

*3.0 FIELD METHODS AND  
RESULTS*



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#### **3.1 Field Methods**

Phase I archaeological survey of the three survey areas was conducted on June 14 and 15, 2004. The Phase I survey of the proposed drainage ditch was conducted on June 23, 2006. The additional STP excavations in the southwestern quadrant of the Tower Hill Road survey area were conducted on July 20, 2006. A.D. Marble & Company staff placed transects of shovel test pits (STPs) parallel to and 6.1 meters (20.0 feet) from the edge of Tower Hill Road, 12.2 meters (40.0 feet) from the edge of Farmington Road, and at the northeastern corner of the intersection of Commerce Street and Reece Avenue, 6.1 meters (20.0 feet) from the edge of the road. A total of 51 STPs were excavated at 15.2 meter (50.0 foot) intervals in the southeast and southwest quadrants of the Tower Hill Road survey area, the Farmington Road survey area, and the intersection of Commerce Street and Reece Avenue. Based on the scattered distribution of a few historic artifacts and large number of modern artifacts recovered in the southeastern and southwestern quadrants of the Tower Hill Road survey area, Phase I archaeological testing in the northeast and northwest quadrants of Tower Hill Road survey area were adjusted to 30.5-meter (100.0 foot) intervals. An approximately 30.5-meter-wide by 91.4-meter-long (100.0 foot by 300.0 foot) new and not previously surveyed portion of the southwestern quadrant of Tower Hill Road survey area was subjected to a pedestrian survey of five north-to-south transects and the excavation of four STPs placed at 30.5-meter (100.0 foot) intervals. Radial excavations were conducted at the four cardinal points surrounding STPs containing prehistoric artifacts of five or more historic artifacts.

The testing methodology for the proposed drainage ditch followed established landmarks as the basis for placing excavation locations. The proposed ditch extended from Farmington Road to its intersection with Jackson's Tax Ditch, paralleling a gravel road to the south and a chain link fence to the north. The fence has 23 vertical poles, beginning at Farmington Road and heading due east to Jackson's Tax Ditch. STPs were offset 3.0 meters (10.0 feet) south of pole 17 and 22 and placed between the gravel road and the fence. The two STPs were placed close to Jackson's Tax Ditch in an area having the best possibility of finding prehistoric remains. In addition to the two STPs, a strata cut was placed within Jackson's Tax Ditch. This cut was made on the east

bank of the ditch 6.1 meters (20.0 feet) north of the chain link fence. The strata cut was placed outside the proposed ditch but was conducted to verify the soil stratigraphy recorded in the two STPs and to inspect the survey area for possible archaeological remains.

All test locations were excavated through a plowzone (Ap) soil horizon into sterile subsoil. All excavated soils were passed through one-quarter inch wire mesh screen, and artifacts were retained regardless of age. Descriptions of each excavation level, the soil stratigraphy in each test pit, and corresponding artifacts were recorded on standardized forms. All artifacts were taken to the laboratory for cleaning and analysis. The project area was documented photographically, both digitally and with black and white 35 mm film.

### **3.2 Field Results**

Phase I testing consisted of the excavation of 65, 50.0 centimeter (20.0 inch) diameter STPs. In all, 117 artifacts were recovered during the field survey. Of this total, only one was prehistoric in nature. A log of all shovel test pits is included in Appendix C, and a catalog of artifacts recovered during the Phase I survey is included in Appendix D.

#### *3.2.1 Tower Hill Road*

Tower Hill Road was divided into four separate quadrants using the existing railway line. The total testable area along Tower Hill Road totaled 0.43 hectare (1.05 acres). A total of 112 artifacts were recovered from 55 STPs excavated within this area (Figures 8a-8c).

#### Southeastern Quadrant

A total of 32 STPs was excavated within the southeastern quadrant survey area (Figures 8a-8c). The soil profile contained a 25.0- to 35.0 centimeter (9.8 to 13.8 inch) dark grayish brown to brown (10YR 4/2-4/3) silty sand plowzone overlying a light olive brown to light yellowish brown (2.5Y 5/3-6/4) loamy sand B-horizon. On average, test pits in the southeastern quadrant were excavated to 47.0 centimeters (18.5 inches) below surface and yielded a consistent plowzone overlying B-horizon profile. Testing recovered a total of 58 artifacts, including 21 bottle glass fragments, one cut glass fragment, two window glass, small oyster (n=1) and clam (n=8) shell fragments, three brick fragments, one copper tube, 18 coal fragments, and two pieces

of slag, all from the plowzone. The overwhelming majority of the bottle glass collection (n=20) consists of nondescript, mid- to late-twentieth-century colorless (n=7), amber (n=9), and green (n=3) fragments. An aqua bottle glass fragment recovered in the plowzone horizon of STP SE-10 may represent a mid-nineteenth to early-twentieth-century manufacture, but the small size of the fragment and lack of diagnostic characteristic prohibits a positive identification of age or method of manufacture. One colorless bottle glass shard recovered in STP SE-24 exhibited the embossed letters “ ...W FOR...E OF THIS...”, representing a late-nineteenth through twentieth-century machine-made manufacturing process. STP SE-4 produced one jasper tertiary flake in the plowzone. Radials excavated around this test pit recovered only modern historic artifacts indicating that this flake was an isolated find. No subsurface features were identified during the Phase I survey in the southeastern quadrant, and the distribution of the artifact assemblage did not yield any concentrations indicative of historic or prehistoric activity areas within the southeastern quadrant survey area. No archaeological sites were identified in the southeastern quadrant survey area.

#### Northeastern Quadrant

Seven STPs were excavated in the northeastern quadrant survey area of Tower Hill Road (Figure 8b). Soils in this quadrant consisted of a 24.0- to 32.0 centimeter (9.4 to 12.6 inch) dark grayish brown to brown (10YR 4/2-4/3) loamy sand plowzone above a light brownish gray to light yellowish brown (2.5Y 6/2-6/3) loamy sand B-horizon, both of which were compacted. On average, test pits in the northeastern quadrant were excavated to 43.0 centimeters (16.9 inches) below surface and yielded a consistent plowzone overlying B-horizon profile. A total of 31 artifacts were recovered from the plowzone horizon. The assemblage represented a mix of modern and historic refuse, including bottle glass (n=26), two late-twentieth-century bottle cap fragments with “TROPICANA” printed on the surface, one lead glazed redware fragment, one green annular whiteware vessel fragment and a piece of coal. The bottle glass assemblage contained nondescript body fragments likely of mid- to late-twentieth-century manufacture, given the absence of surface patina and inclusions, and the smooth, even thickness of the shards. Lead-glazed redware was generally produced from 1822 to 1900, while annular whiteware represents an 1820 to 1850 period of manufacture (South 1977; Miller 200). This area is used for overflow parking by the Delaware State Fairgrounds. No cultural features were identified during

the Phase I survey in the northeastern quadrant. No concentrations of artifact classes suggestive of historic or prehistoric activity areas were identified in the artifact distribution patterns of the northeastern quadrant survey area. No archaeological sites were identified in the northeastern quadrant survey area.

### Northwestern Quadrant

Three STPs were excavated in the northwestern quadrant survey area of Tower Hill Road (Figure 8c). Soils consisted of a 28.0- to 36.0 centimeter (11.0 to 14.2 inch) dark grayish brown to brown (10YR 4/2-4/3) loamy sand plowzone overlying a light brownish gray to light gray 2.5Y 6/2-7/2 loamy sand B-horizon. Tests were excavated to an average of 47.0 centimeters (18.5 inches) below surface. A total of eight modern/historic artifacts were recovered from the plowzone, including four bottle glass, three wire nail fragments, and a piece of plastic. STP NW-1 produced a small, weathered olive glass fragment, as well as two modern colorless fragments and three wire nails. STP NW-2 did not contain any cultural materials, while STP NW-3 evidenced one piece of plastic and one modern colorless bottle glass fragment. Ground disturbance associated with the installation of an electrified horse fence, a driveway entrance to a mid-twentieth-century residence, and drainage swale were noted in western portion of the northwestern quadrant survey area. No subsurface features were identified during the Phase I survey in the northwestern quadrant, and the distribution of the artifact assemblage did not yield any concentrations indicative of historic or prehistoric activity areas within the survey area. No archaeological sites were identified in the northwestern quadrant survey area.

### Southwestern Quadrant

The southwestern quadrant survey area was tested with 17 STPs (Figure 8c). The soil profile consisted of a 25.0- to 37.0 centimeter (9.8 to 14.6 inch) dark grayish brown (10YR 4/2) silty sand plowzone overlying a light brownish gray (2.5Y 6/2) loamy sand B-horizon. The average bottom depth of the STPs conducted in the southwestern quadrant survey area for Tower Hill Road was 45.0 centimeters (17.7 inches) below ground surface. A total of 13 modern/historic artifacts was recovered from the plowzone horizon, including one clear glazed redware fragment, six bottle glass, three wire nails, one copper wire fragment, one unidentifiable iron fragment, and a piece of coal. The bottle glass assemblage consisted of mid- to late-twentieth-century amber

(n=5) and colorless (n=1) shards. The wire nails recovered in STP SW-2 and SW-4+10ft North and the copper wire fragment found in STP SW-4 are attributed to construction activities in the residential property in the northwestern quadrant, possibly with the stable and horse fence constructed in the backyard. Although no inspection of the stable was conducted to assess the type of metal fasteners used, similar wire nails were recovered from STP NW-1. The Phase I archaeological survey in the southwestern quadrant survey area did not record any subsurface cultural features, and the distribution of the artifact assemblage did not indicate the presence of prehistoric or historic activity areas. No archaeological sites were identified in the southwestern quadrant survey area.

### *3.2.2 Farmington Road*

The survey area along Farmington Road totaled approximately 0.08 hectare (0.19 acre). This section was tested with a series of four STPs (Figure 9). Soils consisted of a 20.0- to 34.0 centimeters (7.9 to 13.4 inch) very dark brown (10YR 2/2) loamy silt plowzone above a gray to light brownish gray (10YR 6/1-6/2) silty sand B-horizon. On average, the STPs conducted in the Farmington Road survey area were excavated to 48.0 centimeters (18.9 inches) below ground surface. Only one historic artifact, an undiagnostic porcelain vessel fragment, was recovered from the plowzone in STP FR-1. No archaeological sites were identified in the Farmington Road survey area.

### *3.2.3 Proposed Drainage Ditch*

A 0.20 hectare (0.5 acre) parcel of ground was tested as part of the proposed drainage ditch (Figure 10). STP Pole 17 produced a soil profile consisting of a 35.6-centimeter (14.0 inch ) dark brown (10YR 3/3) sandy loam plow zone horizon overlying a 10.2-centimeter (4.0 inch) mottled dark grayish-brown and gray (10YR 4/2 mottled with Gley 1 6/N) sandy loam transitional horizon. A gray (Gley I 6/N) clay loam B-horizon, indicative of wetland soils, was encountered below the transitional horizon and excavated to the bottom of the test pit at 76.2 centimeters (30.0 inches) below ground surface. STP Pole 22 and the bank cut excavated within Jackson's Tax Ditch yielded a similar soil profile as recorded in STP Pole 17. The bank cut was excavated to approximately 1.2 meters (4 feet) below ground surface. The clay content of the B-horizon increased with the depth of the soil stratum. No prehistoric or historic artifacts or subsurface

features were discovered in the Proposed Drainage Ditch survey area. No archaeological sites were identified in the Proposed Drainage Ditch survey area.

#### *3.2.4 Commerce Street and Reese Avenue Intersection*

A small area measuring approximately 0.05 hectare (0.12 acre) was surveyed at the intersection of the Commerce Street and Reese Avenue (Figure 11). The northeastern corner of the intersection was tested with two STPs placed at a 15.2 meter (50.0 ft) interval. The soils consisted of a 27.0- to 38.0 centimeter (10.6 to 15.0 inch) dark grayish brown (10YR 4/2) sandy silt plowzone horizon overlying a grayish brown (2.5Y 5/2) sandy silt B-horizon. STP RA-1 was excavated to a depth of 64.0 centimeters (25.2 inches) below surface, while STP RA-2 was excavated to 40.0 centimeters (15.7 inches) below surface. Five artifacts were recovered from the plowzone, including a fragment of colorless vessel glass, molded plastic (n=2), slag (n=1) and an aluminum can fragment. No artifacts were found in the B-horizon. The Phase I archaeological survey in the Commerce Street and Reese Avenue Intersection survey area did not record any subsurface cultural features, and the distribution of the artifact assemblage did not indicate the presence of historic activity areas. No archaeological sites were identified in the Commerce Street and Reese Avenue Intersection survey area.