey had been previously completed for the S.R. 24 project and the landforms and soils in the new S.R. 24 test areas are similar, no additional geomorphology fieldwork was completed for this project.

Phase I archaeological fieldwork consisted of a visual examination of the entire archaeological APE followed by subsurface testing. Due to the presence of relatively shallow non-alluvial sediments, the excavation of 108, 57.0 cm (22.4 in) diameter shovel test pits (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. Information 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. No archaeological materials were recovered; therefore, no analysis or artifact 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 expected site types for this project were developed primarily through three avenues of research: review of archaeological site predictive information (Gundy *et al*. 2006; Custer n.d.); review of previously surveyed archaeological sites and historic resources (DE SHPO; Gundy and Sams 2003, 2004); and review of historic maps and historic aerial photographs (see attached list of historic maps).

Predictive information included in Custer (n.d.) and Gundy *et al.* (2006) utilized environmental and secondary cost/distance variables to determine the relative potential for archaeological resources in large geographic regions which include the eight test areas studied for this project. Custer (n.d.) classifies the lands within the eight test areas as either low or moderate probability for the presence of pre-contact period archaeological sites. More specifically, Custer (1987:62) indicates that the probability for finding significant sites within the interior areas of the Atlantic Coastal region (of which the S.R. 24 Improvements project is a part) is low to medium for most of the pre-contact period site types, while the existing data quality is poor. This makes the interior areas of the Atlantic Coastal region low research sensitivity areas (Custer 1987:58). Custer (1987:62) does list two site types -- Woodland I and Woodland II procurement -- as high probability sites with fair data quality. The results of the Western Parkway pre-contact period archaeological site location predictive surface (Gundy *et al.* 2006) agrees with Custer and classifies the areas immediately adjacent to S.R. 24 as very low probability with areas further from the road as low and moderate. None of the lands classified as high or very high by the Western Parkway predictive surface are within the archaeological APE.

Previously conducted archaeological research indicates that the majority of the Paleoindian site types, as defined by Gardner (1979), are directly related to lithic resource procurement and lithic tool manufacturing. The S.R. 24 test areas are not located within any of the three Paleoindian site concentrations defined in Delaware, and sources of high-quality lithic raw materials are not present. Therefore, the likelihood of substantial Paleoindian period remains being present in the test areas is low. No Paleoindian archaeological remains have been previously identified within or adjacent to the S.R. 24 Improvements archaeological APE.

The Archaic period 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. A variety of environmental settings, including swamps/marshes and their associated terraces and floodplains of major streams, would have been preferred locations for macro-band camps, while sheltered locales along smaller streams and major stream headlands appear to have been the preferred micro-band camp environmental settings. The potential for the S.R. 24 Improvements archaeological APE to contain Archaic period archaeological remains is low to moderate based on the limited environmental settings included in and the constricted size of the archaeological APE, especially as broken into eight separate test areas.

Many large base camp sites, with associated large numbers of people, were 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. Settlement during this period commonly consisted of repeated use

campsites and semi-sedentary to sedentary village sites along major drainages (Morin *et al.* 2001:3.3). Due to the lack of major drainages within the S.R. 24 Improvements archaeological APE, there is a low to moderate probability of identifying Woodland I period sites. 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). "In general, the Woodland II subsistence patterns in southern Delaware are similar to those of the Woodland I period with the likely addition of minor amounts of cultivated plant food resources, triangular projectile points and various styles of ceramics" (Custer 1984:148; Custer and Catts 1991:24). Settlement during the Woodland period commonly consisted of repeated use campsites and semi-sedentary to sedentary village sites along major drainages (Morin *et al.* 2001:3.3). Due to the lack of major drainages within the archaeological APE, there is a low to moderate probability of identifying Woodland period sites.

The Nanticoke people have a special and long-term relationship with the S.R. 24 Improvements project area. This relationship, despite Euro-American attempts to exterminate or remove the Nanticoke people, continued throughout the post-contact period to the present. Despite the direct and lengthy association of the Nanticoke Indians with the project vicinity throughout the historic period, based on the absence of previously identified pre-contact, contact, or early historic period (Native American) archaeological sites in the general vicinity of the archaeological APE, the nature of the archaeological APE along an existing transportation and utilities corridor, and the constricted areal size of the test areas, the S.R. 24 Improvements Additional Areas archaeological APE is considered to have a low to moderate probability to contain pre-contact, contact, and early historic period Native American archaeological sites.

The initial S.R. 24 archaeological research included a summary of previously identified historic period archaeological sites in the general vicinity of the S.R. 24 Improvements archaeological APE, remembrances of Nanticoke tribal members and non-tribal residents, and a discussion of the potential for the archaeological APE to contain historic period archaeological sites. Previously completed cultural resource studies in the vicinity of the archaeological APE identified extant property types including agricultural complexes, individual residences, maritime resources, industrial/commercial resources, public/religious resources, and others. Based on the results of past archaeological research, it appears that the archaeological APE has the potential to contain the gamut of historic period archaeological resources; however, agricultural related resources will most likely make up the bulk of those identified.

The results of the Western Parkway historic period archaeological site location predictive surface (Gundy *et al.* 2006) indicate that there are specific locations which exhibit the range (very low to very high) of probabilities for historic period archaeological remains along S.R. 24. These identified locations are the combined overlay of various historically sensitive areas determined through the review of historic maps, aerial photographs, and deed research. The historic settlement and development of the archaeological APE vicinity has been strongly influenced by the early settlement of nearby Lewes, the agricultural nature of the region, and tourism. The earliest focus of settlement was in areas nearest Lewes, with agriculture playing the lead economic role. A 1737 map of the area shows the gridded layout of Lewes Town to the north of the project area as well as inland roads leading to early settlements at present day Millsboro and Angola Neck to the southwest and south of the project area (Figure 4). During the earliest settlement of the region, the area along S.R. 24 would have been agricultural, and it would have been

peripheral to larger settlements like Lewes. During the late eighteenth and early nineteenth centuries, residential, industrial, and commercial development historically clustered along the waterways, roads, and railroads, opening up the archaeological APE vicinity to additional historic period land uses.

Review of historic maps and aerial photographs did not reveal the presence of any structures within the eight test areas during the historic or modern periods, though an 1868 map reveals that they are located in the vicinity of several farmsteads (Figure 5). The test areas appear to have served as rural agricultural fields throughout their history, although it might be possible to find traces of ephemeral agricultural features or uses (e.g., fences, walls, dumps, field scatter) (Figures 6 through 11). The present path of S.R. 24 was not carved through the area until the 1930s (Figure 9); therefore, roadway related resources would only be expected after that time period. Deed research for each of the eight test areas did not reveal any significant ownerships or uses of the lands historically. Many of the test areas are only small portions of larger tracts making it difficult to pinpoint any specific type of expected resource. The results of the deed research are attached to this form.

Due to the long-term rural nature of the archaeological APE, and based on deed research and the numbers of different types of previously identified historic archaeological sites located within Sussex County, if historic period archaeological sites are identified in the archaeological APE, they will likely be related to Nanticoke Tribal or Euro-American rural agricultural and/or domestic activities. However, given the constricted size and positioning of the archaeological APE as eight discontinuous test areas, if historic archaeological resources are identified, they will most likely be generalized historic artifact scatters or isolates, types of resources which do not typically contribute significant information about the land-use history of an area.

RESULTS and RECOMMENDATIONS

15. Fieldwork (describe survey; add maps as needed): Eight test areas (Test Areas A-H) which correspond to proposed construction areas that were not previously surveyed for archaeological resources comprise the archaeological APE. The location, acreage, and description of each test area are included in Table 1 while the archaeological results for each test area are included below.

Due to various disturbances within Test Area A, only three STPs were excavated along a single transect in an area which appeared to be less disturbed. However, the stratigraphic profiles of the excavated STPs indicated that the area had been previously disturbed by grading and fill activities. The stratigraphic profiles in Test Area A consist of re-deposited fill overlying Pleistocene aged subsoil. The fill was mainly an olive brown (2.5Y 4/3) colored sandy silt loam with black (10YR 2/1) mottling. The fill had a maximum thickness of 32.0 cm (12.6 in) and did not yield any cultural materials. Stratum 2 underlies the fill by an arbitrary interface and is a light olive brown (2.5Y 5/4) coarse sand B subsoil horizon. The water table was encountered near the fill/Stratum 2 interface. Stratum 2 is culturally sterile. No previously identified archaeological sites are present in Test Area A, and no cultural material was identified during the Phase I survey; therefore, no additional archaeological investigations in this test area are warranted.

Test Area B is located in a harvested soybean field. Twenty-four STPs were excavated along two transects in the test area. The excavated stratigraphic profiles in Test Area B

consist of two natural strata. Stratum 1 is an olive brown (2.5Y 4/3) colored sand loam Ap (plowzone) soil horizon which contains less than one percent rounded pebbles. The thickness of Stratum 1 ranges from between 26.0 cm (10.2 in) to 64.0 cm (25.2 in). No cultural materials were identified in Stratum 1. Stratum 2 underlies Stratum 1 and is a light olive brown (2.5Y 5/4) coarse sand B horizon subsoil. Stratum 2 is culturally sterile. No previously identified archaeological sites are present in Test Area B, and no cultural material was identified during the Phase I survey; therefore, no additional archaeological investigations in this test area are warranted.

Test Area C is located in a harvested soybean field. Thirty STPs were excavated in the test area. The excavated stratigraphic profiles in Test Area C consist of two natural strata. Stratum 1 is a light olive brown (2.5Y 5/4) colored sand loam Ap (plowzone) soil horizon which contains less than one percent rounded pebbles. The thickness of Stratum 1 ranges from between 26.0 cm (10.2 in) to 64.0 cm (25.2 in). No cultural materials were identified in Stratum 1. Stratum 2 underlies Stratum 1 and is a yellowish brown (10YR 5/8) coarse sand B horizon subsoil. Stratum 2 is culturally sterile. No previously identified archaeological sites are present in Test Area C, and no cultural material was identified during the Phase I survey; therefore, no additional archaeological investigations in this test area are warranted.

Due to heavy recent disturbances to Test Area D, no subsurface excavations were conducted. The test area is bisected by the paved entrance to Beacon Middle School. In addition, it appears that activities associated with school property updates have disturbed the entire test area. The western half of the test area contains graded re-deposited fill from a recently constructed storm water drainage located between the school entrance and an athletic field. A mounded and graded soccer field with drainage grates and buried electrical lines is present in the eastern half of the test area, and a buried sewer line is present along the northern limits of Test Area D. No previously identified archaeological sites are present in Test Area D and, based on the extensive disturbances, there is no potential for intact cultural material; therefore, no additional archaeological investigations in this test area are warranted.

Test Area E is located in a harvested corn field. Twenty-one STPs were excavated in the test area. The excavated stratigraphic profiles in Test Area E consist of two natural strata. Stratum 1 is a dark brown (10YR 3/3) colored sand loam Ap (plowzone) soil horizon which contains less than one percent rounded pebbles. The thickness of Stratum 1 ranges from between 24.0 cm (9.5 in) to 36.0 cm (14.2 in). No cultural materials were identified in Stratum 1. Stratum 2 underlies Stratum 1 and is a yellowish brown (10YR 5/6) sandy clay loam B horizon subsoil. Stratum 2 is culturally sterile. No previously identified archaeological sites are present in Test Area E, and no cultural material was identified during the Phase I survey; therefore, no additional archaeological investigations in this test area are warranted.

Due to various disturbances within Test Area F, only six STPs were excavated along a single transect in an area which appeared to be less disturbed. However, the stratigraphic profiles of the excavated STPs indicated that the area had been previously disturbed by grading and fill activities. The excavated stratigraphic profiles in Test Area F consist of thick re-deposited fill. The fill is comprised of yellowish brown (10YR 5/6) sandy loam alternating with pale brown (10YR 6/3) sand bands. The fill reached beyond the maximum excavated depth of 75.0 cm (29.5 in) below the modern ground surface demonstrating that the original natural soils have been removed from this area. The fill

did not yield any cultural materials. No previously identified archaeological sites are present in Test Area F and, based on the presence of only re-deposited fill, there is no potential for intact cultural material; therefore, no additional archaeological investigations in this test area are warranted.

Test Area G is located in a mown lawn and abandoned commercial facility. Only 13 STPs were excavated in the test area due to the presence of localized disturbances and gravel paving. Two distinct excavated stratigraphic profiles are present in the test area. The first stratigraphic profile is present in excavations located in the western portion of the test area and consists of two natural strata. Stratum 1 is a dark yellowish brown (10YR 4/4) colored sandy loam Ap (plowzone) soil horizon which contains less than one percent rounded pebbles and some coal fragments. The thickness of Stratum 1 ranges from between 24.0 cm (9.5 in) to 56.0 cm (22.1 in). No cultural materials were identified in Stratum 1. Stratum 2 underlies Stratum 1 and is a yellowish brown (10YR 5/8) sandy clay loam B horizon subsoil. Stratum 2 is culturally sterile. The second stratigraphic profile is present in excavations in the eastern portion of the test area and consists of fill over coarse sands and/or gravels. The fill consists of a mix of dark yellowish brown (10YR 4/4) sandy loam and yellowish brown (10YR 5/6) sandy clay loam with five percent coal fragments and angular gravels. The thickness of the fill ranged from between 10.0 cm (3.9 in) to 98.0 cm (38.6 in). The fill was stratigraphically above either coarse compacted sands or gravels. No cultural materials were identified in the fill or gravels. The presence of the fill and gravels is likely due to the prior modern period commercial uses of the property. No previously identified archaeological sites are present in Test Area G, and no cultural material was identified during the Phase I survey; therefore, no additional archaeological investigations in this test area are warranted.

Test Area H is located in a harvested corn field. Eleven STPs were excavated in the test area. The excavated stratigraphic profiles in Test Area H consist of two natural strata. Stratum 1 is a dark yellowish brown (10YR 4/4) colored sandy loam Ap (plowzone) soil horizon which contains less than one percent rounded pebbles. The thickness of Stratum 1 ranges from between 28.0 cm (11.0 in) to 32.0 cm (12.6 in). No cultural materials were identified in Stratum 1. Stratum 2 underlies Stratum 1 and is a yellowish brown (10YR 5/6) sandy clay loam B horizon subsoil. Stratum 2 is culturally sterile. No previously identified archaeological sites are present in Test Area H, and no cultural material was identified during the Phase I survey; therefore, no additional archaeological investigations in this test area are warranted.

16. **Artifacts (describe any found; identify location; explain why determined not to be a site):** No pre-contact or historic period artifacts were recovered during the Phase I survey of the archaeological APE.

17. **Recommendations:** Based on the lack of previously identified archaeological sites and historic structures within the archaeological APE, and the negative results of the Phase I survey, the proposed S.R. 24 construction, as currently designed, will not affect any archaeological 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** (Table 2)
- **g.** ☒ **soils map(s)**

Others (list, if any):

Table 1. Test Area Descriptions
Table 3. Previously Identified Cultural Resources near the APE.
Deed Research Results

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