

**FINAL PHASE I ARCHAEOLOGICAL SURVEY REPORT
BRIDGE 1-536 GUYENCOURT ROAD**

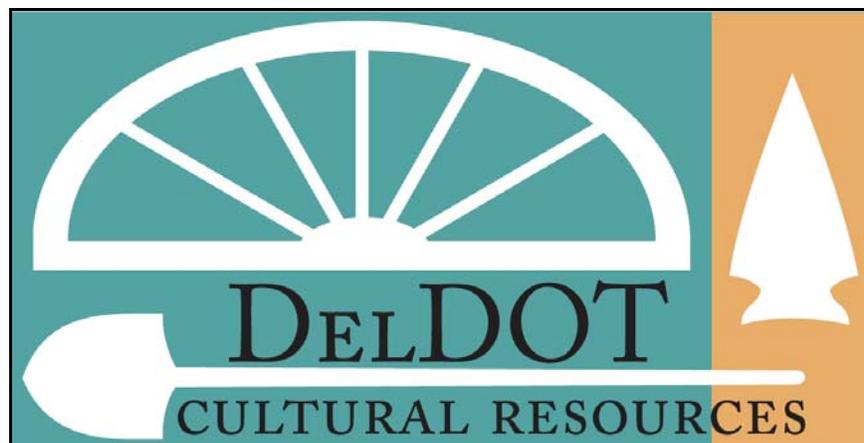
Prepared for:

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Archaeological Survey Report Form

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

- Report title:** Phase I Archaeological Survey Report Bridge 1-536 Guyencourt Road
- Date:** 8/18/2009
- Author(s):** David S. Clarke and Kevin Cunningham
- Consulting firm name and address:** NA
- Client agency:** Delaware Department of Transportation

LOCATION

- County (check as many as apply):** New Castle Kent Sussex
- Nearest town(s):** Centreville
- Physiographic and geographic zone(s):** Piedmont and Piedmont

PROJECT DESCRIPTION

- Dates of fieldwork:** 7/9/2009
- Size of area covered: unit used:** acres hectares
project area: 0.96 **surveyed area:** 0.96
- Project description (describe location and nature of project):** Bridge 1-536 carries Guyencourt Road (N231) over Wilson Run near the intersection of Montchanin Road (SR 100), southeast of Centreville, in New Castle County. The existing bridge consists of an 8-foot span concrete culvert in poor condition. There are large cracks, exposed and corroded and rebar and significant undermining of the scour protection. The bridge has a sufficiency rating of 52.4. The scope of work for this project will include replacement of the existing bridge with a precast three-sided frame/arch structure. Additional work will include re-aligning the intersection of Guyencourt

Road and SR 100 to improve sight distance and turning movements, reconstructing the approach roadways, installing guardrail as needed and placing riprap for scour protection. This is a Delaware state funded project, but due to an Army Corps of Engineers permit needed for environmental issues, section 106 consultation was initiated. The limits of the project are the same as the Army Corps permit. The Area of Potential Effect (APE), which for this project is the Corps Permit Area, is situated on a level residential lawn / floodplain adjacent to Wilson Run. Vegetation consisted of native and nonnative grasses along with deciduous forest, and the soil type is Hatboro silt loam (Ha). The APE (0.96 acres) is mostly disturbed due to the existing roads Guyencourt (N231) and Montchanin (SR 100). Along with the road disturbance there is Wilson Run and Bridge 1-536, which prohibit any archaeological potential in that area of the APE. The only undisturbed "testable" area with the potential to contain archaeological sites, within the APE, is situated adjacent to Wilson Run and the Intersection of the two Roads see attachments E and H.

RESEARCH DESIGN

12. **Survey objectives:** To determine the presence or absence of any Archaeological sites within the defined Army Corps Permit Area.
13. **Survey methods (describe both field and background research methods):** Prior to fieldwork, background research commenced at both DelDOT and DHCA to determine the archaeological potential of the APE. Background research consisted of researching, historic maps, aerial photographs, CRM reports, NHRP files, DHCA site files, and historic and prehistoric contexts. Fieldwork consisted of 4 shovel test pits (STP) between 50 and 60 cm in diameter spaced between 15 and 10 meters apart. Shovel test pits were dug at least 10 cm into culturally sterile soil, below the A/B horizon interface, and screened through 0.25 inch mesh hardware cloth. Photographs were taken of the site and example STP's. Data regarding soil texture, color, depth of any cultural materials, and any soil disturbance was recorded on DelDOT excavation forms.
14. **Expected site types for this area (cite earlier surveys & known nearby resources, information from historic maps or research):** The historic archaeological potential for the APE is moderate due to known historic cultural resources within a 1/2 mile of the APE, and the known age (historic) of the surrounding roads and railroads within and adjacent to the APE. The prehistoric archaeological potential is moderate due to the proximity of the APE to a fresh water source. Also, based on multiple predictive models for the surrounding environs (see bibliography), the physiographic, topographic, and other geographic features of the APE provide the potential for prehistoric sites to be present. There two known cultural resources in or adjacent to the APE. Bridge 1-536 (CRS N14471) is a circa 1920 concrete-slab culvert with flared, heavily parged, aggregate wingwalls at the west elevation, altered galvanized pipe railings and culvert bottom with concrete sandbagging (Hahn and Schmidt 2009). Also, CRS N01396, the Guyencourt Railroad Station is an extant structure adjacent to the APE (DHCA site files 1976 survey). See attachment I for a list and description of all cultural resources within 0.5 miles of the APE.

RESULTS and RECOMMENDATIONS

15. **Fieldwork (describe survey; add maps as needed):** See attachments C and F
16. **Artifacts (describe any found; identify location; explain why determined not to be a site):** One piece of interior and exterior salt glazed vitrified eathernware clay drain pipe (1880 - 1900's) was found between 0 - 11 cm in STP 4 (photograph between attachments b and c). This artifact was found in the natural A soil horizon, thus being defined as an Isolated find / find spot and determined not to be an Archaeological site.
17. **Recommendations:** No Archaeological sites were identified, and thus no additional archaeological work is recommended. It is the opinion of the authors that the single artifact found during this project not be curated.

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)** 1954 Aerial, 1937 Aerail, 1868 Beers, 1893 Basit
- e. **photographs of general project/surveyed area**
- f. **table of collection units and/or excavated tests**
- g. **soils map(s)**

Others (list, if any):

Artifact photograph inbetween attachments b and c

h. corps permit area map.

i. table of all cultural resources within 0.5 miles of the APE.

Attachments

A. Bibliography

Baist, G. W.

1893 *Atlas of New Castle County, Delaware*. George W. Baist, Philadelphia, PA.

Beers, D.G.

1868 *Atlas of the State of Delaware*. Pomeroy & Beers, Philadelphia.

Custer, Jay F.

1986 *A Management Plan for Delaware's Prehistoric Cultural Resources*. University of Delaware Center for Archaeological Research, Monograph No.2. Newark, Delaware.

1989 *Prehistoric Cultures of the Delmarva Peninsula: An Archaeological Study*. Cranbury, New Jersey: Associated University Presses, Inc.

DeCunzo, Lu Ann

2004 *A Historical Archaeology of Delaware*. University of Tennessee Press, Knoxville, TN.

DeCunzo, Lu Ann, and Wade P. Catts

1990 *Management Plan for Delaware's Historical Archaeological Resources*. University of Delaware Center for Archaeological Research, Newark, De.

Delaware Cultural & Historical Resource Information System (CHRIS)

2007 Aerial Photograph with currently available CRS data www.chris.delaware.gov, accessed August 2009.

Delaware Geological Survey (DGS)

1937 Aerial Photography. www.datamil.delaware.gov, accessed August 2009.

1954 Aerial Photography. www.datamil.delaware.gov, accessed August 2009.

2009 Quadrangle Map. www.datamil.delaware.gov, accessed August 2009.

Google Earth

2005 Aerial Photography. www.earth.google.com, accessed August 2009.

Hahn, Michale C. and Jon Schmidt

2008 *Bridge I-536 National Register Evaluation State Contract 27-071-05*. Delaware Department of Transportation, Dover, DE.

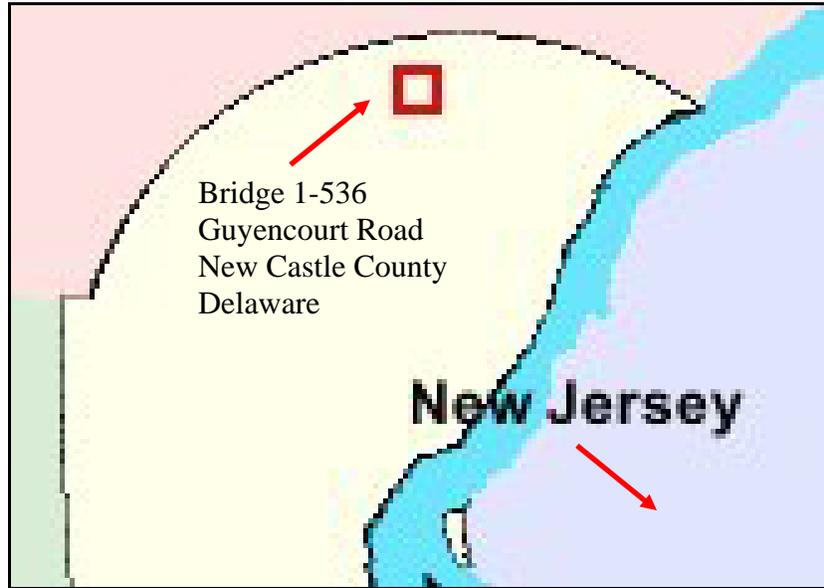
Mathews, Earle D. and Oscar L. Lavoie

1970 *Soil Survey, New Castle County, Delaware*. United States Department of Agriculture, Soil Conservation Service, Washington D.C.

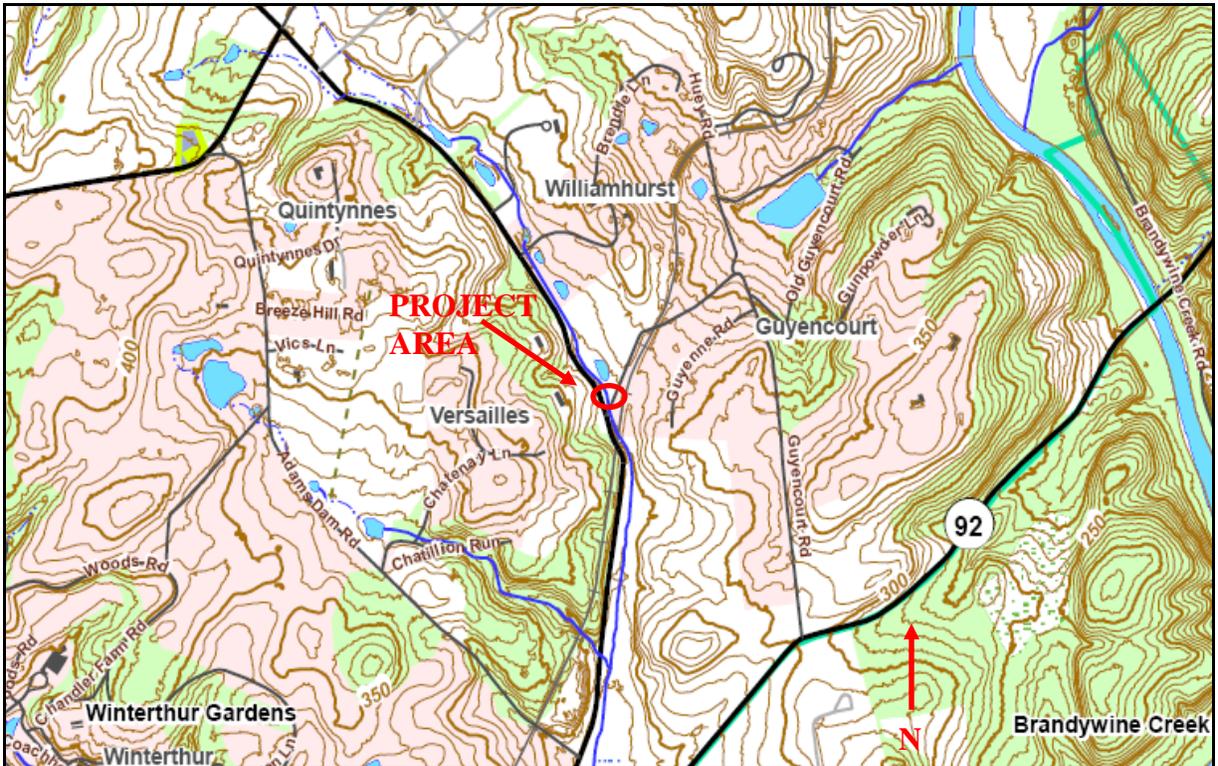
Scharf, J. Thomas

1888 *History of Delaware, 1609-1888*. J.L. Richards and Company, Philadelphia, Pennsylvania.

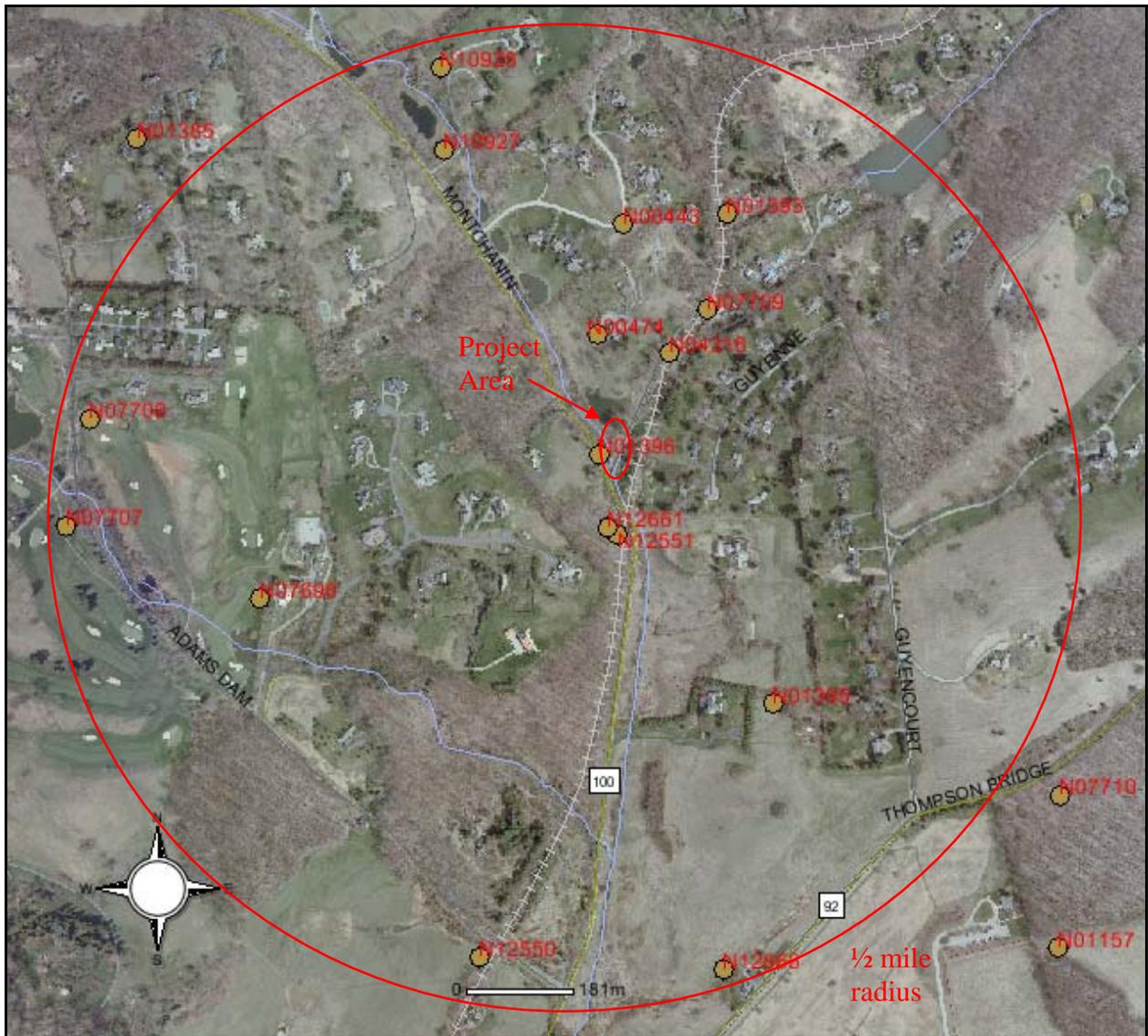
B. Location Maps



Site Location within the state, Delaware Datamil



2009 Quadrangle Map, Delaware Datamil, 1 in = 2000 ft



CRS points within 1/2 mile, base layer 2007 Aerial Photograph, Delaware CHRIS



Interior and exterior salt glazed vitrified eatherware clay drain pipe (1880 - 1900's)

C. Detailed Maps

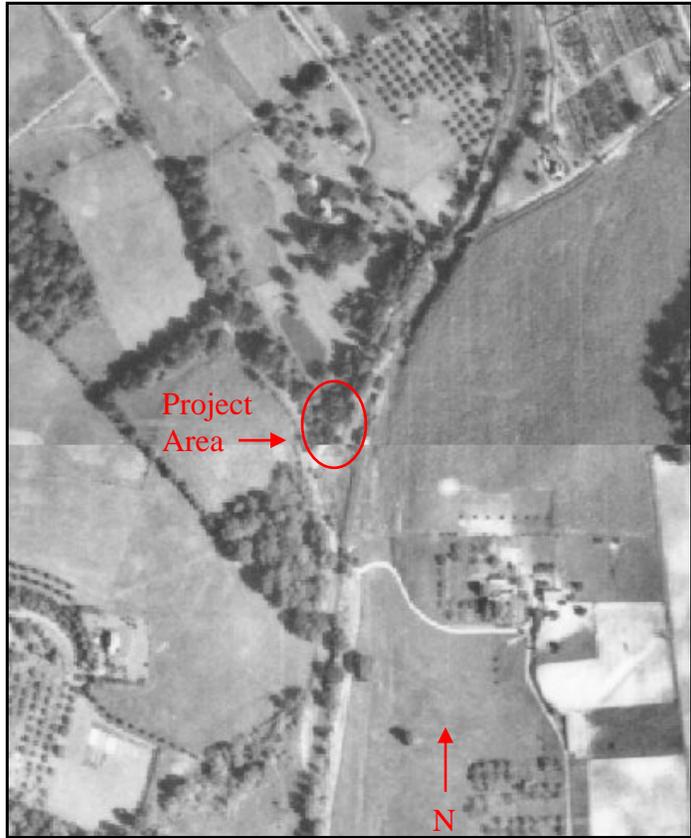


Shovel Test Pits 1-4, Google Earth, base layer 2005 Aerial Photograph

D. Historic Maps



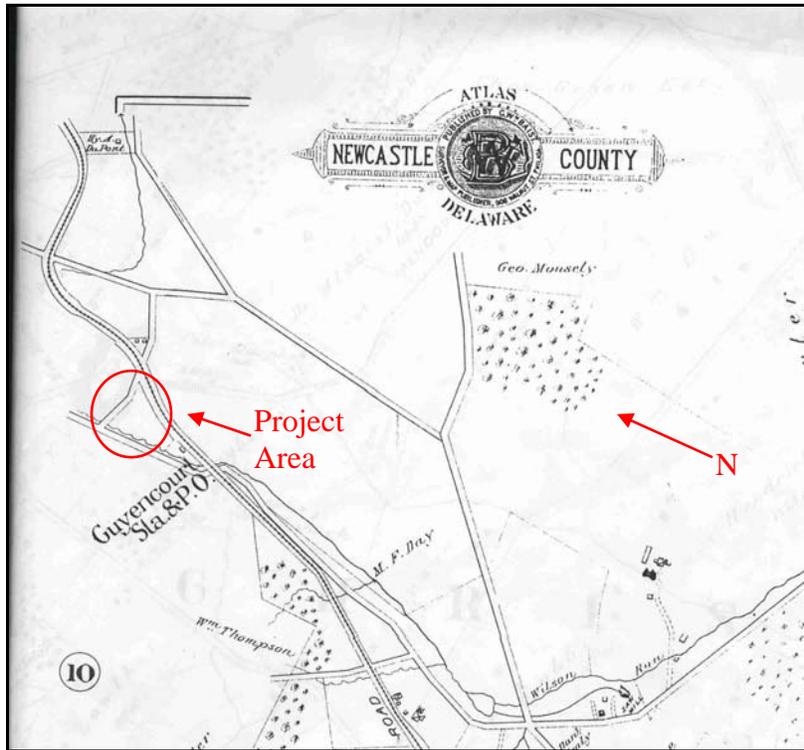
1954 Aerial Photograph, Delaware Datamil, 1 in = 500 ft



1937 Aerial Photograph, Delaware Datamil, 1 in = 500 ft

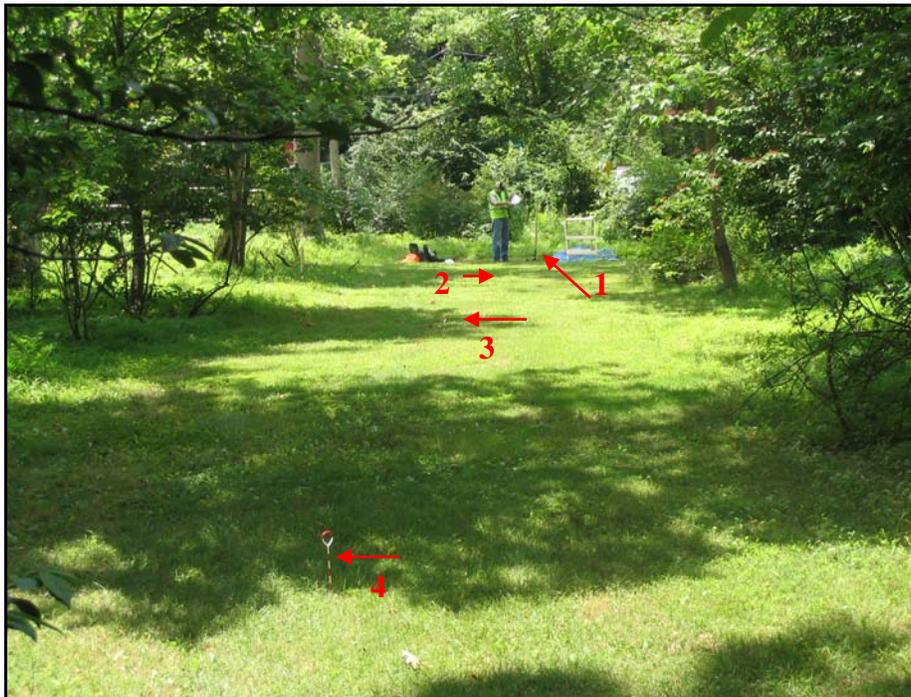


1868 Beers Atlas, Delaware CHRIS



1893 Baist Atlas, 5/8 in = 500 ft

E. Photographs



Project Area Facing South East, STP's 1-4



Shovel Test Pit 1

F. Table of results

SHOVEL TEST FORM

PROJECT NAME Br 1-536 Guyencourt Road **PROJECT NUMBER** 27-071-05

DATE	7/9/09	STP NUMBER	1 (photo)
E	18449786	N	4407371

DEPTH		SOIL	MUNSELL	CULTURAL
BEGIN	END	CLASSIFICATION	COLOR	MATERIAL
0	6	Clay Loam	7.5 YR 3/2	NCM
6	20	Clay Mottled	5YR 4/6 & 5YR 6/1	NCM

STP NUMBER 2

E	18449790	N	4407378
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DEPTH		SOIL	MUNSELL	CULTURAL
BEGIN	END	CLASSIFICATION	COLOR	MATERIAL
0	7	Clay Loam	7.5 YR 3/2	NCM
7	27	Clay Mottled	5YR 4/6 & 5YR 6/1	NCM
27	30	Clay	5TR 6/1	NCM

STP NUMBER 3

E 18449791 **N** 4407387

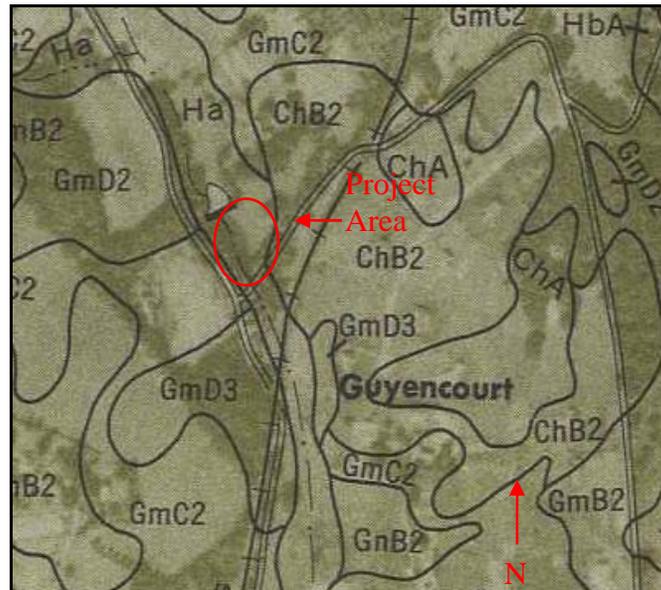
DEPTH		SOIL	MUNSELL	CULTURAL
BEGIN	END	CLASSIFICATION	COLOR	MATERIAL
0	8	Clay Loam	7.5 YR 3/2	NCM
8	24	Clay Mottled	5YR 4/6 & 5YR 6/1	NCM
24	30	Clay	5YR 6/1	NCM

STP NUMBER 4

E 18449792 **N** 4407399

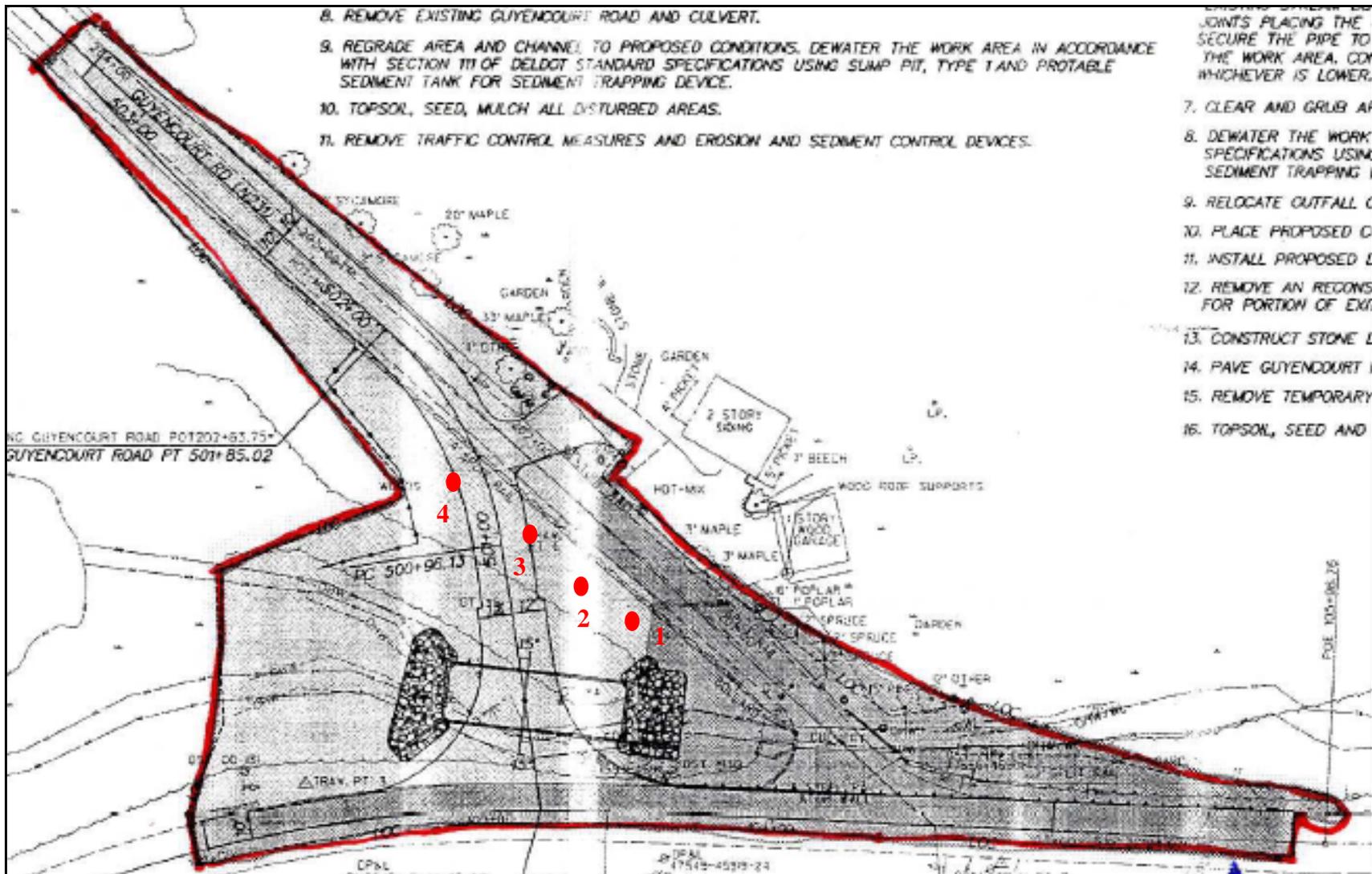
DEPTH		SOIL	MUNSELL	CULTURAL
BEGIN	END	CLASSIFICATION	COLOR	MATERIAL
0	11	Clay Loam, quartz cobbles	7.5 YR 3/2	1 piece of drain pipe
11	22	Clay Mottled	5YR 4/6 & 5YR 6/1	NCM

G. Soils Map



1970 Soil Survey New Castle County, 1 in = 1/4 mile

H. Army Corps of Engineers Permit Area Map



Army Corps of Engineers Permit Area, Signed June 24, 2009, and STP locations

I. Cultural Resources within a ½ mile of the project APE

CRS #	Description
N10927	Agricultural complex, no survey forms just a photo card
N00443	Dalhousie / Hollingsworth log home, early 18 th century, square logs dovetail joints
N01393	William E Phelps house 1836 3 bay stucco over fieldstone
N00474	Emig house / Log folly moved 1966 from PA, 4 story log house field stone foundation (1750) Emig family 1732 – 1970, one of the largest log homes in US
N07709	4 bay 2 story T plan structure 1890-1900, and 2 outbuildings (sheds)
N04316	Bridge 1-23A, 1918 Reading railroad bridge, 3 span skewed timber trestle
N01396	Guyencourt railroad station, 1976 survey, extant structure
N12661	Bridge 1-78, no date, single span concrete frame
N12551	Bridge 1-526, 1945 single span thru steel girder bridge
N07696	Agricultural complex, late 19 th early 20 th century, W.M. Thompson House, extant
N10928	Tenant house associated with 10927, no record just a photo card, extant
N07706	Agricultural complex, 3 bay 2 story, L plan, barn and carriage house 1870 - 1880
N07707	Tenant house associated with 7706
N12550	Bridge 1-73A, 1926 single span concrete slab bridge
N14471	Bridge 1-536, subject of this project, Culvert at Guyencourt Road CRS added 5/21/09
N12666	Winterthur buildings 94 / 95 or 95 / 96 SHPO files not consistent surveyed in 1990
N01395	Thompsons Bridge Road, survey 1976, 2 extant structures